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# WageIndicator

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# Socio-economic Data Collections Worldwide

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## Abstract

Since the early 2000s, the Internet has enlarged data-collection opportunities regarding the measurement of socio-economic topics, thus enriching micro-data surveys as well as desk-based databases, covering a wide range of countries. This working paper provides a kaleidoscope of the WageIndicator data collections in dozens of countries, including Low- and Middle-Income Countries such as Bangladesh, Ethiopia, Indonesia, and Uganda. It shows the variety of Internet-based data collections as well as new approaches for face-to-face surveys in which the authors have been involved, in addition to large cross-country comparative and longitudinal surveys. The working paper details four microdata collections, namely the COVID-19 surveys, the Decent Work Survey, the Cost-of-Living Survey, and the Salary Surveys. In addition, it showcases five databases collected by means of desk research, namely the Labour Law Database, the Collective Bargaining Agreements Database, the Minimum Wages Database, the Garment Supply Chain (GSC) Database, and the Working Hours Database. All these data collections cover dozens of countries.

## Introduction

This working paper provides a kaleidoscope of the WageIndicator data collections in dozens of countries, including Low- and Middle-Income Countries such as Bangladesh, Ethiopia, Indonesia, and Uganda. It details four microdata collections, namely the COVID-19 surveys, the Decent Work Survey, the Cost-of-Living Survey, and the Salary Surveys. It showcases five databases collected by means of desk research, namely, the Labour Law Database, the Collective Bargaining Agreements Database, the Minimum Wages Database, the Garment Supply Chain (GSC) Database, and the Working Hours Database. All these data collections cover dozens of countries.

### **The Covid-19 surveys**

The COVID-19 pandemic that ruled large parts of the world from 2020 to 2023 affected survey practices substantially. Face-to-face surveys were no longer possible: all of a sudden survey had to rely solely on internet or telephone modes. Also, survey questions had to be amended. This was the case in a survey measuring wages in low-paid industries in Bangladesh in which WageIndicator participated, developed in 2019 with fieldwork scheduled for Spring 2020. The COVID-19 pandemic delayed field work yet created an impetus to add a substantive survey module focusing on the pandemic's impact on jobs and workers. It included questions about hygiene facilities at the workplace, absenteeism from the job, reasons for being absent and workers' coping strategies with the related income loss. After a rather short lockdown period, fieldwork could go ahead through a face-to-face survey that included the newly added questions. The results revealed a poor supply of disinfectants and sanitizers and high absenteeism during the lockdown, while two in three workers reported income losses due to workplace closure (Tijdens et al., 2024).

Another WageIndicator survey, the Corona Work Life Company Survey, held from May/June until 31 December 2020 in Ethiopia (garment and flowers production), Indonesia (garment), and Uganda (garment), took the form of a telephone survey covering factories and farms that had already been covered in previous projects. This survey aimed to gain insight into what exactly happened at the shopfloor and to deliver reliable data to be used by trade unions and employers in negotiations about workplace improvement. To facilitate such negotiations on a weekly basis, in the three countries, the survey results were shown in so-called factory/farm pages and in graphs.

Overall, the COVID-19 pandemic gave rise to large-scale online surveys, which were predominantly country-based. WageIndicator developed a web survey asking whether the Coronavirus lockdown affected workers' jobs, lives and mood. In over 100 countries, this survey was translated and posted on the national WageIndicator websites. With daily updates, the results were shown online in maps and graphs. In one country, Spain, extra promotional efforts using Facebook were undertaken (De Pedraza et al., 2025). Research quantified the returns from ad-investments in terms of the number of responses. It showed that each additional Euro invested in Facebook added between 2 and 2.8 additional completed surveys, daily generated.

