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EVALUATION OF DEVELOPMENT CO-OPERATION
TO STRENGTHEN TRADE UNIONS IN ZAMBIA -
A METHODOLOGICAL APPROACH AND
RESULTS FROM A BASELINE STUDY

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Abstract

This study analyses a baseline dataset collected for an evaluation of a co-operation project that assists trade unions in Zambia to boost their activities. The data were collected from 51 establishments to study attitudes towards unions, working conditions and the views of employers and trade union representatives on each other. The results show that employees have, by and large, positive views on unions but turning to unions when there are problems is not particularly common. Wages are often considered to be too low and assumed to be lower than those of similar individuals elsewhere or even in the same establishment. Regression analysis shows that having positive views on unions *per se* has a positive association with satisfaction and negative correlation with resign intentions. Union membership, however, seems to be correlated with employees being more discontent with their wages in some instances, though the direction of causality is unclear.

1. Introduction

This report outlines the first results from the baseline survey of an evaluation of the development co-operation of SASK (The Finnish Trade Union Solidarity Centre) in Zambia. The main aim is to establish to what extent unions serve as a discussion platform and information exchange and are thus overall efficiency enhancing, along the lines of the theory of the union “voice” effect described by Richard Freeman and James Medoff in their seminal work on unions (1984). Similarly, the impact of industrial relations on wage, perceptions thereof and occupational health and safety are the focus of this study. Together with the follow-up study, the evaluation will investigate whether a co-operation project with the local union enhances these effects or has other quantifiable positive effects at the workplace, and whether the impact is possibly dependent on various background factors.

It is well known (for a survey, see Kangasniemi and Pirttilä 2013) that too rigid regulation may even increase the wage gap between the formal and informal sectors and constrain the amount of formal employment, as there may not be adequate incentives to formalise employment in the presence of strict regulation and relatively low productivity. Thus, the impact of labour market institutions such as unions can be either to enhance efficiency and compress wage distribution (as in the case of developed countries) or in some cases actually widen inequalities.

Considerations of sufficient pay and employment protection aside, any employment should satisfy the minimum conditions of physical safety. Similarly, abolishing forced labour, limiting freedom, the worst forms of child labour and discrimination are core labour standards that should be implemented, irrespective of efficiency considerations. Unions and employers may have a role to play in improving these issues with other institutions, such as the government and other authorities who set the ground rules and provide information on them. Therefore, one element of the impact that we study is

how these phenomena are linked to the union presence at the workplace and how co-operation from developed countries can help to strengthen the positive linkages.

The voice effect may be particularly important in developing countries because of the low general enforcement of labour standards, whereas the protection provided by unions can serve as insurance when overall social security or social protection policies are largely missing or largely incomplete. It has to be noted that this does not necessarily imply that overall unions in developing countries are optimal labour market institutions. Union membership may be the cause of another source of inequality if it is not accessible to everyone and, on the other hand, other policies such as building social protection systems or other forms of labour market institutions may provide even better outcomes.

There are several reasons why trade unions may fall short of the optimal outcome even when there are potential gains from unionisation. Unions may have other objectives that override the improvement of labour standards or productivity, or they may only serve the interests of insiders at the cost of outsiders. Unions may be highly adversarial and have high transaction costs, as there are limited channels for worker voices outside formal union channels in the traditional form of unionism, which ultimately leads to a rejection of unionism. This has happened, for example, in the United States (Hirsch 2007).

The distributional effects of unions may mainly benefit unionised workers, unless the 'threat' effect of unionisation is very strong. It can also be argued that the positive voice effects cannot exist without the negative 'monopoly face' (Kaufman and Bennett 2007). In order for a union to effectively promote positive objectives it will have to possess some monopoly power. Even if the positive effect of unions is observed in the empirical data, it may hide a large negative effect. The institution that serves as the voice of the workers does not necessarily need to be a union in the traditional sense. There may be alternative institutional forms that are capable of attaining similar positive outcomes.

The modes of union behaviour, as well as the degree of co-operation in industrial relations, vary a lot.

To our knowledge there has not been a study whereby an intervention involving trade unions has been tested by using this approach. This is quite surprising, since interventions can be used as an attempt to improve labour standards, something which is high on the agenda of global development objectives. Moreover, interventions are of the type that could be subject to rigorous impact evaluation, at least when they deal with firm-level or worker-level outcome variables. While potential outcomes can be somewhat abstract, they are quite similar to topics (such as job satisfaction) that are routinely investigated using surveys and interviews in developed countries.

Zambia is a lower middle income economy¹ which has experienced significant rates of economic growth during the last decade. However, the growth has not generated an equally impressive amount of high quality employment, and the unemployment rate remains high. Poverty is still widespread and a large share of employment is informal. Thus, there remains scope for improvement in terms of the quality of employment and the extent to which jobs created by economic growth reduce vulnerability. Nationwide representative statistics on the quality of working life are not produced frequently: the Labour Force Survey is only conducted every four years, which further emphasises the need to collect new data.

We hope this study will shed further light on these issues in the context of the Zambian labour market and, more specifically, will explore whether factors such as union membership, employees' trust in unions or employers' and unions' views on each other will influence employee outcomes such as job satisfaction.

1 According to the World Bank classification, Zambia is a lower middle income economy but it is still listed by the UN as one of the least developed countries.

2. Background

Despite the fact that Zambia has ratified all the eight fundamental ILO conventions, there is clearly still a need for improvement in terms of accomplishing the goals of the decent work agenda. According to the ILO Decent work country report (2012), the statutory minimum wage falls below the basic need level. Child labour is still an issue of major concern. A majority of people hold unstable and insecure jobs. There are several acts aimed at protecting employees from unlawful termination of employment as well as discrimination, but casual and temporary labour are outside the scope of much of the legislation. The enforcement of health and safety regulations is inadequate.

The Industrial and Labour Relations Act establishes the right of every employee to join a trade union. The same act obliges employers with more than 25 employees to enter a recognition agreement with a trade union and undertake collective bargaining. However, union membership has been in decline and a large share of employees do not have trade union representation. Informal workers naturally fall completely outside collective bargaining.

The main sector included in this study, construction, is currently experiencing a strong boom and likely to benefit from sustained growth and from the growing infrastructure needs of the economy in the future. Thus, the construction sector is also projected to employ a growing number of people. At the same time, atypical and casual work as well as informal businesses are common in this sector, and working conditions vary largely across companies and individuals. The presence of multinational companies and migrant workers presents further challenges to the quality of working life and labour rights in this sector. The sector thus represents many of the typical issues of concern of the labour markets in developing countries.

The casualisation of labour is widely considered to be a major problem. According to the ILO (2012), for example, most of the growth in employment in the mining sector has been labour that is employed by contractors and labour brokers. There do not seem to

be solid nationwide statistics on casualisation. The ILO reports, though, that the share of people in “precarious” employment (temporary, seasonal and involuntary part-time) was 59.10% of paid employees in 2008 and 69.35% in 2005. An amendment to the Employment Act enacted at the end of 2015 implies that it is illegal to hire employees on a casual basis for any job that is of a permanent nature but the actual effects of this law are not yet known.

