

IMPACT OF WAGE EMPLOYMENT IN AGRICULTURE PRODUCTION ON LABOR SATISFACTION IN THE RED RIVER DELTA, VIETNAM

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Abstract: This paper attempts to identify the impact of wage employment in agricultural production on hired laborer satisfaction in the Red River Delta of Vietnam. By analysing primary data collected from 150 hired laborers in Bac Ninh, Hai Duong, and Thai Binh provinces, we discover that hired laborers working for farm households are paid both in cash and in kind. During the employed period, hired laborers can receive two forms of wage in cash, daily wage for seasonal workers and monthly wage for long-term workers. Further, hired laborers also receive remuneration in kind such as drink, lunch, bonuses for overtime working, and Lunar New Year gifts. In order to determine factors effecting laborers satisfaction with work, the authors use Exploratory Factor Analysis and the results show that Cronbach's Alfa coefficient of each group is more than 0.6. That indicates the use of 25 observation variations belonging to 5 factors in the study is suitable. Additionally, logistic model reports that wage, remuneration, working condition, workplace training and gender of employees have a statistically significant effect on job satisfaction of laborers. Of these factors, wage and remuneration report the stronger impact on hired laborers satisfaction. However, hired laborers in farm households state that their wage and remuneration are quite low in comparison with wage of workers in off-farm sectors. Therefore, including regulation on minimum wage and remuneration of hired laborers in agricultural production in to the Labor Law is necessary to enhance hired laborers satisfaction with wage employment.

Keywords: wage employment, agricultural production, laborer satisfaction, Red river delta, Vietnam.

I. INTRODUCTION

The process of industrialization in Vietnam for over 30 years since “*Đổi mới*” (Innovation) 1986 has created a huge number of agricultural laborers affected by the loss of farmland. This situation is the cause leading to the result that 53% of households who lost farmland have income much less than before and so they have to seek various ways to earn their living (Hoang Ba Thinh, 2009). As a result, there is a wave of labor mobility from rural areas to cities to find jobs in the industrial and services sectors with higher income. The research results of the Vietnam Population Census in 2014 showed that of more

than 5.6 million migrants, 29.0% has migrated from rural to urban areas, 28.8% migrated from rural to rural areas, 30.1 % are migrants from urban to urban, and only 12.1% are migrants from urban to rural areas. Overall, migrant labor to the cities and large industrial areas are young and skilled labor or they are manual labor in good health (UNFPA, 2016). A survey of the Institute of Policy and Strategy for Agriculture and Rural Development in the Red River Delta, Southeastern region and the Mekong River Delta shows that there are almost no laborers under 40 years of age in most of the rural regions (Dang Kim Son, 2008). In other words, most of remaining people in

rural areas are un-trained, low-skilled and old-age laborers. However, those remaining are making significant contributions to the sustainability of agricultural production in rural Vietnam. They are a crucial source of labor supply in rural labor market because many farm laborers have migrated, households require additional human labor for agricultural production (Nguyen Tuan Anh *et al.*, 2015). The labor demand increasing especially in peaking seasons leads agricultural production to shift from self-employment to wage employment in farm households. Self-employment in agriculture, therefore has been steadily shrinking compared with wage employment. In 1990s, nearly half of the employment came from farm self-employment, while wage employment accounted for only about 18%. Since the 1990s, the share of wage employment has increased substantially every year (Le Dang Trung and Remco H. Oostendorp, 2016).

Despite the fact that wage employment is becoming increasingly important in agricultural production in Vietnam, there is the lack of attention to employees in this sector compared to laborers in industrial and service areas. In terms of research, as many developing countries in the world, it is hard to find a significant statistical information regarding number of wage employment in agriculture, average income of employees, working hours, working condition, etc in Vietnam (C.Oya and N.Pontara, 2015). In terms of law, it has been acknowledged that Vietnamese Labor Law concentrates on workers in cooperatives and enterprises which have registered as businesses under the Enterprise Law rather than laborers who work for agricultural households. As a consequence, hired laborers who work as wage employment in farm households are excluded by the law (Nguyen Thi Hai Ninh and Philippe Lebailly, 2017).

