WageIndicator

EXPLANATORY NOTE ON THE WAGEINDICATOR WORKING HOURS DATABASE

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WageIndicator Foundation - www.wageindicator.org

WageIndicator started in 2000 to contribute to a more transparent labour market by publishing easily accessible information online. It collects, compares and shares labour market information through online and face-to-face surveys and desk research. It publishes the collected information on national websites, thereby serving as an online library for cost of living and wage information, labour law, and career advice, both for workers/employees and employers.

The WageIndicator websites and related communication activities reach out to millions of people each month. By 2023 WageIndicator has offices in Amsterdam (HQ), Bratislava, Buenos Aires, Cairo, Cape Town, Düsseldorf, Jakarta, Islamabad, Maputo, Pune, Sarajevo and Venice. The foundation has a core team of 40 people and some 100 associates - specialists in wages, labour law, industrial relations, data science, data collection, statistics - from all over the world. On a yearly basis, WageIndicator Foundation offers 150 internships to students from different universities. FLAME University in Pune, India, plays a key role in the intern program.

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INTRODUCTION

Defining the working week

Working hours can be measured in several ways, depending on the sources used and the aim of measurement. It is common to distinguish at least six definitions related to hours of work per week (Bell and Elias 2003; Evans et al. 2001; Lukács and Antal 2022; Tijdens and Dragstra 2007). The first definition refers to the **actual hours of work** in productive activities, whether paid or unpaid. This definition is particularly important for macro-economic analyses and typically based on reports from employers. The second definition refers to the **usual hours of work**, derived from the hours reported by individual workers in surveys. These reported hours are not influenced by unusual or irregular events, such as a short period of overtime working, or short-hours working, holidays or sicknesses. This definition is in international respect most commonly used in labour force surveys. Third, in countries where the working week is primarily regulated by law, it is common to refer to the concept of **legal working hours**. This applies for example to France, where the 35-hour-week has been introduced by law. Other countries may set only a maximum number of working hours in their legislation. This is for example the case in the Netherlands, where the standard working week is agreed upon in collective bargaining and where excessive working hours are limited by legislation. Fourth, in countries where the working week is predominantly regulated in collective agreements, it is common to refer to the **agreed weekly working hours** and the hours accordingly agreed in employment contracts. Fifth, in countries where collective bargaining coverage is low and the duration of the working week predominantly regulated in individual employment contracts, it is common to refer to the **contractual hours of work**. Sixth, countries with a Statutory Minimum Wage mostly define **a standard working week** when the minimum wages are defined per week or per month.

The WageIndicator working hours database focuses on the standard, contractual or agreed working hours per week and on the legal working hours, provided that these do not indicate the maximum hours. The word **standard working week** is used here to indicate the standard number of hours worked per week and in most countries these hours are adapted country wide. As a consequence of such regulated weekly working hours, overtime hours are defined as the hours worked per week in excess of the standard working week.

No database available about the standard working week worldwide

WageIndicator needs information about the standard weekly working hours for countries around the world as to compute hourly wages from weekly or monthly minimum wage rates, from the salary data collected in its Salary Survey and Salary Check, and for its Living Wage calculations. The information should cover at least the 196 countries with a WageIndicator website, and preferably all years from 2014 on. The database contains country-level information, implying that each country has one, and just one, standard working week.

An inventory has been made of publicly available databases. Unfortunately, none of these databases contain data regarding the standard weekly working hours worldwide:

- In its data catalogue ILO has information about mean weekly hours actually worked for 189 countries, and modelled for all years from 2013 on, as reported in survey data, see https://ilostat.ilo.org/data/

data-catalogue/. However, mean weekly hours may deviate from standard hours, particularly in countries where part-time work or overtime hours are common.

- World Bank provides information about working hours per day and maximum work days per week for 192 countries, see [ht-tps://www.World Bank.org/en/research/employing-workers/data/working-hours.](https://www.WorldBank.org/en/research/employing-workers/data/working-hours) However, neither of these two measures provide reliable data about the standard working week.

- OECD (2023) provides data about the number of hours worked per year per person in employment for 38 OECD members for each year from 2010 on, see https://www.oecd-ilibrary.org/employment/data/hours-worked/average-annual-hours-actually-worked_data-00303-en. This database as well does not provide data about the standard working week worldwide.

WageIndicator collects data about the legal working hours. In its Labour Law database, the legal weekly working hours per country are collected, see https://labourrightsindex.org/ . Currently that database contains information for 152 countries, in most cases from at least 2014 onwards. However, in some countries the legal working hours reflect the standard working week, whereas in other countries they indicate the maximum working hours allowed per week; the latter may differ substantially from the standard working hours per week.

