

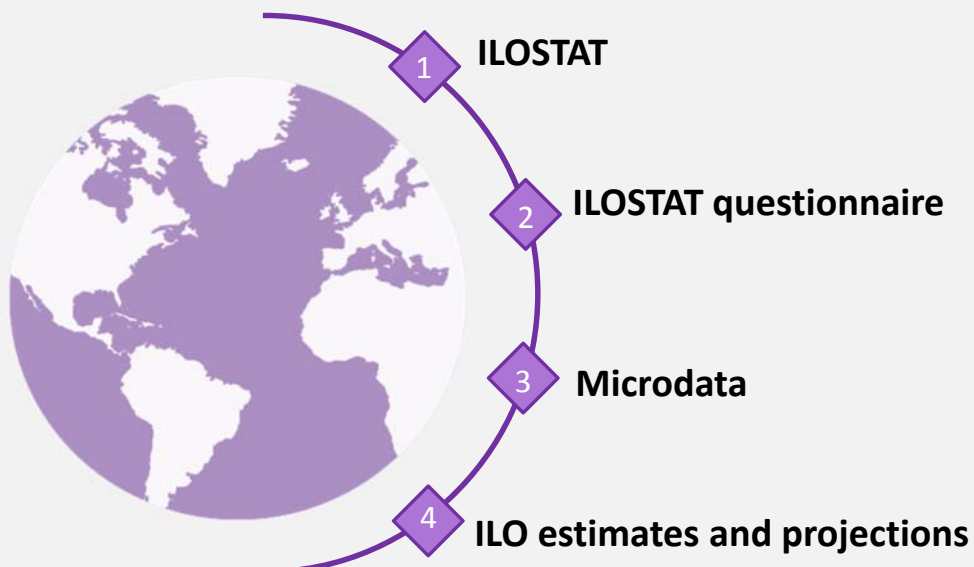
Data Collection, Production and Dissemination

General Report Sections 4.1-4.5
ILO Department of Statistics
15 October 2018

20th International Conference of Labour Statisticians
10-19 October 2018, Geneva



Agenda



20th International Conference of Labour Statisticians
10-19 October 2018, Geneva





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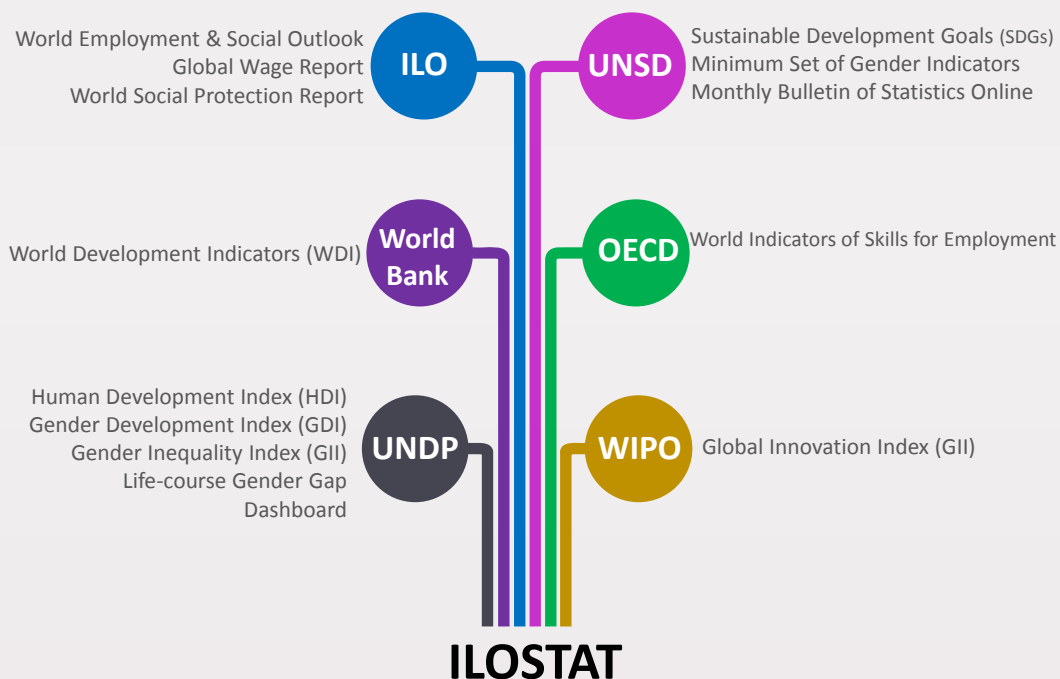


