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ОПРЕДЕЛЕНИЕ ЧЛЕНСТВА В ПРОФСОЮЗЕ И ЕГО ВЛИЯНИЕ НА ЗАРАБОТНУЮ ПЛАТУ РАБОЧИХ В КИТАЕ

Аннотация. Являясь представителем интересов работников, Всекитайская федерация профсоюзов проводит реформы, стремясь сыграть более важную роль в распределении первичного дохода. Используя данные опроса «работодатель – работник», в статье используется метод наименьших квадратов для анализа влияния профсоюзов на заработную плату. Результаты показывают, что профсоюз оказывает положительное влияние на почасовую заработную плату работников, но незначительно влияет на еженедельную и месячную заработную плату. Причины этого состоят в том, что профсоюзные рабочие места имеют высокий уровень человеческого капитала и больше строго соблюдают трудовые нормы. Кроме того, профсоюз может указать минимальный уровень заработной платы, увеличение минимальной заработной платы, рабочее время, отдых и другие льготы посредством коллективных переговоров и коллективного договора. Таким образом, именно профсоюз, а не само членство увеличивает заработную плату работников.

В документе также сравниваются три различных типа профсоюзов для определения статуса объединения. Результаты показывают, что влияние заработной платы профсоюза распространяется на всех работников, а не только на тех, кто признается в качестве членов профсоюза, и часть профсоюзов не выполняет обязанности по улучшению интересов работников, что подрывает фактическое влияние профсоюзов. В заключение, Всекитайской федерации профсоюзов следует уделять больше внимания защите низкоквалифицированных работников, таких как мигранты и работницы-женщины, и расширять масштабы коллективных переговоров о заработной плате посредством региональных и отраслевых коллективных договоров.

Ключевые слова: Всекитайская федерация профсоюзов, коллективные переговоры, эффект заработной платы, профсоюзный статус.

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ВИЗНАЧЕННЯ ЧЛЕНСТВА В ПРОФСПІЛЦІ ТА ЙОГО ВПЛИВ НА ЗАРОБІТНУ ПЛАТУ РОБІТНИКІВ У КИТАЇ

Анотация. Будучи представником інтересів працівників, Всекитайська федерація профспілок проводить реформи, прагнучи зіграти більш важливу роль у розподілі первинного доходу. ВФП визначає члена профспілки як всіх співробітників і працівників на підприємствах, які створили профспілки, що означає, що працівник вважається членом профспілки, якщо його / її фірма має профспілкову організацію, тому статус профспілки людини залежить від готовності роботодавця приймати профспілку. Щільність профспілок – це співвідношення між членом профспілки і всім персоналом і працівниками країни. Це може розглядатися як «стандарт ACF-TU».

Використовуючи дані опитування «роботодавець – працівник», у статті використовується метод найменших квадратів для аналізу впливу профспілок на заробітну плату. Результати показують, що профспілка позитивно впливає на погодинну заробітну плату працівників, але незначно впливає на щотижневу і місячну заробітну плату. Причини цього полягають у тому, що профспілкові робочі місця мають високий рівень людського капіталу і більше строго дотримуються трудові норми. Крім того, профспілка може встановити мінімальний рівень заробітної плати, збільшення мінімальній заробітній плати, робочий час, відпочинок та інші пільги у вигляді колективних переговорів і колективного договору. Таким чином, саме профспілка, а не саме членство збільшує заробітну плату працівників.

У документі також порівнюються три різних типи профспілок для визначення статусу об'єднання. Результати показують, що вплив заробітної плати профспілки поширюється на всіх працівників, а не тільки на тих, хто зізнається в якості членів профспілки, і частина профспілок не виконує обов'язки щодо поліпшення інтересів працівників, що підриває фактичний вплив профспілок. На закінчення, Всекитайській федерації профспілок слід приділяти більше уваги захисту низькокваліфікованих працівників, таких як мигранти та працівниці-жінки, і розширювати масштаби колективних переговорів про заробітну плату за допомогою регіональних і галузевих колективних договорів.

Ключові слова: Всекитайська федерація профспілок, колективні переговори, ефект заробітної плати, профспілковий статус.

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TRADE UNION MEMBERSHIP IDENTIFICATION AND ITS INFLUENCES ON WORKERS' WAGE IN CHINA

Abstract: *As a representative of workers' interests, ACFTU is reforming in an attempt to play a more important role in primary income distribution. ACFTU defines union member as all staff and workers within enterprises that have established trade unions, which means an employee is calculated as a union member if his/her firm has union organization, so an individual's union status depends on the employer's willingness to accept trade unions. Union density is the ratio between union member and all the nation's staff and workers. This may be referred to as the «ACFTU standard».*

By using an «employer-employee» matched survey data, the paper uses OLS method to analyze the union wage effect. Results show that a union has a positive influence on workers' hourly wage, but not significantly so on the weekly and monthly wage. The reasons for this are that unionized workplaces have high human capital level and more strictly abide by labor regulations. The paper also compares three different union variables to identify the union status. The results show that the union wage effects cover all workers, rather than only those who admit as union members, and a part of the unions do not fulfill the responsibility of improving workers' interests, which undermines actual union influences. As a conclusion, ACFTU should pay more attention to the protection of low-skilled workers, such as migrants and female workers, and increase the scope of collective wage negotiation through regional and industrial collective contracts.

