

The Effect of International Trade on Workers' Bargaining Power in Indonesia

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Abstract—This study is aimed at analyzing the effect of international trade on workers' bargaining power in Indonesia with a sample of more than 40,000 firms from the manufacturing industry during the period of 2006-2015. Regression analysis was conducted by using panel data from national sector level and national province level. The national sector level showed that export did not affect workers' bargaining power, while import decreased workers' bargaining power. Meanwhile, national province level data showed that export did not affect workers' bargaining power, but import increased workers' bargaining power.

Index Terms—international trade, workers' bargaining power, Indonesia

I. INTRODUCTION

One of the main assumptions of the equilibrium unemployment model is a match between employer and prospective worker involves friction that generates rent that is being shared between those two parties. Such frictions occur because the employer cannot fill the job vacancies instantly, and the prospective worker cannot get the job instantly as well. Wage earned by the prospective worker will be between marginal product value of worker from the employer's side and worker's outside option. The difference between wages earned and workers' outside options will depend on workers' bargaining power [1].

Brock and Dobbelaere explain that workers' bargaining power is a channel that links international trade and wages [2]. Worker's bargaining power will move due to international trade such as export and import. Exports will increase domestic production and labor absorption, tighten the labor market and increase workers' bargaining power. High bargaining power position strengthens workers to earn high wages. In contrast, imports will lower domestic production, reduce employment absorption, loosen the labor market, and decrease workers' bargaining power. It makes the worker more difficult to earn high wages.

The different effects may occur if the import is raw or supporting materials, because it will increase employment absorption, tighten the labor markets, and increase workers' bargaining power. Finally, the wages of the worker will increase.

The empirical results of a study by Brock and Dobbelaere in Belgium showed that both export and import did not affect workers' bargaining power [2]. However, exports to The

Organization for Economic Co-operation and Development (OECD) countries increased workers' bargaining power.

Another study in Belgium, by Abraham, et al. found that the increase of import competition reduced workers' bargaining power to the firms due to workers worrying of losing their jobs [3]. They choose to earn relatively lower wages.

Both Brock and Dobbelaere [2] and Abraham, et al. [3] discussed the effect of international trade on workers' bargaining power based on sector-level analysis because Belgium sets minimum wage at sector level through joint committees and enforced by the Ministry of Labor [4].

Different with the Belgian wage policy, Indonesia sets a minimum wage at a province level and district level, and also at sector province level and sector district level. Minimum wage level policy in Indonesia regulated through the Act of the Republic of Indonesia (Undang-undang) Number 13 Year 2003 about Labor and the Regulation of Ministry of Manpower and Transmigration (Permenakertrans) Number 7 Year 2013 about Minimum Wage. Based on these minimum wage policy differences, the research related to the bargaining power in Indonesia should be conducted at the regional level.

The study of Brock and Dobbelaere [2] and Abraham, et al. [3] were conducted in Belgium as a developed country. A similar study in developing countries was conducted by Pal and Rathore in India [5]. They estimate workers' bargaining power and firm markup during a period of industry deregulation and international trade in 1980-2007. The study explained that during the period of the increasing international trade in 1991-2007, workers' bargaining power fell by 55% from the initial value of 0.043. The result of this study provided arguments for workers in developing countries that international trade increases competition with foreign workers, loss of jobs or relatively lower wages. However, Pal and Rathore do not use international trade variables directly [5]. They use variables that are indirectly related to international trade such as output, capital, and number of workers, input material, profit, and wages.

To the authors' knowledge and information, until now there is no study in Indonesia that discusses the effects of international trade and workers' bargaining power. However, international trade is important in Indonesia because the percentage of export and import to Gross Domestic Product

(GDP) during 2006-2015 is around 40% (World Bank (2018)). It is relatively high among developing countries.

This research studies the effect of international trade on workers' bargaining power in Indonesia. The issue of international trade in Indonesia is important to be studied because of its relatively large share. Meanwhile the workers' bargaining power is important to be studied because it is a channel that links international trade and wages.

This research was mainly conducted with province level data; however, we also conducted at the sectoral level data to compare with previous studies from other countries, including Brock and Dobbelaere [2].

The research problem is "Does international trade affect workers' bargaining power in Indonesia?". The research gap addressed based on the previous studies are; (1) This was conducted at the provincial level that has not been found from the previous study; (2) This could be the first study in Indonesia that showing the effect of international trade on workers' bargaining power.