Starting from these above practical issues, the first objective of this paper is to draw an overview picture of wage employment in agricultural production at household level in the Red River Delta of Vietnam. Then, this paper will analyze the impacts of wage employment on hired labor satisfaction. Based on these impacts, we expect to recommend appropriately policy implications for better management of laborers working as wage employees in agricultural production of Vietnam.

II. LITERATURE REVIEW

2.1. Wage employment in agricultural production

In our paper, it is important to provide an introductory discussion of the term “wage employment”. In a simple understanding, wage employment can be defined as a mutual agreement between two parties (known as employer and employee) in which the employee (generally an individual) agrees to work for the employer (generally a business firm, government office or sometimes an individual) under some specific terms and conditions and the employer agrees to pay him some remuneration (may be in cash or kind) for his work (ILOSTAT, 1993). Within this definition, terms and conditions of employment are working conditions, rules concerning work relationships, etc which are decided in advance. Both employee and employer abide to these terms and conditions of employment.

In a more complicated approach, “employment”, or what the World Bank has recently called “jobs” (World Bank, 2012) means “work performed for pay or profit”, which can be remunerated in a variety of ways, in cash or in kind (C.Oya and N.Pontara, 2015). This is what is often considered a “market oriented” job, although the employers can be any individual, private, or public entity (Belchamber and Schetagne, 2013). To be sure, there are many types of work that are not explicitly remunerated in any way, but the boundaries between existing categories of “work” are sometimes blurred, especially in the rural areas of poor countries (C.Oya and N.Pontara, 2015). What the ILO now calls “unpaid trainee work” (Belchamber and Schetagne, 2013), for instance unpaid apprenticeships, could also be regarded as forms of employment, since the skills and knowledge acquired by a trainee could be classified as a “wage” (C.Oya and N.Pontara, 2015).

In Vietnam, industrialization has created a large labor migration process which transformed labor structures and supply in many farm households, leading to changes in household agricultural production in terms of labor across two main dimensions. First, labor exchanging (either help other households and/or received help from other households) amongst households with small- scale of agricultural land. Second, labor renting to supplement

the lack of family laborers in large –scale farm households (Nguyen Tuan Anh *et al.*, 2015). Therefore, in order to clearly understand about wage employment in agricultural production in the Red River Delta of Vietnam, we follow the definition of C.Oya and N.Pontara about rural “wage employment” in developing countries which refers to any form of work for another person or entity in exchange for any kind of compensation, whether in kind (including land, for example) or in cash (C.Oya and N.Pontara, 2015). A part from wage, other remunerations such as drink, lunch support, and allowance for overtime working hours are included as wage employment. Non-explicit remunerations like training, supporting laborers to find new jobs, etc are also considered as “wage” in our paper.

2.2. Labor satisfaction with job

Job satisfaction is characterized as “it is the distinction between the measure of prizes workers get and the sum they trust they ought to get” (Robbins and Judge, 2003). A standout among the frequently referred definitions on job satisfaction is that job satisfaction needs to do with the way how individuals feel about their job and its different perspectives (Rahman *et al.*, 2017). In recent years, worker job satisfaction is considered as an issue in industrial and commercial enterprises, services like insurance, health care and education are also included (Deeter-Schmelz and Sojka, 2003). Surprisingly, topic of labor satisfaction with job in agricultural production is rarely found in literature, particularly in case of Vietnam.

With regard to factor affecting job satisfaction, there are various analysts who have examined job satisfaction determinants. Of those determinants, factors such as wage, the labor itself, administration, associations with colleagues, and prospects for advancements have been found to impact on job satisfaction (Okpara, 2004). In addition, age, education and occupation are also identified as main determinants of job satisfaction (Peng Nie and Alfonso Sousa-Poza, 2017). It has been argued that most of the literature has focused on the impact of education and skills on job satisfaction rather than the effect of training as such. But, then researches found that job satisfaction tended to be higher where there was access to workplace training (Melanie K. Jones *et al.*, 2008).

Taking into account the determinants mentioned above, our paper not only analyzes the impact of wage employment (wage, other remunerations) itself on hired labor satisfaction but also includes working condition, relationship with household head, and workplace training as additional factors which can affect labor satisfaction when they work for farm households in agriculture production.

