The Outcome of NGOs Activism on Domestic Firms in Developing Countries[*]

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Abstract

Many Developing Countries ratified ILO Fundamental Conventions and raised domestic labor laws. Multinational companies producing in these countries pay more when international NGOs campaigns take place and reputation counts. However, whether domestic NGOs' actions benefit local workers outside MNEs affiliates in host countries remains an open issue. This paper addresses the impact of NGOs activism on wages and employment in domestic firms in Indonesia. We use data on Indonesian manufacturing firms, before and after the authorization of labor unions, in presence or not of labor NGOs, in domestic firms or not. We find that the NGOs activism led a large increase in wage for unskilled workers in small and domestic firms after the authorization of labor unions. This suggests that non-governmental labor organizations have an impact on labor market outcomes as a complement of traditional labor institutions.

Keywords: labor standards, NGOs, wage determination

JEL: J51, J80

1 Introduction

In the last decades two major actors of globalization developed: Multinational Enterprizes (MNEs) and their network of subcontractors (Antras & Helpman (2004)), and international Non Governmental Organizations (NGOs) (Aldashev & Verdier (2009)). The two interact with each other through the increasing outside monitoring carried on by international NGOs. Civil society and international NGOs accuse MNEs of not complying with labor standards in their affiliates in Developing Countries (DCs). Recent studies show how MNEs pay more when NGOs campaigns take place and reputation counts (Harrison & Scorse (2010)). However, there is still an open issue: does this external pressure from NGOs benefit local workers outside MNEs affiliates in host countries and what is the actual influence of local labor NGOs?

Due to reputation effect, DCs shifted towards more labor protection (Caraway (2004)). More than 100 DCs ratified ILO Fundamental Conventions, improved domestic labor laws and authorized local labor unions.[1] However, despite this reshaped regulatory environment, there are still evidences that sweatshops have not been eradicated. Two factors may explain this contrast. First, weak enforcement institutions characterized many DCs (Boeri et al. (2008),Flanagan (2006)). Second, local labor unions suffer from lack of expertise in collective bargaining and in defending workers rights, in countries where labor unions have been banned for long. The role of weak enforcement institutions has been well documented (Martins & Esteves (2007), Bigsten et al. (2003)). We will focus here on the role of labor NGOs activism when labor unions are authorized on labor market outcomes *outside* multinational companies.

Labour NGOs are relatively small and mission-oriented organisations. Labour NGOs can be differentiated from other NGOs since they carry on activities "traditionally associated with trade unionism, organise groups generally considered "unorganisable" by unions (such as migrant workers), or influence labour issues by participating in advocacy, networking, research and publishing activities" (Ford, 2002). Interestingly, local labor NGOs are becoming new players in labor market institutions in developing countries. In authoritarian regimes where trade unions have been severely repressed, NGOs provid a basis for organizing and defending workers. There are revealing examples from Korea (up to the late 1980s), the Philippines (under Marcos), Indonesia (during the Suharto regime), or South Africa (in the early 1970s) (Spooner (2004)). Then, in countries fac-

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[1]http://www.ilo.org/ilolex/english/docs/declworld.htm.

ing state repression of labor organization, local labor NGOs act as a substitute of traditional trade unions. While, in more democratic regimes, where independent labor unions are authorized by the law, NGOs act as a complement to the traditional labor institutions. Indeed, local labor unions and local NGOs cooperate in various regions of the world, including Southeast Asia. In Thailand, trade unions and NGOs campaigned jointly for improvements in occupational health and safety after a fire killed 188 people in a toy factory in May 1993 and have since developed new alliances (Brown (2004)). In Malaysia, women's NGOs and women's section of the Malaysian Trade Union Congress worked together on many issues (Crinis (2008)). A Jakarta-based grassroots NGO activist states that "the task of NGOs is to encourage workers to form unions, not to control them. NGOs have to raise their self-awareness so that they see the need to organize" (Ford (2005)). While several Developing Countries have recently authorized labor unions, there is often a lack of collective bargaining background and legal capacity to defend workers rights. In such context, local labor NGOs provide technical and legal assistance to workers, disseminate information on domestic labor laws and workers' rights.

Therefore, the presence of *local* labor NGOs is expected to change labor market outcomes in countries lacking a culture of negotiation and with weak enforcement institutions. We are interested in such outcome. Our point is however that not all workers are employed in affiliates of foreign companies. At the same time, among workers employed outside these affiliates, not all workers are employed in the formal sector where labor unions are active. The question is thus how the large segment of the labor market corresponding to formal employment in domestic firms is impacted by such interactions.

The recent literature has so far focused on the impact of NGOs activism on labor conditions in multinational affiliates ((Baron (2001)); Harrison and Scorse, 2010; (O'Rourke (2003)); (Yaziji (2009)). Focusing on domestic firms implies that the channel of reputation of the firm is no longer relevant. Domestic firms are not even concerned about reputation as they do not export, at least directly. Therefore, the threat to damage the reputation of the firm, often used by international NGOs campaigns against multinationals, is not credible. This is our first departure from the existing literature. Our second departure is to explicitly address the consequences of labor NGOs activism as a substitute/complement of traditional labor institutions.

To our knowledge, no empirical research exists addressing the issue of the interaction between

labor NGOs activism and traditional labor institutions. To analyse empirically this interaction, we need data on domestic manufacturing firms in a developing country, before and after authorization of labor unions, in presence or not of local labor NGOs. Indonesia offers such a combination and will be used to analyze the interaction between traditional labor institutions and labor NGOs activity. Local labor NGOs played an important role in the Indonesian working-class movement. During the Suharto regime, labor NGOs were the principal organized labor movement against the New Order's industrial relations system, due to the strong repression of workers activists (Ford, 2002). During that period, labor NGOs carried on activities *outside* firms: they targeted MNEs operating in Indonesia and conducted advocacy campaigns at the international level. After the end of the Suharto regime in 1998, with the democratic transition, labor NGOs changed their strategies. They focused on activities *inside* the firms, relying on the reformed labor institutions. Indeed, the post-Suharto era is defined by a strong complementarity between local labor NGOs and the activities of labor unions.