ILOSTAT

Steven Kapsos

General Report Sections 4.1 and 4.3

Uses of ILOSTAT data



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ILOSTAT

THE WORLD'S LEADING SOURCE OF LABOUR STATISTICS



*User-friendly portal for timely,
comprehensive and internationally-
comparable labour statistics*



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Challenges

- Labour statistics are complex
- Large data gaps
- Lag in data dissemination
- Lack of comparability
- Reporting burden
- Reporting mistakes
- Limited resources nationally and at the ILO

impossible



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Website

IMPROVING THE USER INTERFACE

Simple navigation

Customized & bulk download

Multi-indicator reports with 1-click access

Section on SDGs

Quick access to data tools

The screenshot shows the ILOSTAT website with a navigation bar at the top containing 'Home', 'Download', 'Metadata', and 'Publications'. Below this is a section titled 'Key Indicators of the Labour Market (KILM)' with a grid of indicators. A sidebar on the right lists 'SDG indicators' and 'Data Tools'. Red arrows point from the text labels to specific features on the website: 'Simple navigation' points to the top navigation bar; 'Customized & bulk download' points to the 'Download' link; 'Multi-indicator reports with 1-click access' points to the indicator grid; 'Section on SDGs' points to the 'SDG indicators' link in the sidebar; and 'Quick access to data tools' points to the 'Data Tools' link in the sidebar.



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Data tools

PROVIDING MORE OPTIONS FOR DATA USERS

Excel Add-In

WESO Data Finder

SDMX API

Country Profiles

R-package

The diagram shows five data tools represented by gears. The 'Excel Add-In' gear is green and contains an Excel icon. The 'WESO Data Finder' gear is purple and contains a screenshot of the WESO Data Finder interface. The 'SDMX API' gear is black and contains the SDMX logo. The 'Country Profiles' gear is blue and contains a globe icon. The 'R-package' gear is red and contains the R logo. The gears are arranged in a circular pattern around a central point.



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Methods

MORE RESOURCES FOR BETTER LABOUR STATISTICS



METADATA

- Glossary
- Standards and guidelines
- Indicator descriptions
- National sources and methods

PUBLICATIONS > Statistical guides and manuals

- ILO Guidebook on SDG Labour Market Indicators
- Visualizing Labour Markets: A Quick Guide to Charting Labour Statistics
- Quick Guide on Sources and Uses of Labour Statistics
- Labour Force Estimates and Projections: Methodological Description
- Key Labor Market Indicators: Analysis with Household Survey Data
- Sampling elusive populations: Applications of child labour
- Decent Work Indicators: Concepts and Definitions (revised)
- Measuring informality: A statistical manual on the informal sector and informal employment



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New indicators in ILOSTAT

Nationally-reported series

- Minimum wages
- Gender pay gap
- Temporary employment
- Unemployment levels and rates by disability status
- Labour underutilization LU2-LU4
- International labour migration statistics (22 indicators)

Harmonized series

- Informal employment and informal sector
- Earnings (minimum wage, hourly earnings, monthly earnings)
- Labour cost
- Trade union density
- Collective bargaining coverage
- Incidence of part-time employment

ILO modelled estimates

- Global, regional, and country-level estimates on:
- Labour force (by sex and age)
 - Employment (by sex and age, status, sector, occupation)
 - Unemployment (by sex and age)
 - Labour productivity