II. LITERATURE REVIEW

A. Conceptual Framework

1) Efficient Bargaining Framework: This study uses rent sharing literature to link the firm's ability to pay and the wage of workers. Literature review begins with an efficient bargaining framework in order to find a theory or channel explaining the correlation between wage and workers' bargaining power. One theory or channel will be used to analyze how international trade affects workers' bargaining power.

Efficient bargaining framework is applied to establish employer and worker relationships. This framework involves union and firm. Unions are concerned with agreements on wages (w) resulting from negotiation, whereas firms have an interest in the number of workers who earn negotiated wages (N) [6].

The utility function of a union is $U(w, N) = Nw + (\bar{N} - N)w_a$, which can be interpreted union utility is earning a negotiated wage (w) for N employees, whereas the others earn an alternative wage (w_a). An assumption of the union is risk neutral [7] with \bar{N} is the union membership ($0 < N \leq \bar{N}$), and w_a is the alternative wages with the value $w_a \leftarrow w$.

Meanwhile on the firm side, the utility function is gaining profit π with model $\pi(w, N) = \theta R(N) - wN - F$, where $R(N)$ is value added, θ is for revenue shifter which depends on product demand, and F is for all other costs associated with production. That utility function means firm utility is gaining profit, which is a difference of value added with labor cost and other production costs. Assume that labor is the firm's only variable input, and then F is a fixed cost, it means that input costs other than labor do not affect workers' bargaining [8].

The next assumption is the threat point of union equal to alternative wages w_a , which means the worker will not work if the wages offered is under alternative wage w_a . In the firm side, assumed revenue is uncertain if there is no revenue accrued when negotiation breakdown, the utility of the firm will drop to $-F$. Information about alternative wages

wa and revenue are asymmetric, the solution to obtain the probability of bargaining result is calculated using Asymmetric Generalized Nash solution:

$$\max_{w, N} \Omega = \{Nw + (\bar{N} - N)w_a - \bar{N}w_a\}^\phi \{\theta R(N) - wN\}^{1-\phi} \quad (1)$$

where $\phi \in [0, 1]$ represents workers' bargaining power. Maximize (1) to wage w is the first derivative as follow:

$$w = w_a + \frac{\phi}{1-\phi} \left\{ \frac{\theta R(N) - wN}{N} \right\} \quad (2)$$

Maximization (1) to N is the first derivative as follow:

$$w = \theta R_N + \frac{\phi}{1-\phi} \left\{ \frac{\theta R(N) - wN}{N} \right\} \quad (3)$$

In solution equations (2) and (3), $\theta R_N = w_a$ is obtained, which indicates that change in the number of workers R_N depends on the alternative wages w_a , not negotiation wage (w) [9].

In equation (2), wage (w) is determined by alternative wage (w_a) and profit per worker. However, since w exist on the left and right sides of equation (2) and to avoid bias in estimating $\phi/1-\phi$, w is moved to the left side of the equation. This study will use value added per worker as a measure of the firm's ability to pay. Rewrite Equation (2) as follow:

$$w = (1-\phi) w_a + \phi \frac{\theta R(N)}{N} \quad (4)$$

Equation (4) means that the wage earned by the worker is determined by the minimum wage and the productivity of each worker.

2) The Effect of International Trade on Wages through Changes in Bargaining Power: Based on equation (4), one of the channels that makes an international trade have the ability to affect wages during the bargaining process is a collective bargaining framework through movement of workers' bargaining power. This study uses this channel to relate international trade and wages.

How workers' bargaining power parameters will move has been explained by Linden, who defines workers' bargaining power as a measure of labor market tightness, which can be calculated as the ratio number of vacancies to the number of unemployed workers [10]. Initially, international trade gives influence to the economic climate, and in particular to the unemployment rate. The unemployment rate is crucial to the movement of workers' bargaining power parameters. More unemployment makes the labor market less tight and workers' bargaining power becomes weaker.

Increased export makes many domestic workers absorbed by the industry and reduces unemployment, makes the labor market more tight, and increases workers' bargaining power. On the other hand, increased import causes domestic labor market to become less tight and may even lead to increase unemployment, and will lower workers' bargaining power.

We think that there is also another possibility of the import impact on labor bargaining. If the imports are capital goods, raw and supporting materials, they may cause an increase in bargaining power because it may increase domestic production, more employment absorption, demand in the labor market becomes more tight, and make workers' bargaining power becomes stronger.