The Zambian labour market laws are currently in the process of being reviewed. The aim is not so much to change the overall strictness of the law but to remove inconsistencies. As with regulation in general, compliance is a major stumbling block, especially as resources for enforcement and monitoring are scarce. As in many developing countries, the problem is not altogether the lack of regulation *per se* but the lack of compliance. According to our interviewees, small companies often find labour law too complicated and costly and thus decide not to comply at all. There is a serious lack of resources for enforcement and there is little co-ordination within the government in labour issues.

According to Labour Force Survey 2012 (CSO 2013), the share of informal employment stands as 84.6% of total employment (Table 1). During the previous LFS in 2008 it was 89.0% and in 2005 90.91%. Thus, the share of informal jobs seems to be very persistent. Some efforts have been made to improve the situation of informal workers. For example, domestic workers have an association and the ILO has managed to assign a code of conduct for employers of domestic workers with ZFE.

Estimates of basic labour market indicators from Labour Force Survey 2012	
Population	14375601
Working age population	7861259
Labour force	5966199
Employment	5499673
Formal sector employment	847420
Formal sector employment, % of total employment	15.4
Construction sector, total employment	187906
Transport sector, total employment	137301
Construction sector, share of formal employment	19.50 %
Transport sector, share of formal employment	45.10 %
Average weekly hours of work	38.7
Average weekly hours of work, construction	48.6
Average weekly hours of work, transport	67.4
Average monthly earnings	K1724106 (334.77 USD)
Average monthly earnings, formal sector	K2215688 (430.23 USD)

Table 1. Basic statistics from Labour Force Survey 2012

The construction sector is one of the fastest growing sectors and has a strong presence of foreign companies (Sutton and Langmead 2013). The Trade Union Solidarity Centre NUBEWG or National Union for Building Engineering and General Workers is a multi-sector union that also represents workers in the construction industry. Of all NUBEGW members 94.5% are men and 5.5% are women and the total number of members 11148 (2011-2012). The number of companies covered by the union is currently 134.

In the construction sector NUBEGW considers the presence of foreign and multinational companies that are often suspected of labour rights breaches and low health and safety

standards as one of the main issues. The language barrier introduces an element of imperfect communication between workers and management, further aggravating the situation.

Anecdotal evidence suggests that people often work long hours without overtime pay, are paid less than the minimum wage and have no right to sick leave. Casualisation of work and very short contracts are common in the construction sector. It is suspected that child labour is also used within the sector. There have also been reports of workers having to buy their own protective clothing. There is also a need for workers to be educated on issues of health and safety.

One of the central issues of occupational health and safety in the construction sector, according to NUBEGW, is the rampant HIV/AIDS epidemic. Owing to the seasonal nature of construction, workers often reside away from their permanent residence, which contributes to the spread of the epidemic. There are also reports of sexual harassment of female workers.

There are fears that with the sector booming it will become even more difficult to enforce the labour laws and health and safety regulations. On the other hand, when the sector dwindles, the unions also lose members, which further contracts their resources.

The employer side of the construction sector is regulated by the National Council of Construction, which is an arm of the government. However, there are businesses outside the membership of the NCC. In the case of those businesses, it is very difficult for the union to intervene even when there is an obvious case for such intervention.

Labour Force Survey 2012 was a nationwide survey covering household populations in all the ten provinces. The population estimate of individuals in paid employment is 1,120,178, whereas the estimate of the total number of employed people is 5,499,673. Thus, the share of paid employees is 20.1% (CSO 2013). At the population level, the number of individuals working in construction is estimated to be 187,906, and in

transportation and storage 137,301. The share of paid employees in each of these sectors is 42.8% and 75.1%. This is relatively high. For example, the share of paid employees in the two largest industries, agriculture and trade, (as opposed to self-employed and unpaid family workers) is even lower (CSO 2013). The term “formal employment” is used when defined as the number of people employed in formally registered companies, central government, local government or parastatals. The shares of these in both of the sectors, respectively, are 19.5% and 45.1%. The population-level estimate of average pay for paid employees is K1,724,061² (335 USD), which at the inflation rate of 6.98% in 2013 and 7.84% in 2014 would equal K1990 (324 USD) at the price level of 2014.

The co-operation work conducted by the Trade Union Solidarity Centre consists of various activities such as training and education aimed at building union strength through training union officials and activists in organising, recruitment and campaigning as well as project management, finances and administration. At the workplace level co-operation activities can be targeted at shop stewards. More specifically, in addition to strengthening the union organisation in general, the work projected to be carried out in Zambia includes occupational health and safety workshops for shop stewards.

As the coverage and the likely effects of some of the elements of the co-operation are limited to specific workplaces, their impact can be evaluated by using the RCT methodology described below. Though the focus of the training is occupational health and safety, it is possible that increased awareness of the presence of the union or changes of attitudes towards unions occurs in addition to the possible changes in the knowledge of OHS and labour rights.

2 The kwacha was rebased on 1st January 2013 at the rate of 1 new kwacha =1000 old kwacha.

3. Research methodology

The survey analysed in this report constitutes the first stage of an evaluation of the SASK co-operation work in Zambia. The impact of the SASK co-operation work in the construction sector will be studied by using a randomised controlled trial methodology. The main advantage of this approach is that it allows us to infer causality. In observational studies, or in a typical qualitative analysis, it is often impossible to determine whether the detected developments are caused by a particular intervention or whether they have taken place for another reason. In a careful econometric impact evaluation, one measures the interesting outcome variable before and after the intervention. Data collection is conducted not only in those units of analysis that are subject to the intervention but also in a comparison group. The comparison group should consist of units that are similar to the treatment group so that the only reason why outcomes should vary between the treated and the control units is the intervention. The best way to ensure that the groups are alike is via randomisation: then subjects cannot choose themselves whether they become subject to the intervention or not. For a thorough discussion of the approach, see Banerjee and Duflo (2009).

It is clear that such an approach is not suitable for every possible research question: macro policies can hardly be randomised across countries. It is often uncertain to what extent the results can be generalised for other settings. (This is the question about external validity.) And while it can be argued that the experimental approach can reveal what works and what does not work, the question as to why something happens is often left unanswered. However, the last problem can be alleviated by careful design: the experiment can involve different types of interventions that are being tested at the same time against the no-intervention case and, in the best possible situation, the experiment deals directly with a particular behavioural mechanism (Mullainathan et al. 2011).

At this point we assume that the intervention will be made at the establishment or, in statistical terms, cluster level. This may mean, for example, training trade union representatives or targeting specific establishments in a membership campaign. The co-operation projects typically include training on health and safety issues that can be targeted at a certain set of establishments through training their shop stewards. Thus, we can assume that the impact can also be best identified at the cluster level. Information and skills spill overs (employees learning from each other) are also likely to occur within establishments, which further supports the need for the sampling to take place at the establishment level.

Some of the impact of the project (such as the improved media presence of the union, or general efforts to improve the organising of construction workers or awareness of the union issues) is also likely to occur at the sectoral level. These effects cannot be identified with certainty, though a comparison of the situation in the baseline survey and the follow-up may give a descriptive indication of either the impact of the project or general trends in those issues. However, the most precise measure of impact can be attained for the intervention that is only applied to a randomly selected group of establishments.