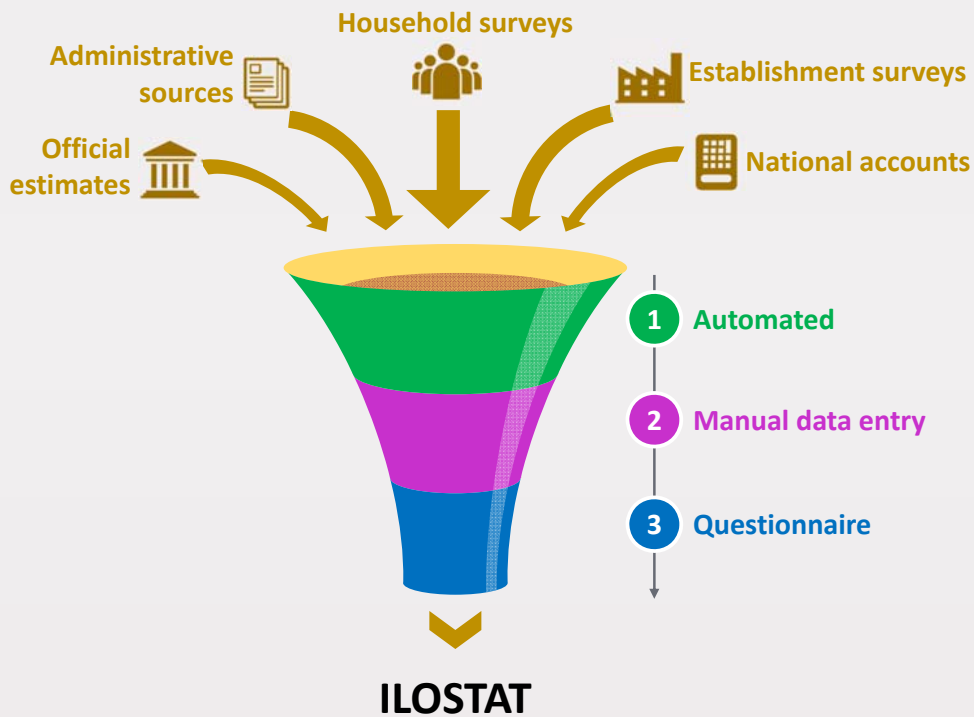


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Data sources and channels

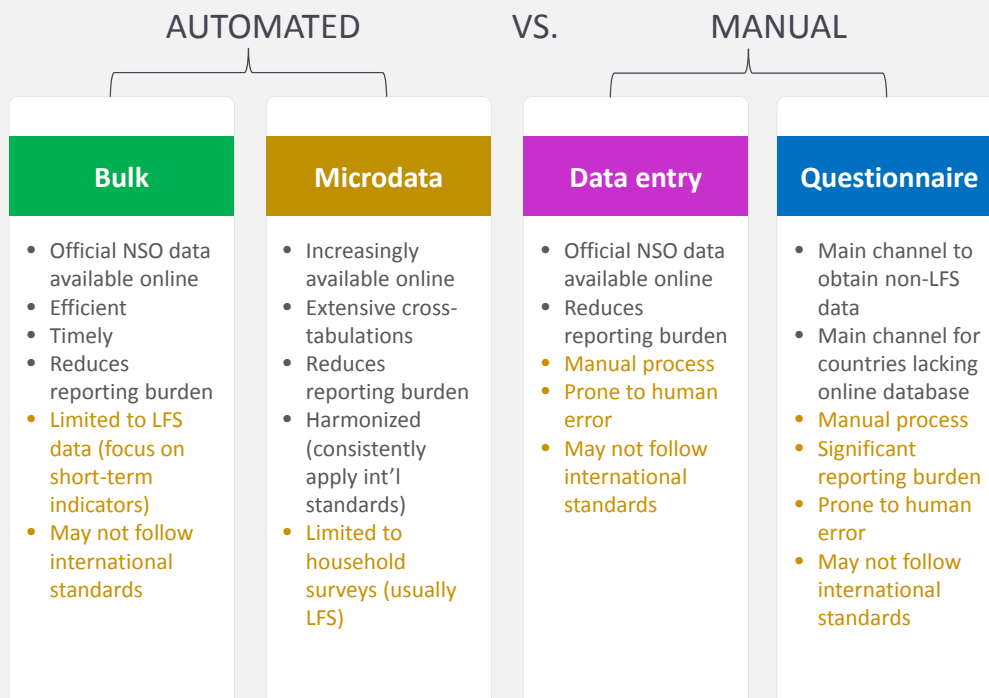


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Data channel comparison



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More data

EVOLVING PROCESSES FOR MORE EFFICIENCIES



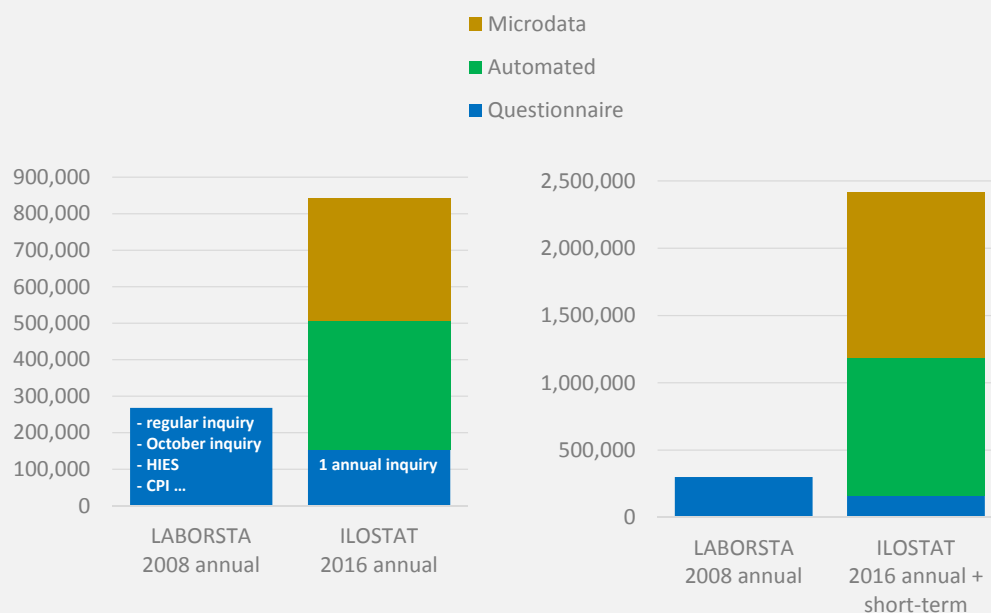
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More data (cont.)