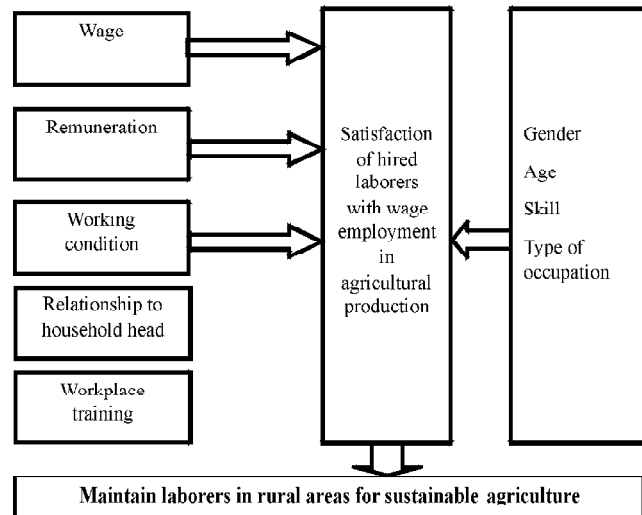


Figure 1: Analytical framework

III. RESEARCH METHODOLOGY

3.1. Selection of studied areas

The Red River Delta is the cradle of agricultural production in Vietnam with diverse activities including crop production, animal husbandary and poultry, and aquaculture. This delta includes 11 provinces with high population density, rapid industrialization and urbanization processes narrowing the land available for agriculture. In recent years, in many localities in the Red River Delta, farmers have not been attached to agriculture because of its low efficiency. For example in Thai Binh province, about 45% laborers have moved out of agriculture, 200 thousands work far from home and the percent of people working outside is increasing (Hoang Ba Think, 2009). This movement results the lack of labor supply for agricultural production especially during the time of transplanting and harvesting. Consequently, exchanging and renting laborers amongst farm households are the two agricultural production

management systems designed to deal with imbalances between labor supply at the household level and labor demand (Nguyen Tuan Anh *et al.*, 2015). Taking into account these arguments, the authors selected 3 provinces in the Red River delta which are Bac Ninh (typical for rice production), Hai Duong (typical for pig raising) and Thai Binh (typical for aquaculture, especially clam culture) to conduct our research.

Data collection

As already mentioned, this paper focuses on understanding of wage employment in agriculture production at household level. So that, primary data were gathered from 3 provinces by interviewing 20 heads of farm households in each province and hired laborers who work for these households with the questionnaires prepared for each particular object. Information of wage employment was collected through 150 employees including 60 people in Bac Ninh, 60 people in Hai Duong and 30 people in Thai Binh.

The questionnaire for laborers was designed with both open and close questions. With open questions, we interviewed hired laborers directly and it took about 2 hours per person. The close questions use 5-level likert scale to collect their evaluations about the importance of factors affecting to their satisfaction: (1) absolutely not important; (2) unimportant; (3) normal; (4) important; (5) very important (Tran Khanh Du, 2009). With close questions, we explained to help laborers understand about the meaning of questions and answers, then each interviewee filled out answer by himself/herself.

Data analysis

Besides using economic statistical methods including description statistics and comparative statistics to present general situation of laborers such as gender, age, working hours, wage, etc. In order to analyze the data the authors applied 2 quantitative methods including Exploratory Factor Analysis (EFA) analysis and logistic regression.

EFA analysis: is the common name of a group of procedures to reduce and recapitulate data. In researches, large amount of variations can be collected and normally they have relationship to each other. So that, variation

quantity need be reduced to a number that researchers can use (Hoang Trong and Chu Nguyen Mong Ngoc, 2008). This study used 25 observation variations and 5 independent variations including wage, other remunerations, working condition, relationship with household head and workplace training to analyze the impact of these 5 variations to satisfaction level of laborers with their works. Thus, EFA analysis assists the authors to obtain suitable data by grouping variations having relationship among 25 observation ones and eliminating variations having no or less relationship.