We rely on Data of the Indonesia Manufacturing Industry over the period 1991-2005. This period covers the Trade union Act of 2000 that authorized independent labor union. During the Suharto Regime only one labor union was officially recognized by the government. Independent labor unions were not only banned but also severely repressed. The Trade Union Act of 2000 permitted groups of 10 or more workers to form union at firm level. We make use of a difference-in-difference-in-difference method. We study the external shock (before and after the labor law), the role of the substitution/complementarity between labor NGOs and labor unions (district with/without labor NGOs) and the ownership of the firm (domestic versus foreign).

We find that the NGOs activism led a large increase in wage for unskilled workers in small and domestic firms after the authorization of labor unions and the raise of national labor laws. This suggests that labor NGOs activism provides technical and legal support to workers within firms with few resources, where labor rights are not protected. Moreover, the results suggest that labor NGOs activism has an impact on labor market outcomes just acting as a complement of traditional labor unions activities. Labor NGOs activity can be effective if carried on inside the firms and relied on domestic labor institutions.

The remainder of the paper is organized as follows: Section 2 presents the empirical analysis based on manufacturing industry in Indonesia, while Section 3 concludes.

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2 Empirical Analysis

2.1 Background

Indonesia is an ideal case study due to the variability over time in labor market relations. During the Suharto Regime only one labor union was officially recognized by the government.[2] Independent labor unions were not only banned but also severely repressed. In absence of free labor unions, the period of the Suharto regime was characterized by radical and violent movements. During that period, Indonesia's labor NGOs carried on advocacy campaigns, training local workers and conduct research activities. As aforementioned, labor NGOs conducted activities *outside* firms: they targeted MNEs operating in Indonesia and conducted advocacy campaigns at the international level. They exerted pressure also against the political authorities to stop repressions of workers activists.

President Suharto's resignation in May 1998 changed deeply Indonesia's industrial relations landscape. The new government ratified eight ILO Conventions; one of them was *Convention N. 87* on the "Freedom of Association and the Protection on the Right to Organize". The Trade Union Act of 2000 permitted groups of 10 or more workers to form union also at firm level. There were two other important labor laws in these years. The "Manpower Act" (law n.13/2003) and the "Law 2001 on minimum wage". The "Manpower Act" defines rules on the right to strike while with the Law 2001 the right to set the minimum wage was transferred from the central government to the local government (at province level). By August 2000, 24 national union organizations and over 10,000 enterprize unions had registered with the Department of Manpower. Federation and confederation of labor unions exist but enterprise union is considered to be more important due to the direct relationship with both workers and management. A *Collective labor agreement* (CLA) shall be made between one (or several) registered trade union and an employer.[3] An alternative system used by firm is the *Company regulation* (instead of the CLA) with the agreement of labor union.[4] Caraway (2004) argues that labor success in the immediate post-Suharto years can be

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[2]Suharto was the second president of Indonesia, holding the office from 1967 to 1998.
[3]The validity of CLA is 2 years expendable for 1 year.
[4]The CLA and the company regulation are almost the same as both tend to follow the legal minima (Julia & Putranto

explained by the international pressure to restore basic labor rights and the early remobilization of labor in contrast to employers after the Asian financial crisis.

However, despite this reshaped regulatory environment, there is still a limited impact not only due to weak enforcement institutions, but also due to labor market features, in particular the lack of tradition in terms of labor market negotiations.[5] As reported by the *ILO Survey on Collective Bargaining in Indonesia* (2006): "the frequent failure of labor unions to secure CLA at the enterprize level results from a lack understanding of the concepts of collective bargaining, poor negotiation skills of the parties and inadequate preparations."

The technical and legal support of labor NGOs must have an impact on labor market outcomes.[6]

After the Trade Union Act was passed in 2000, the lack of expertise on collective bargaining and technical skills reduced the impact of independent labor unions on workers' conditions. To some extent, this lack of expertise has been compensated by the activism of local labor NGOs. Such NGOs have played an important role in Indonesia society and particularly in the working-class movement. However, after the authorization of trade unions, labor NGOs had to redefine their role to be "legitimate" within the organized labor movement. The Trade union law created for them the opportunity to act directly at firm level by closely cooperating with workers activists.

Then, after the labor laws, local NGOs provided important services to workers and labor organizations. They offered legal advice and legal services, teaching about labor rights, and helping to release workers from jail when they are arrested. Indeed, NGOs were the most important source of support to workers (Botz (2001)).

To identify the mechanism we are interested in, remind that we need three dimensions in our data. We need a time dimension to control for the introduction of labor unions. We need an ownership dimension to control for the reputation channel. We also need a geographic dimension to control for the presence of local labor NGOs within Indonesia.

(2006)).

[5]In our empirical analysis, we control for weak enforcement institutions by using the Difference-in-Difference method. In our sample the external shocks are the new labor laws, while enforcement institutions did not change over time.

[6]Notice that the Department of Manpower could still withdraw official recognition of union that did not meet administrative requirements, and the courts could dissolve unions whose leaders deemed to "threaten national security".

2.2 Data summary

The Dataset used in this analysis is derived from the annual manufacturing survey of Indonesia collected and compiled by the Indonesian government's statistical agency BPS (*Badan Pusat Statistik*). The BPS submits a questionnaire annually to all registered manufacturing establishments with 20 or more employees. The data cover the period before and after the Trade Union Act of 2000. The number of observation is around 20,000 firms per year. There is information about employees (wages) and each firm (industry, region, size, ownership, etc.). We also rely on a detailed list of Indonesian NGOs specialized in labor issues provided by Ford (2009) to collect information on the years and area where local labor NGOs were active. We restrict our analysis to provinces where labor NGOs were active, by considering the difference at district level. Districts, i.e. regency (*kabu*) and city (*kota*), are a sub-division of the provinces at administrative level. They have their own local government and legislative body. Cities differ from regency essentially because they do not include rural area. Local NGOs specialized on labor issues are active in the major cities in Indonesia: Medan, Jakarta Timur, Jakarta Selatan, Jakarta Pusat, Bandung, Surabaya, Bogor, Yogyakarta. Though, there was a change in the identification code of provinces and districts in Indonesia, we were able to convert the old code to the new one through a table with the corresponding code.