More specifically, some of the issues we wish to measure are perceptions of unions and their role in the establishment in question as well as in Zambia in general, and occupational health and safety (incidence of accidents and work-related illnesses) as a concrete measure of the impact of education. We also inquire whether employees consider unions as their first point of contact in the case of grievance or suggestion as a proxy for the scope for the “voice” role that the union may play in the establishment. The aim of using the latter is to establish whether increased knowledge of the union presence can enhance information exchange and productivity in the plant as well as their subjective welfare of workers through having a reliable point of contact for raising their grievances.

The union representatives and the employer representatives are similarly interviewed about their perceptions of each other as well as which issues are either discussed or negotiated between them, and the quality of the dialogue.

4. Baseline survey

The baseline survey was carried out in two phases in June 2014 and February 2015. The intention was to cover all implementation of the RCT approach. In the case of SASK, intervention in Zambia will consist of a baseline survey and a follow-up survey which will be conducted after the intervention has taken place.

The number of workplaces covered in the first phase was 31 and in the second phase 20. One company was interviewed during both rounds. The aim was to collect all the data during the first phase, but experience showed that companies need to be contacted well beforehand in order to attain a maximum response rate. Ultimately, six of the companies whose names were provided by the union did not participate in the survey. In the transport sector there were also a number of refusals during the first round but, as is explained below, no attempt was made to contact them in the second round.

An attempt was made to interview a random sample of employees from each company. In practice, randomisation was possible in 20 companies, and in the rest convenient sampling was used, for example in choosing volunteers. Human resources and the union survey did not have a full response rate either; both had responses from 40 companies. In total there are 34 companies for which we have all human resources, union and employee questionnaires. In most of the analysis we make use of the employee survey. In some of the regressions we use the employer and union representative characteristics as explanatory variables as this allows us to draw some conclusions on how, if at all, they are reflected by the employees' experiences.

During the initial phase it was still assumed that the transport sector would be covered by SASK co-operation work and nine of the companies would be from the transport

sector. Though the transport sector has since been excluded from co-operation in the immediate future, these observations may serve as a useful comparison point for the construction sector to establish to what extent certain features are sector specific.

The questionnaires consisted of a large number of questions concerning individual characteristics, their perceptions of the quality of industrial relations, conditions of work and opinions on trade unions and employers. The co-operation work has a potential impact on several of these issues.

- The potential for the “voice” effect: Do unions effectively operate as *a discussion platform* between workers and management, thereby improving efficiency? Are they perceived as such by the actors?
- *Trust* between employees, unions and management
- *Views on the role of trade unions and unionism in Zambian society and economy*: Do union membership and the added resources to union activities change views about what unions can and should do in Zambian society?
- *Training and productivity enhancement*: opportunities to participate in training activities and to contribute to improving work practices by providing suggestions

Missing observations were relatively infrequent in the case of employee questionnaires and trade union questionnaires, but there was a relatively large number of missing information in the employer questionnaire, mainly due to a large number on questions on the structure of the company personnel.

5. Results from the baseline survey

In this chapter we outline some central results from the baseline survey. The main focus is to describe the general perceptions of the unions and experiences of the quality of working conditions. Furthermore, we have run regressions whereby we have examined the impact of union membership and level of activism and the characteristics of industrial relations within the workplace on wages and various measures of job quality

and job and wage satisfaction. We also study the impact of the views of unions and employers on each other and the level of knowledge of the union representative on occurrences of accidents and labour rights violations and also employees turning to the union in case of grievances.

5.1 Profile of respondents

Of the employees surveyed 82% were from the construction sector firms and the rest from the transport sector. The share of union members in the survey is 67% and thus much higher than in Zambia in general. Of the respondents 58% worked in skilled blue collar occupations, 25% in unskilled blue collar occupations and the rest represented professionals and managers. Of the respondents 81% had a written contract and can thus be considered as formally employed. Also, this share is much higher than in the sectors in question overall. The average age of the respondents was 37.8 years and only 7% were female. Monthly earnings were approximated by adding the earnings in the previous month (using the midpoint of each wage category) and the estimated monetary value of in kind benefits. The average approximate (using midpoints of categories of earnings given in the questionnaire) monthly earnings were 2591 ZMW (421 USD).

5.2 Employees' attitudes towards unions

Of those respondents who were members of unions 57.5 % participated in some form, either by following the union activities or actively being involved. All the reasons suggested in the questionnaire to join a union were mentioned quite frequently as being important. Those reasons include interest in receiving information about rights at work, to guarantee that wage rates at the workplace are negotiated with a union, to guarantee job security, to have someone who is reliable to turn to in case of grievance, to have someone to give support and safeguard the respondent's employment if she or

he wants to discuss work-related issues with the employer and to support workers' movement in general.

The question about why people have not joined a union does not provide an obvious reason why people do not join. The only suggested reasons where over half of the respondents said that the reason was at least of minor importance was the statement that unions were too weak to make a difference and that unions were too fragmented.

The general perception of trade unions in Zambia was positive (Figure 1), with the exception of statements on unions helping casual workers or unemployed members. Unions were perceived to have an impact on the working conditions and wages of their members, and, to a lesser extent, on those of all members, and they were perceived to have a role as a source of information of rights and employers' views and strategies. With all these over half of the respondents agreed or agreed strongly.

There is a fair amount of confidence in the impact of industrial action among employees: 81% of respondents believe that wage rates can be influenced by it. Over half also believed that changes in conditions of employment and occupational health and safety could be influenced by industrial action. Most (54%) believe, however, that industrial action is unlikely or highly unlikely in their establishment.