Logistic regression was developed by David Cox in 1958. The binary logistic model is used to estimate the probability of a binary response based on one or more predictor. It allows one to say that the presence of a risk factor increases the odds of a given outcome by a specific factor (Hoang Trong and Chu Nguyen Mong Ngoc, 2008). In our paper, logistic regression model is used for quantifying influence level of wage, other remunerations, working condition, relationship with household head and opportunity for long-term working on probability of satisfaction or dissatisfaction of hire laborers with their works. The model includes variations as following:

$$\text{Log [P/(1-P)]} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10}$$

Where: dependent variation is 1 if a hired laborer satisfies with his/her work and if 0 if he/she dissatisfies and wants to move to another job. The Log [P/(1-P)] describes the ratio of probabilities of a hired laborer either satisfies or dissatisfies with his/her work. The independent variations X_1 to X_5 represent 5 above-mentioned factors. The variations X_6 , X_7 , X_8 , X_9 , X_{10} represent personal characteristics of laborers such as gender, age, skill level and type of occupation as who working in rice production, pig raising or clam culture.

IV. RESEARCH FINDINGS

4.1. Demographic description of hired laborers

In our survey, agricultural households were divided into two groups, large scale and small scale households. In general, employment hiring depends on the production scale of households as well as the seasonal time. Due to

high seasonality, both large scale and small scale rice households have to hire laborers. Large scale rice households hire labor all year round while small scale households only hire seasonal workers. Regarding pig production, only large scale households need to hire labor since the over workload. In aquaculture, all clam households culture in wide beaches so they need to hire labor in terms of both long term and seasonal ones. Demographic characteristics of hired laborers are described as follows.

Classifying hired laborers by gender

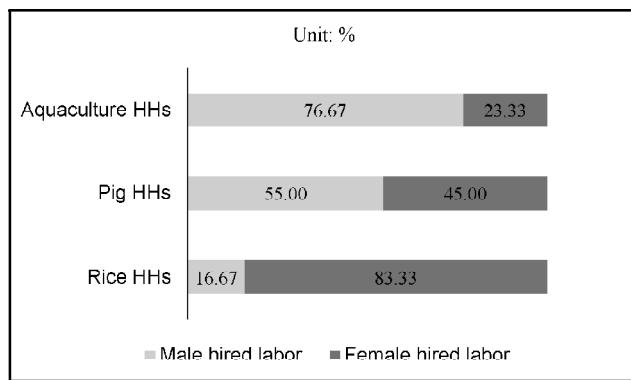


Figure 2: The proportion of hired labor by gender

Source: Hired labor surveyd in the Red river Delta 2017

The proportion of hired laborers by gender is illustrated in Figure 2. Apparently, there is a difference between the proportion of male and female hired laborers working in each type of agricultural households. In rice households, about 83% of hired laborers involve in production are women; and this proportion in pig raising and clam households is accounted for about 45% and 23% respectively. As observed, clam production takes place in wide beaches with many heavy work such as baby clam stocking, netting, protecting, etc. So that femal laborers are not suitable for these works and the proportion of them participating in these activities is quite low. Conversely, rice is cultivated in fields with simple and not heavy works that female hired laborers can participate in higher proportion than men. In addition, head of rice production households in Bac Ninh province said that it is easier for them to hire female laborers since there are not many men present in the village, they move to cities to work as off-farm laborers with higher wage.

Classifying hired laborers by age

Statistical data of the survey on hired labor in agricultural production lead us to the conclusion that hired laborers popularly have age range from 45 to 54 years old (Figure 3). In rice cultivation, 75% of employees are at this age and this proportion of the hired laborers in pig raising and aquaculture is about 72% and 66% respectively.

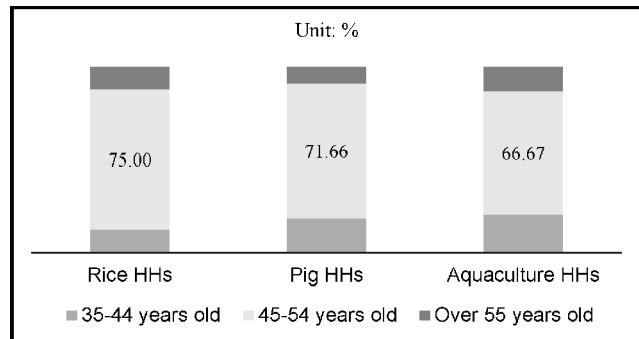


Figure 3: The proportion of hired laborers by age

Source: Hired labor surveyd in the Red river Delta 2017

According to head of agricultural households, they prefer to hire laborers who are over 35 years old since laborers at this age have certain experience and skill in agricultural production so that they apply well to production process. However at the age of 35-44 years old, laborers still have chance to work at industrial zone in Bac Ninh, Hai Duong and Thai Binh provinces, so we found a low proportion of hired laborers in households at this age.