NUMBER OF VALUES BY DATA CHANNEL



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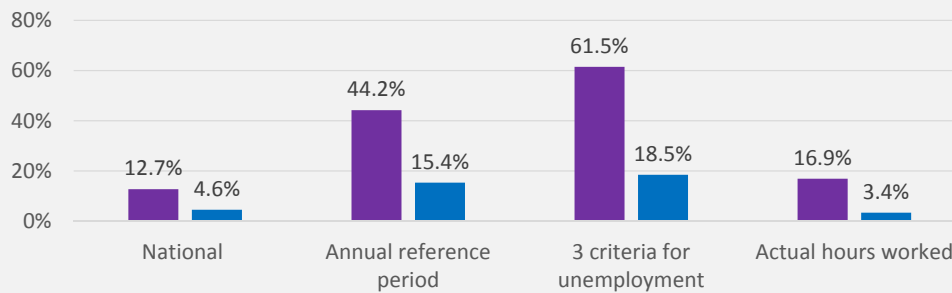


More comparable

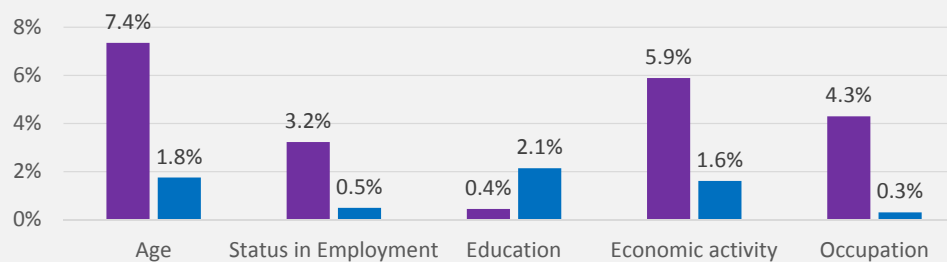
FEWER CAVEATS SINCE THE 19TH ICLS

■ 19th ICLS ■ 20th ICLS

Percent of values with footnotes, selected concepts



Percent of values with footnotes, selected classifications



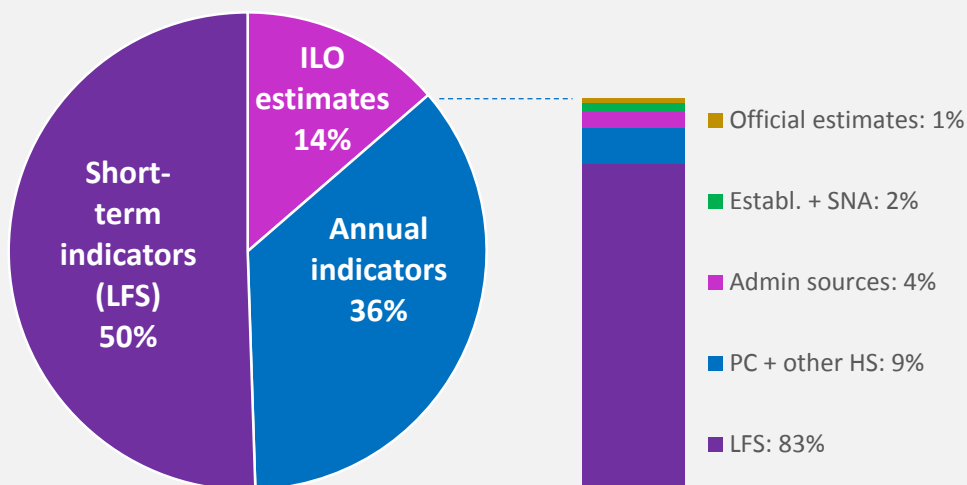
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Datasets and source types