3) Political Effect on Minimum Wage at Provincial Level: Other than analysis based on sector level, this study also analyzes by province level. In Indonesia, the minimum wage is formulated by the wage council consisting of the government, firms and unions. After formulated, the minimum wage is legally enforced by the governor.

In the political process of governor election through Pemilihan Kepala Daerah (Pilkada) in Indonesia, minimum wage often becomes one of the candidates' political promises. The political promises aim to get more votes from workers group and increase the chances of a particular candidate to be elected. The consequence of such political promises is minimum wage setting at the provincial level that may be affected by the political process. The conclusion is if we want to analyze Indonesian international trade impact on workers' bargaining power, it should be conducted at the regional level rather than the sectoral level data.

B. Empirical Review

Rodrik showed that increases in international trade have lowered workers' bargaining power (as cited in [2]). The easier substitution of domestic workers and foreign workers due to international trade make a surplus (profit) of firms ending in the worker becoming lower, and the union becomes weaker. Indirect empirical evidence of a weakening union is given by Slaughter's study which investigates the hypothesis that international trade has contributed to the increase in elasticity of labor demand [11]. Using sector data level, the empirical results have variations across sectors and the change in labor demand elasticity is highly dependent on the length of time of the study. Based on Rodrik and Slaughter (2001), increased labor demand elasticity and increased foreign competition cause a decrease in the workers' bargaining power and a shift from labor bargaining power to capital bargaining power to rent distributions in firms that earn extra profit.

III. RESEARCH METHODOLOGY

The effects of international trade on workers' bargaining power are identified through 2 (two) stages regression. In regression stage 1, we estimate workers' bargaining power coefficient (ϕ) and in regression stage 2, those estimated workers' bargaining power coefficient (ϕ) is regressed with international trade variables.

A. National Sector Level Analysis

1) Regression Stage 1: Estimated Workers' Bargaining Power Coefficient: The econometric equation used in the regression stage 1 is derived from equation (4):

$$w_{ijt} = \alpha_i + \delta_1 \ln \bar{w}_{jt} + \phi \left(\frac{VA}{N} \right)_{ijt} + \epsilon_{ijt} \quad (5)$$

with w in equation (4) to be w_{ijt} , w_a to be \bar{w}_{jt} and $\frac{\theta R(N)}{N}$ to be $\left(\frac{VA}{N} \right)_{ijt}$, and ϕ is workers' bargaining power. Index ijt means firm i in sector j at time t . All data was collected from Survei Industri Besar dan Sedang (IBS Survey) by Badan Pusat Statistik (BPS) year 2006-2015 and prepared at a firm level. The data was arranged in cross-sectional pooling to obtain workers' bargaining power each sector and each year because the heterogeneity of workers' bargaining power across sectors is important an issue. The classification of sectors follows "Klasifikasi Baku Lapangan Usaha di Indonesia" (KBLI) year 2009 with 2 digit classification.

w_{ijt} is the average annual wage of workers in each sample firm, which is the average annual expenditure data for workers in a firm and divided by the Consumer Price Index (CPI) at province level where the firm operates by the reference year 2012 to express in real terms. IBS Survey does not provide annual wage data, therefore this study uses annual expenditure data for workers as an approach of annual wage, following Brock and Dobbelaere [2]. (\bar{w}_{jt}) is the smallest value of the average annual wage of the worker in the sector where firms operated. $\left(\frac{VA}{N} \right)_{ijt}$ is average annual value added of the worker in each firm and divided by sector level GDP deflator where the firm operates with the reference year 2010 to express in real terms. Regression stage 1 result is estimated of ϕ_{jt} for each sector and each year.

2) Regression Stage 2: Determining Workers' Bargaining Power Determinant: The empirical method of regression stage 2 uses an empirical model from Slaughter that explains the impact of international trade on labor demand elasticity [11]. Svejnar argues that no form is truly appropriate as a determinant of workers' bargaining power [7]. Data on regression stage 2 is a balanced panel and collected from IBS survey.

The econometric equation used for analysis by national sector level is:

$$\hat{\phi}_{jt} = x_{jt-1}\beta_1 + m_{jt-1}\beta_2 + f_{jt-1}\beta_3 + h_{jt}\beta_4 + c_{jt}\beta_5 + \epsilon_{jt} \quad (6)$$

with $\hat{\phi}_{jt}$ being workers' bargaining power parameter obtained from regression stage 1, grouped by sectors of the manufacturing industry, j represents sector and t represent a corresponding year.