We focus in Table 1 on production workers wages, which we use as a proxy of unskilled workers. Table 1 shows the mean of the wage for the manufacturing sector for domestic and foreign firms for year 1991-1996 and 2004-2005.[7]

We consider the period 1991-1996 before the Trade Union Act (2000) as opposed to the period 2005-2006. We focus on these years, since the financial crisis in 1997 and the fall of the Suharto Regime in 1998 makes the analysis of post 1996 problematic (Harrison & Scorse (2010)). The economic situation pre-crisis was re-established just after 2002 (Rahayu & Sumarto (2003)).

During that period, there were two Export Processing Zones (EPZs) in Indonesia: Jakarta Utara and Batam. EPZs provide a series of benefits to foreign investments, export-oriented manufacturing facilities and streamlined administration. The compliance with labor laws, the number of labor inspections and the repressions of labor activists in the EPZ is a very specific issue (Sivanan-

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[7]We define the average wage as the total wage of production workers at firm level divided by the number of production workers.

thiran (2009)). We exclude from the analysis these two areas, since the peculiarities of the EPZ on labor issues might drive the results. As a robustness check, we include the EZPs in the regression analysis.

Table 2 shows the mean of the wage, the profit and the number of production workers in the period analyzed. Rows (1) and (2) of Table 2 report the average wage in districts without labor NGOs, our control group, and in districts with labor NGOs, our treatment group, within provinces were labor NGOs were active. Results of t-test reported in rows (3) of Table 2 shows that the difference in mean of wage between districts with labor NGOs and districts without labor NGOs are not statistically significant. Hence, we do not risk an identification error. Then, we split the sample with respect to the ownership of the firm. Table 3 and Table 4 show the mean of the wage, the profit and the number of production workers in the period analyzed for respectively domestic and foreign firms. Results of t-test show that the difference in mean of wage between districts with labor NGOs and districts without labor NGOs are not statistically significant for both domestic and foreign firms. Figure (5) shows the log mean annual earnings for districts with NGO and districts without NGOs for 1991-1996. The figure indicates no difference in the trend of average annual wage between treatment and control group *before* the labor law. This suggests that during the Suharto regime firms paid the same wage.

2.3 Empirical Strategy

We study the impact of local labor NGOs activism on labor market outcomes in domestic firms. As aforementioned, NGOs specialized in labor issues are active in several developing countries and operate close to the traditional labor institutions. Local labor NGOs in Indonesia have played an important role in workers movement before and after the Suharto Regime. This changing in the political regime in Indonesia allows us to analyze the impact of local labor NGOs activism during an authoritarian regime and then a more democratic regime with well established labor laws at the governmental level. We exploit the external shock, i.e. the Trade Union law of 2000, as the point in time when labor NGOs start working close to labor unions and workers at firm level.

From 1999 to 2004, the real wages in the formal sector increased rapidly. As reported by the *Indonesia Job Report 2010 of the World Bank*, the median real wages increased by almost 9 percent per year. Figure (1) shows the distribution of the log of production worker wages before

and after 2000 for all firms. We construct a time dummy T that is equal to 1 for the year after the Trade Union law and is equal to zero for the year before 2000 in order to take into account this increase in wage. However, as reported in Figure (2), there is a difference in the distribution of the log of production worker wages before and after 2000 in district with NGO and without NGOs for all firms. In district with NGOs the wage increase more in the lower part of the distribution with respect to districts without labor NGOs. Figure (3) and (4) show that this effect is concentrated only on domestic firms. It seems that labor NGOs provide a support to workers within firms with few resources, where labor rights are not protected. We want to measure precisely the impact of labor NGOs on wage distribution.

As aforementioned, after the authorization of independent labor unions, there exists a strong complementarity between labor unions and local labor NGOs. The collective bargaining was banned and repressed since 1998 (the fall of Suharto). Moreover, the last period of the Regime was characterized by radical movement and violent demonstration. After the fall of Suharto and the authorization of independent labor unions in 2000, the role embodied by local labor NGOs was to rebuild a negotiation capacity. Since then labor NGOs have developed alliances with labor unions at local level and have supported small labor unions at firm level (Ford 2009). They provide technical and legal assistance to workers, inform them on domestic labor laws and on workers' rights. Therefore, the local labor NGOs activism must have an impact on labor market outcomes, due to this complementarity.

Importantly for our estimation strategy, in Indonesia local labor NGOs are active in some specific areas. As aforementioned, we restrict our analysis to provinces where labor NGOs were active, by considering the difference at district level. NGOs specialized on labor issues are active in the major cities in Indonesia: Medan, Jakarta Timur, Jakarta Selatan, Jakarta Pusat, Bandung, Surabaya, Bogor, Yogyakarta.

We proceed sequentially. We firstly examine the impact of NGOs activism (proxied by their presence in the district of interest) on the Indonesian labor market after the fall of the Suharto regime. We take care of controlling for the reputation channel. We then address more specifically the role of these events for domestic owned versus multinational enterprises. We finally split our sample by firm size in order to identify the specific role of NGOs activism on small firms.

2.3.1 The change in labor laws

We firstly use a difference in difference approach in order to investigate the role of labor NGOs *after* the Trade Union Act 2000 in a country with lack of individual background of negotiation. We consider the difference in wage between district with local labor NGOs and district without local labor NGOs, for the period before and after the Trade Unions Act of 2000. We construct a district dummy NGO, where $NGO = 1$ for districts where labor NGOs were active and $NGO = 0$ otherwise. We interact the time dummy T with the geographical dummy NGO. Our treatment group is then a firm located in district where labor NGOs were active. The interaction term $T * NGO$ is our variable of interest.

