Comparing collective bargaining agreements for developing countries

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BIONOTES:
Janna Besamusca is a PhD candidate at the University of Amsterdam, Amsterdam Institute for Advanced Labour Studies (AIAS). She has done research into the effects of motherhood on women’s wages and labour force participation, youth unemployment, working conditions in the Dutch cleaning and care sectors, informal work in sub Saharan Africa, and wages and working conditions in developing countries. For the Labour Rights for Women project she has made inventories of national labour legislation regarding women’s labour rights.

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ABSTRACT

Purpose We aim to fill several knowledge gaps regarding the contents of collective agreements, using a new online database. We analyse 249 collective agreements from 11 countries - Benin, Brazil, Ghana, Indonesia, Kenya, Madagascar, Peru, Senegal, Tanzania, Togo, Uganda. We research to what extent wage and other remuneration-related clauses, working hours, paid leave arrangements and work-family arrangements are included in collective agreements and whether bargaining topics cluster within agreements.

Design/methodology/approach We use the web-based WageIndicator Collective Bargaining Agreement Database with uniformly coded agreements, that are both collected and made accessible online. We present a quantitative multi-country comparison of the inclusion and contents of the clauses in the agreements.

Findings We find that 98% of the collective agreements include clauses on wages, but that only few agreements specify wage levels. Up to 71% have clauses on social security, 89% on working hours and 84% of work-family arrangements. We also find that collective agreements including one of these four clauses, are also more likely to include the other three and conclude that no trade off exists between their inclusion on the bargaining agenda.

Research limitations/implications Being one of the first multi-country analyses of collective agreements, the analysis is primarily explorative, aiming to establish a factual baseline with regard to the contents of collective agreements.

Originality/value This study is unique because of its focus on the content of collective bargaining agreements. We are the first to be able to show empirically which clauses are included in existing collective agreements in developing countries.

Keywords collective bargaining agreements, wage setting, working hours, developing countries, social security, work-family arrangements, African countries, Indonesia, Brazil, Peru
1. **INTRODUCTION**

In a globalised world comparative and up-to-date data on wages and wage setting institutions are needed to understand the global economy in relation to national labour markets and industrial relations systems. Collective bargaining is considered an important instrument in wage setting processes. However, this assumption is not underpinned with rich empirical data, because very little is known about what exactly is agreed in these collective bargaining agreements. Few countries maintain databases with collective agreement texts, and if so, across countries these agreements are coded differently and on different levels of detail. Such databases require prolonged efforts to collect, read and code collective agreements. This lack of data is an obstacle to the exploration of the range of issues negotiated in collective agreements, as well as their impact on individual labour market outcomes.

The worldwide web has opened up new possibilities for global data collection. The WageIndicator websites on work and wages in 80 countries with their millions of web visitors, their network of correspondents, and central web-based technology have developed as an innovative method for collecting, annotating, coding and publishing bargaining agreements' texts. The WageIndicator Collective Agreements Database (Osse and Tijdens) primarily aims to enrich the content of the websites, but also provides a unique opportunity to closely examine the variation within and across agreements. Data collection started in December 2013 and this paper analyses the content of 249 agreements in 11 countries, collected up to September 2014. We examine the extent to which these agreements are used as wage setting mechanisms and, secondly, what range of issues are covered in the agreements.

2. **INSIDE COLLECTIVE AGREEMENTS**

2.1. *Wage setting through collective bargaining*

Globally, collective bargaining coverage rates vary widely. In the European Union rates run from around 20% to 100% (European Commission, 2013), while in the eight African countries where data are available rates run from 3% of wage and salaried earners to 70%; in Asia and the Pacific they range from 2% to 52% with data for eight countries, and in the Americas from 4% to 81% in Cuba with data from 11 countries (Hayter and Stoevska, 2010). According to the ILO, collective bargaining encompasses “negotiations which take place between an employer, a group of employers or one or more employers’ organizations, […] and one or more workers’ organizations, […] for determining working conditions and terms of employment” (Hayter and Stoevska, 2010, p 6). Hence, agreements should include the determination of remuneration. This is also the underlying assumption in many economic and sociological studies of wage levels. In their famous study ‘What do unions do?’ Freeman and Medoff (1984) argue that trade unions bargain for higher wages, equal pay, and fair working conditions, implying that collective bargaining is central to wage setting processes and that wage outcomes will vary according to the wage levels agreed in collective bargaining. However, we did not come across empirical studies reporting whether wage levels are bargained in collective agreements and, if so, how. Typically studies exploring wage setting differentiate between those covered and those not covered, sometimes distinguishing between different bargaining regimes, and occasionally taking industry dummies as a proxy for the variation in collective agreements. Using a large, matched employer-employee dataset Magda et al. (2012) for example explore the impact of company and industry bargaining agreements on wages in the Czech Republic, Hungary, and Poland. Blien et al. (2013) do so for Western Germany, whereas Heinbach and Schropfer (2007)
differentiate agreements with respect to the use of opening clauses and examine their impact on employment levels in Germany. Addison et al. (2014) examine the wage effects for companies entering into or abandoning a collective agreement in Germany. Multi-country studies, as for example by Du Caju et al. (2008), typically extend the analysis with aggregated characteristics of collective bargaining, such as indices of corporatism, bargaining regimes, existence of wage indexation, or centralisation of wage bargaining. Matched employee-collective agreement data instead of a dichotomous approach would greatly contribute to reducing the effects of unobserved heterogeneity in wage models.