(x_{jt-1}) is a ratio of exports to production, which is the total amount of finished goods exported in a sector divided by total production in that sector. The hypothesis for this variable is positive, which means that higher export will increase workers' bargaining power;

(m_{jt-1}) is a ratio of imports to production, which is the total of all raw and supporting materials imported into a sector divided by total production in that sector. The hypothesis for this variable is a negative or positive effect, which means that higher imports can decrease or increase workers' bargaining power;

(f_{jt-1}) is a ratio of total foreign firms in a sector to the total number of firms in that sector. Boeri, et al. argue that the effect of foreign ownership on workers' bargaining power depends on the motivation of foreign direct investment. If the motivation is expanding the market, it will increase workers' bargaining power (As cited in [2]). But if the motivation is to get workers with a cheaper wage, it will reduce workers' bargaining power. Based on those explanations, the variable can have a positive or negative effect, which means that the motivation of foreign direct investment is able to increase or decrease workers' bargaining power.

(h_{jt}) is Herfindahl Index (HI Index) by calculating the concentration of an industry and as an indicator of competition in the industry. The HI index is calculated by summing output squares of a firm over the total output of all firms in the sector firm operated.

The Herfindahl index affects workers' bargaining power in both directions, either positively or negatively. Veugelers states that higher concentration of output allows for uncompetitive pricing behavior (as cited in [2]). Therefore, firms are sensitive to raising wages because the cost can be shifted to domestic consumers. It means Herfindahl Index is expected to have a positive effect. But Veugelers also stated that the stronger market share of a product can be interpreted the stronger in the input market. So workers' bargaining power can weaken.

(c_{jt}) is sector capacity utilization, which is total capacity production used to total production capacity, calculated by sector level. Hypothesis this variable is a positive effect, as the higher capacity utilization of a sector illustrates the good economic situation, allowing workers to demand higher wages and increase workers' bargaining power

B. National Province Level Analysis

1) Regression Stage 1: Estimated Workers' Bargaining Power Coefficient: The econometric equations used for regression stage 1 are derived from equation (4).

$$w_{ilt} = \alpha_i + \delta_1 \ln \bar{w}_{lt} + \phi \left(\frac{VA}{N} \right)_{ilt} + \epsilon_{ilt} \quad (7)$$

with w in (4) to be w_{ilt} , w_a to be \bar{w}_{lt} and $\frac{\theta R(N)}{N}$ to be $\left(\frac{VA}{n} \right)_{ilt}$, with ϕ is workers' bargaining power. Index ilt means firm i in province l at time t . Data prepare at a firm level, arranged in cross-sectional pooling to obtain workers' bargaining power coefficient each province and every year. Data are grouped by province.

(w_{ilt}) is the average annual wage of workers in each sample firm. This variable uses the same data as the national sector level analysis. (\bar{w}_{lt}) is the smallest value of the average annual wage of workers in the province where firms operated. $\left(\frac{VA}{n} \right)_{ilt}$ is average annual value added of the worker in each firm and divided by province level Gross Domestic Regional Product (GDRP) deflator where the firm operates by the reference year 2010 to expressed in real terms.

2) Regression Stage 2: Determining Workers' Bargaining Power Determinant: The econometric equations used for analysis based national province level is:

$$\hat{\phi}_{lt} = x_{lt-1}\beta_1 + m_{lt-1}\beta_2 + f_{lt-1}\beta_3 + u_l\beta_4 + \epsilon_{jt} \quad (8)$$

$(\hat{\phi}_{lt})$ is worker's bargaining power, which is obtained from regression stage 1, grouped by province and year.

(x_{lt-1}) is ratio export to production, which is the total value of finished goods exported in a province divided by total production in that province. The hypothesis for this variable is a positive effect, which means higher export will increase workers' bargaining power;

(m_{lt-1}) is ratio import to production, which is the total of all raw and supporting materials imported in a province divided by total production in that province. The hypothesis for this variable is a negative or positive effect, which means higher imports will decrease or increase workers' bargaining power;

(f_{lt-1}) is ratio foreign firms to a total number of firms, which is the number of foreign firms in a province divided by total number of firms in that province. The hypothesis of this variable is a positive or negative effect, which means it can increase or decrease workers' bargaining power.