### **The Decent Work Survey**

Which compliance rates for regulations in the area of decent work exist? Measuring such rates in Low- and Middle-Income countries requires surveys in which daily work is compared to the applicable labour law clauses. Along this line, information from the multi-country WageIndicator Labour Law database has been used to design questions for surveying workers in the garment industries of Bangladesh, Indonesia, Ethiopia and Uganda and in flower farms in Uganda. These surveys allow workers to test whether their jobs comply with 46 topics in the national Labour Law and with the applicable Minimum Wage rates.

In the four countries mentioned, the Decent Work Survey started in 2017. It continues till the current day. In cooperation with local trade unions, the WageIndicator teams in these countries selected factories, respectively, flower farms where these unions had members, regardless of the state of affairs of the working conditions in question. A factory/farm-level survey was designed to collect information about the factories or farms, with questions regarding the size of the workforce, broken down by workforce characteristics, the production processes at stake, the position of factories/farms in the supply chain, and their turnover. This data is used to supplement the workers' data.

Subsequently, the management of factories and farms was contacted and asked for permission to conduct interviews. On behalf of the interviewers, the teams launched a training program. Interviews were based on random samples of the respective workforces. As yet, over 32,000 workers have completed the survey. The outcomes have been visualized on the WageIndicator country websites.

## **The Cost-of-Living Survey**

In many countries and for many years, national Statistical Offices have been collecting price data to be used in economic modelling, among other things, to estimate inflation. To this end, a wide variety of data collection methods have been used, from scraping of prices and price databases to face-to-face surveys. However, only at highly aggregated cost categories are these data collections comparable across countries, while data releases are facing time lags. Yet, currently, there is a global need for up-to-date and cross-country comparable data on cost-of-living data and the related living wage levels. The main reason is that statutory minimum wages often fall short of securing a decent living standard for workers, in particular as governments are often slow in adapting these minimum wages to the rising cost of living.

In 2013, WageIndicator took up the challenge hidden in this discrepancy and developed a plan to collect data on the prices of food items. A plan for 'on the ground' data collection was developed, observing prices in shops and on markets as well as asking individuals about their expenses for certain items. On behalf of such a Cost-of-Living survey, in an increasing number of countries, WageIndicator established data collection teams, consisting of 400 professional data collectors, with trained team members added. Price data is collected in shops and markets, through face-to-face interviews, through checking web shops and from third-party sources. These datasets are updated quarterly. The price data the Cost-of-Living survey collects covers ten cost categories: food, housing and utilities, transport, drinking water, phone plus internet, clothing, health-related expenses, education, provision for unexpected expenses, and mandatory contributions and taxes. The model diet used in the food basket is adapted to regional or national food consumption patterns (Guzi et al., 2025).

By mid-2025, the database behind the Cost-of-Living survey included over 6 million prices and covered 175 countries, of which 21 were low- and 88 were middle-income countries. Large countries are broken down into provinces or states. Based on the collected price data for all countries and regions within countries, living wages are estimated for several family types. As this quarterly updated data collection is quite expensive, access to the full data is behind a paywall.

## **The Salary Survey**

In High-Income countries, information on earnings is mostly based on well-organised and regularly updated survey and administrative data collections. Yet, this is far less the case in Low- and Middle-Income Countries. Main reasons are that regularly conducting representative salary surveys is difficult and costly, and that administrative databases mainly include high-income strata, while not capturing the informal labour market. Luckily, the ILO's statistical office observes that a growing number of countries are providing salary data.

Since its start in 2000, WageIndicator, with its national websites in almost 200 countries, has posted a volunteer Salary Survey, inviting the millions of its web visitors to complete that survey (Tijdens et al., 2013). Twenty-five years after its start, over a million web visitors completed the Salary Survey. It is in the language(s) of the country, currently counting over 50 languages. Of course, web surveys cannot meet the criteria of random sampling as respondents are self-selected. Nevertheless, such surveys are advantageous in terms of continuity, the use of advanced routing schemes in the questionnaire, their multi-lingual approach, and their use of APIs (Application Programming Interface).