Collective agreements typically employ pay scales to differentiate between job categories and job levels within the industry or the company. OECD (2014) assumes that pay scales tie wages to certified skills, i.e. achieved education levels or specific vocational qualifications (although to the best of our knowledge, no studies exist that detail the nature and distribution of pay scales in agreements). Yet, in the Netherlands pay scales are related to job classification systems, rating the job content, not the skills of the jobholder (Tijdens and Van Klaveren, 2003). Studies about the returns to skills use the same binary divide between those covered and those not covered. The OECD argues that skill related pay scales imply only limited possibilities to reward actual abilities. Following this argument, they quote Blau and Kahn (2005) who believe that the higher price of labour market skills in the United States could be caused by the lower coverage of collective bargaining. Carbonaro (2006) finds that returns to literacy skills are higher in liberal market economies than in social market economies, primarily related to collective bargaining coverage. Lamarche (2013) is one of the few using coded information of collective agreements. For the manufacturing industry in Argentina he explores the effect of agreed work practices and decentralization of bargaining regimes on productivity from 1973 to 1994, finding that policies that weaken these regimes improve productivity. The existence of both skill and job based wage classifications begs further empirical investigation into the wage setting structures through collective bargaining. Using the new database, this paper aims to explore the variation in wage setting in collective agreements.

2.2. THE WIDER AGENDA FOR COLLECTIVE BARGAINING

Collective negotiations cover a wider bargaining agenda than just wage setting, but the width and depth of these issues remains relatively unexplored, except for a few single-country studies. The most recent European Industrial Relations report, for example, does not include any reference to findings related to the content of collective agreements, let alone the range of issues covered (European Commission 2013). More than twenty years ago, Dunn and Wright (1994) examined the contents of approximately 100 collective agreements in the UK, focussing among others on procedural provisions and flexible working practices. Since then, we have hardly found any comparable studies. Using the 1995 – 2008 coded data from the Dutch FNV Database of collective agreements, Yerkes and Tijdens (2010) demonstrate that collective agreements have largely compensated for the declining welfare state coverage with respect to disability and work–life arrangements. Using a qualitative approach, Shapiro and Olgiati (2002) compare gender equality issues in collective agreements in seven EU countries, while Jacob, (2013) examines the effect of weakening employment protection clauses in the Chicago Public Schools’ bargaining agreement on teacher absenteeism. Bonvin et al. (2013) specify the clauses in the collective agreement in the firm under study related to the procedure to be followed in case of restructuring. In these studies typically the focus is on a small number of clauses, which are coded manually from the relevant agreements.
Country-specific databases with coded information about collective agreements clauses are only available in Australia, Austria, Germany, the Netherlands and Switzerland (Yerkes and Tijdens, 2010; Bispinck, 2014). In South Africa and in Brazil, the Labour Research Service (LRS) and DIEESE respectively, gather data about collective agreements. However, even for countries where coded data is available, we found few studies that have systematically examined the issues negotiated in collective agreements. No cross-country databases with comparably coded information are available. In an ILO review of the issues covered by collective agreements, Hayter et al (2011) observe that the bargaining agenda has expanded in many parts of the world, now including issues such as work organization, vocational training, the regularization of employment, parental leave and family responsibilities. Their observations are mainly based on country reports provided to the ILO. A systematic data collection of bargained issues, particularly for developing countries, could provide an empirical underpinning.

Our paper aims to take a step in enlarging our knowledge on how institutional arrangements affect individual labour market outcomes by exploiting the data from this newly started data collection. Research objectives are threefold. First, to what extent do collective agreements include wage and other remuneration-related clauses, are indexation clauses included, are wages tied to skills and if so how are skills typically defined, and are social security provisions included and if so against which social risks do they insure workers? Second, to what extent is a wider bargaining agenda with working hours, paid leave arrangements and work-family arrangements agreed? Third, to what extent do bargaining topics cluster within agreements?


In this article, we analyse the content of collective agreements, hence the agreement is our unit of analysis. We build on the data from the Collective Agreements Database, collected by WageIndicator Foundation. This Foundation operates national websites with job-related content for the public at large in 80 countries on five continents, receiving 23 million web-visitors in 2013. Each website is in the national language(s), and consists of three pillars, namely wages, labour law and collective agreements, and career and training. The Foundation was established in 2003, with the University of Amsterdam in its Board of Overseers.

As a part of Development Aid projects with social partners in the global south, WageIndicator started gathering collective agreements aiming to publish the full text on its websites. The social partners expressed a strong interest in publishing their agreements, considering this an effective and economical means of communicating the results of their bargaining efforts to their constituency and to a wider audience. These partners send the texts of their agreements to a small team. The texts are uploaded in a web-based, custom-made data-entry system, are annotated and coded, and published on the national websites. A web tool is available to compare annotated text across agreements within and between countries. The coded data from the Database is in a csv format, which the authors converted into a statistical programme.