DISTRIBUTION OF 62 MILLION VALUES BY DATASET & SOURCE TYPE



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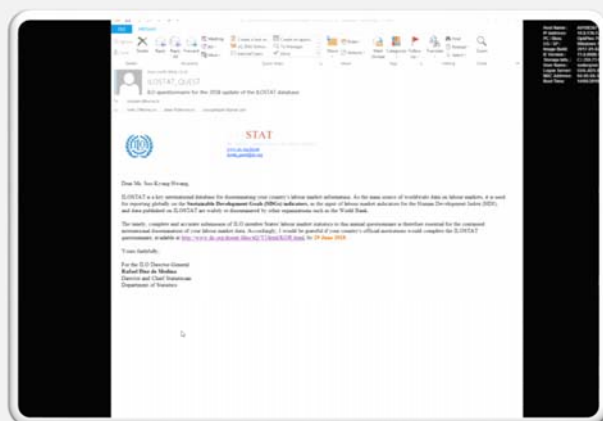


ILOSTAT Questionnaire

Marie-Claire Sodergren
General Report Section 4.2

ILOSTAT Questionnaire

TAILORED TO YOUR COUNTRY



- Email in May
 - Due 29 June
- Country-specific page
 1. Instructions with detailed guide and Excel files
 2. Contacts
 3. Data availability



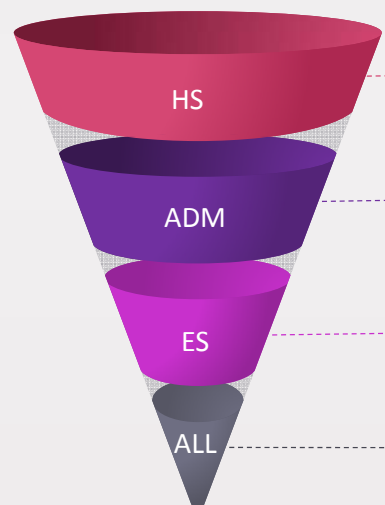
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Questionnaire split by source type

- 4 Excel files
- 18 topics/sheets
- 73 indicators



HOUSEHOLD SURVEYS & POPULATION CENSUSES

Working-age population, Labour force, Employment, Informality, Time-related underemployment, Unemployment, Persons outside the labour force and NEET, Working poor

ADMINISTRATIVE SOURCES

Minimum wage, Occupational injuries, Labour inspection, Strikes and lockouts, Industrial relations

ESTABLISHMENT SURVEYS & NATIONAL ACCOUNTS

Employees, Earnings, Working time, Labour cost, Public sector employment, Labour income share

OFFICIAL ESTIMATES & OTHER SOURCES

All of the above



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Breakdowns

Recurring

- Sex
- Age
- Economic activity (ISIC)
- Education (ISCED)
- Occupation (ISCO)

Topic-specific

- For LFS
 - Rural/urban
- For employment
 - Status in employment (ICSE)
 - Hour bands
 - Private/public sector
- For unemployment
 - Duration
 - Disability status **NEW**
- For injuries
 - Migrant status **NEW**



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Questionnaire and the SDGs

SDG	Indicator	Quest	Most used Source
1.1.1	Working poverty rate		ILO
1.3.1	Population covered by social protection floors/systems	socpro	ADM
5.5.2	Female share of employment in managerial positions	✓	LFS
8.2.1	Labour productivity		ILO
8.3.1	Informal employment	✓	LFS
8.5.1	Average hourly earnings by sex (by occupation)	✓	ES
8.5.2	Unemployment rate (by sex, age, disability status)	✓	LFS
8.6.1	NEET rate	✓	LFS
8.7.1	Number and proportion of children in child labour		CLS
8.8.1	Fatal and non-fatal occupational injuries (by sex, migrant status)	✓	ADM
9.2.2	Manufacturing employment	✓	LFS
10.4.1	Labour income share as a percent of GDP	✓	SNA



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Questionnaire length

BASED ON OTHER DATA CHANNELS & DATA AVAILABILITY

72

countries

Full length

No automated procedures in place.
Must complete entire questionnaire.