The wage equation estimated is the following:

$$lnw_{ijrt} = \alpha + \beta_3 T + \beta_6 NGO_{rt} + \beta_7 TNGO_{rt} + \eta_t + \eta_j + \eta_r + \epsilon_{ijrt} \tag{2.1}$$

for firm i in district r and year t, where η_t are fixed effect at time level, η_r at province level and η_j at sector level.

Column (1) in Table (5) presents the results. The dependent variable is the log of the average wage. The coefficient of the variable T*NGO is positive and highly significant. This result shows that the complementarity between labor NGOs and labor unions activities has a strong and positive impact on wage. The role of labor NGOs to rebuild a negotiation capacity was effective.

However, the effect of labor NGOs could be concentrated on firms with reputation concerns. Indeed, during that period local labor NGOs build network at the international level with Northern NGOs caring about working conditions in developing countries and acting against well-known brand. From 1990s a huge campaigns was launched in Indonesia by civil society activists about working conditions in the export firms and in textile and garment sector. Harrison and Scorse (2002) show how MNE affiliates pay a higher wage where NGOs campaigns take place and reputation counts. Therefore, the reputation channel could be used also by local labor NGOs after the authorization of independent labor unions. In order to control for the reputation concern, we include in the regression variables that are related with the reputation of the firm. We construct the sector dummy TFA that is equal to 1 if a firm is in the textile-footwear-garment sector and

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zero otherwise. We construct the dummy at district level SUB that is equal to 1 if the firm is located in the district where are located suppliers of Nike, Reebok, and Adidas.[8] In column (2) in Table 5, we report coefficient estimates when we include export dummy, the sector dummy TFA and the dummy SUB. The coefficient of the variables EXP and SUB is positive and significant but not significant for TFA, while the magnitude and the sign of the coefficient of our treatment group do not change. This result suggests that the impact of labor NGOs activism do not pass through the threat of damaging the firm reputation. Notice that all along the analysis we focus on domestic labor NGOs active in Indonesia. Therefore, the target and the instruments available to local and small labor NGOs are different from those of larger NGOs located in the North and exerting pressure on Multinational firms operating in developing countries. Finally, in column (3), we report coefficient estimates when we include the minimum wage.

2.3.2 The ownership of the firm

In the previous section, we analyzed the impact of labor NGOs activism on the outcome in a country with lack of individual background of negotiation. However, on one hand labor NGOs provide more technical and legal assistance to workers operating in firms where labor movement are less organized and lacking in resources. On the other hand, the firm can react differently to workers activism with respect to the cost and benefit in managing workers' complaints. Therefore, the status of the firm has an impact on the level of wage setting at firm level. We have the information on the ownership of the firm. We include in the regression the dummy variable DOM, that is equal to 1 if the firm is domestic and zero otherwise. We interact this variable with the time dummy T and district dummy NGO. Then, we use a Difference-in-Difference-in-Difference method, in order to take into account the external shock (before and after the Trade Union Act 2000), the role of the complementarity between labor NGOs and labor unions activities (district with/without labor NGOs) and the ownership of the firm (domestic versus foreign firms).

The equation estimated is the following:

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[8]The list of the subcontractors have been provided by Ann Harrison. This list is available upon request by Harrison and Scorse.

$$lnw_{ijrt} = \alpha + \beta_3 T + \beta_4 NGO_{rt} + \beta_5 T * NGO_{rt} + \beta_6 T * NGO_{rt} DOM_i +$$

$$\beta_7 T * DOM_i + \beta_8 DOM_i * NGO_{rt} + \beta_9 DOMi + \beta_{10} X_{irt} + \eta_t + \eta_j + \eta_j + \epsilon_{ijrt}$$

$$(2.2)$$

Column (1) and (2) in Table 6 presents the results. The coefficient of the interaction term variable $T * DOM * NGO$ is *positive* and highly significant even after controlling for EXP, TFA and SUB. This suggests that labor NGOs activism provides technical and legal support to workers within firms with few resources, where labor rights are not protected. We include in all estimated equations year dummy to control for any aggregate shocks in year 1991-1996 and 2004-2005. We include as well sector and province dummy to control for any sector and province specific shocks.

The positive effect is even stronger when we split the sample by size. We consider firm with less than 50 employees, firms with a number of employees within 50 and 250, and large firms with more than 250 employees.[9] For small firms with less than 50 employees, after the trade union law, in district where labor NGOs were active the wage is around 50 percent higher than in district without labor NGOs. This result suggests that the impact of labor NGOs is higher when workers are less organized and lacking in resources. Not surprisingly, our results are different from Harrison and Scorse (2010), who find that the effect of the outside pressure of NGOs against MNEs through the threat to damage their reputation is limited to large firms.[10] In contrast, the activism of domestic labor NGOs has a larger impact for small domestic firms.

We have shown that the activism of local labor NGOs had a positive impact on wages for workers in small and domestic firms after the authorization of independent labor unions. Then, the results suggest that labor NGOs activism has an impact on labor market outcomes just acting as a complement of labor unions activities. Labor NGOs activity can be effective if carried on inside the firms and relied on domestic labor institutions.

However, the higher wage paid in domestic firms where labor NGOs were active might have led to a reduction in the level of employment at firm level. In Table 8 we replace the log of

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[9]We use the definition of small, medium and large firms adopted by the European Union.

[10]Harrison and Scorse (2010) consider small firms with less than 100 employees and large firms with more than 100 employees.

production workers wage with the log of production worker employment as dependent variable. The coefficient of $T*NGO*DOM$ is negative but not significant. This suggests that labor NGOs activism did not translate in employment decline.

2.3.3 Robustness Checks

Firstly, the dynamic economic and social environment of Jakarta capital might drive our main results. Column (1) of Table 9 presents a first robustness check where we run the main regression as in equation (2.2) but we exclude the province of the capital. The coefficient of our treatment variable $NGO*T*DOM$ remains positive and strongly significant.