APIs are databases for long-list survey questions, for example, about occupation, education, region of residence, and industry. In each country, tens of different educational categories may be in existence. Whereas respondents may prefer to answer with their specific educational achievement, lists in surveys force them to make a choice from a list of aggregated categories. Web surveys can tackle this problem in two ways. First, search trees can be used, whereby respondents stepwise select their educational category. Second, text recognition can be used, whereby respondents type in a few characters, and a database shows the items that match these characters. WageIndicator has developed APIs for measuring occupations covering more than 4,000 titles, all translated for over 50 languages and coded according to the ISCO classification; for educational categories in the national language(s) coded according to the ISCED classification and translated in English, and for industry in the national languages and coded according to the NACE/ISIC classification.

## **The Labour Law database**

As a rule, a set of labour laws is included in national legal systems. Most likely, company management and workers alike are curious to know what has been agreed upon in these laws. This holds in particular for the

management of multinational companies and for workers aiming to work abroad. To provide this information, research by the WageIndicator Foundation (Netherlands) and its labour law office, i.e., the Centre for Labour Research (Pakistan), aims to collect this data. Data collection started in 2013 with 16 countries, and gradually, more countries have been added. As of today, the Labour Law Database holds detailed country profiles for 153 countries, of which 22 are Low-Income Countries, and 75 are Middle-Income Countries. This information is published on the national WageIndicator websites in the national languages, and is used for the bi-annual Labour Rights Index.

The relevant information has been collected from official websites, gazettes or documentation. A scheme has been developed for coding the labour law clauses, covering 19 topics, namely: legal basis for collective bargaining; legal basis for signatories of collective agreements; wage boards; national wage policies; industrial conflicts; export processing zones; work and wages; compensation; annual leave and holidays; employment security; family responsibilities; maternity and work; health and safety; sick leave; social security; fair treatment; minors and youth; forced labour; trade unions. An online platform has been developed to facilitate coding (Ahmad et al., 2024).

The Labour Law Database is also used for the Decent Work Check, as discussed in the previous section. This Check is used as an offline tool in print, and as a survey, whereby workers are informed whether their job complies with the applicable labour law. The check works as an awareness tool and as a quick check of one's labour law knowledge.

### **The Collective Bargaining Agreements database**

When independent trade unions and employers or employers' organisations engage in negotiations to establish terms and conditions of employment, and they thus regulate their relationship, this process is known as "collective bargaining", as defined by the International Labour Organization (ILO) Convention 154. The resulting legally binding contract is called a Collective Bargaining Agreement (CBA). CBAs can be established either at the enterprise level involving one or multiple companies, at the sectoral level, or at an inter-professional level encompassing all workers in a country. In CBAs, negotiated issues are laid down, such as wages, working hours, benefits, workplace rules, dispute resolution procedures, and other issues. This should ensure that employees are treated fairly and consistently, that working conditions comply with national labour law and that benefits and protections are

provided more favourably than what the law provides. Some countries run a CBA registry; a few of them even register the agreed-upon benefits and protections. However, little is known about wages, benefits and protections as laid down in CBAs; that is already in general the case but particularly so in Low- and Middle-Income Countries.

In order to overcome this knowledge gap, an analysis of the content of CBAs requires an understanding of the full text of CBAs. Two methods are available to study this content, namely, interviewing the persons who have been involved in the preparation or use of the texts, or coding the content of the CBAs full text. The latter refers to the so-called leximetric coding of legal texts. This method is particularly suited for CBAs, some of which may be hundreds of pages long. In December 2012, WageIndicator began collecting collective agreements. This organisation developed an online platform with a coding scheme, where the text is coded by skilled, multilingual annotators able to manage multiple languages. Additionally, WageIndicator allows to publish the full texts online. The idea to publish CBA full texts online initially stemmed from social partners in developing countries, who experienced high costs and logistical difficulties when distributing the printed texts of the agreed CBAs to the employers and employees covered. In December 2013, the very first CBA was entered in the CBA Database. In many countries, social partners expressed great interest in publishing their CBAs, recognizing it as an effective and cost-efficient method of communicating the outcomes of bargaining efforts to their constituents and a broader audience. These partners submit the texts of their agreements to be entered in the database. By mid-2025, the CBA database included 3,298 CBAs from 74 countries, of which nine Low-Income Countries, 16 Lower-Middle Income Countries and 14 Upper Middle-Income countries.