Reduced length

Automated procedures in place, usually for household survey-based data. Complete partial questionnaire.

75

countries

48

countries

Mini version

No or very low response rate usually due to lack of data available. Complete only 10 key tables.



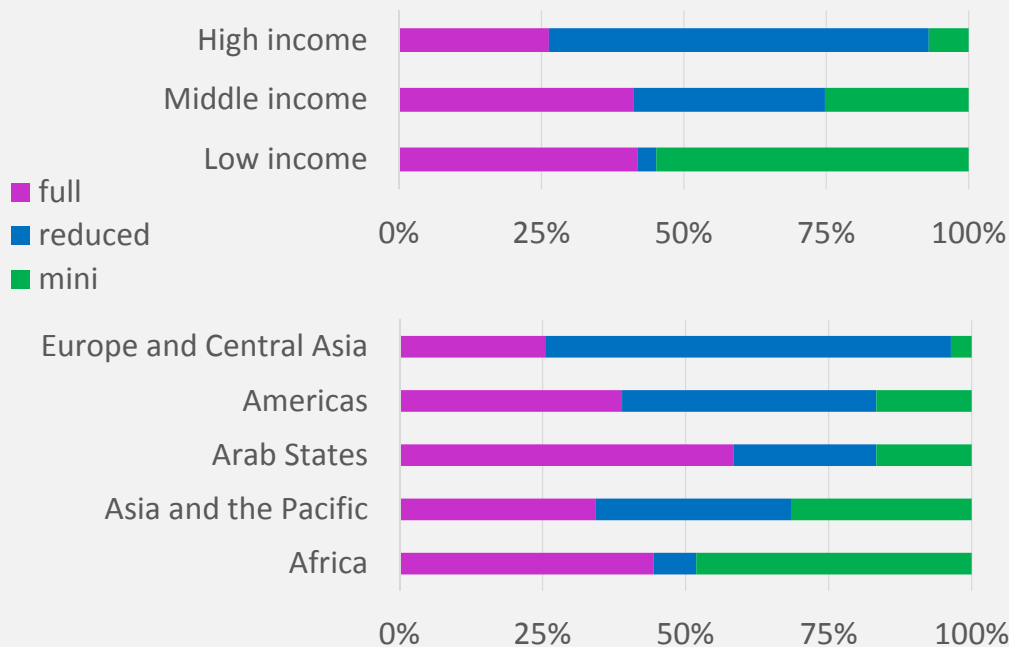
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Questionnaire length (cont.)

DISTRIBUTION BY WB INCOME GROUP AND BY ILO REGION



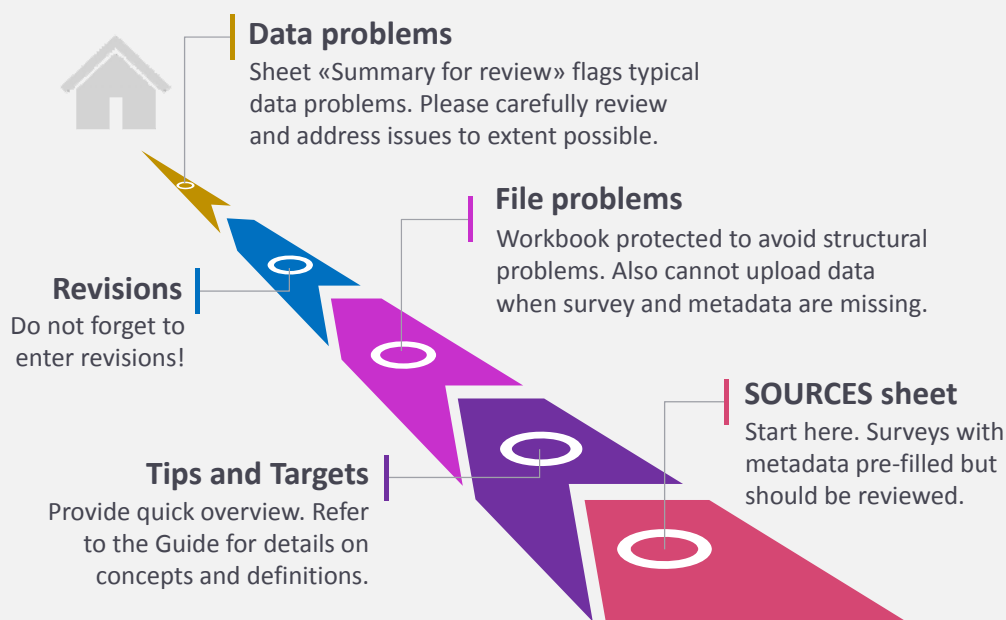
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Self-help to avoid inconsistencies