Keywords: *ACFTU, collective negotiation, wage effect, union status.*

Problem statement. Ever since the market reforms of 1979, the Chinese labour market has gradually established and developed, and income distribution is an important part. The Ministry of Labour and Social Securities (now the Ministry of Human Resource and Social Securities) announced the strategic goal of enterprise salary distribution, including «market determination, enterprise support, staff participation and government guidance». As the only legal organization of workers, All China Federa-

tion of Trade Unions (ACFTU) and its affiliation unions have the largest single-country membership in the world. Till 2018, ACFTU has covered 2,7 million grass-root units and 306 million workers (National Bureau of Statistics, 2019). In furthering of reform, disappearing of demographic dividend and development of labour market, the upsurge of labour disputes becomes a serious social problem and ACFTU is assigned the dual roles of protecting workers' interests and supporting economic growth.

Meanwhile, the traditional view sees the Chinese trade union as a quasi-government bureau, so it receives government direction at a macro level, and is closely connected to management at enterprise level, such that it cannot improve workers' interests. Some commentators believe unions are under control and dominance of government and enterprises, so the collective negotiation system and collective contract are, to some extent, the «performance propaganda» (Chang, 2013), or even a game of completing number assignment (Wu, 2013), and it is hard to balance the power of capital and labour. Facing pressures from government, firms, workers and media, ACFTU pay considerable attention to promoting collective wage negotiation nationwide through a series of campaigns: for example the «Rainbow Plan» (2010), «Two Commons» (2011), etc. The question then arises as to what effect Chinese unions have on wages. The answers may be divided into two related questions: firstly, whether a union can increase workers' wages and to what extent; and secondly, how union status may be evaluated. Section two reviews the current studies on Chinese unions. Section three introduces the data background, raises discuss of union density (status), and basic wage information. Section four explains the model and analysis. Section five provides the conclusion and further suggestions.

Review of the last research and publications. Debate persists among academics as to whether Chinese unions can protect workers' interests. Some supporters believe that protecting workers' interests has become the basic responsibility of unions (Wu *et al.*, 2008), and unionized firms have better employment terms and conditions (Yao *et*

al., 2009). Alternatively, union critics observe that Chinese unions are unable to maintain and protect workers' interests (Metcalf and Li, 2006). ACFTU has developed a tripartite negotiation system and collective wage negotiation system, but this party-led trade union is facing the challenge of grass-roots disputes and independent worker activism, and hardly supports a regulated model for Chinese labour relations (Clarke and Pringle, 2009). This research usually uses case studies that are eye catching, and which emphasize the weak power of workers. Although they are useful in describing the severity of current problems, the observations selected may result in a biased conclusion that underestimates the true effects of unions.

In terms of union wage effects, several researchers have proved that a union can improve workers' wages and benefits. Ge (2007) uses the First Economic Census and finds that Chinese unions can increase wage level, labour productivity, research and human capital investment, but decrease profit rate. However, Lu *et al.* (2010) find unions can improve productivity and employee's benefits, but have negative effects on wage and profit levels in private enterprises. The reasons rely on the monopoly of administrative power, union bureaucracy and dual market structure (Zhang *et al.*, 2011). These papers either use accumulated data or enterprise survey data that takes monthly average wage as the dependent variable, and this may undermine the union's effects by omitting working hours. According to this situation, Yao and Zhong (2013) use another enterprise survey data from 12 cities, and find that unions have a significant effect on hourly wage logarithms, insurance coverage and other benefits,

but minor effects on working hours. Furthermore, Wei *et al.* (2013) also believe that unions can increase workers' wage levels, but the labour share of income distribution is lower because unions have a stronger influence on labour productivity. All of these four pieces of research use enterprise data, and add several independent variables to control human capital issues. However, they experience two problems that may lead to a biased result: the first is the lack of direct evaluation of human capital, while the second is the omission of workers' awareness of the status of unions.

Traditional union wage effect research, in advanced countries, usually utilizes individual surveys and data from labour market investigations and population census, such as Freeman (1980), Card (2001), Blanchflower and Bryson (2003). However, NBS investigations rarely have union questions, so the above research has to apply a small range of firm data, which makes it extremely hard to control for human capital effects. Thus, this paper uses an employer-employee matched survey data so as to avoid the objective selection bias of case studies and to control for the heterogeneity of workers.