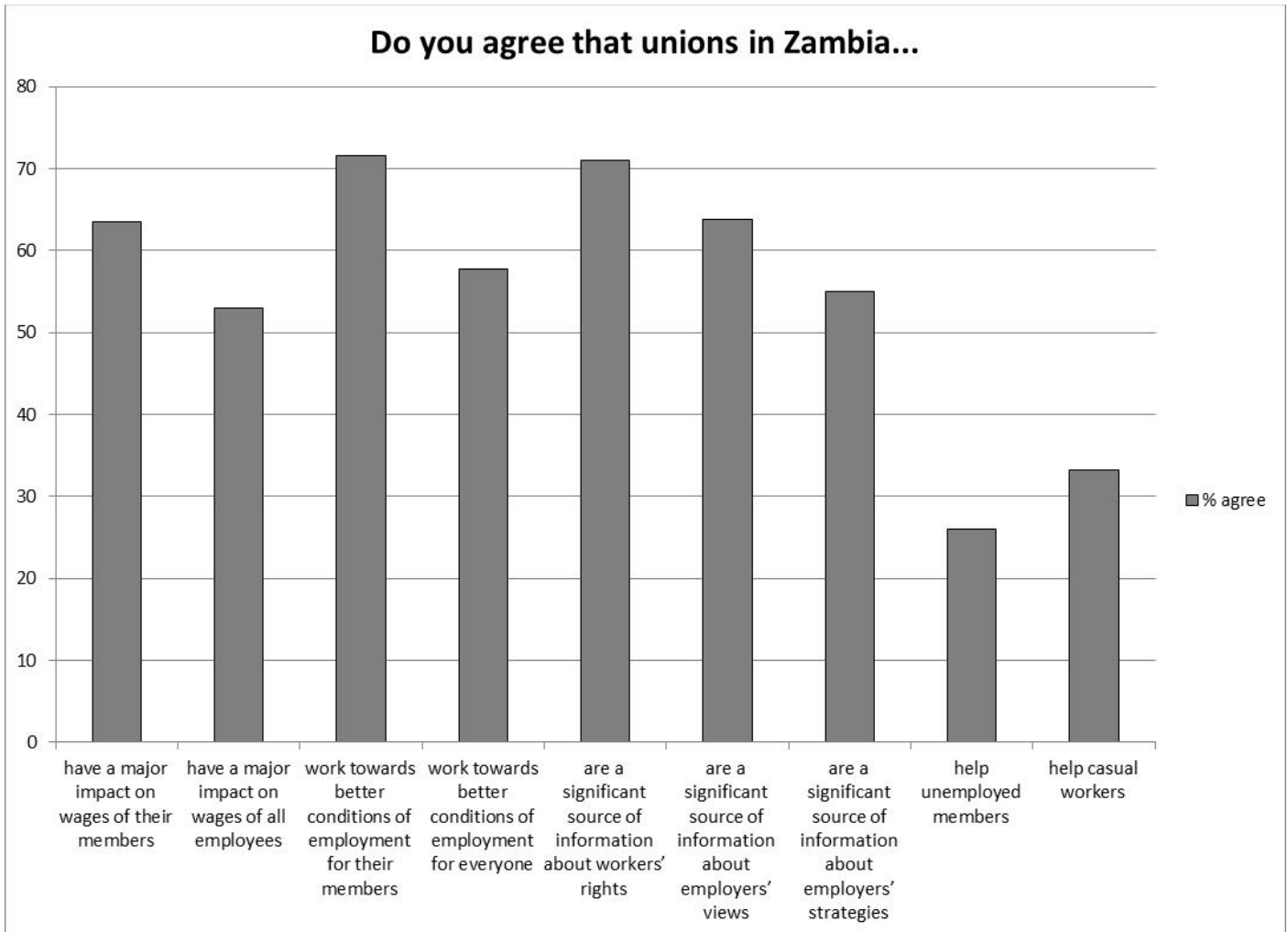


Figure 1. Employees' opinions on unions in Zambia

5.3 Wage satisfaction and quality of work

The questionnaire included a number of questions on how respondents felt about their wage as described by its adequacy to support their household and a number of questions on how high they believed their wage to be compared with other employees in the same establishment, individuals with similar skills in the same establishment, in

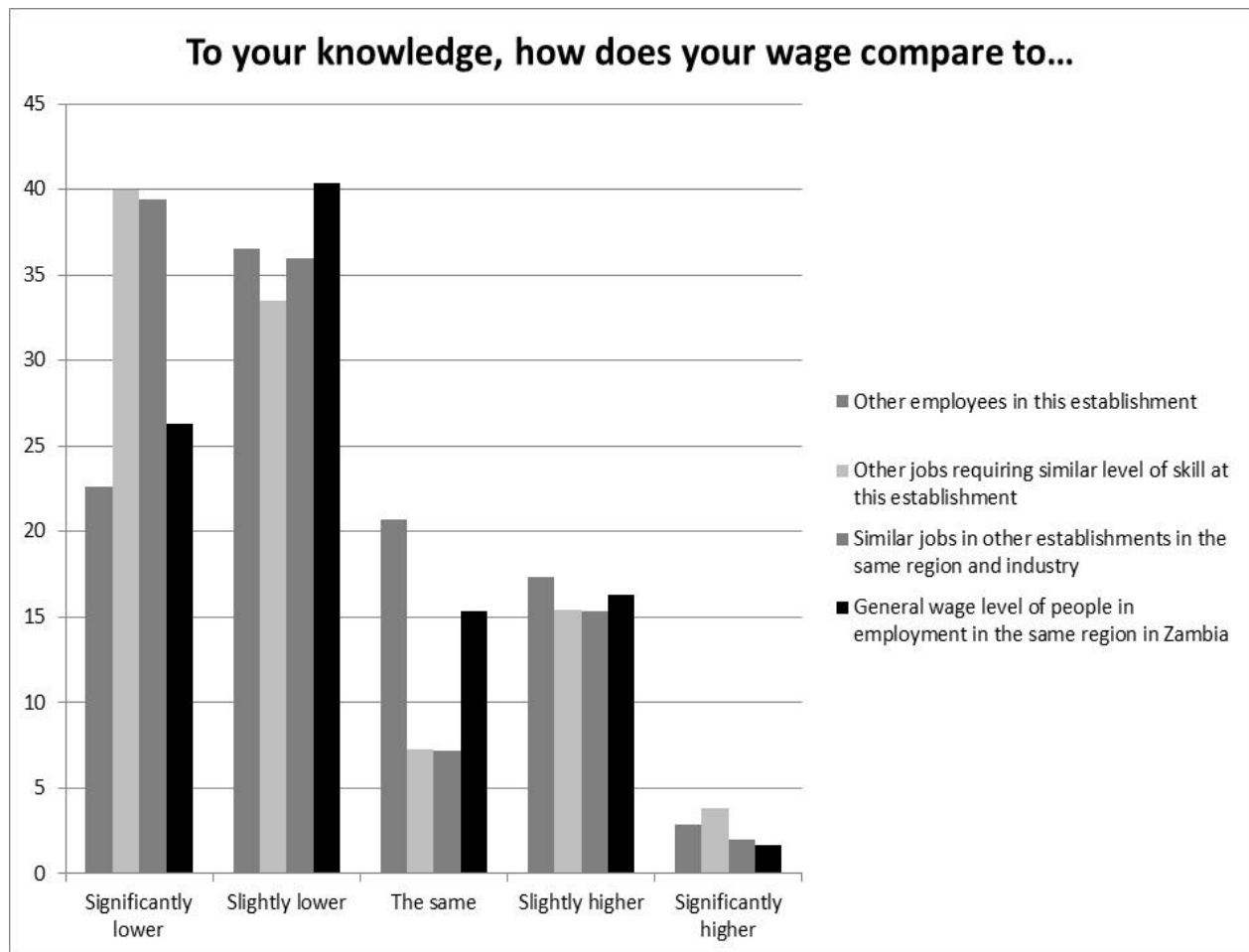


Figure 2. Employees' perceptions of their relative wage

the same sector and in the same region in Zambia (Figure 2). The respondents typically perceive their wage to be below others or other similar workers in their establishment and Zambia, and compared with other establishments. A large majority (88%) finds it at least difficult to cope on their wage (Figure 3). However, the majority (52%) think it is unlikely they will resign from their job in the next twelve months, which suggests that

either they do not believe they will be able to find a better paid job or that the non-wage elements of the job compensate for the low wage.