The database’s coding scheme consists of two parts with in total almost seven hundred variables. The first part covers meta-level data about the collective agreement, specifically related to the signatories, the single or multi-employer nature, the operative date and duration, the ratification procedure if any, and the coverage characteristics. For the latter, industry and regions are registered, as well as whether coverage limitations apply to trade union members, job categories or age groups. Data about the number of workers covered are collected, where possible broken down by gender. The second part relates to the agreement’s content, coded
according to eight topics, namely 1) wages, 2) working hours, schedules, paid leaves and paid holidays, 3) employment contracts, 4) work-family arrangements, 5) arrangements concerning health and medical assistance, 6) sickness and disability arrangements, 7) social security and pensions, and 8) training. The database uses a country-specific list of bank holidays and general lists of categories of leaves, shifts, pay periods, and job types, e.g. unskilled workers.

By September 2014, 299 agreements from 23 countries had been entered and were published on the national websites. In this article, we selected 249 collective agreements from the eleven countries with at least ten agreements (Table 1). These include agreements from two Latin American countries (Brazil and Peru), four English speaking African countries (Ghana, Kenya, Uganda and Tanzania), four French speaking African countries (Benin, Madagascar, Senegal and Togo) and one South East Asian country (Indonesia). The agreements in the sample have been negotiated in eighteen different sectors and primarily (231 agreements) cover the private sector. The sector covered most often is manufacturing (74 agreements), followed by transports, logistics and communications (33 agreements), agriculture, forestry and fishing (21 agreements), hospitality, catering and tourism (17 agreements), extraction, mining and quarrying (16 agreements) and retail trade (10 agreements).

Table 1. Descriptive statistics per country

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of agreements</th>
<th>Share of agreements extended to employers who did not sign the agreement</th>
<th>Share of agreements signed by one or more employers' associations</th>
<th>Share of CBAs covering the private sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>18</td>
<td>6%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Benin</td>
<td>13</td>
<td>46%</td>
<td>92%</td>
<td>85%</td>
</tr>
<tr>
<td>Ghana</td>
<td>11</td>
<td>18%</td>
<td>27%</td>
<td>100%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>40</td>
<td>5%</td>
<td>0%</td>
<td>98%</td>
</tr>
<tr>
<td>Kenya</td>
<td>56</td>
<td>4%</td>
<td>11%</td>
<td>96%</td>
</tr>
<tr>
<td>Madagascar</td>
<td>11</td>
<td>9%</td>
<td>73%</td>
<td>91%</td>
</tr>
<tr>
<td>Peru</td>
<td>35</td>
<td>0%</td>
<td>3%</td>
<td>100%</td>
</tr>
<tr>
<td>Senegal</td>
<td>18</td>
<td>0%</td>
<td>88%</td>
<td>100%</td>
</tr>
<tr>
<td>Togo</td>
<td>12</td>
<td>9%</td>
<td>100%</td>
<td>91%</td>
</tr>
<tr>
<td>Uganda</td>
<td>16</td>
<td>25%</td>
<td>31%</td>
<td>44%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>19</td>
<td>16%</td>
<td>21%</td>
<td>95%</td>
</tr>
<tr>
<td>Total</td>
<td>249</td>
<td>9%</td>
<td>26%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Source: WageIndicator Collective Agreements Database

Sixty-five agreements were signed by one or more employers’ associations, whereas the others were signed by single employers (Table 1). Multi-employer agreements very common in Benin, Madagascar, Senegal and Togo and rare in Brazil, Peru and Indonesia, with the English speaking African countries taking a middle position. Only 22 out of 249 agreements were extended to companies in the same industry that did not sign the agreement; only in Benin were half of the agreements extended, whereas none were extended in Peru and Senegal.

We aimed to explore if the agreements are representative of the population of collective agreements and all employees in the countries, which would allow us to draw more general conclusions about the form collective bargaining takes in the different countries. Unfortunately, this question cannot be answered in a straightforward manner for any of the eleven countries. We have to rely on rough estimates from the WageIndicator team, indicating the Database includes almost all collective agreements in the majority of African countries and in Indonesia, whereas in Latin America more agreements are still being collected as the project reaches out to new trade union and employer partner organisations. The Brazilian DIEESE database holds over 660 agreements, while we use only 18 agreements. Concerning the share of employees
covered, data is even more scarce, and no statements can be made. For sub-Saharan Africa, Koçer and Hayter (2011) argue that these states are able to prevent certain collective actors from engaging in bargaining and thus coverage will be low. As such, we refrain from drawing any conclusions regarding general working conditions in the developing countries and are wary of generalisations with regard to Peruvian and Brazilian collective agreements.

In reviewing the interaction between collective bargaining versus administrative regulations and labour law, Hayter et al. (2011) observe that countries vary from replicating basic provisions in legislation on minimum wages and working time in collective agreements to not regulating these provisions at all. In our paper, we take the collective agreement clauses for granted and do not explore how these relate to national regulations. Such comparisons require an exhaustive database of national regulations and legislation, which is beyond the scope of this paper.

4. Findings

In section three, we asked to what extent wage and other remuneration-related clauses, working hours, paid leave arrangements and work-family arrangements are included in collective agreement and whether bargaining topics cluster within agreements. Here, we firstly examine the wage setting and social security clauses (4.1) and the wider bargaining agenda (4.2) separately, after which try to determine whether any bargaining patterns can be discerned (4.3).