A second potential issue is that the presence of a large number of NGOs in each province working on different issues might create a specific environment and then affect our results. The information about the number of NGOs in each province in Indonesia is publicly available on the website of SMERU, an independent institution for research and public policy studies working on issues concerning Indonesia.[11] We restrict the analysis on NGOs specialized on labor rights issues and control for the number of NGOs in each province in column (2). The coefficient of the variable $nbNGO$ is positive and not significant while the results for our key variables are basically unaffected.

A third concern is with the indirect effect of the presence of foreign firms on individual wage at firm level in the domestic sector. To address this issue, we introduce in column (3) a variable called $spillover$ that measures the share of the foreign firms in the total value of the production per province and year. The parameter of this variable is positive and significant but the coefficient of our variable of interest $NGO*T*DOM$ is unaffected.

Lastly we add a dummy variable called $highwage$ equal to one if firms pay over the minimum wage. Indeed, this could bias our results. The coefficient of this dummy variable in column (3) is positive but not significant, while the sign and significance of our main variable of interest does not change.

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[11]SMERU is funded by the Australian Agency for International Development (AusAid). http://www.smeru.or.id/

3   Conclusion

In the present paper we investigated the impact of local labor NGOs activism in Indonesia on wages and employment in domestic firms. We used data on Indonesian manufacturing firms, before and after the authorization of labor unions, in presence or not of labor NGOs.

In Indonesia, as other developing countries, local labor NGOs have increasingly carried on activities to help local workers to achieve better working conditions. Labor NGOs provide technical and legal assistance, training workers and conduct research activities. The role embodied by local labor NGOs was to rebuild a negotiation capacity. Therefore, the activism of local labor NGOs had potentially a significant impact on labor market outcomes. We used a Difference-in-Difference method in order to study the difference in wage between firms located in districts with labor NGOs (our treatment) and firms located in districts without labor NGOs (our control), before and after the labor laws (Trade Union Act 2000). We found that the NGOs activism led an increase in wage for unskilled workers after the authorization of labor unions.

Such influence is mitigated by three types of factors. First, NGOs provide more technical and legal assistance to worker operating in firms where labor movement are less organized and lacking in resources. Second, firms can react differently to workers activism with respect to the cost and benefit in managing workers' complaints. Third, the effect of labor NGOs could be concentrated on firms with reputation concerns, as the reputation channel could be used by labor NGOs also after the authorization of independent labor unions. Therefore, the size and status of the firm should have an impact on the wage set at firm level. We used a Difference-in-Difference-in-Difference method, in order to take into account the ownership of the firm. In order to control for the reputation concern, we included in the regression variables that are related to the reputation of the firm: export status, the location of the firm in district with suppliers of Nike, Reebok and Adidas, the affiliation to the textile and garment sector. Finally, we split our sample in order to control for the influence of firm size.

We found that the NGOs activism led a large increase in wage for unskilled workers in small and domestic firms after the authorization of labor unions. The impact is even stronger after controlling for reputation issue, suggesting that the impact of labor NGOs activism did not pass through the threat of damaging the firm reputation. Labor NGOs activism provides technical and legal support to workers within firms with few resources, where labor rights are not protected.

Moreover, the results suggest that labor NGOs activism has an impact on labor market outcomes just acting as a complement of traditional labor unions activities. Labor NGOs activity can be effective if carried out inside the firms and relied on domestic labor institutions.

This work opens many avenue of research, as it highlights the complexity of relations on the labor market in developing countries progressively reorienting their attitude towards more workers-friendly institutions. For instance, there could be some form of competition among labor NGOs in the South and also between labor unions and local labor NGOs. Another important issue is about the outside option of workers and the relative wages in the formal and informal sector, taking into account the compensation offered in the informal sector for harsh working conditions. The issue of the informality sector is important even for Indonesia but unfortunately hardly empirically documented.

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Figure 1: **Distribution of the log of production worker wages before and after 2000-All firms**

Figure 2: **Distribution of the log of production worker wages before and after 2000 in district with NGO and noNGO-All firms**