IMPROVING THE QUESTIONNAIRE PROCESS



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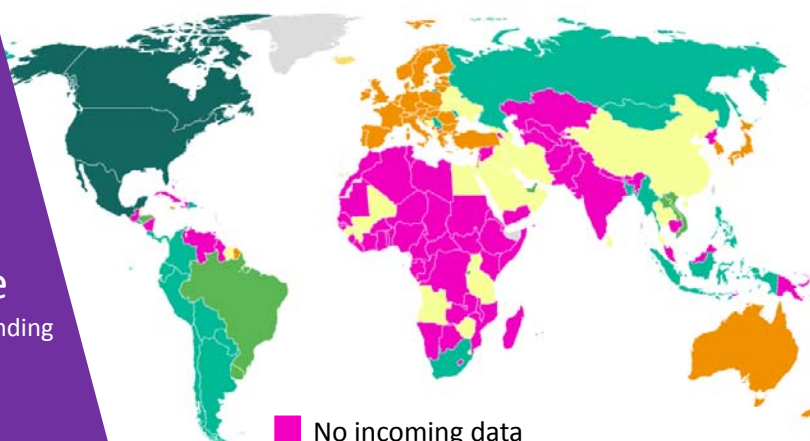


Data reporting

RESPONSE TO THE 2018 QUESTIONNAIRE
AND INCOMING 2017 DATA FROM OTHER CHANNELS

Reporting rate

(percent of countries sending back the questionnaire)



- No incoming data
- Questionnaire only
- Web only
- Questionnaire + Web
- Microdata only
- Microdata + Questionnaire
- Microdata + Web + Questionnaire



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Reducing the Questionnaire Burden



Provide microdata

- Preferably make available online
- Substitutes the household survey portion of the questionnaire

Option 1

Online static files

- Allows for automation
- Release data from all source types, not just LFS

Option 2

Option 3

Online database

- Allows for automation
- Release data from all source types, not just LFS

Send CSV file

Option 4

- Any format, but prefer similar to ILOSTAT csv files
- Allows for some automation
- Less prone to human error than questionnaire



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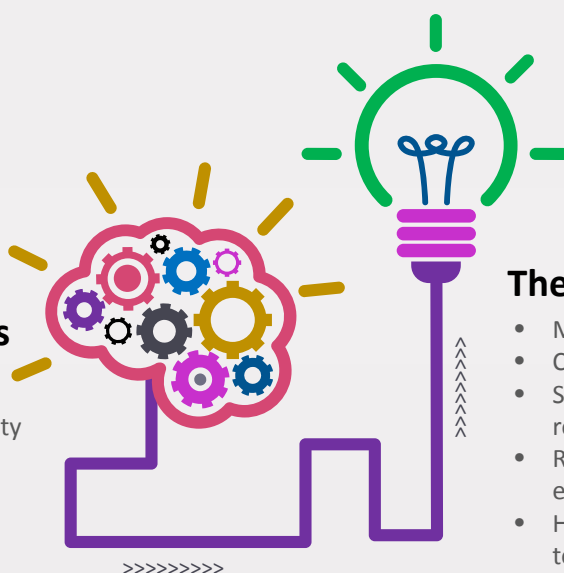
Microdata

Mabelin Villarreal-Fuentes & Yves Perardel
General Report Section 4.5

Benefits of microdata processing

The challenges

- Data gaps
- Lack of comparability
- Reporting burden
- Reporting mistakes
- Non-response



The Solution

- More data
- Comparable
- Significantly reduced reporting burden
- Reduced reporting errors
- Highlights areas for technical assistance



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The process

Sample size	Dissemination
< 5	Not published
5-14	Published with a warning
≥ 15	Published with no remark