4.1. Wage setting and social security

Firstly, we aim to examine the practice of wage setting through collective bargaining. We coded how wage are set, whether the agreements include indexation and pay scales and if these are related to skills, as well as whether they include other remuneration-related clauses and social security provisions and against which social risks they insure employees (Table 2). Virtually all agreements, with the exception of one Peruvian, one Ugandan and two Tanzanian cases, contain clauses on wages. However, the agreements do not include wage amounts, but identify where the wage setting takes place. Over 90% of the agreements specify individual contracts as the level where wages are to be determined. This is the case for all Latin American cases and most agreements in English speaking Africa (100% in Uganda and Tanzania, 97% in Kenya and 82% in Ghana). Wages are sometimes set at the industry level (17% in Benin and Togo, 14% in Indonesia, 8% in Senegal and 3% in Kenya) or through a framework agreement (17% in Senegal and 14% in Indonesia). In Madagascar (11%) and Senegal (8%) wages are occasionally set at the state level. One third of the agreements determine a wage floor for all employees, a practice which is only absent in Ghana and uncommon in Madagascar (9%) and Peru (3%).

Half of the agreements contain an indexation clause, increasing basic pay on a permanent basis. This is very common in Peru (91%) and Brazil (82%), as well as in Kenya (89%). Only 13% have a clause arranging the adjustment of wages to compensate for rising costs of living and 8% have a once-only wage increase agreed. Cost of living adjustments are most common in Indonesia (50%), following by Uganda (29%) and Ghana (27%).

Only 15% of the agreements refer to pay scales as a means of wage setting and of those agreements, more than half do not specify which or how many pay scales exist; the remaining agreements fix between one and thirteen pay scales. Four agreements have set pay indices instead of pay scales, formulating the wages as an increase with respect to the previous agreement rather than as a fixed monetary amount. None of the Brazilian or Peruvian
agreements contain pay scales, whereas these are found in half of the Indonesian ones. Just over a quarter of the Ugandan agreements have pay scales, while only 5% of the Tanzanian, 4% of the Kenyan and none of the Ghanaian cases do so. Pay scales are relatively rare in Madagascar (9%) and Senegal (11%) and more common in the other two French speaking African countries (23% in Benin and 42% in Togo). As a result, we do not encounter enough agreements that include detailed pay scale to conduct a meaningful analysis on wage dispersion.

Table 2. Share of Collective Agreements that include wage and social security clauses per country

<table>
<thead>
<tr>
<th>Country</th>
<th>Wage clause</th>
<th>Lowest wage clause</th>
<th>Pay scales</th>
<th>Wages tied to skills</th>
<th>Employer contributions to pension fund</th>
<th>Employer contributions to disability fund</th>
<th>Employer contributions to unemployment fund</th>
<th>Sickness and disability clauses</th>
<th>Health/medical assistance clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>100%</td>
<td>71%</td>
<td>0%</td>
<td>0%</td>
<td>56%</td>
<td>28%</td>
<td>8%</td>
<td>78%</td>
<td>100%</td>
</tr>
<tr>
<td>Benin</td>
<td>100%</td>
<td>38%</td>
<td>23%</td>
<td>54%</td>
<td>77%</td>
<td>8%</td>
<td>0%</td>
<td>92%</td>
<td>92%</td>
</tr>
<tr>
<td>Ghana</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>27%</td>
<td>27%</td>
<td>0%</td>
<td>0%</td>
<td>91%</td>
<td>100%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>100%</td>
<td>32%</td>
<td>50%</td>
<td>47%</td>
<td>95%</td>
<td>85%</td>
<td>3%</td>
<td>97%</td>
<td>98%</td>
</tr>
<tr>
<td>Kenya</td>
<td>100%</td>
<td>76%</td>
<td>4%</td>
<td>68%</td>
<td>62%</td>
<td>2%</td>
<td>0%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Madagascar</td>
<td>100%</td>
<td>9%</td>
<td>9%</td>
<td>45%</td>
<td>55%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Peru</td>
<td>100%</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>31%</td>
<td>74%</td>
</tr>
<tr>
<td>Senegal</td>
<td>100%</td>
<td>22%</td>
<td>11%</td>
<td>83%</td>
<td>28%</td>
<td>6%</td>
<td>6%</td>
<td>83%</td>
<td>89%</td>
</tr>
<tr>
<td>Togo</td>
<td>100%</td>
<td>25%</td>
<td>42%</td>
<td>92%</td>
<td>92%</td>
<td>17%</td>
<td>8%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Uganda</td>
<td>94%</td>
<td>21%</td>
<td>25%</td>
<td>29%</td>
<td>13%</td>
<td>0%</td>
<td>6%</td>
<td>75%</td>
<td>69%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>89%</td>
<td>26%</td>
<td>5%</td>
<td>18%</td>
<td>42%</td>
<td>5%</td>
<td>0%</td>
<td>79%</td>
<td>84%</td>
</tr>
<tr>
<td>Total</td>
<td>98%</td>
<td>36%</td>
<td>15%</td>
<td>43%</td>
<td>52%</td>
<td>19%</td>
<td>2%</td>
<td>83%</td>
<td>92%</td>
</tr>
</tbody>
</table>

Source: WageIndicator Collective Agreements Database

Fewer than half of the collective bargaining agreements (43%) have wages determined by occupational, job or skill levels. None of the Latin American agreements do, compared to 92% of Togo’s and 83% of Senegal’s. Of those agreements that determine wages according to skill or job levels, 10% contain skill levels and two thirds recognise different job levels. The skill levels mentioned in the agreements are very generic, including unskilled, semi-skilled, skilled, highly skilled and specialised workers, but never referring to specific educational titles. The occupations cited in the collective bargaining agreements include mainly manual and some administrative occupations such as artisans, cleaners, clerks, and machine operators.