The coding scheme aims to capture the critical elements of CBAs (Medas et al., 2024). The scheme falls apart into two sections, namely metadata and content. The metadata refers to the signatories: employers or their associations, trade unions, or, in some cases, works councils or professional associations, and to the operative date as well as the duration of the CBA, if agreed. The second part of the database aims to code the content of clauses related to wages, working hours, social security and pensions, training, employment contracts, sickness and disability, health and medical assistance, work/family balance arrangements, gender equality issues, workers' representation and

conflicts, new technologies and green clauses, and definitions of which workers are covered by the CBA at stake.

### **The Minimum Wages database**

Minimum wages are often assumed to be one rate per country with yearly updates. However, just 75 countries worldwide apply this model (Tijdens et al., 2024). Apart from the 18 countries with no statutory minimum wage, the remaining countries have two or more rates, up to more than 13,000 rates in India alone. The latter countries either differentiate minimum wage rates across their regions to keep up with within-country Consumer Price Index (CPI) differences, or a mimicking collective bargaining strategy is at stake, whereby rates differ across industries or across occupational groups. Some countries differentiate minimum wage rates by firm size, others do so by workers' age, or by their nationality status. The minimum wage rates in India combine all these approaches, namely specifying rates per state, dividing within states for employment schedules, and within these schedules by job role or by skill level, sometimes adding breakdowns by firm size.

In light of the advocacy for decent minimum wages, knowledge spanning the world is lagging behind on minimum wage levels and on whether these levels are keeping up with inflation. Only four databases collect time series for Minimum Wage rates, but three of them (ILO, OECD, WSI) follow a one-rate-per-country-per-year approach. The fourth, the WageIndicator Minimum Wage Database (MWDB), is much more fine-grained by including all countries' minimum rates; it also contains monthly instead of yearly rates. The MWDB database contains over 22,000 rates in 210 countries per month, for each month from January 2014 to the present. It covers 25 Low-Income Countries and 104 Middle-Income Countries. Based on desk research and a network of national correspondents, the MWDB database is continuously updated.

Combined with third-party data, explanatory models can shed light on the dynamics hidden in the MWDB database. This third-party data can include time series of the Human Development Index (HDI) maintained by the United Nations, the World Bank's classification of a country's income class, the IMF's inflation data, or employment data extracted from the Labour Force Statistics in ILOSTAT. Such analyses reveal that two (not-mutually exclusive) models for minimum wage setting are dominant, namely, in 147 countries ensuring minimum wages for the entire labour force and in 76 countries mimicking collective bargaining.

## **The Garment Supply Chain (GSC) Database**

A more specific database developed by WageIndicator regards the global supply chains of textile, garment and leather products. This database, based on extensive desk research, documents for 2015-18 the main characteristics of the supply chains of 24 major textile, garment and leather-selling brands based in Europe, the United States and Japan. It covers 25 production countries, namely:

- 16 Asian countries: Bangladesh; Cambodia; China; India; Indonesia; South Korea; Malaysia; Myanmar; Pakistan; Philippines; Singapore; Sri Lanka, Taiwan; Thailand, Turkey, and Vietnam;
- four African countries: Egypt; Ethiopia; Morocco, and Tunisia;
- five Latin-American countries: El Salvador; Guatemala; Honduras; Mexico, and Peru.