The basic material of research. Data Resources and Basic Wage Conditions

The data used here is drawn from an employer-employee matched survey – «Employment and Enterprise Competition Research», organized by the Institute of Population and Labour Economics, CASS and processed by the Bureau of Statistics of Minghang District of Shanghai in 2008. Shanghai locates at the central of Changjiang River Delta, is one center of the manufacturing and exporting industries, and has a bet-

ter-regulated labour market. The survey uses an equidistant sampling method: firstly, selecting 2403 enterprises that are in accordance with NBS statistical investigation standard¹; then randomly choosing 80 enterprises with equal distance for employer questionnaires; within these firms, randomly selecting 10 employees with equal distance², based on the employee list. Finally, the investigation receives 79 employer questionnaires where 52 % have trade unions and 724 employee questionnaires where 54 % are male. There have been some studies using the matched data. For example, Freeman (1982) analyzes union effects on firm wage policy and wage dispersion, and Dell'Aginga and Pagani (2007) further analyzes different level of centrality of collective bargaining on wage inequality. Thus, it will use a matched data to evaluate a union's influences on workers' wages by simultaneously considering the firm's and individual's characteristics.

1. Discussion on Identifying Union Status

Before analyzing the union effects on wage, it is necessary to answer the following question – how can we judge the union status (or union density). China's answer is different from that of western countries. ACFTU defines union member as all staff and workers within enterprises that have established trade unions, which means an employee is calculated as a union member if his/her firm has union organization, so an indi-

¹ NBS only counts enterprises with certain standard, which is above 5 million RMB gross productions, in its statistical calculation.

² If the employee list includes migrant workers (peasant workers), an equidistant method is used. If not, 8 workers are selected from the employee list and 2 are left to migrant worker sample.

vidual's union status depends on the employer's willingness to accept trade unions. Union density is the ratio between union member and all the nation's staff and workers. This may be referred to as the «ACFTU standard». Meanwhile, advanced countries such as the UK and US use «western standards» of union status that ask individuals whether they have joined in, or are a member of a trade union or a similar workers' organization (Card, 1996), which represents the workers' subjective understanding of and consent to trade unions. The union density is the ratio of the former number to the employed population (sometimes non-agriculture employment). In term of analysis, the difference in these two standards relies on the question of what, if there is a union wage premium, might be the result of either trade union or individual's union membership. If it is the union, then all workers in firms with trade union establishment can benefit from union effect. If membership is essential, the union premium will be exclusive to those who clearly join the union [3]³.

Aside from advanced countries, ACFTU and its affiliated unions are a semi-government body, all of whose level union federations have a close relationship with local government. Administrative power often interferes with union actions and behaviours, so the enterprise choice to establish trade union is not only an economic result but also a political issue. It will thus be less deliberate to judge individual's union status

³ As it is impossible to imagine a market without trade union, unions also have an influence on non-union workers. There is another problem: worker's misclassification of union status. For more information, see Freeman and Medoff (1984), and Card (1996).

by whether the employer establishes trade union, as unions are not necessarily active to improve employment conditions. However, all current research uses ACFTU standard as the key explainable variable, rather than workers' subjective understanding of union existence, for example, Ge (2007), Yao and Zhong (2013), Wei *et al.* (2013). This is because they use firm survey data where there is no observation of individual characteristics and selection. This method has a prior assumption that all established unions have fully or at least partially functioned to protect workers' interests. Meanwhile, several case studies, such as Li *et al.* (2011) and Wu (2013), observe that many enterprise unions are only there, remain inactive and do not have any influences on workers' wages and benefits. Thus, it will be inappropriate to take firms with trade unions to be representative of workers' union status, and including inactive unions in the unionized sector by using ACFTU standard will lead to bias. Meanwhile, most individual investigations have no union status questions⁴, so it is hard to use western standards to evaluate union effects.

How, can we properly identify an individual's union status in China? If we assume that the wage of workers in non-union sector is not directly influenced by trade union, the union wage effect is totally upon enterprises that have established union organizations. In this case, union status represents the enterprise's acceptance of trade unions, which corresponds to the ACFTU standard. When a trade union is established in an enterprise, there are still three situations:

⁴ Some of these investigations are: Chinese Population Census, China Urban Labour Survey, China Household Income Project Survey and China Health and Nutrition Survey.

firstly, the union has no actions and influences at all; secondly, the union fulfills its function of protecting and improving workers' interests, and all workers consent to union's behaviours and functions, and identify themselves as union members; thirdly, unions partially function and are not fully recognized by all workers. If the first situation is true, the second and third are false, so that the ACFTU standard is an invalid variable. This is because the wage in unionized, and non-unionized sectors will be the same, the wage dispersion will not exist. If the first situation is false and unions have an effect on workers' wages and other benefits, either the second or third situations will be true. If the second situation is true, all workers will be conscious of the union's functions, and classify themselves as union members. The 2001 *Trade Union Law* states that «trade unions are mass organizations of the working class formed by the workers and staff members on a voluntary basis» (Article 2), so workers are willing to join trade unions when they are satisfied with a union's actions and functions. In such circumstances, the union status judged by the second situation becomes the western standard, which represents workers' consent to the trade union. When workers do not agree with the union's behaviour or cannot obtain union support, they will quit the union, or refuse to become a member. Thus, they will not benefit from union effects.