(u_l) is the unemployment rate. The hypothesis of this variable is a negative effect on workers' bargaining power, as it makes the labor market is less tight.

IV. RESULTS

A. National Sector Level Analysis

The descriptive statistic for national sector level analysis is presented in Appendix 1. The number of i is 40,178 firms, for 24 sectors (j), and 10 years (t).

1) Regression Stage 1: Estimated Workers' Bargaining Power Coefficient: The efficiency-wage theory explains that higher wages will increase worker productivity. In equation (5) and (7), wages are the dependent variable and worker value added (lead to workers' productivity) is an independent variable. Conducting Ordinary Least Square (OLS) regression on equation (5) and (7) will show endogeneity bias. The strategy to overcome this bias is using lag on the worker value added variable, because workers value added does not affect wages, but correlates with rent-shifting parameter Θ or workers' bargaining power coefficient.

The regression stage 1 estimate uses a significance level of 10%. The number of sample firms per sector can be seen in appendix 1. The sector with the most sample firms is the Food Industry with 9,400 firms and the smallest ones are Beverages, and Refined Petroleum Products which only contains 104 firms.

The regression stage 1 results in as worker' bargaining power coefficient (details can be seen in Appendix 2), with the statistical summary shown in Appendix 1.

Analyses from regression stage 1 are (a) workers' bargaining power coefficient shows variation across sectors, it means

TABLE I
NATIONAL SECTOR LEVEL ANALYSIS RESULT

Variable	Workers' Bargaining Power	Hypothesis
EKSPORT RATIO	-0.000111 (0.000667)	B>0
IMPORT RATIO	-0.0299*** (0.00685)	B<0
FOREIGN OWNERSHIP RATIO	0.000175* (9.27e-05)	B>0 or B<0
HERFINDAHL INDEX	0.000772*** (0.000101)	B>0 or B<0
CAPACITY UTILIZATION	0.000303*** (8.74e-05)	B>0
R-squared	0.240	

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

using a cross-sectional pooling approach can be considered appropriate. Abraham et al. showed that a positive correlation between workers' bargaining power and how strong the product market [3]. The sector with higher product market power will have higher workers' bargaining power than the weaker one; (b) Sectors with the highest average bargaining power coefficient are Repair and Installation of Machinery and Equipment 0.0000557, followed by Beverages sector 0.0000418 and Printing and Reproduction of Recorded Media sector 0.000395. Among these three sectors, printing and reproduction of recorded media sectors have the largest sample which are 1183 firms; (c) While the sector with the lowest one is chemical and chemical products with 0.0000019; paper and paper products with 0.0000037; and food industry with 0.0000099. These sectors have the characteristics of using many low skilled workers and more tight import competition.

2) *Regression Stage 2: Determining Workers' Bargaining Power Determinant:* Export, imports, and foreign ownership ratio variables potentially have endogeneity problems in regression stage 2, as they are strongly influenced by inputs. The higher input may increase the volume of export and import of a firm. This problem is solved by using lag, which means estimating workers' bargaining power coefficient to export ratio, import ratio and foreign ownership ratio with a 1-year lag.

The dependent variable used in regression stage 2 is workers' bargaining power coefficient, which is a set of result from regression stage 1. The regression stage 2 used weighted least square (WLS), with the weight being a variance of each sector and every year. The statistical result of regression stage 2 is shown in Table I.

B. National Province Level Analysis

The descriptive statistic for national province level analysis is presented in Appendix 3. The number of i is 40,179 firms, for 33 provinces (l), and 10 years (t).

1) *Regression Stage 1: Estimated Workers' Bargaining Power Coefficient:* The provinces sample can be seen in Appendix 3. Provinces with the most sample firms are Jawa Barat with 9,655 firms, and the least is Maluku Utara with 34 firms.

The regression stage 1 uses a significance level of 10%. The result of regression stage 1 for analysis by national province level is workers' bargaining powers coefficients (can be seen in Appendix 4), with statistical summary in Appendix 3. Regression stage 1 analysis are (a) workers' bargaining power coefficient shows a variation across provinces; it means using a cross-sectional pooling approach is considered appropriate. Otherwise, this variation may indicate that minimum wage setting at provincial level may be influenced by campaign promises of the elected governor; (b) Provinces with the highest average bargaining power coefficient is Nusa Tenggara Timur with 0.0011234 followed by Bali with 0.0002143. It is interesting to discuss how Nusa Tenggara Timur has the highest workers' bargaining power even though the number of firm sample relatively small. The authors argue it might be due to many workers in Nusa Tenggara Timur coming from outside the province; (c) While the lowest one is Maluku and Maluku Utara with around 0.0000000. Maluku Utara is the province with the lowest firm sample, which means there are not many industries in that province. The authors argue that this argument is one of many which cause workers' bargaining power to be relatively low in Maluku Utara.