Many of the collective agreements contain additional remuneration-related clauses, such as arrangements regarding benefits, premium pay and allowances. Up to 83% of the agreements have clauses regarding sickness and disability pay, arranging for wages to continue to be paid during periods that employees are unable to work, and 92% have health related or medical assistance clauses. Less common are the premiums and allowances, which differ much per country. We distinguish between six kinds of pay premiums (night work, on call work, holiday pay, over time, hardship and work on Sunday) and three types of allowances (for commuting, seniority and meals). The most frequently mentioned premiums regard overtime work (75%), work on Sunday (53%) and night work (42%). Only in Peru and Uganda do less than half of the agreements guarantee an overtime pay premium. Tanzania, Kenya and Indonesia are the only countries where all eight kinds of premiums and allowances are sometimes awarded.

Seven in ten agreements contain clauses on social security, including all Indonesian and Togolese agreements. Between 80% and 90% of Beninese, Ghanaian, Madagascan and Tanzanian agreements, as well as two thirds of the Brazilian, Kenyan and Senegalese agreements, have social security or pension clauses. On the low end of the spectre, only half of
the Ugandan and 29% of the Peruvian agreements do.

We further detail the social security clauses by distinguishing between employer contributions to pension, unemployment and disability funds. Pension fund contributions are paid under 52% of the agreements, whereas 19% stipulate such payments into disability funds and only 2% include unemployment funds. As table 2 shows, over 90% of the agreements from Indonesia and Togo contain clauses specifying employer contributions to employees’ pension funds. This is much less common in Peru (6%) and Uganda (13%). Indonesia is the only country where employer contributions to disability funds are common (85%), followed at considerable distance by Brazil (28%). None of the Ghanaian, Madagascan or Ugandan agreements in the sample contain such disability fund contributions at all. Employer contributions to unemployment funds are rare in all eleven countries, with Togo leading the way (8%), followed by the Brazilian, Senegalese and Ugandan agreements (6%).

Clauses on sickness and disability as well as medical assistance are more common, being included in 83% and 92% of the agreements respectively. All of the agreements in Kenya, Madagascan and Togo contain clauses on both, while all Brazilian and Ghanaian agreements have clauses on health and medical assistance. These levels are lowest for Peru, where only 31% of agreements have sickness and disability clauses and 74% have health and medical assistance clauses.

4.2. The wider bargaining agenda: working hours and leaves

The second research objective aims to examine the wider agenda in collective bargaining, notably to what extent working hours are regulated, including paid leave arrangements and work-family arrangements (Table 3). As expected, most agreements contain clauses on the standard working hours to which the agreed wages apply (89%). With the exception of one Senegalese agreement, this is always the case in the French speaking African countries, as well as in Ghana, Kenya and Indonesia. Peru (57%) and Uganda (56%) are the only two countries with relatively few standard working hours clauses. Limits on overtime are rare (8%) and are only regularly included in Indonesia (28%) and Madagascar (27%). The mean agreed standard working time is 7.96 hours per day and 42.44 per week. Average daily working hours in the countries vary from 7.6 in Brazil to 8.7 in Uganda and Tanzania. An eight hour working day is most common in all countries except Tanzania, where two thirds of the agreements stipulate a nine hour day. In the four French speaking African countries, all agreements with agreed standard working hours set the working day to eight hours. In Brazil and Indonesia, the eight hour working day is most common, while some agreements contain shorter working days of six or seven hours. In Kenya, Peru and Uganda, on the contrary, some agreements have negotiated longer working days of nine, ten or even twelve hours.

Just 135 collective agreements set a standard number of working days per week, which in a little over half of the cases (54%) is six days. Two agreements (in Indonesia and Tanzania) have seven-day working weeks, while all others (44%) foresee a five-day working week. Of the agreements that specify the number of days in the working week, all agreements in Ghana and Madagascar set five days; Benin, Indonesia, Senegal and Uganda are split roughly equally between five- and six-day working weeks. In Brazil, Togo and Tanzania, two-thirds of the agreements prescribe five days, whereas only 17% of Kenyan and Peruvian agreements do. A 155 agreements set weekly working hours, varying between 40 hours on average in Ghana, Indonesia, Madagascar and Peru to nearly 50 hours in Uganda. The standard working week is
40 hours in all Ghanaian, Indonesian, Madagascan and Peruvian agreements in the sample. As such, the variation in daily working hours should primarily be interpreted as the difference between a five- and a six-day working week. In Benin (80%), Senegal (70%) and Togo (87%), a 40-hour working week is the standard, but several agreements have 48 or even 50 hours working weeks. In Kenya and Tanzania, the most common working week is 45 hours, with some agreements having negotiated the limit up or down. Half of Brazil’s agreements with working time clauses put the standard on 40 hours, but a 36-hour (17%) and 44-hour (25%) working week are also relatively common. A majority of the agreements also contain clauses on schedules and rest periods (64%).