However, the 2001 *Trade Union Law* requires a trade union to «...represent...and safeguard the legitimate rights and interests of the workers and staff members according to law» (Article 2), «while protecting the overall interests of the entire Chinese People» (Article 6). This means that the union

effect, if it exists, will cover all workers of enterprises with union organizations, rather than those classifying themselves as union members. Meanwhile, the union status identified by workers' consent will undermine the scope of union effects, so many workers who are covered by unions but refuse their membership are wrongly classified as being part of the non-unionized sector. The western standard of union status is also an inappropriate and biased variable, but it will be more reasonable than the ACFTU standard, as this group of union members are truly affected by trade unions. This is more close to reality that a part of the union fulfills their functions and improves workers' wages, and part of the workers agree with the union's effects and recognize themselves as union members. For those who are affected by trade union but do not agree with union actions, they may refuse to become a member, but will recognize the existence of unions within enterprises. This reflects workers' recognition of union establishment, which can be seen as the new standard for identifying union status. In essence, it would seem that the new standard (third situation) more accurately reflects China's environment, by which some enterprise trade unions have an effect on workers' wages and benefits. This effect covers both self-classified members and employees as a whole. Thus, the individual's recognition of a union's existence is a better variable that leads to a more precise evaluation of the union wage effect.

This paper uses an employer-employee matched survey drawing on three questions relevant to trade union organization. The first of these questions is drawn from the employer questionnaire, and the second and third questions

are taken from the employee survey. The questions are as follows:

Question 1: «Does the enterprise have a trade union?». This question reflects the enterprise's acceptance of a union's establishment and represents the ACFTU standards of union status;

Question 2: «Are you a trade union member?». This question reflects an individual's consent to be a member of a union and represent western standards;

Question 3: «Is there a trade union at your workplace?». This question reflects individual's recognition of union existence and represents the new standard.

Question 1 is the same as is used in previous research which examines whether there are unions established in the enterprises that have no relations to workers' consciousness or understanding of trade unions. If a trade union is established and takes action to influence the workplace, workers will come to recognize its existence. Meanwhile, if workers are satisfied with a union's contribution to improving their terms and conditions, they will confirm their union member status and union's representativeness. Thus, if the enterprise trade union fulfills its function of protecting workers' rights and increases their wages, and all workers consent to a union's behaviour, these three standards will obtain similar, or even the same results. Otherwise, it will be necessary to re-evaluate the union's influences on workers' wages and benefits.

2 Firm Control Variables and Wage Conditions

Union density varies among different types of enterprises, while unions are more easily established in firms with certain characteristics, for example, SOE

than POE, or large ones rather than small ones. On the other hand, unions are more willing to choose large companies with better profitability, because they are able to pay higher wages than the market equilibrium price. US and UK experiences have proved such view (Freeman and Medoff, 1984; Blanchflower and Bryson, 2004). Thus, it is necessary to control firm characters to evaluate a union's wage effect. According to previous research (Freeman, 1980; Lu *et al.*, 2010; Yao and Zhong, 2013) and the quality of the matched data, three firm variables are selected, these being ownership, employment size and capital intensity⁵.

Table 1 shows the average wage of unionized and nonunionized companies according to different characteristics. The first two columns display the unionized rate and number of firms selected in the sample where the union density is around 52 %. The data is based on an average monthly wage in the employer questionnaire, and the last three columns are the direct average wage weighted by the number of employees of the firm. Firstly, the overall average wage is higher in unionized firms, and the unionized worker is 151 RMB higher as a direct average and 111 as a weighted average. Secondly, unionized firms have a higher average wage in most subtypes, and the facts remain after weighted, so it may be assumed that [the

⁵ According to ownership, there are four groups: State and Collective Owned Enterprises (SOE), Share Held Enterprise (SHE), Foreign Invested Enterprise (FIE), and Private Owned Enterprises (POE). By employment size, there are three groups: under 60 people, between 61 and 150, and above 151. Capital intensity is calculated by current fix capital value per capita, including: under 30,000, between 30,000 and 100,000, and above 100,000.

presence of] unions and higher wages are related. However, where there is no union, wages are higher in firms with more than 61 employees, which differ from our previous assumption. This rea-

son may rely on the difference in human capital structure, so it is necessary to control individual characteristic variables.