The database details the garment exports of these 25 countries (2016); total and female employment in their textile, garment and leather industries (2015-16); sales, number of employed and number of factories in the supply chains of the 24 brands in these countries (2017-18); distribution of the number of brands supplied per factory; distribution of factory size over brands and countries; and the number of supplying factories by parent company, including foreign ownership and joint ventures. Also, for the 10 largest exporting countries, their spatial concentration has been detailed, as well as for all 25 countries, their presence in Export Processing Zones (EPZs) and similar areas. The information disclosure of all 24 brands has been mapped for 14 items.

All in all, the GSC database covers 8,110 factories. Their size varies widely. In the 2018 WageIndicator report, the largest 24 footwear factories, 13 garment factories and five accessories factories worldwide have additionally been detailed (Van Klaveren et al., 2018).

Data derived from the database has notably been used in ILO publications, like in its 2022 publication *Employment, wages and productivity trends in the Asian garment sector* (International Labour Organization, 2022). Other organizations and independent researchers are invited to use the detailed GSC database as well and, wherever possible, update the data.

## **The Standard Working Hours database**

Working hours can be measured in several ways, depending on the sources used and the aims of measurement. At least six definitions can be distinguished, indicating the number of hours worked per year per person in employment; survey-based weekly hours actually worked, law-based working hours per day, and the maximum number of working hours.

Since 2014, WageIndicator has maintained a database with information about weekly working hours for over 200 countries (Tijdens, 2023). The database holds information about the standard working week. This refers to the most common working week as agreed in employment contracts in the formal labour market. As a consequence of such regulated weekly working hours, overtime hours are defined as hours worked per week in excess of the standard working week. Such information about the standard weekly working hours is needed as a basis to compute hourly wages and to identify overtime hours.

The data collection is based on an inventory of publicly available databases of the mean weekly hours actually worked, derived from five major sources: the ILO database; the number of hours worked per year, derived from the OECD database; the contractual weekly working hours, derived from the WageIndicator salary survey; the working hours agreed in collective agreements from the WageIndicator Collective Agreements Database, and the standard working hours agreed in the WageIndicator Minimum Wages Database. Where data was missing or inconsistent, it was completed through an online search. The database contains information for 200 countries, of which 23 are low-income countries, and 96 are middle-income countries. The database is annually updated, using multiple sources, such as the regulations in Minimum Wage Notifications, the WageIndicator Labour Law database, newsletters announcing working time reductions, websites from international HR companies, and alike.

Almost half of these 190 countries have a 40-hours working week (106 countries or 49%); 18 countries have a shorter working week, ranging from 35 to 39 hours per week (8%); 45 countries have a long working week of 48 hours, reflecting a 6-days working week (21%), while 44 countries have a working week of 44 or 45 hours (20%). In the latter two categories, workers typically work 5.5 days per week. The remaining two countries have a 41- or 42-hour working week. Almost all countries have 8-hour working days, with a few exceptions for a 9-hour day or a

shorter day in summertime and a longer day in wintertime. Few countries maintain working days between 7 and 8 hours per day.

## **Conclusion**

This working paper provided a kaleidoscope of Internet-based data collections, generating data from face-to-face surveys, from desk research, from networks of correspondents, from networks of experts, or from web surveys, including countries in the Low- and Middle-Income domain. The working paper shows that connecting data collections from different sources opens new perspectives. For example, the Decent Work Check surveys show that compliance can be assessed by comparing the responses in a face-to-face survey with the relevant clauses from a labour law database. Thus, the interviewed worker can be provided feedback on how his or her job meets legal requirements.

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## Relevant Websites

Collective Agreements Database, see

<https://wageindicator.org/labour-laws/collective-bargaining-agreements>

Decent Work Survey in Indonesia, see <https://gajimu.com/garment>

Global Barometer Surveys (GBS), see <https://www.globalbarometer.net/>

Living Wages, see <https://wageindicator.org/salary/living-wage>

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