Table 3. Clauses on working hours in Collective Agreements per country

<table>
<thead>
<tr>
<th>Country</th>
<th>Standard working hours clause</th>
<th>Mean daily working hours*</th>
<th>Mean weekly working hours*</th>
<th>Paid leave clause</th>
<th>Clauses on work-family arrangements</th>
<th>Paid maternity leave clause</th>
<th>Child care clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>94%</td>
<td>7.60</td>
<td>41.00</td>
<td>29%</td>
<td>78%</td>
<td>67%</td>
<td>17%</td>
</tr>
<tr>
<td>Benin</td>
<td>100%</td>
<td>8.00</td>
<td>42.00</td>
<td>92%</td>
<td>85%</td>
<td>46%</td>
<td>8%</td>
</tr>
<tr>
<td>Ghana</td>
<td>100%</td>
<td>8.00</td>
<td>40.00</td>
<td>90%</td>
<td>91%</td>
<td>73%</td>
<td>36%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>100%</td>
<td>7.64</td>
<td>40.00</td>
<td>97%</td>
<td>100%</td>
<td>90%</td>
<td>45%</td>
</tr>
<tr>
<td>Kenya</td>
<td>100%</td>
<td>8.33</td>
<td>44.86</td>
<td>100%</td>
<td>100%</td>
<td>98%</td>
<td>41%</td>
</tr>
<tr>
<td>Madagascar</td>
<td>100%</td>
<td>8.00</td>
<td>40.00</td>
<td>91%</td>
<td>100%</td>
<td>91%</td>
<td>91%</td>
</tr>
<tr>
<td>Peru</td>
<td>57%</td>
<td>8.67</td>
<td>40.00</td>
<td>9%</td>
<td>51%</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>Senegal</td>
<td>94%</td>
<td>8.00</td>
<td>42.00</td>
<td>76%</td>
<td>89%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>Togo</td>
<td>100%</td>
<td>8.00</td>
<td>41.00</td>
<td>83%</td>
<td>100%</td>
<td>75%</td>
<td>67%</td>
</tr>
<tr>
<td>Uganda</td>
<td>56%</td>
<td>8.67</td>
<td>49.67</td>
<td>38%</td>
<td>75%</td>
<td>31%</td>
<td>0%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>84%</td>
<td>8.67</td>
<td>43.57</td>
<td>74%</td>
<td>79%</td>
<td>53%</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>89%</td>
<td>7.96</td>
<td>42.44</td>
<td>72%</td>
<td>86%</td>
<td>63%</td>
<td>31%</td>
</tr>
<tr>
<td>n</td>
<td>249</td>
<td>91</td>
<td>155</td>
<td>249</td>
<td>249</td>
<td>249</td>
<td>249</td>
</tr>
</tbody>
</table>

* Means include only collective agreements that contain a clause on working hours and specify the number of standard daily or weekly working hours

Source: WageIndicator Collective Agreements Database

Most of the agreements contain clauses on paid annual leave (72%). With the exception of Uganda (38%), at least 74% of the African and Indonesian agreements contain clauses on annual leave, compared to only 29% in Brazil and 9% in Peru. The average number of days of paid annual leave stipulated in the abovementioned 72% of all agreements, varies considerably between countries. It ranges from only twelve days (two weeks) in Indonesia to 38 days in Tanzania (six weeks). There are no countries where all agreements contain the same number of days of paid annual leave for all agreements, although 89% of the Indonesian agreements with an annual leave clause prescribe twelve days and 97% two weeks, again attributing most of the variation to the difference between a five and a six-day working week. The agreements in English speaking African countries do not show any clear standard number of days or weeks of paid leave, suggesting that social partners in these countries actively negotiate on the issue. Brazilian and Peruvian agreements can each be divided into two groups with regard to the number of paid leave days and weeks and seem to be most straightforwardly explained by the difference between a five and a six day working week.

For 120 collective agreements we can calculate the number of annual working hours by multiplying the weekly working hours by the number of weeks in the year, excluding those reserved for paid leave. While this overview disregards off time due to bank holidays, it can provide some insight in country patterns and shows us that the collective agreements foresee between 1840 and 2688 working hours per annum. In Kenya in particular, annual working time
differs quite drastically, ranging from 1840 to 2548 hours. The lowest average working hours per year are observed in Brazil (1860) and the highest in Uganda (2688).

We find that work-family arrangements are more common than social security and pension clauses. Almost all agreements include work-family arrangements (86%), only a few less than those with working hours (89%). We find large country differences. Whereas all Indonesian, Kenyan, Madagascan and Togolese agreements contain work-family clauses, only half of the Peruvian ones do (51%). In the four French speaking African countries, at least 85 per cent have such clauses, while the Latin American agreements do so to a lesser extent (78% in Brazil and 51% in Peru). In the English speaking African countries, Uganda (75%) and Tanzania (79%) lag significantly behind Ghana (91%) and Kenya (100%).