All firms located in district with NGO and noNGO

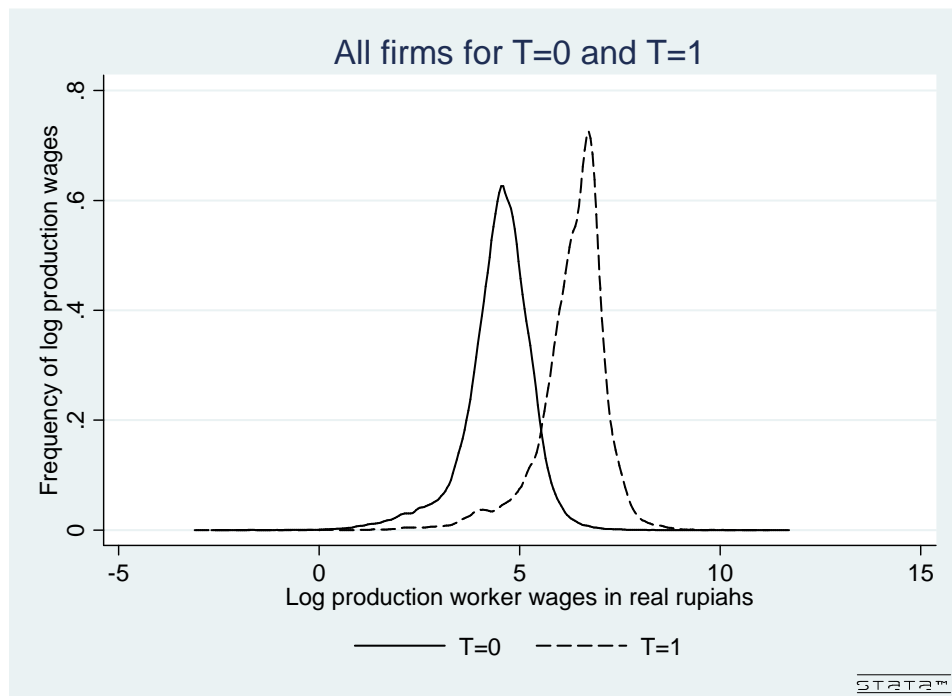NGO T=0   noNGO T=0
NGO T=1   noNGO T=1
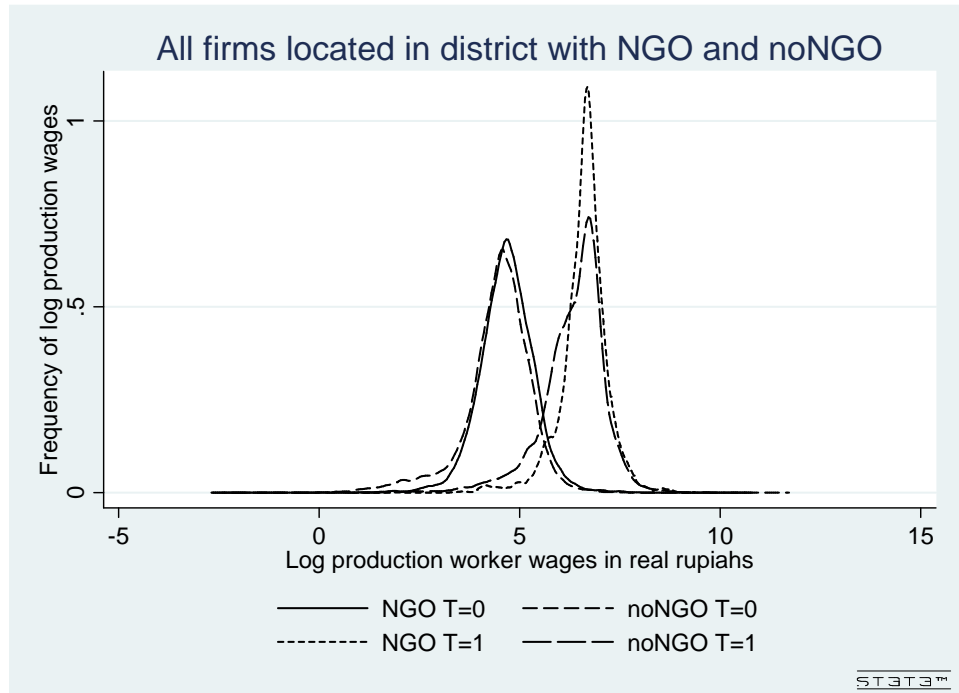
Figure 3: **Distribution of the log of production worker wages before and after 2000 in district with NGO and noNGO-Foreign firms**
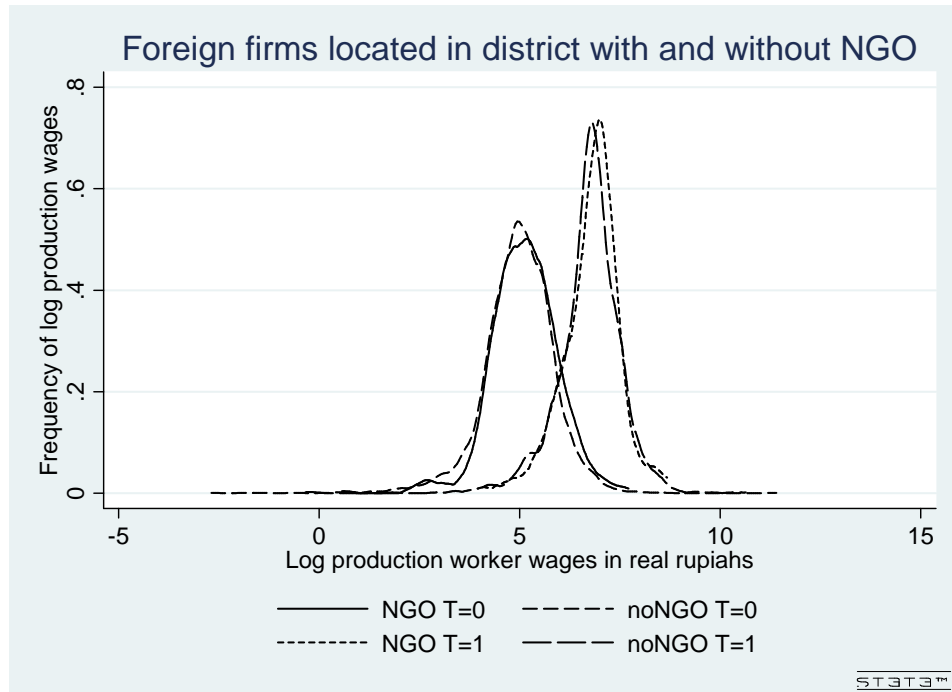
Figure 4: **Distribution of the log of production worker wages before and after 2000 in district with NGO and noNGO-Domestic firms**
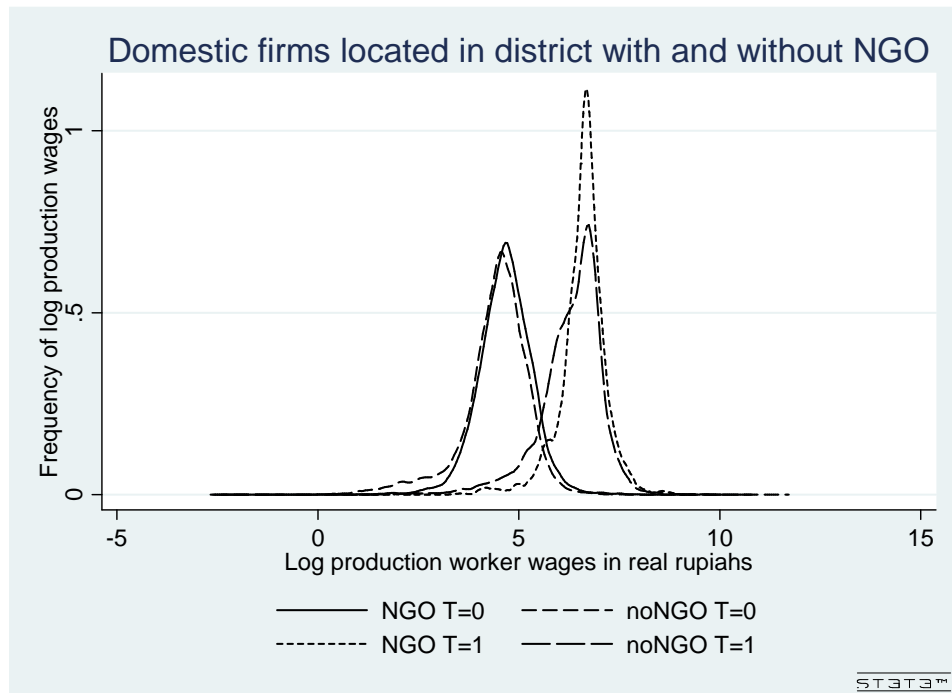
Table 1: **Mean of wage production workers for years 1991-2005**