Figure 3. Employees' perceptions of the adequacy of their wage

5.4 Health and safety and experiences of discrimination

Issues with job quality and decent work were investigated by asking employees about their experiences or witnessing harmful workplace practices and accidents and work-related illnesses (Figure 4, Figure 5 and Figure 6).

The most common problems experienced and witnessed at work were having to work excessive overtime, threats of dismissal and working with limited freedom. A majority (70%) had not experienced an accident or a work-related illness, and serious injuries or illnesses were rare. The union representatives were also asked about occurrences of accidents or work-related illnesses: in the majority of establishments these had not

occurred, but, for example, 27% stated that accidents leading to serious injury had occurred and 27.5% stated that accidents had led to moderate injury. 16% of employees reported having experienced discrimination at work.

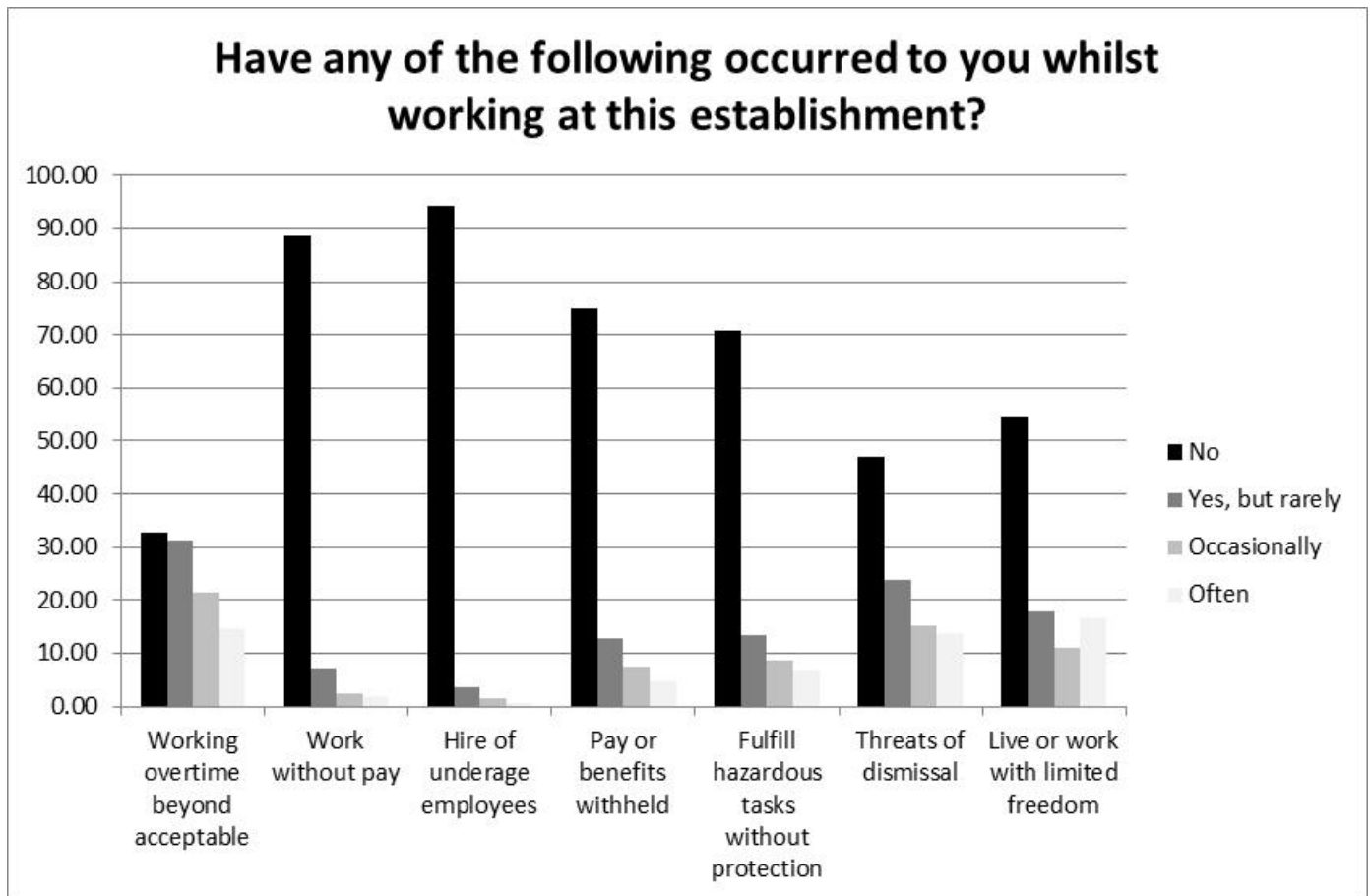


Figure 4. Employees' experiences of labour rights violations



Figure 5. Employees' experiences of workplace injury

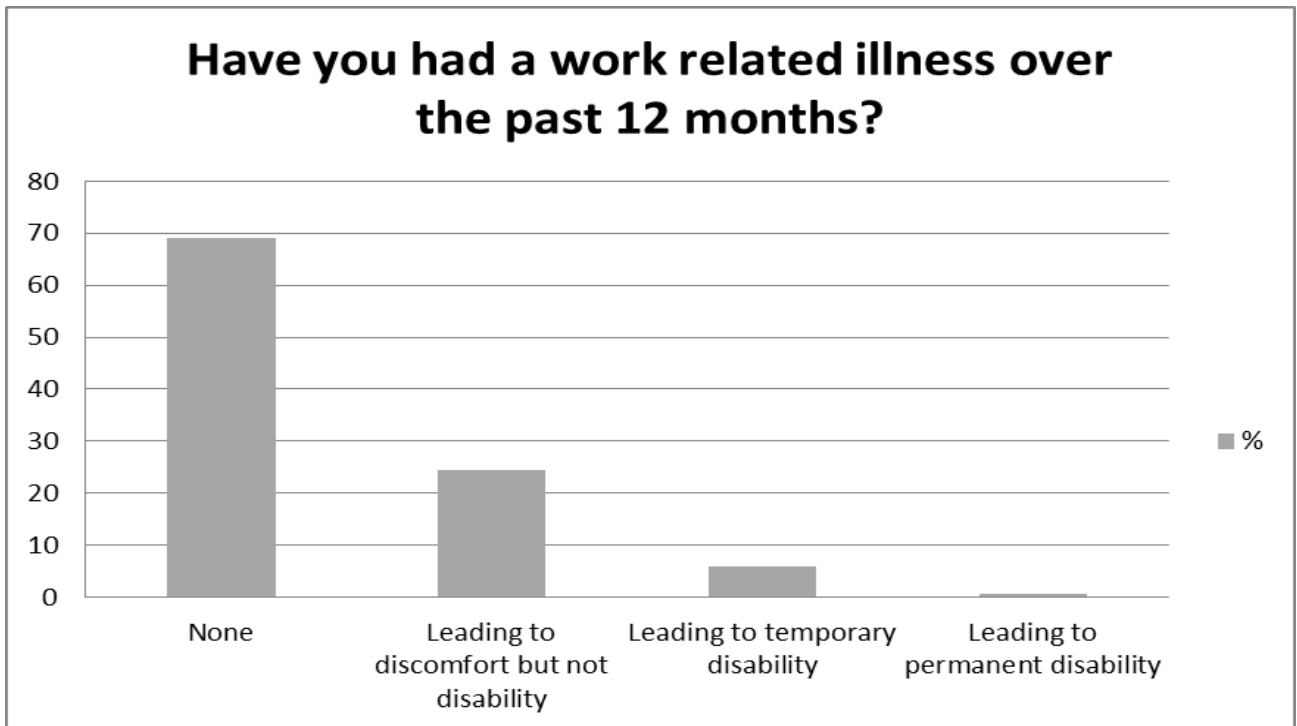


Figure 6. Employees' experiences of work-related illnesses

5.5 A union's role as the workers' voice

The questionnaires had several questions on whether complaints and grievances as well as suggestions of improvement were channelled through unions, human resources or other parties.