In general, at younger ages, farmers are more likely to invest more capital to develop their production, they are not afraid of risk and are willing to apply new technique. In contrast, older farmers have conservative mind, they are carefully in investing and applying the new technique. Therefore, when hiring laborers, older households' heads always pay attention on the experience and skill of them.

Classifying hired laborers by working duration

In this paper, we found that hired laborers in agricultural production in Bac Ninh, Hai Duong and Thai Binh provinces are divided in to two types, seasonal hired laborers and long term hired laborers. Seasonal laborers are hired to work on fields in peaking time from 5 to 10

days per month and they are paid daily wages. All rice cultivation households need seasonal hire laborers for transplanting and harvesting; some households with large rice area also have to hire laborer for weeding and pesticide controlling. Similarly, clam households in Thai Binh report their high demand in hiring laborers when stocking baby clam at the beginning of a season and harvesting clam at the end of a season. Consequently, number of seasonal hired laborers in rice cultivation and clam culture households are higher than long term hired laborers. In contrast, due to the stability of pig production, pig raising households need more long term hired laborers than seasonal employees. As observed, long term employees are laborers who work for households at least 3 months continuously and they are paid monthly wages. A majority of hired laborers in pig production are long term employees. In aquaculture production, households also have to hire long term laborers who can stay long to protect clam in wide beaches. On average, an aquaculture household needs one hire laborer for each 2 ha of clam.

day; the payment for weeding is lower with 170,000 dong (less than 8 USD) per day and the highest wage is paid for pesticide spraying with 250,000 dong per day since this is heavy and harmful work, and only male laborers can do it. In pig and aquaculture production, laborers can get higher daily wage with 250,000 dong on average. According to hired laborers, one day working in pig raising and clam culture takes from 8 to 10 hours with very hard jobs, and not good working environment especially for pig production; thus they do not want to work with lower wages.

As mentioned above, pig raising and clam culture households also need to hire long term laborers for taking care of pigs and clams. Long term hired laborers are paid monthly. On average, monthly wage of aquacultural workers is highest with 4,000,000 dong (almost 180 USD) whereas pig raising households pay about 3,000,000 dong (about 130 USD) for a long term labor. In fact, long term employees in pig raising households used to get higher wages. However pork prices have sharply declined in the market since beginning of 2017, many pig raising households, hence can not afford to pay their employees more than 3000,000 dong per month. Some surveyed households reported that they made use of family labor to reduce the hiring labor cost.

4.2. Wage employment in agricultural production

Wage of hired laborers

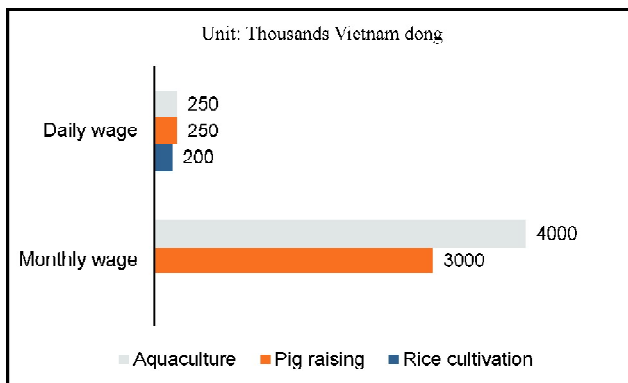


Figure 4: Wage comparison amongst hired laborers

Source: Hired labor surveyed in the Red river Delta 2017

During the employed period, hired laborers can receive two forms of payment, daily wage for seasonal workers and monthly for long-term workers. The average daily wage of rice labor is 200,000 dong (about 9 USD) but this wage ranges from 170,000 to 250,000 dong depended on type of work. For transplanting and harvesting rice, an employee can earn 200,000 dong per

Remunerations for hired laborers

Apart from wage, hired laborers also receive several kind of remunerations from employers such as drink at time break, lunch support, travel allowance for far distant laborers, assistance in sickness and bonus for good performance. According to hired laborers in Bac Ninh, Hai Duong and Thai Binh provinces, a working day usually lasts from 8 to 10 hours with 2 breaking times for drink and one time for lunch. On average, employers spend 1000 dong/laborer/day for drink and from 15,000 dong to 20,000 dong/laborer/day for lunch (Table 1). As observed, rice cultivation and aquaculture households do support lunch for seasonal hired laborers but pig raising households do not as almost all hired laborers in pig raising households are long term employees so they paid lunch by themselves.