Table 1

*Average Wage in Unionized and Nonunionized Firms
based on Employer Questionnaire (RMB/month)*

Category		Question 1		Direct Average			Weight Average		
		Union Rate	No. of Firms	Union	Non - union	Diff.	Union	Non - union	Diff.
Ownership	SOE	72%	7	1757	1599	158	1879	1654	225
	SHE	58%	24	1786	1435	351	1939	1411	528
	FIE	47%	32	2011	1793	218	2026	1967	59
	POE	44%	16	1359	1629	-270	1378	1583	-205
Employment Size (headcount)	<60	28%	29	1882	1585	297	1951	1585	366
	61-150	55%	29	1482	1554	-72	1477	1514	-37
	>151	81%	21	2041	2248	-207	2032	2153	-121
Current Fix Capital Value (10,000 RMB Per Capita)	<3	47%	38	1558	1547	11	1475	1576	-101
	>=3, <10	58%	26	1749	1500	249	2001	1597	404
	>=10	53%	15	2416	1915	501	2439	2437	2
Overall		51,9 %	79	1797	1646	151	1927	1816	111

Source: Survey data calculated by author

3.3. Individual Control Variables and Wage Conditions

Difference in human capital difference is the main reason for individual income variety, while education and work experience are the most common variables to evaluate workers' skills level. Even research using micro firm data takes into account individual education level, such as, Lu *et al.* (2010), Yao and Zhong (2013), Wei *et al.* (2013). Yet individuals with different human capital features have diverse preference from union jobs. Card (2001) states that the union density of high skilled workers increased significantly from the 1970s to the 1990s, while low skilled workers experienced the reverse trend. Thus, the evaluation of union wage effects re-

quires the influence of workers' skill level on wages to be controlled.

The control variables used in evaluating the union wage effect usually include: industry, region, gender, age, education, working experience, ethnic, profession, marriage status, and number of children (Freeman, 1980; Card, 2001). As this paper uses data from manufacturing industries in Minhang District, Shanghai, so there is no necessity to use the region and the industry as control variables. Gender remains a key variable in individual wage determination, so this is retained and a dummy variable is used. The contribution of education level is different to workers' wages in China (Wang, 2009), so this paper divides education into three cate-

gories, namely junior middle school and below, senior middle school and technical school, and higher education. There is no direct variable for work experience in the questionnaire, but the equation “age – year of education – 6” is used as a representative variable, as in Wang (2009). China has a noteworthy group of migrants, namely “peasant workers⁶” who are rural migrants working in urban areas. Some scholars, such as Yang and Liu (2013) have paid attention to the influences of trade union and collective negotiation on migrant workers. Thus, it is necessary to control the effect of peasant worker on wage differences. People in different professions have a diverse willingness to join trade unions, so this paper also controls an individual’s profession, which has three simple categories, including normal worker, technician and manager.

Firm data has shown an obvious union wage advantage in Table 1, but the individual questionnaire shows more negative story. As shown in Table 2, nonunion workers have a higher monthly wage in most categories. In particular, there are only three subcategories where union wage is higher in the ACFTU standard, while in all other cases, wages are higher where there is no union. One important finding is that workers with better human capital investment may obtain a higher wage in nonunionized firms than in large-scale and internally competitive firms. For example, individuals with characteristics of education at college level and above, urban *hukou*, those occupying technician jobs and the post-70 age group may require advantageous wages. The reason for this lies in

the union’s effects in terms of increasing the wage level of the low-income group and restraining the high wage group, so individuals with higher human capital accumulation will obtain lower wages in unionized sectors than in nonunionized ones. Meanwhile, there is a nonunion wage premium in more than half of the sub-categories in the west, and new standards of union status. Thus, the individual average monthly wage shows an advantageous nonunion wage in most categories. It may thus be questioned whether trade union have any influence on workers’ wages.

Regression Result and Analysis

1 Research Model

This paper uses the Ordinary Least Square regression to evaluate the union wage effects. OLS is the most often cited, classic method to examine union influences, as it can achieve the least biased result. Many scholars have used this method, such as Freeman (1980), Card (2001). The model is based on a Mincer’s wage equation, in which union status is the main variable to be explained, and control variables include firm and individual features, as in Blanchflower and Bryson (2003):

$$\ln W_i = \delta U_i + \beta_i X_i + \varepsilon_i \quad (1)$$

W_i is the wage of individual i , X_i represents the firm and individual control variables, β_i is the coefficient of variable X_i , U_i is a dummy variable representing the union status, and ε_i is the residual.

⁶ This paper defines rural migrant worker as workers with rural *hukou* who are still in their hometown, rather than the city where they work.

The firm variables include ownership, employment size (using number of employees) and capital intensity (using current fix capital value), and they all use dummies. Individual variables include gender, education, working experience, profession and migration. The main explained variable, that of workers' wages, uses the natural logarithm of the hourly wage. The hourly wage is a better variable, in that it removes the influences of working hours and overtime working, which is a normal phenomenon in Chinese manufacturing industry. Moreover, union wage dispersion is bigger by using hourly wage than weekly wage and the workers' income calculated by hourly wage is more reliable than monthly wage (Andrews *et al.*, 1998). The reason may rely on the fact that there are fewer working hours in firms with trade unions, which will result in a lower weekly and monthly wage. Thus, the model uses $\ln(\text{hourlywage})$ as the main dependent, while there will be two extra regressions to support the analysis, using $\ln(\text{weeklywage})$ and $\ln(\text{monthlywage})$.