WAGEINDICATOR DATA COLLECTION ABOUT HOURS

The data collection about the working hours per week

To fill this gap WageIndicator had to develop a table with country-level information about the standard working hours per week for 196 countries and all years between 2014 and the current year.[1] In a first step, data from various sources was pooled per country and per year:

- the legal working hours from the World Bank and WageIndicator databases;
- the mean weekly hours actually worked from the ILO database;
- the number of hours worked per year from the OECD database;
- the mode statistic of the contractual weekly working hours from the WageIndicator salary survey;
- the working hours agreed in collective agreements from the WageIndicator Collective Agreements Database;
- the standard working hours agreed in the WageIndicator Minimum Wages Database.

The pooled database revealed quite a number of missing data points across years and countries. Some countries had valid data for almost all years and almost all sources, whereas others only had one single data point for one year – thus, challenging the development of a database with valid data regarding the standard working week. The following steps were undertaken to identify the valid datapoints:

- per country the data collected from each source was compared through the years as to detect outliers in one or more years;

- per country and per year the most reliable standard working hours were identified across sources, applying the following rules:

  ° if in a cell the maximum legal hours were 48 and more, and the contractual/regular hours from other sources were between 35 and 45, the decision was in favour of the contractual hours; this case occurred most frequently;

  ° if in a cell the maximum legal hours were 48 and more, and the contractual/regular hours from other sources were above 48, the decision was in favour of the legal hours; this occurred rarely;

  ° if in a cell the maximum legal hours were 47 hours or less, and the contractual/regular hours from other sources were less than 48 but higher than the maximum, the decision was in favour of the legal hours;

- in case the valid datapoints revealed the same number of hours per week in any years between 2014 and 2022, the missing years were assigned these hours;

- in case the legal hours did not substantially deviate from the hours defined in other sources, the legal hours were considered to reflect the standard hours;

- for countries with no or unreliable information in any of the years, knowledge was based on WageIndicator's country correspondents or on smart googling for working hours, and if absent, on typical opening

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1 The start year 2014 was chosen because the WageIndicator Minimum Wage Database started from 2014 on, see https://wageindicator.org/about/researchlab/minimum-wages-historic-data.

hours in banks, offices and shops.

The resulting database contained valid information about the standard working hours per week for 243 countries or territories for all years from 2014 until now. For up-to-date information about the database and for downloading the database, see https://wageindicator.org/Wageindicatorfoundation/researchlab/working-hours-and-leave-regulations.

Working days per week

Apart from the working *hours* per week, the database also contains information about the working *days* per week. This information is derived from the working hours per week, and calculated as follows:

- if working hours pw < 41, working days pw are between 4 and 5;

- if working hours pw > 40 and < 46, working days pw are between 5 and 6;

- if working hours pw > 45, working days pw are 6.

Updating policy

Each year, the database is updated using information from the WageIndicator Labour Law database and the WageIndicator Minimum Wages database, as well as information from external sources (World Bank, ILO, OECD), as well as from the monthly De Burcht-ETUI Collective Bargaining Newsletters, that typically report about changes in standard working hours per week, see https://www.etui.org/newsletters/collective-bargaining-newsletter. In January 2023, the WageIndicator Labour Law was updated for the standard working hours in 2023.

THE STANDARD WEEKLY WORKING HOURS API

Introducing the API

An API is an abbreviation for an Application Programming Interface, a way for two or more computer programs to communicate with each other. It is a type of software interface, offering a service to other pieces of software. APIs are widely used in many WageIndicator tools. A WageIndicator API uses the database with the standard working hours for the calculations of hourly wages, providing the data about the standard working hours per country and per calendar year. The API consists of an excel file with three tabs, which will be discussed here.

The CODESET tab

This tab consists solely of a list of country codes (country id).

The STRUCTURE tab

This tab also consists solely of a list of country codes (country id).

The MAPPING tab

This tab connects the country id's to three main variables indicating the working hours valid in the current year (at the time of writing 2023), notably

normalworkhoursweek >> this variable indicates the hours in the standard working week in the current year

normalworkdaysweek >> this variable indicates the number of working days in the standard working week in the current year

normalworkhoursday >> this variable indicates the number of working hours per day in the standard working week in the current year

The MAPPING tab also includes the *normalworkhoursweek* for each year between 2014 and 2022 and these variables are called *normalworkhoursweek2022, normalworkhoursweek2021,* etc to *normalworkhoursweek2014*. For the *normalworkdaysweek* the tab includes variables called *normalworkdaysweek2022* till *normalworkdaysweek2014*.

Working hours per day

The column *normalworkhoursday* is not based on empirical evidence, but on computations: hoursweek/daysweek, and they vary between 7 and 8 hours per day.

When working hours per week are between 41 and 45, the working hours per day are mostly 8 plus a 6th day of a few hours. However, for the computation of hourly MW rates, provided that the Minimum Wage rates are specified per day, we should always divide by 8 hours per day for all countries.

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