In comparison with rice cultivation and pig raising households, aquaculture households present the best

Table 1
Forms and value of remuneration for hired labor

Description	Unit	Rice Cultivation (n=60)	Pig Raising (n=60)	Clam Aquaculture (n=30)
1. Drink at time break	1000 dong/laborer/day	1.0	1.0	1.0
2. Support for lunch	1000 dong/laborer/day	15.0	-	20.0
3. Bonus for good performance	1000 dong/laborer/day	50.0	-	100.0
4. Other remunerations				
- Holiday leave	Days/year	-	10.0	15.0
- Support when sick	1000 dong/laborer/time	50.0	50.0	50.0
5. Allowance for overtime working hours	1000 dong/laborer/hour	30.0	-	50.0

Source: Hired labor surveyd in the Red river Delta 2017; (22,700 Vietnam dong = 1 USD)

forms and value of remuneration for hired laborers. For good performance, employees can get bonus equivalent of 100,000 dong/person/day but this bonus is not in cash, it is normally a money card for cell phone charge as employees preference. Besides, they are entitled to support when sick and to have holiday leave (in case of long term employees). Pig raising households only apply their remuneration for long term employees concentrated on sickness support since pig raising

households' income rapidly reduce from beginning of 2017.

Other benefit for hired laborers

Other benefit that households can bring to hired laborers are sending employees to training courses to improve working skill and knowledge, equipping employees with working equipments, and signing labor contracts with employees.

Table 2
Other benefit for hired laborers in surveyed households

Description	Rice Cultivation (n=60)	Pig Raising (n=60)	Clam Aquaculture (n=30)
1. Attend training courses	15 (25.0%)	22 (36.6%)	6 (20%)
2. Fully equipped with working equipments	0 (0.0%)	33 (55.0%)	10 (33.3%)
3. Partly equipped with working equipments	15 (25.0%)	27 (45.0%)	10 (33.3%)
4. Signing labor contract	0 (0.0%)	0 (0.0%)	0 (0.0%)

Source: Hired labor surveyd in the Red river Delta 2017

Table 2 illustrates several kinds of benefit which hired laborers can get from agricultural households. In general, participating in extension training courses is a good chance for hired laborers to improve their technique in rice cultivation, pig raising and clam culture. As shown in statistical data, about 36% of surveyed laborers in pig

production are sent to extension training courses. This percentage is the highest compared to proportion of employees in rice and aquaculture production attending training courses. This fact can be explained by the reason that a majority of hired laborers in rice cultivation and clam culture households are seasonal employees who

work for households from 5 to 20 days a month, thus households will not get benefit when spending time and even money on training them. Conversely, most of hired laborers in pig production work for households in long period, hence it is necessary to enhance employees' technique and knowledge on pig raising by training them.

During the survey, we discover that not many hired laborers are equipped with working equipments. A high proportion of hired laborers in rice cultivation reports that they equip themselves with very simple equipments such as gloves and masks. Moreover, they also have to bring their working tools. In pig production and clam culture, employees are partly equipped with some equipments as they usually work in hard conditions with polluted environment.

A labor contract is a written agreement between the employee and the employer on paid employment, which stipulates the working conditions, rights and obligations of each party in labor relations. The labor contract is signed on the principle of voluntariness, equality, and in accordance with the provisions of the labor law. During the execution of the labor contract, the contracting parties may agree to amend the contents of the labor contract. In case of a change in one of the main contents of working conditions, the laborer is entitled to sign a new labor contract. It can be said that a labor contract is very important in the employment relationship between head of households and hired laborers, which helps hired laborers to secure their rights and obligations in the work process. However, a common problem which we observe is that there are no labor contracts signed between hired laborers and the household heads, even for long-term hired laborers. Labor relations between hired laborers and the head of household are totally by verbal agreement based on their trust. However, both hired laborers and head of households report that the employment contract is unnecessary.