The above text has explained the reasons for selecting three questions regarding union status. By introducing these questions into equation (1), a new equation will be formed as follows:

$$\ln W_i = \delta U_i^k + \beta X_i + \varepsilon_i \quad (2)$$

U_i^k is the union status and represents the union status of question 1, 2 and 3, while $k = 1, 2$ and 3 .

2. Regression Result and Analysis

The result demonstrates that trade unions have a positive effect on workers' hourly wage by controlling firm and in-

dividual variables for three questions in Table 3. This means that the union and wages are positively related, so that the union can increase workers' wage level, which is the same as other researches by using firm data, such as Ge (2007), Yao and Zhong (2013). Firstly, unions in other types of firm have insignificant influences on wages, comparing with trade union traditions in SOEs, while POE has the least coefficient. This corresponds to our understanding of POE, which has low union density, poor working condition and more rural migrant workers. Secondly, the coefficient of the union is negative in firms with 60 more employees and is significant at 99 %, which is in accordance with workers' average monthly wage in Table 2. This is because companies with large scale employees are more likely to use performance pay, and individual and collective incentives to motivate employees, and this results in widening the wage distribution, and decreases the union wage effect. Thirdly, in firms where the current fix capital value is more than RMB 10,000 per capita, the union has a significant influence on wages, because large firms have more chance to obtain higher gross profits and to pay their employees better, compared with firms of low capital intensity. Fourthly, workers who have the characteristics of being male, with college level or above education, and being managers are more likely to derive benefits from the union wage effect. It is much easier for these workers to obtain high wages in the labour market, because they are more competitive in regards to high skill levels. According to Freeman (1980), highly skilled workers may achieve a higher wage than the market equilibrium if they are unionized. Chinese laws require

trade union to protect all workers' rights in organizations, so technician and managers who have better human capital accumulation can also enjoy union wage premium. However, those on low income, or those working in poor conditions do not get enough protection. For example, the coefficient of rural migration is around -0.12 in all three models, and its union density is much lower than that of urban workers.

Yang and Liu (2013) find similar problems, namely that rural migrant workers are less represented and covered by trade unions and collective contracts.

By considering the question of union status, the three models have different results, which can identify the true union wage effect from inactive unions. The ACFTU standard, namely firm acceptance of a union, is the most insignificant variable and its coefficient is only 0.027.

Table 3

*OLS Regression Result of Trade Union
on Logarithm Hourly Wage by Three Union Status Questions*

Dependent: ln(hourlywage)	Question 1		Question 2		Question 3	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
UNION	0.027	0.034	0.065*	0.034	0.085**	0.035
MALE	0.158***	0.032	0.157***	0.032	0.162***	0.032
WORK EXP	0.021***	0.005	0.020***	0.005	0.021***	0.005
WORK EXP ²	-0.001***	0.000	-0.001***	0.000	-0.001***	0.000
EDUCATION						
Middle	0.074*	0.039	0.070*	0.039	0.075*	0.038
Higher	0.384***	0.05	0.385***	0.05	0.387***	0.05
PROFESSION						
Technician	0.089**	0.043	0.085**	0.043	0.091**	0.043
Manager	0.365***	0.04	0.356***	0.041	0.356***	0.04
MIGRATION	-0.129**	0.039	-0.124***	0.039	-0.123***	0.039
OWNERSHIP						
SHE	0.030	0.058	0.039	0.058	0.033	0.058
FIE	0.093	0.059	0.106*	0.059	0.110*	0.059
POE	-0.005	0.063	0.01	0.063	0.008	0.063
EMPLOYMENT						
61-150	-0.155***	0.036	-0.159***	0.035	-0.176***	0.036
>151	-0.108**	0.045	-0.111***	0.042	-0.142***	0.045
CAPITAL INT						
>=3, <10	0.032	0.035	0.028	0.034	0.033	0.034
>=10	0.236***	0.043	0.237***	0.043	0.244***	0.043
CONSTANT	1.797***	0.085	1.793***	0.084	1.776***	0.084
Observation	688		688		688	
R ² (Adj.)	0.390 (0.375)		0.392 (0.378)		0.395 (0.380)	

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Source: Survey data calculated by author

As ACFTU standards include all firms where a union is established, this outcome means that some enterprise trade unions are not active in protecting and improving workers' interests, so that a wage is the same as is the case in non-unionized firms. Nonetheless, the western standard, using individual consent to union, and the new standard, using individual recognition, are significant, separately, at the 90 % and 95 % level. This demonstrates that unions can positively influence workers' wages through collective wage bargaining and other forms of management participation, and that workers can sense this influence, and consequently recognize the existence of unions in their workplace. This effect is undermined by the long-term misplace of union's protection function, lack of workers' trust and absence of mutual communication, so a certain number of

workers do not understand the union's action and function, and do not identify themselves as union members, even though they are covered by union influences, which implies the western standard of union status seriously underestimates the true union effect coverage. As shown in Table 4, among all the employees surveyed, 15,9 % ones who are covered by union but refuse as union member, so the percentage of workers who admit union presence (51 %) is higher than that of workers (36 %) who ascertain their union membership. The above facts show that workers can obtain higher wages in unionized workplaces where the union actively participates in promoting collective bargaining and collective contract, regardless of whether workers believe they are union members.