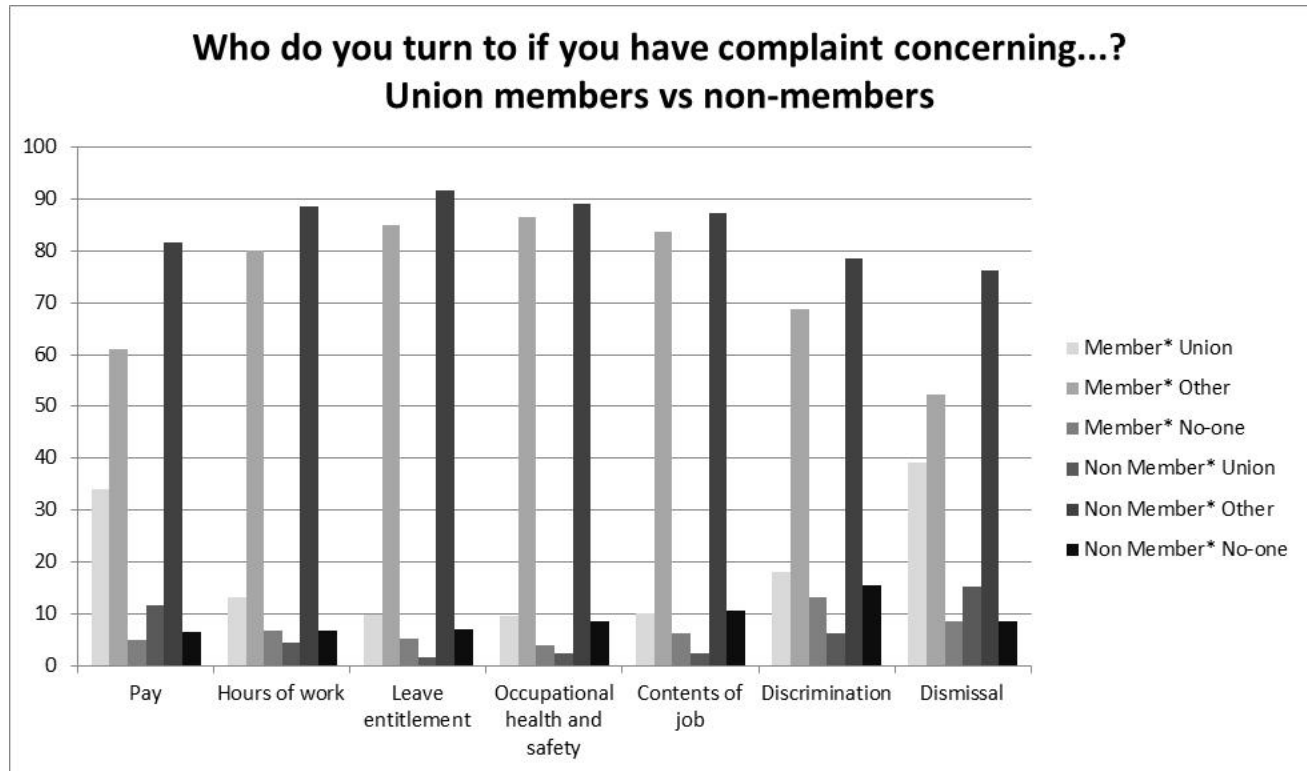


Figure 7. Employees' views on who they turn to in case of complaints or grievances

Even union members do not most typically turn to the union but more often to other parties (the company HR and supervisor being the most important) (Figure 7). It is most typical to turn to the union in the case of dismissal or a dispute over wages. In the case of other topics of complaint (working time, leave, health and safety, contents of the job and discrimination) it is relatively infrequent to turn to the union.

Union representatives believe the union to be the first point of contact in most cases (67.5%) but in the case of non-members and casual workers it was less important. A

similar pattern holds for suggestions: 60% of union representatives believed the union to be the first contact for suggestions from union members.

46% of the employers' representatives also stated that they "often" received complaints from the union. Almost as many mentioned "often" receiving complaints through employees' supervisors. Other channels were less often used. Suggestions were mentioned as "often" coming from supervisors in 30% of the cases and from the union in 22% of them.

Most employers (75%) responded that they had a positive attitude towards union membership and the rest stated that their attitude was neutral. By and large, the union was considered as professional and acting with integrity and honesty. Similarly, trade union representatives had positive views on employers. In 72.5 % of companies there were also meetings between staff and the management, suggesting that in addition to trade unions there are other discussion platforms for the employer and employees.

5.6 Determinants of wage, subjective perceptions of wage and resignation intentions

We ran regressions on the logarithm of wages and on the subjective perception of the adequacy of the wage as well as its relation to other people's wages. Instead of using ordered probit or logit we used simple OLS regression in this descriptive analysis³. The main regression results are presented in Appendix 1: here we describe them briefly.

The explanatory variables include age, age squared, tenure, gender, education, occupation, type of contract (written contract, permanent or fixed-term, part-time or full-time), sector, dummies indicating the interview round, a set of dummies indicating

³ We also carried out ordered probit, probit or tobit analysis for the outcome variables for which the range or number of values is limited, calculating the marginal effects of the variables of interest when the coefficient alone was not adequate to draw inference on the direction of the impact. The results were in line with those obtained from simple linear regressions, and available on request.

combinations of region, interview round and interviewer id⁴ and the level of participation in union activities. These variables were generally used in all the regressions below.

We created a composite variable from the questions regarding attitudes and trust towards unions. The variable measures the number of positive responses relative to the number of questions responded to. The questions concern issues such as whether unions have an impact on the wages of the members and employees in general, whether they are an important source of information and whether they are concerned about casual workers and the unemployed.

There does not seem to be a union wage premium *per se*: union membership or higher levels of activism do not have a statistically significant relationship to the logarithm of wage. This may be simply due to the fact that the unions are present in each company and the wage negotiated by them also applies to those who are not members or effectively non-members and members represent different occupational groups or types of contracts, and any wage differential is picked up by the coefficients of these variables. Generally, occupational categories have some explanatory power over the wage regressions, and when firm effects are not controlled for, having received training raises the wage significantly. Those with a written contract have an almost significant (p-value 0.076) higher wage and those with a fixed term contract a similarly (p-value 0.056) higher wage. Introducing firm effects, however, makes these effects less significant, though occupational categories are still significant determinants of wage levels.