2) *Regression Stage 2: Determining Workers' Bargaining Power Determinant:*

V. DISCUSSION

A. National Sector Level Analysis

The regression analysis found the value of workers' bargaining power relatively different across the sector, which may depend on how strong the product market of one sector.

Export ratio statistically has no significant effect on the worker's bargaining power. It may be caused by the low export to production ratio. The average value of the export ratio to production is 0.0023, which means every 1000 units of firm's production only 2.3 units are exported. This means production in Indonesia is heavily absorbed by the domestic market compared to export. The Brock and Dobbelaere study also found no significant effect between export and workers' bargaining power.

Import ratios have a statistically significant effect on workers' bargaining power with a negative direction. It is consistent

TABLE II
NATIONAL PROVINCE LEVEL ANALYSIS RESULT

Variable	Workers' Bargaining Power	Hypothesis
EKSPORT RATIO	0.00112 (0.00258)	B>0
IMPORT RATIO	0.199** (0.0865)	B<0
FOREIGN OWNERSHIP RATIO	0.0372*** (0.00448)	B>0 or B<0
UNEMPLOYMENT LEVEL	0.0119 (0.0110)	B<0
R-squared	0.270	

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

with the hypothesis and empirical results of Abraham, et al. that imports have lowered workers' bargaining power [3]. Increased imports will lower domestic production and reduce employment. Furthermore, the labor market becomes less tight and workers' bargaining power falls.

Foreign Firm Ratio statistically has a significant effect on the worker's bargaining power with positive direction. Each increase in 1 unit ratio of foreign firms will increase workers' bargaining power by 0.000175 units. The positive direction shows that the motivation of foreign investors to conduct foreign direct investment is to expand the market.

Herfindahl index has a statistically significant effect on the worker's bargaining power with a positive direction, which can be interpreted that an increase in 1 unit of Herfindahl Index causes an increase in workers' bargaining power equal to 0.000772 units.

B. National Province Level Analysis

Regression analysis found the value of workers' bargaining power relatively differ across the provinces, which may be influenced by the political process of governor election.

Export ratio statistically has no significant effect on the worker's bargaining power. It may due to the higher proportion of production absorbed by the domestic market than the export market. Average value of the export ratio is 0.0116583 which means only 11 units production is exported with every 1000 units produced.

Import ratio has a statistically significant effect on the worker's bargaining power with a positive direction. It is consistent with the hypothesis that import of raw and supporting materials causes increased workers' bargaining power. Rising imports of raw and supporting materials will make domestic production rise, increase labor absorption and tighten the labor market. Ultimately workers' bargaining power will increase.

Results of import ratio from national province level analysis show positive results which is completely different compared national sector level analysis. It may due to political influence in determining minimum wage at the provincial level. Every elected governor tries to fulfill a political promise, one of them is raising the minimum wage at the province level. The minimum wage that always rises as if describes the increasing workers' bargaining power. Unfortunately, this study does not

include variables related to political influence in regressions 1 and 2.

Foreign ownership ratio statistically has a significant effect on the worker's bargaining power with a positive direction. An increase in 1 unit ratio of foreign companies will increase workers' bargaining power by 0.0372 units. Positive direction shows the motivation of foreign investors to conduct foreign direct investment is to expand the market. The unemployment rate does not affect the bargaining power of workers.

VI. CONCLUSION

This study finds that in the national sector level analysis, imports will decrease workers' bargaining power, but exports do not affect workers' bargaining power. Meanwhile, in the national province level analysis, imports will increase workers' bargaining power, but not for exports which do not affect workers' bargaining power. The discussion is domestic production is more absorbed by the domestic market rather than the export market. Imports will increase or decrease workers bargaining power depend on the scope of analysis.

Subsequent research in Indonesia can develop study about the effects of international trade on the labor market by dividing up groups of workers by expertise and considering using variables related to political influence in determining minimum wages.

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