Table 4

The Difference between Individual Recognition and Individual Consent to Trade Union

		Question 3: Is there a trade union at your workplace?		
		Yes	No	Headcount
Question 2: Are you a trade union member?	Yes	35.2 %	0.8 %	261
	No	15.9 %	48.1 %	463
	Headcount	370	354	(724)

Source: Survey data calculated by author

3. Further Analysis

The individual average monthly wage shows the disadvantage of unionized wages, but the regression result shows that the union has a positive influence on hourly wages. To what extent, does this influence exist? This part will consider working time, and continue the regression analysis by using logarithm of weekly wage and monthly wage

as dependent variable. Compared with the hourly wage, the influences of a union on wages becomes smaller. In question 1 above, is almost none, and trade unions become insignificant in question 2. This has two potential meanings. Firstly, a union can improve a worker's hourly wage, but those in nonunionized sectors can increase their incomings by working longer hours. This also implies that unions can decrease working hours.

Secondly, the union wage effect covers all employees, rather than those who are admitted as members, if active collective bargaining is processed. The insignificance of the union in Question 2 arises because some employees covered by collective bargaining refuse their union membership, and consequently the union effects. The influences of active trade unions will cover all workers within the

workplace, so the individual recognition of the union in Question 3 is still significant, at the 90 % and 95 % level. However, the coefficient is smaller than that of an hourly wage. This result supports the view of Wu *et al.* (2008) and Yao *et al.* (2009), namely that protecting workers' interests has become a basic function of Chinese trade unions.

Table 5

*OLS Regression Result of Trade Union
on Logarithm Weekly Wage by Three Union Status Questions*

Dependent Var.: ln(weeklywage)	Question 1		Question 2		Question 3	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
UNION	-0.001	0.032	0.021	0.0344	0.061*	0.032
CONSTANT	5.511***	0.079	5.505***	0.038	5.488***	0.079
CONTROL VAR.	Yes		Yes		Yes	
Observation	698		698		698	
R-Square (Adj.)	0.406 (0.392)		0.407 (0.393)		0.409 (0.395)	

* p<0.1; ** p<0.05; ***p<0.01.

Other control variables are not displayed here for saving space.

Source: Survey data calculated by author

Table 6

*OLS Regression Result of Trade Union
on Logarithm Monthly Wage by Three Union Status Questions*

Dependent Var.: ln(monthlywage)	Question 1		Question 2		Question 3	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
UNION	0.009	0.032	0.021	0.032	0.067**	0.032
CONSTANT	6.881***	0.08	6.880***	0.079	6.860***	0.079
CONTROL VAR.	Yes		Yes		Yes	
Observation	698		698		698	
R-Square (Adj.)	0.403 (0.389)		0.403 (0.389)		0.407 (0.393)	

* p<0.1; ** p<0.05; ***p<0.01.

Other control variables are not displayed here for saving space.

Source: Survey data calculated by author

The above analysis shows that an active trade union has a positive influ-

ence on workers' wages in China, and this influence includes all workers in the workplace. However, the fact that some unions do not fulfill the responsibility undermines the overall union wage effect. From another point of view, the human capital level is higher in unionized sectors, for example, the age, years of education and working experience, as shown in Table 7. This is in accordance with the research of Yao *et al.* (2009), which shows that firms with a higher education and skills level find it more feasible to establish a union. There are two possibilities for this. Firstly, workers who are older, better educated and more experienced are more likely to join trade unions, because compared with their younger counterparts, they are more willing to choose a stable job, rather than frequently change jobs. Thus, they pay more attention to the management environment and employee participation, which relates to union activities.

Secondly, it is easier for trade unions to be established and perform in firms that have longer history and better human capital level, because these firms may have better labour productivity and higher gross profit for compensation. The result is unionized firms can supply higher hourly wage rate, while Ge (2007), Lu *et al.* (2010), and Wei *et al.* (2013) support this view. Meanwhile, average working time is shorter in unionized sectors than those nonunionized, which is in accordance with Yao and Zhong's (2013) result that the union can slightly decrease working hours. The possible explanation for this is that firms with active trade union more strictly abide labour related laws, especially on work time and protection. Thus, unionized workers can gain a higher hourly wage, but their weekly and monthly wages are not significantly advantageous.