Of the agreements with work-family clauses, three in four have guaranteed paid maternity leave (ranging from 3% in Peru to 98% in Kenya). The share of agreements with paid maternity leave is high in Brazil, Ghana, Indonesia, Kenya and Madagascar, while it is low in Peru, Senegal and Uganda. The few Peruvian agreements that offer paid maternity leave do not specify its duration. The rest of the countries in the sample offer on average between 11 and 19 weeks of paid leave. In Benin and Togo all agreements offer 14 weeks. All Ghanaian and almost all Kenyan agreements offer 12 weeks. In Tanzania and Madagascar, agreements differ in offering between 12 and 14 weeks. The Senegalese agreements offer either two weeks or 14 weeks. As was the case with working hours, Brazilian and Ugandan agreements offer a multitude of different periods of maternity leave. Paid paternity leave clauses are less common, but still included in most agreements (55%). Kenya, Indonesia, Madagascar, Senegal and Togo relatively often have agreements with clauses on paid paternity leave. Only a third of the agreements offer child care allowances or facilities, varying from none in Uganda to most in Madagascar (91%). Relatively few agreements in Benin (8%), Peru (6%) and Tanzania (11%) contain such clauses.

4.3. Bargaining patterns

Our last research objective aims to explore patterns in the clauses with respect to the issues discussed. While any advanced causal analysis is outside the scope of this article, both theoretically and in terms of the sample size, we do present some analyses to indicate the way in which the clauses and contents of collective agreements relate to each other. In so doing, we examine whether trade-offs exists in terms of agenda setting, that is to say whether the inclusion of one issue is exchanged for the exclusion of another, as well as in terms of content.

When examining the inclusion of clauses on wages, working conditions, social security and pensions and work-family arrangements, we can draw a number of conclusions. As Figure 1 illustrates, wage clauses are most common (98%), followed by working hours (89%), family-work arrangements (86%) and social security clauses (71%). This finding holds for Brazil, Ghana, Kenya, Madagascar, Peru and Senegal. In Indonesia and Togo, all agreements include all four clauses and in Benin, the inclusion of social security clauses and work-family arrangements is equally likely (85%). In Uganda, work-family arrangements are more common even than clauses on working hours. Only Tanzania really diverges from the trend: social security clauses are included as often as wages (89%) and more so than working hours (84%) or family-work arrangements (86%).
When we know the frequencies with which each of the four clauses are included, the question remains how they are distributed across the agreements. In the sample, two thirds of the agreements have all four clauses. Two do not have any of the four clauses (one in Uganda and one in Tanzania). Seven per cent have only one of the four clauses, which is a common occurrence only in Peru. Six per cent have two of the clauses but not the other two, which is also most common in Peru. Almost 20 per cent contain three of the clauses, missing only one. This happens especially in Brazil, Kenya, Peru, Senegal and Uganda.

When we look at individual agreements, we find that having a social security clause in the absence of the other clauses is rare. There are no agreements with only the social security clause. Only one agreement has a social security clause without an accompanying wage clause, four agreements have a social security clause without working hours and five have social security clause without a family clause. By comparison, 181 agreements have wages but no social security clause; 48 have hours but no social security; and 42 contain family-work arrangements but no social security.

We run three logistic regressions to determine the extent to which the inclusion of a clause is associated with the inclusion of the others. We do so for working hours, social security and family-work clauses, but not for wages, because the sample contains only four agreements without wage clauses. Since all Indonesian and Togolese agreements in the sample contain clauses on all three issues, we exclude those countries from our analysis so as not to bias the results. We control for public sector and manufacturing agreements because public sector negotiations may be subject to a different dynamic than private sector bargaining and to ascertain that our findings are not driven manufacturing, which is the largest sector in our sample.

We find that the inclusion of clauses on one of the three issues is positively associated with the other two (table 4). The results are reported in odds ratios, whereby coefficients above 1 imply a positive association and those below one a negative association. Agreements are five times as likely to contain a social security clause if they have a clause on working hours (odds ratio
5.171) and over nine times as likely if they have a clause on work-family arrangements (9.597). Collective agreements are up to 16 times as likely to contain working hours clauses if they have a clause on work-family arrangements (16.018) and over five times as likely to do so if they have a social security clause (5.116). We do not find significant results for the public sector and manufacturing dummies.

To examine whether a trade-off exists in terms of contents, rather than the inclusion of bargaining clauses, we run another set of regressions using the number of weekly working hours, days of annual leave and weeks of maternity leave. In order to ensure that we measure whether levels are set on, below or above the statutory minimum (annual and maternity leave) or maximum (weekly working hours), we subtract the legal standard from the agreed standards in the agreements. That also allows us to note that weak to moderate positive correlations exist between the legal standards and the contents of the agreements, as well as how many agreements set standards that are superior to the legal requirements. In so doing, we research whether agreements represent a bargaining process that delivers working conditions superior to the legislative process, or whether they are primarily a confirmation of legal standards – in the latter case, they might be interpreted as an employer’s commitment to upholding the law, a non-trivial commitment in many developing countries.