We run regressions on wage satisfaction by using different subjective outcome measures, as well as those on resignation intentions, which are another measure of job satisfaction. The logarithm of wage was controlled for, and thus the results indicate the impact of various characteristics that occur beyond those arising from actual differences

⁴ The interviewer id was generally not available for the second round. Thus for these observations region and interview round are controlled for.

in wages. People with fixed term contracts considered their wage to be generally lower than those of other individuals or individuals with similar characteristics at their establishment. Having a written contract had a positive correlation with perceptions of one's wage compared with other employees in the same industry or Zambia overall, and having received training is associated with the person rating their wage higher compared with the industry wage. It seems that these indicators are considered as a signal of a better job and pay in the absence of actual knowledge of the general wage level. Some of these effects persist even after controlling for the firm effects. Having a written contract is also negatively correlated with the intentions of resigning.

Union members who do not participate as well as those who hold a role in the union perceive their wage to be lower compared with wages in other jobs requiring similar levels of skill at the same establishment, controlling for the logarithm of wage and other characteristics. Those who hold an official role within the union also consider their wages to be lower than people in current in the same region in Zambia. These results may be either because union members have higher expectations of what their wage should be, or because people join a union because they assume their wage is below that of similar workers elsewhere. Active members are more likely to have a better awareness of the actual wage levels compared with at least their peers at the same establishment, but this is not necessarily true for the country or industry overall, as actual and representative wage data are typically not available in Zambia and the Labour Force Survey results are published with a considerable delay. It is also possible that the respondents would also only compare themselves with employees of the formal sector rather than with casual workers or, for example, rural small-scale farmers.

Introducing firm dummies to the regression does reduce some coefficients to the status of "insignificant", but given the other explanatory variables non-active union members are still more likely to consider their wage as being lower than that of their co-workers in jobs requiring similar levels of skill as the respondent's. Those respondents that have

an official role in the union, given their other characteristics, reckon their wages are lower than in the same region in Zambia in general.

Interestingly, having a positive view of unions as such (controlling for union activism) is in turn linked to the individual having more positive perceptions of their wage and a lower likelihood of resigning. This provides some support for the theory of trust in the union “voice”: the effect may reduce unnecessary staff turnover and increase satisfaction. However, it does not seem to link to union membership as such but to generally positive views and trust in unions.

Resignation intentions are another indicator of job satisfaction and lowering excess worker turnover of the potential benefits of unionisation. High trust in unions seems to be associated with lower intentions to quit (responses to the question “how likely it is that you will resign from your current job within the next twelve months?”), controlling for wage and other characteristics. This coefficient remains significant when we control for firm effects. Union membership or activism, however, does not have a statistically significant relationship with resignation intentions, so the reduction in excess turnover is more related to general trust in labour issues being looked after by unions. The level of trust is higher among active union members (though for inactive members actually lower than for non-members), but there is still variation within the levels of trust within each level of activism. All in all, the data shows some support for the hypothesis of the voice effect of unions reducing excess staff turnover.

5.7 Determinants of occupational health and safety and the attitudes towards unions

Decreasing the number of accidents and occupational hazards is potentially one of the main benefits of unionism. We estimated a regression where we also included composite variables from the union and human resources questionnaires in order to see whether their views on each other impacted on the occurrences of accidents or illnesses. The composite variables include how large a share of the positive views on

employers listed in the questionnaire the union representative agrees on, such as whether the management can be expected to act with honesty and integrity, whether they are professional, have a good knowledge of health and safety and labour law. A variable measuring trade union representatives' own knowledge of labour law, wage and labour market issues, health and safety, negotiation skills and workers' expectations is the average of their self-assessment of their level of knowledge regarding these. The views of employers on unions are similarly summarised in a variable which is the share of positive statements on unions (such as whether unions are efficient, flexible and useful in dealing with grievances) which they agree on, relative to the number of questions answered. For the estimations where we use these firm level variables we have not presented results with firm effects, as it is not possible, though these variables vary between firms, to credibly separate their impact from the unobservable firm effects if firm dummies are included.

The dependent variables in these regressions are whether or not the employee has had an accident, the average of experiences of labour rights violations or malpractices (0 never, 3 often) and witnessing them measured with a similar scale.

None of the variables of interest have a statistically significant relationship to having had an accident or accidents, though having a written contract is almost statistically significantly (p -value 0.057) negatively correlated with accidents. A trade union representative's self-rated knowledge of labour issues seems to have a positive correlation with the number of labour rights violations that have occurred to the respondent or their having witnessed them, whereas a higher wage has a negative correlation with these. If there is indeed causality at play, it is likely that well-informed trade union representatives keep the staff more informed about their rights and what constitutes malpractice. On the other hand, it may also be that constant labour rights violations in an establishment have forced the local trade union representative to educate themselves on labour rights issues.

In order to explore what explains what determines whether employees turn to the union in case they have a grievance or a complaint we estimate a similar model where the dependent variable is in how large a share of listed issues (pay, hours of work, leave entitlement, occupational health and safety, contents of job, discrimination, dismissal) the union is the first point of contact. Another estimation is carried out for the share of sources of complaint where the respondent does not turn to anyone, and a third one for the share of issues for suggestions, where the union is used as the first point of contact.

An employer having positive views of unions has a positive association with turning to a union as the first point of contact. This is logical, as having positive views probably also implies that the employer is more receptive to any information conveyed through the union. The association, however, disappears in alternative specifications where the outcome variable is treated as dichotomous⁵. Holding meetings between staff and management, on the other hand, has a negative association with the probability of turning to no-one, which suggests that they serve as a discussion platform that improves the exchange of information. No variable of interest seemed to explain the average of the number of issues where the union is used as the first point of contact for suggestions.

6. Conclusions

This study is based on the baseline data collected for the evaluation of the work that the Trade Union Solidarity Center (SASK) will be carrying out in Zambia. In addition to using the data we collected to describe the industrial relations and working conditions in the establishments we surveyed, we studied the relationship between union activism and attitudes towards unions and measures of job satisfaction, occupational health and

⁵ A tobit specification gives rather different results, but as there is a large number of zero values and assuming that there is a negative outcome though not observed seems unrealistic, a dichotomous specification is used in the robustness check.

safety and whether employees generally used unions as the channel through which they brought up grievances, complaints and suggestions.

The respondents often feel that their wage is somewhat inadequate. Accidents and illnesses have been experienced by a minority of respondents, though not an insignificant share. These results as such are not surprising, though it is difficult to say whether they indicate that the establishments surveyed are particularly problematic as there is no point of comparison.

Respondents' perceptions of unions are rather positive. It seems, however, that the unions are not the first point of contact for a surprisingly large share of even those employees who are union members in the case of grievances and complaints. Nevertheless, the regression results provide some evidence of a potential positive impact of trust in the unions on subjective job satisfaction when measured by a subjective assessment of relative wage and resignation intentions. Employers' positive views of unions are correlated with turning to unions, which indicates that mutual trust between employers and unions is important for unions' ability to function as the "voice".