Table 7

Individual Characteristics of Sampled Employees

Category	Question 1		Question 2		Question 3	
	Yes	No	Yes	No	Yes	No
Female (%)	51.2	41.7	44.1	47.3	48.6	43.5
Migrant Worker (%)	26.3	41.2	20.3	40.2	26.5	39.8
Normal Worker (%)	67.8	64.9	60.5	69.3	64.9	67.5
Age (Year)	37.3	34.3	40.0	33.7	37.7	34.1
Education (Year)	11.9	11.7	11.8	11.8	11.9	11.8
Work Experience (Year)	19.6	16.5	22.3	15.8	19.9	16.3
Work Time (Hours/Day)	8.2	8.3	8.1	8.3	8.2	8.3
Headcount	369	345	261	463	370	354

Source: Survey data calculated by author

4. Reasons for the Use of Individual Recognition to Trade Union

Why does union have much less significant influence on weekly and

monthly wages than on hourly wages? There are two potential reasons. Firstly, some firm trade unions do not fulfill their responsibilities in regards to protecting workers' interests or not estab-

lishing and urging collective bargaining and collective contracts, so they hardly improve workers' employment conditions. The current collective wage negotiation system that ACFTU promotes has several unresolved problems, including absence of implementation procedure rules, low level of legislation, unequal structure of negotiation parties, and over-interference of government, so enterprise unions are unwilling, discouraged and unable to take part in active bargaining (Shen, 2011). AS a consequence of this, they have little influence on wages, and this explains the views of critics to Chinese trade unions, such as Li *et al.* (2011), and Chang (2013). Secondly, Works can increase their income through longer working hours, but active unions can enforce firms to comply more strictly with labour laws, including limiting overtime working and employment protection. Meanwhile, workers in nonunionized establishments can obtain slightly higher weekly and monthly wage by overtime working. Furthermore, workers pay more attention to their monthly income, rather than their hourly wage on a normal working day, so they may reject union membership and deny the union wage effect, even when their hourly wage is higher. Overall, the new standard (Question 3) – individual recognition to trade union is significant in all three regressions, and is more in accordance with Chinese conditions of union behavior and organization, so it is a better variable to evaluate union influences on employment conditions.

From another point of view, Yao and Zhong (2013) believe that all workers will be under union influence if the firm is unionized, so they prefer firm data to be available, by assuming that a

trade union will immediately be active as soon as it is established⁷. However, there is a potential problem that some unions do not do anything to fulfill responsibilities and protect workers' rights. The regression result explains this point that ACFTU standard is insignificant in all models. Also, for the historical and objective reasons, workers' consent to trade union is much lower than its actual coverage rate. Thus, the evaluation of the results will be notably biased, and underestimated by using firm's acceptance and individual consent to unions. The individual recognition is consequently a better variable for three reasons. Firstly, there are indeed some trade unions that only exist in organization structure and have not influences on employment conditions at all. These are the bureaucratic trade unions mentioned by Zhang *et al.* (2011). Secondly, some unions take action to implement collective bargaining and collective contract, but there is a lack of communication between unions and workers, which leads to workers' being unaware of, and having low trust in unions, whilst refusing union membership. Thirdly, its [whose or what's?] effect will cover all employees within the establishment, rather than simply those who admit to being union members, if the collective bargaining and collective contract have a bearing on wage increases. Therefore, it [what?] will achieve more reliable and accurate result to evaluate Chinese union's influences on employment conditions, by asking workers whether their workplace has trade union (individual recognition), while using individual survey data.

⁷ There is also the possibility that they do not have good individual data.

Conclusion. This paper has mainly sought to address the question of the extent to which Chinese trade unions can increase workers' wages, whilst also comparing three different standards to identify trade union status. Through matched employer-employee data in Shanghai and OLS regression analysis, the results shows that the union has a positive influence on workers' wages, which is in accordance with Ge (2007) and Yao and Zhang (2013). A union can significantly increase hourly wage, but the effect weakens on weekly and monthly wage. The reasons rely on firms with active union obeying Chinese labour laws better than their nonunionized counterparts, so that overtime time working is strictly limited; moreover a union can state the minimum wage level, minimum wage increase, working time, rest and other benefits through collective bargaining and collective contract. Thus, it is the trade union rather than the membership itself that increases worker's wages. In nonunionized sectors, workers have lower hourly wages, but they can increase their weekly and monthly income through long hours of work. This explains the view of Lu *et al.* (2010), namely that a union cannot improve worker's wage, as their data only include private owned enterprises where overtime working is serious, and labour laws are badly implemented.

Overall, Chinese trade unions ha-

ve positive influences on maintaining and improving employment conditions through collective bargaining and participating in management. Thus, it is necessary to promote the coverage and implementation of collective wage negotiation, initiated by ACFTU, so as to reconcile labour disputes and primary income distribution inequality. The result also shows that the disadvantaged groups, such as rural migrant workers and informal employment, require more protection from unions. The change in such a situation needs to extend the level and scale of collective bargaining through regional and sector collective contract, avoiding numerical evaluation by government (Wu, 2013), and discussing a more reasonable profit distribution scheme by considering market and firm operation conditions.

There are also some problems in this research. The first is that union density in the sample is 51 %, which is much lower than the 80,1 % stated by ACFTU. Secondly, the sample is selected from one region and one industry, so whether the result can be extended to the whole country requires further assessment. Thirdly, the bonus, social insurance and incentives differ among workers, and these should be taken into consideration. Future research will continue to use individual data and to expand the sample size, so as to obtain more accurate results.

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