Weekly working hours are most strongly correlated with the legal standard (r=.638, p<.000, n=155). Most agreements (52%) contain weekly working hours equal to the legal maximum working time; four in ten (43%) have shorter working weeks than allowed whereas the remained have longer weeks. Annual leave days are correlated at .56 (p<.000, n=165) with legal standards. Few agreements (7%) have fewer annual leave days than the statutory
minimum, a third (31%) has the exact same number and the rest has more days (62%). Maternity leave, too, correlates with the legal standard ($r=.660$, $p<0.000$, $n=151$). Some 76% of the agreements follow the legal standards, 19% grant fewer weeks of maternity leave and 5% give more weeks. Agreements with high weekly working hours limits are also more likely to grant a low number of annual leave days and maternity leave weeks (table 5). Agreements with more annual leave days or maternity leave weeks have lower standard working hours. However, the two leaves also have a significant negative effect on each other, indicating that generous maternity leave clauses are associated with shorter annual leave clauses and vice versa.

5. **CONCLUSIONS AND DISCUSSION**

In this article, we have attempted to show how and to what extent wages, social security, working hours and work-family arrangements are negotiated in collective agreements. We have done so using the first ever large-scale, multi-country and consistently coded dataset of 249 agreements from 11 developing countries, which was made possible in the course of a major effort to disclose the contents of collective agreements to a larger public using web-based technology. Our article has shown that the web-based data collection of collective agreements provides systematic insights into the issues agreed in collective bargaining, which without Internet would have been impossible. We can imagine that these results are extended further to include more countries, industries and agreements in a systematised effort of data collection with coherent coding and template collective agreements, which would benefit bargaining partners and researchers alike.

We find that while wages are an integral part of almost all collective agreements, the detail with which they are set is much lower than expected. The agreements recognise the role of bargaining in wage setting, but do not commonly include pay scales and leave the determination of exact wages up to individual contracts. Secondly, we find that clauses on social security, including the provision of pensions, unemployment funds and access to health care, are still not a self-evident chapter in each collective agreement.

The relatively large variation within countries in terms of working hours and paid annual leave days suggests that this is one of the core issues on the table during the negotiations of a collective bargaining agreement, although less so in Indonesia and French speaking Africa than in the other countries. We find that clauses on work-family arrangements are relatively common. They are more common than social security clauses and occur only slightly less frequently than working hour clauses. The large variation in duration of leaves within countries seems to suggest that maternity arrangements are one area where intensive bargaining occurs and that it may be an issue on which good employers distinguish themselves. To explain conclusively how this came to be is beyond the scope of this article, but is certainly an interesting query for further research. From the large variation in clauses and contents of the agreements, we also conclude that collective agreements are more than a mere reiteration of national legislation, but an integral part of improving wages and working conditions in developing countries. Section 4.3 shows that agreements that contain one of the three clauses are also more likely to include the other two clauses and that this association is strongest between work-family clauses and the other two. These results suggest that there is no trade-off in terms of putting these issues on the bargaining agenda. The second set of regressions suggest that the dynamics of content trade-off are more nuanced and merit further study. Within a sample of collective agreements that fixed levels on working hours, annual leave and maternity
leave, we find some evidence of a trade-off. Shorter working weeks do seem to be associated with longer leaves, but a longer leave period of one kind is also associated with a shorter leave of the other.

The WageIndicator Collective Agreements Database will enable new research, whereby future objectives can be clustered into a few strands of research. The first strand aims to analyse the content of agreements, such as the challenge to compute working hours in a full year working scheme, to identify country versus industry level patterns in bargaining, or to reconstruct industry-level wage structures. A second strand could aim to explore and specify coverage rates and bargaining regimes, which are also coded in the database, but not used in this article. A third strand could use the country-level bargaining characteristics in a related database, also not used here. Country-level features allow exploring objectives such as the impact of globalization on collective bargaining, thereby expanding for example the analysis of Neumayer and De Soysa (2006), relating a country-level index for violations of free association and collective bargaining rights to trade and governance characteristics. A fourth strand challenges research about the impact of collective bargaining on employee’s wages and working hours beyond the covered – not covered dichotomy, as discussed in Section 2. This would require either the identification of the collective agreements’ name in surveys of employees to allow matching this data with the collective agreements database or by using industry-level proxies.

Finally, by publishing the full texts of collective bargaining agreements, the national WageIndicator websites will function as a lighthouse for other negotiators and this may challenge them to submit their bargained agreements to the website as a means of cheap dissemination. In the long run, this process will hopefully lead to a collective agreements database that covers most of the bargaining results for many developing as well as developed countries, particularly in countries where no database currently exists.

6. REFERENCES


Osse, P. and Tijdens, K.G., WageIndicator Collective Agreement Database. Amsterdam: Stichting Loonwijzer and University of Amsterdam/AIAS (from 2015 on the data can be obtained from IDSC of IZA).


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ii We do not find any collective agreements that specify whether working time is meant to include or exclude lunch and other break time, but for the purposes of the analysis here assume here that they are excluded in all collective bargaining agreements.

iii The number of paid annual leave days in the agreements correlate at .56 (p<.000; n= 165) with the
legal minimum number of annual leave days in the countries, which we take from the ILO Travail database and convert to a standard six day working week.

Note that laws often permit collective agreements to diverge from working hour standards, and that collective agreements that fixed weekly working hours which are longer that the law prescribes are not necessarily a breach.