“My household has been culturing clam for many years, employing a lot of laborers but never thinking or doing any labor contracts. They do very simple jobs, and most of farm laborers are very honest so we only make verbal agreement, but not interested in signing labor contracts.” (Interview Mr Do Hoai An, head of oyster household, Nam Thinh commune, Thai Binh province)

4.3. Impact of wage employment in agricultural production on laborers satisfaction

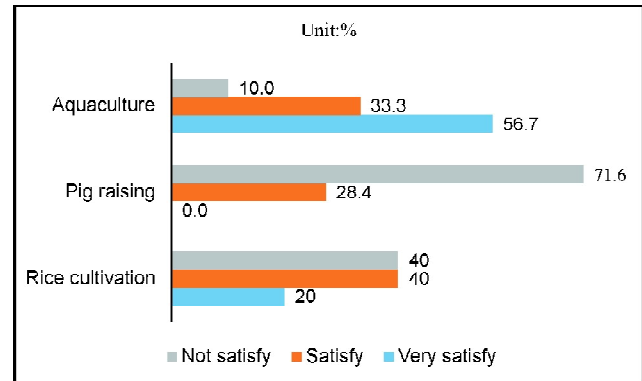


Figure 5: Satisfaction of hired laborers with wage employment

Source: Hired labor surveyd in the Red river Delta 2017

In our survey, we also ask hired laborers about their satisfaction with wage and remunerations which they are received from agricultural households. Consequently, approximate 72 percent of employees are not satisfy with wage which they are paid by pig production households since the wage is rather low compare to other off-farm jobs as well as is not commensurate with their efforts. In rice cultivation, 40 percent of employees also report their dissatisfaction with wage, this proportion equal to the percentage of hired laborers who satisfy with their wage. Although a high number of hired laborers reports their dissatisfaction with wage, they still want to involve in pig raising and rice cultivating as doing this work is more flexible than working in factories, so that hired laborers can make use of their time for their own households agricultural production.

On the other side, there are nearly 57 percent of hired laborers in clam culture satisfy with the wage mention above. Regularly we observe that long time employees in clam culture spend 8 to 10 hours in clam beaches a day. However, they do not intensively work during that hours, and they are entitled to spend some of their time on doing other job for another clam household at the same beach. As a result, employees can earn extra hourly wage and that is the reason why they report their satisfaction.

Exploratory factor analysis

Table 3
Cronbach Alfa coefficient of each factor group

No	Independent Variables	Number of Indicators	Cronbach's Alfa
1	Wage	5	0.86
2	Remuneration	5	0.81
3	Working condition	5	0.72
4	Relationship to household head	5	0.75
5	Workplace training	5	0.68

Source: Compiled from analysis result of authors in SPSS 19.0

In order to analyze EFA, Cronbach Alfa statistical test for close relationship between query items in the measure scale is required. Many researchers propose that Cronbach Alfa coefficient from 0.6 and over can be used in case the measured terms are new for surveyed respondents in the study areas (Nguyen Dinh Tho and Nguyen Thi Mai Trang, 2009). The results of the confidence control of measure scale (Table 3) show that Cronbach's Alfa coefficient of each group is more than 0.6. That indicates the use of 25 observation variations belonging to all factors in the study is suitable and reliable. In other words, the observation variations describing the workers' satisfaction correlate to each other and we qualify for the next steps.

The necessary condition which is that the variations must correlate to each other is solved by Cronbach Alfa test. The sufficient condition is that the Kaiser-Meyer-Olkin value (KMO) must be large (between 0.5 and 1) (Hoang Trong and Chu Nguyen Mong Ngoc, 2008). Therefore, Bartlett test was used in this study to consider an assumption that the correlation matrix is an identify matrix, which would indicate that variables are unrelated and hence unsuitable for structure detection. The results in table 4 show that KMO is within permitted limit and Bartlett test has small value (less than 0.05) of the significance level which indicates that a factor analysis is useful with these data.

With Principal Components and Varimax, only Factor Loading greater than 0.5 is kept. The results of Varimax show that all Factor Loadings are over 0.5 indicating that not any variation among the 25 variations

Table 4
Results of KMO and Bartlett's test

<i>KMO and Bartlett's Test</i>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.753
Bartlett's Test of Sphericity	Approx. Chi-Square	8632.486
	Df	300
	Sig	0.000

Source: Compiled from analysis result of authors in SPSS 19.0

is rejected. Therefore, there are 5 factor groups affecting hired laborers satisfaction with their works in agricultural production: Wage (X_1); Remuneration (X_2); Working condition (X_3); Relationship to head household (X_4); and Workplace training (X_5).