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APPENDIX

Coefficients of variables of interest from the regressions

	No firm fixed effects ln(wage)	Firm fixed effects included ln(wage)
Member but does not participate at all	0.0218 (0.114)	0.0692 (0.140)
Follows activities but does not actively participate	-0.00425 (0.124)	-0.0494 (0.164)
Actively participates but has no official role within the union	-0.184 (0.115)	-0.0882 (0.160)
Has an official role within the union	-0.127 (0.126)	-0.0474 (0.145)
Constant	5.910 ^{***} (0.519)	6.398 ^{***} (0.584)
<i>N</i>	347	347

Explanatory variables included in the regression: age, age squared, tenure, gender, education level dummies, occupational category, contract type, part-time dummy, training dummy, dummies indicating interview round, region and interviewer (in the first round) and sector.

Robust, clustered (by firm) standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

	(1)	(2)	(3)	(4)	(5)	(6)
	Wage satisfaction	Perception of own wage compared with other employees at the same establishment	Perception of own wage compared with wages in other jobs requiring similar levels of skill at the same establishment	Perception of own wage compared with wages in other jobs requiring similar levels of skill in other establishments in the same region and industry	Perception of own wage compared with the general wage level of people in employment in the same region in Zambia	How likely respondent will resign within the next 12 months
Level of union activism						
Member but does not participate at all	-0.272 (0.141)	-0.166 (0.160)	-0.487** (0.172)	-0.284 (0.178)	-0.136 (0.198)	0.0184 (0.201)
Follows activities but does not actively participate	-0.235 (0.183)	0.0185 (0.199)	-0.316 (0.204)	-0.319 (0.248)	-0.339 (0.227)	-0.0165 (0.271)
Actively participates but has no official role within the union	-0.139 (0.204)	-0.221 (0.171)	-0.250 (0.227)	-0.293 (0.248)	-0.404 (0.217)	-0.112 (0.267)
Has an official role within the union	-0.406 (0.222)	-0.216 (0.261)	-0.611* (0.281)	-0.482 (0.280)	-0.899** (0.287)	0.00636 (0.387)
Trust in unions	0.548* (0.271)	0.327 (0.213)	0.523** (0.173)	0.490* (0.233)	0.193 (0.220)	-0.728* (0.288)
Constant	0.465 (0.940)	1.307 (1.146)	0.356 (0.923)	1.271 (0.782)	0.108 (0.856)	6.911*** (1.291)
<i>N</i>	324	323	329	330	322	335

Explanatory variables included in the regression: age, age squared, tenure, gender, education level dummies, occupational category, contract type, part-time dummy, training dummy, dummies indicating interview round, region and interviewer (in the first round) and sector.

Robust, clustered (by firm) standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

	(1)	(2)	(3)	(4)	(5)	(6)
	Wage satisfaction	Perception of own wage compared with other employees at the same establishment	Perception of own wage compared with wages in other jobs requiring similar levels of skill at the same establishment	Perception of own wage compared with wages in other jobs requiring similar levels of skill in other establishments in the same region and industry	Perception of own wage compared with the general wage level of people in employment in the same region in Zambia	How likely respondent will resign within the next 12 months
Member but does not participate at all	-0.214 (0.242)	-0.0756 (0.224)	-0.538* (0.233)	-0.352 (0.217)	-0.286 (0.243)	-0.0210 (0.271)
Follows activities but does not actively participate	-0.240 (0.211)	0.0690 (0.291)	-0.330 (0.263)	-0.439 (0.283)	-0.573 (0.290)	0.125 (0.297)
Actively participates but has no official role within the union	-0.0764 (0.271)	0.0186 (0.226)	-0.0801 (0.280)	-0.392 (0.331)	-0.633* (0.305)	-0.223 (0.315)
Has an official role within the union	-0.346 (0.271)	-0.292 (0.305)	-0.577 (0.329)	-0.365 (0.366)	-0.890* (0.370)	0.198 (0.432)
Trust in unions	0.434 (0.299)	0.305 (0.235)	0.605*** (0.172)	0.454 (0.272)	0.0845 (0.232)	-0.737* (0.315)
Constant	1.371 (1.158)	0.921 (1.491)	1.509 (1.369)	3.493** (1.180)	2.442 (1.354)	5.323** (1.572)
<i>N</i>	324	323	329	330	322	335

Other explanatory variables included in the regression: age, age squared, tenure, gender, education level dummies, occupational category, contract type, part-time dummy, training dummy, dummies indicating interview round, region and interviewer (in the first round) and sector, and firm dummies.

Robust, clustered (by firm) standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

	(1) Has had accident(s)	(2) Share of occurrences of labour rights violations or bad practices	(3) Share of labour rights violations or bad practices that respondent has witnessed
Level of union activism			
Member but does not participate at all	0.0189 (0.0651)	0.0818 (0.0785)	0.0453 (0.0888)
Follows activities but does not actively participate	0.0653 (0.0906)	0.0477 (0.141)	0.0308 (0.132)
Actively participates but has no official role within the union	0.119 (0.146)	0.348 (0.198)	0.338 (0.226)
Has an official role within the union	-0.0566 (0.153)	0.135 (0.110)	0.182 (0.160)
Union representative's knowledge of labour issues	0.0420 (0.0575)	0.250* (0.108)	0.262* (0.110)
Trade unions positive views on employer	0.139 (0.132)	-0.0829 (0.168)	0.0236 (0.192)
Meetings between staff and management	0.0576 (0.0556)	-0.0415 (0.101)	-0.112 (0.119)
Employers positive views on trade unions	0.0221 (0.187)	-0.0324 (0.241)	-0.259 (0.267)
Constant	0.0265 (0.498)	-0.0815 (0.907)	0.730 (0.904)
<i>N</i>	228	226	225

Other explanatory variables included in the regression: age, age squared, tenure, gender, education level dummies, occupational category, contract type, part-time dummy, training dummy, dummies indicating interview round, region and interviewer (in the first round) and sector.

Robust, clustered (by firm) standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

	(1) Share of sources of complaints in which the first point of contact is union	(2) Share of sources of complaints where no-one is turned to	(3) Share of topics for suggestion where union is the first point of contact
Union representative's knowledge of labour issues	-0.00837 (0.0625)	0.0399 (0.0275)	0.0487 (0.0452)
Trade unions positive views on employer	-0.0970 (0.0771)	-0.0450 (0.0569)	-0.0389 (0.0730)
Meetings between staff and management	0.00765 (0.0426)	-0.0731** (0.0256)	0.0486 (0.0367)
Employers positive views on trade unions	0.394* (0.169)	-0.0354 (0.0881)	0.124 (0.186)
Constant	-0.199 (0.349)	0.105 (0.240)	-0.0965 (0.250)
<i>N</i>	232	232	234

Other explanatory variables included in the regression: age, age squared, tenure, gender, education level dummies, occupational category, contract type, part-time dummy, training dummy, dummies indicating interview round, region and interviewer (in the first round) and sector.

Robust, clustered (by firm) standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$