	All firms	**Domestic**	**Foreign** [a]
Mean wage 1991	812.9042	783.60	1452.56
Mean wage 1992	1052.684	993.87	2180.95
Mean wage 1993	1150.60	1120.82	1686.939
Mean wage 1994	1080.93	1029.59	1897.61
Mean wage 1995	1203.36	1151.13	2092.36
Mean wage 1996	1383.41	1314.42	2505.46
Mean wage 2004	5869.65	5604.89	8940.55
Mean wage 2005	6521.78	6227.89	9806.17

(a) Includes at least 10 percent foreign equity

Table 2: **Comparison of Treatment Groups relative to Controls Prior to Treatment (1991-1996)**

NGO	wage	profit	nbworker
(1) Control	130.65	280136	189.80
(2) Treatment	144.85	307489.3	180.99
(3) t-test diff	-1.36	-0.74	1.05

A * indicates the difference in means is statistically significant at 0.05; a ** indicates the difference in means is statistically significant at 0.01; a *** indicates the difference in means is statistically significant at 0.001. All values are in real Rupiahs

Table 3: **Comparison of Treatment Groups relative to Controls Prior to Treatment (1991-1996)- Domestic firm**

NGO	wage	profit	nbworker
(1) Control	124.71	208747.3	166.76
(2) Treatment	141.78	250017.5	173.56
(3) t-test diff	-1.66	-1.13	-0.80

A * indicates the difference in means is statistically significant at 0.05; a ** indicates the difference in means is statistically significant at 0.01; a *** indicates the difference in means is statistically significant at 0.001. All values are in real Rupiahs

Table 4: **Comparison of Treatment Groups relative to Controls Prior to Treatment (1991-1996)- Foreign firm**

NGO	wage	profit	nbworker
(1) Control	241.44	1542334	588.22
(2) Treatment	234.17	2031827	408.625
(3) t-test diff	0.80	-1.70	3.92***

A * indicates the difference in means is statistically significant at 0.05; a ** indicates the difference in means is statistically significant at 0.01; a *** indicates the difference in means is statistically significant at 0.001. All values are in real Rupiahs

Figure 5: **Earnings for period 1991-1996**

Earnings for period 1991-1996- Domestic firms
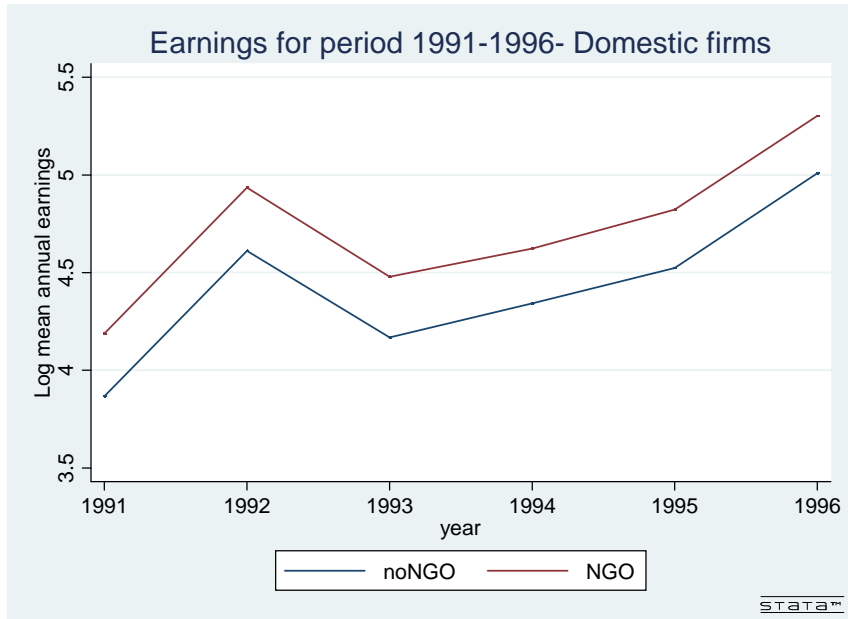
Table 5:

Difference-in-Difference Estimation

	1 Coef./se	2 Coef./se	3 Coef./se
profit	0.000*	0.000*	0.000*
	(0.00)	(0.00)	(0.00)
NGO	-0.035	-0.024	-0.024
	(0.06)	(0.06)	(0.06)
T*NGO	0.109***	0.105***	0.105***
	(0.02)	(0.02)	(0.02)
T	2.363***	2.283***	0.000
	(0.01)	(0.01)	(.)
EXP		0.021*	0.021*
		(0.01)	(0.01)
SUB		0.103***	0.109***
		(0.02)	(0.02)
TFA		0.086	0.098
		(0.09)	(0.09)
realminwage			0.000***
			(0.00)
r2	0.680	0.667	0.668
N	145926	139720	139720
Year fixed effect	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes
Province fixed effect	Yes	Yes	Yes

*Standard error in parentheses, with * indicating significance at 0.05, ** indicating significance at 0.01 and *** indicating significance at 0.001. Constant term included in all specifications but not reported here.*

Table 6:

Difference-in-Difference-in-Difference Estimation

	1	2	3
	Coef./se	Coef./se	Coef./se
profit	0.000*	0.000*	0.000*
	(0.00)	(0.00)	(0.00)
NGO	0.002	0.009	0.105
	(0.09)	(0.09)	(0.08)
T*NGO	-0.176	-0.186	-0.311***
	(0.10)	(0.10)	(0.08)
DOM*NGO	-0.037	-0.029	-0.109
	(0.08)	(0.08)	(0.06)
T*DOM*NGO	0.299**	0.306**	0.399***
	(0.10)	(0.11)	(0.09)
T*DOM	0.010	-0.047	-0.042
	(0.03)	(0.03)	(0.03)
DOM	-0.064**	-0.043	-0.035
	(0.02)	(0.02)	(0.02)
T	2.353***	0.000	0.000
	(0.03)	(.)	(.)
SUB		0.104***	0.104***
		(0.02)	(0.02)
realminwage		0.000***	0.000***
		(0.00)	(0.00)
TFA		0.107	0.083
		(0.08)	(0.08)
EXP		0.021*	0.022**
		(0.01)	(0.01)
r2	0.680	0.668	0.669
N	145924	139719	150406
Year fixed effect	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes
Province fixed effect	Yes	Yes	Yes

*Standard error in parentheses, with * indicating significance at 0.05, ** indicating significance at 0.01 and *** indicating significance at 0.001. Constant term included in all specifications but not reported here*

Table 7:

Difference-in-Difference-in-Difference Estimation: control for firm size

	Small Firm Coef./se	Medium Firm Coef./se	Large Firm 3 Coef./se
profit	0.000	0.000*	0.000
	(0.00)	(0.00)	(0.00)
NGO	0.181	0.105	0.154
	(0.12)	(0.08)	(0.14)
T*NGO	-0.385	-0.311***	-0.318**
	(0.22)	(0.08)	(0.12)
DOM*NGO	-0.142	-0.109	-0.180*
	(0.10)	(0.06)	(0.09)
T*DOM*NGO	0.518*	0.399***	0.337**
	(0.22)	(0.09)	(0.13)
T*DOM	-0.065	-0.042	0.039
	(0.10)	(0.03)	(0.04)
SUB	0.243***	0.104***	0.051
	(0.03)	(0.02)	(0.05)
realminwage	0.000***	0.000***	0.000
	(0.00)	(0.00)	(0.00)
EXP	0.008	0.022**	0.007
	(0.02)	(0.01)	(0.01)
DOM	-0.003	-0.035	-0.024
	(0.04)	(0.02)	(0.04)
r2	0.662	0.669	0.660
N	80253	150406	23297
Year fixed effect	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes
Province fixed effect	Yes	Yes	Yes

Standard error in parentheses, with * indicating significance at 0.05, ** indicating significance at 0.01 and *** indicating significance at 0.001. Constant term included in all specifications but not reported here.

Table 8:

Employment

	1	2
	Coef./se	Coef./se
profit	0.000	0.000
	(0.00)	(0.00)
NGO	-0.066	-0.109
	(0.06)	(0.09)
T*NGO	-0.063***	-0.001
	(0.02)	(0.09)
SUB	0.119***	0.108***
	(0.02)	(0.02)
realminwage	-0.000	-0.000
	(0.00)	(0.00)
TFA	-0.097	-0.097
	(0.10)	(0.10)
EXP	0.119***	0.120***
	(0.01)	(0.01)
DOMESTIC	-0.138***	0.000
	(0.02)	(.)
DOM*NGO		0.054
		(0.07)
T*DOM*NGO		-0.062
		(0.09)
T*DOM		-0.131***
		(0.03)
r2	0.024	0.025
N	139719	139719
Year fixed effect	Yes	Yes
Sector fixed effect	Yes	Yes
Province fixed effect	Yes	Yes

*Standard error in parentheses, with * indicating significance at 0.05, ** indicating significance at 0.01 and *** indicating significance at 0.001. Constant term included in all specifications but not reported here.*

	1	2	3	4
	Coef./se	Coef./se	Coef./se	Coef./se
profit	0.000*	0.000*	0.000*	0.000*
	(0.00)	(0.00)	(0.00)	(0.00)
NGO	-0.005	0.009	0.007	0.042
	(0.10)	(0.09)	(0.09)	(0.09)
T*NGO	-0.192	-0.186	-0.184	-0.175
	(0.11)	(0.10)	(0.10)	(0.10)
DOM*NGO	-0.020	-0.029	-0.026	-0.043
	(0.08)	(0.08)	(0.08)	(0.07)
T*DOM*NGO	0.350**	0.306**	0.305**	0.295**
	(0.11)	(0.11)	(0.11)	(0.11)
T*DOM	-0.047	-0.047	-0.047	-0.047
	(0.03)	(0.03)	(0.03)	(0.03)
SUB	0.105***	0.104***	0.104***	0.104***
	(0.02)	(0.02)	(0.02)	(0.02)
realminwage	0.000***	0.000***	0.000***	0.000***
	(0.00)	(0.00)	(0.00)	(0.00)
TFA	0.136	0.107	0.107	0.096
	(0.09)	(0.08)	(0.09)	(0.08)
EXP	0.019*	0.021*	0.023**	0.022**
	(0.01)	(0.01)	(0.01)	(0.01)
DOM	-0.043	-0.043	-0.045*	-0.047*
	(0.02)	(0.02)	(0.02)	(0.02)
nbNGO		0.000		
		(0.00)		
spillover			0.025	
			(0.03)	
highwage				6.281***
				(0.23)
r2	0.665	0.668	0.671	0.675
N	132905	139719	137120	139719
Year fixed effect	Yes	Yes	Yes	Yes
Sector fixed effect	Yes	Yes	Yes	Yes
Province fixed effect	Yes	Yes	Yes	Yes

*Standard error in parentheses, with * indicating significance at 0.05, ** indicating significance at 0.01 and *** indicating significance at 0.001. Constant term included in all specifications but not reported here*