Logistic regression results

After doing exploratory factor analysis, the authors used logistic regression model to quantify the impact of 5 above mentioned factors on the satisfaction of hired laborers in agricultural production, particularly focusing on their satisfaction with wage employment. Additionally, demographic characteristics of hired laborers are also included in our model.

Results of the logistic regression model mean that there are 4 factors impacting on the satisfaction of hired laborers in agricultural production including: wage, remuneration, working condition and workplace training. Regarding to impact of wage employment on laborers satisfaction, regression coefficient explains that when the score of importance of wage increases 1 point, the probability of satisfaction increases 1.661 time; and when the score of importance of remuneration increases 1 point, the probability of satisfaction increases 1.540 time. In addition to wage and remuneration, workplace training in this paper is considered as a "wage in kind" and it is found to affect on hired laborers satisfaction with statistical significant at the 0.1 level. When the score of the importance of workplace training increases 1 point, the probability of employees satisfy with their works increases 1.481 time.

In terms of demographic aspect, gender of laborers is discovered to have strong impact on their satisfaction as probability of female employees satisfying with their

works is 1.134 time higher than the one of male employees. Furthermore, our findings also show that hired laborers who work for rice and clam production households are more satisfactory with their wage employment than those working in pig raising (Table 5).

Table 5
Results of Logistic regression model

<i>Variation</i>	<i>β coefficient</i>	<i>Significant</i>	<i>Exp (β)</i>
Wage (X ₁)	0.508***	0.004	1.661
Remuneration (X ₂)	0.432**	0.017	1.540
Working condition (X ₃)	0.210**	0.025	1.233
Relationship to household head (X ₄)	0.296	0.139	1.344
Workplace training (X ₅)	0.393*	0.085	1.481
Gender (X ₆)	0.126**	0.016	1.134
Age (X ₇)	1.769	0.663	5.864
Skill level (X ₈)	1.056	0.349	2.874
Rice cultivation (X ₉)	0.098*	0.076	1.102
Clam culture (X ₁₀)	0.705**	0.038	2.023
Constant	0.694	0.329	2.001
Omnibus tests of Model Coefficients	Chi-Square 45.889	Sig. 0.000	Nagelkerke R Square 0.604

***. Correlation is significant at the 0.01 level.

** . Correlation is significant at the 0.05 level.

*. Correlation is significant at the 0.1 level.

Source: Compiled from analysis result of authors in SPSS 19.0

V. CONCLUSION

Under the context of industrialization and urbanization in the Red river Delta, agricultural production still plays an important role in absorbing laborers who remain in rural areas for many different reasons such as un-trained, low skill, old age or not in good health, etc, that prevents them to migrate to work in cities. The statistical data on demographic aspect of hired laborers in rice cultivation in Bac Ninh, pig raising in Hai Duong and clam culture in Thai Binh lead us to the conclusion that hired laborers popularly have age range from 45 to 54 years old and the proportion of female employees in rice production is higher than the ones in pig raising and clam culture. During the employed period, hired laborers can receive many forms of wage employment from farm households, daily wage for seasonal workers and monthly wage for

long-term workers. Apart from wage in cash, hired laborers also receive other remuneration from employers such as drink, lunch, allowance for overtime working, assistance in sickness and Lunar New Year bonuses. In the working place, hired laborers are also supported by skill training and working equipments.

Despite the fact that there are various kinds of wage employment paid for hired laborers in farm households, a substantial share of hired laborers still state their dissatisfaction with works, especially for those who are working in pig production. There are several factors which have been identified to have influence on employees satisfaction as wage, remuneration, working condition, workplace training and gender of employees. Of these elements, wage and remuneration report the stronger impact on hired laborers satisfaction. However, all of hired laborers in our survey are working for farm households without any formal labor contract. Their labor relationship base on verbal agreements, hence most of them are not protected by Vietnamese Labor Law in general as well as not covered by minimum wage regulation in particular. In order to enhance hired laborers satisfaction with wage employment in agricultural production, it is necessary to include their cases in to the Labor Law.

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