

Global and regional estimates of employment in selected economic activities and/or occupations

Explanation of estimation procedure and the resulting output

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Audience – Who is this document for? Researchers, practitioners, policymakers, and the general public interested in global or regional employment statistics in certain economic sectors, occupations, or both.

Purpose – What is this document about? This document explains the estimation procedure and resulting output for global and regional employment estimates within specific groups as defined by International Standard Industrial Classification (ISIC) or International Standard Classification of Occupations (ISCO) categories.

Requirements – What do we need from persons requesting global and regional estimates? A clear mapping of the group(s) of interest must be provided, specifying ISIC Rev 3 and/or 4 categories up to 4 digits, or ISCO08 and/or ISCO88 categories up to 4 digits.

Output – What will you receive from us? A self-explanatory Excel file will be provided containing all necessary information to interpret the data, including total employment figures for the group of interest and their share in global/regional employment. Also included is information on the basis for the estimates, including the number of countries with available microdata and their share in global/regional employment. This is important information for assessing the overall coverage and reliability of the estimates.

Background

Researchers and practitioners frequently need customized global employment data to support their technical projects, research endeavours, and policy-making processes. Traditionally, they rely on resources such as the ILOSTAT website and the ILO Harmonized Microdata collection to fulfil these needs. Recent enhancements in ILOSTAT database collections, particularly the addition of more detailed microdata on ISIC and ISCO classifications within the labour market, have led to a surge in requests for tailored data. However, despite these improvements, there are still gaps in the data coverage, particularly for certain large countries like China, where either detailed information is unavailable or not shared at the micro level.

To address these gaps and provide reliable global/regional estimates, we conduct a series of estimations by leveraging existing ISIC and ISCO information from our microdata repository, primarily sourced from countries' labour force surveys. This forms the foundation of estimates for countries where detailed information is lacking. Additionally, a key component of this exercise is the modelled estimates database, which offers employment insights for nearly all countries worldwide, even in cases where microdata is unavailable.¹

¹ For more information on this database, please refer to [ILO Modelled Estimates \(ILOEST database\) - ILOSTAT](#)

Estimation Procedure

Before explaining the estimation procedure steps, it is crucial to note some key assumptions and limitations. Firstly, this exercise relies on the most recent available dataset from each country, typically spanning the past five years. In cases where multiple sources or surveys are available per country, labour force surveys are always prioritised as they are widely regarded as the most reliable source of employment information. Consequently, the surveys used may not necessarily correspond to the same year. However, for most countries, ILOSTAT receives frequent and up-to-date data that is nationally representative and comparable.

1. **Clear mapping:** Requesters must provide a definition of the target group, specifying ISIC or ISCO categories. Using this, we calculate the total number and share of employed individuals in this group per country for the latest available year. However, as noted earlier we do not have information for all countries to provide a global figure yet, which leads us to the next step.
2. **Weighted Average:** Using the values from step one above, we calculate a weighted average of the employment share in the pre-defined group for each country income group and gender, using World Bank income groups.² This implies that we will have eight values, corresponding to the average of reporting countries for each country's income group and by sex.
3. **Modelled Estimates:** Utilizing our modelled estimates database, which provides total employment by sex for almost all countries, we apply the weighted share to estimate employment in the pre-defined group for each country where microdata was missing. We, thus, obtain an estimated count of individuals employed within this target group by gender and across all countries.
4. **Aggregation:** Real and estimated values are aggregated to determine the global/regional employment in the target group and its share in total global/regional employment.

Output Explained

This process generates an Excel file designed to be self-contained with all necessary information.

- **Summary Sheet:** Provides information on countries, data sources, availability of ISIC/ISCO information, estimated employment based on modelled data, and country characteristics. Countries without information in the modelled estimates database are excluded from the global employment figures, as indicated in the "IS_USING" column for transparency. These excluded countries are usually small islands with very small populations and thus would not impact the global estimates significantly.
- **Mapping Sheet:** Defines the target group as per the request and indicates categories belonging to the definition applied. If the cells in the column "Mapping" contains "Yes", it means that category belongs to the definition of this target group.
- **X4digits Sheet:** This sheet presents the main results. The first three columns specify the region or gender corresponding to the values. The "classif1" column is crucial; when cells read "YES," they represent the estimates aligned with pre-defined classification as per the request. "Total_Employment" displays total employment figures in thousands based on modelled estimates, while "Value_Thousands" shows estimated global/regional

² The World Bank income groups categorise all countries in one of the following category based on gross national income: Low-income countries (LICs); Lower-middle-income countries (LMICs); Upper-middle-income countries (UMICs); High-income countries (HICs).

employment for each classification. The "distribution_percentage" column indicates the share of the target group in total employment for the given region or gender. The last two columns provide important information for transparency: "Country_coverage" shows the number of countries out of 189 with available microdata, and "Employment_coverage_percentage" reveals the share of global employment these countries represent. We strongly discourage using results where available microdata represents less than 33% of global employment.

Recommendations

We strongly discourage using results where available microdata represents less than 33% of global or regional employment. Further estimation techniques are employed and detailed in additional sheets within the Excel file, offering a more comprehensive analysis.³

³ For more information on these techniques, please refer to "ISIC_ISCO_Adjustment_procedure.pdf"