Documentation

- Document deviations if international concepts cannot be applied
- Metadata documentation for ILO microdata repository

03

Acquisition

- Obtain files online or establish agreement with NSO
- Store microdata files in ILO safe drive



01



Dissemination

04

- Publish results on ILOSTAT, including any caveats
- Publish metadata on ILO microdata repository; no files for external users

Processing

- Map national to international concepts and classifications
- Run routine to derive variables
- Apply reliability compliance test
- Review/assess resulting figures



02



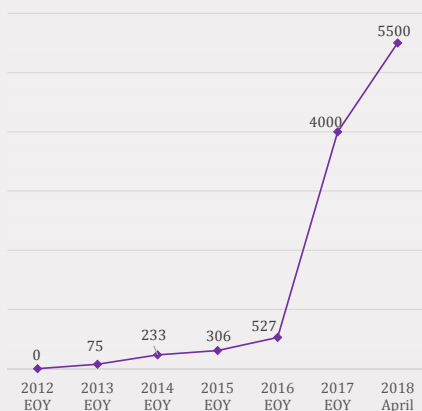
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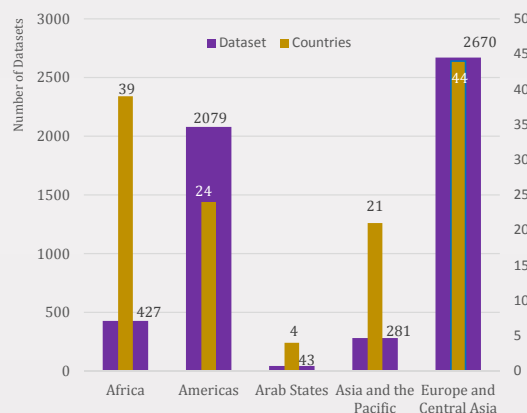


Number of LFS/household micro datasets

Large acquisition in recent years



Most datasets from Europe and the Americas



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Challenges

01

Missing necessary documentation



02

Unaware of updated population benchmarks



03

Undesirable skip patterns



04

No oversampling for vulnerable groups



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Acknowledgements

To National Statistical Systems

That widely and freely disseminate HHS or LFS's anonymized datasets.

To Countries

Which despite not disseminating files online, engaged themselves to sending them to us regularly.



We encourage countries to share anonymized microdata sets



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Action Point

Participants in the Conference may wish to reflect on the importance of providing access to anonymized national microdata sets to promote more and better data globally and to discuss ways in which the ILO can leverage its microdata processing efforts to enhance technical assistance to constituents.



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ILO Estimates and Projections

Steven Kapsos & Roger Gomis
General Report Section 4.4

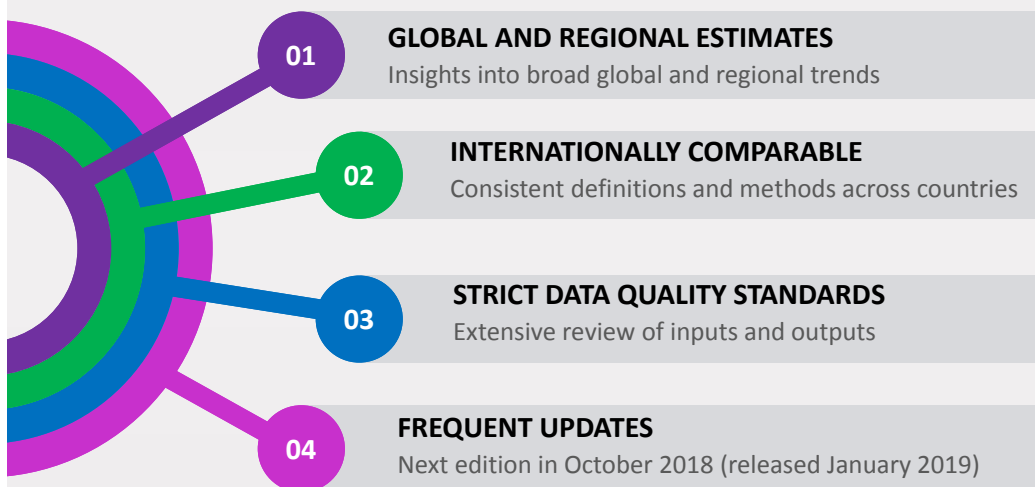


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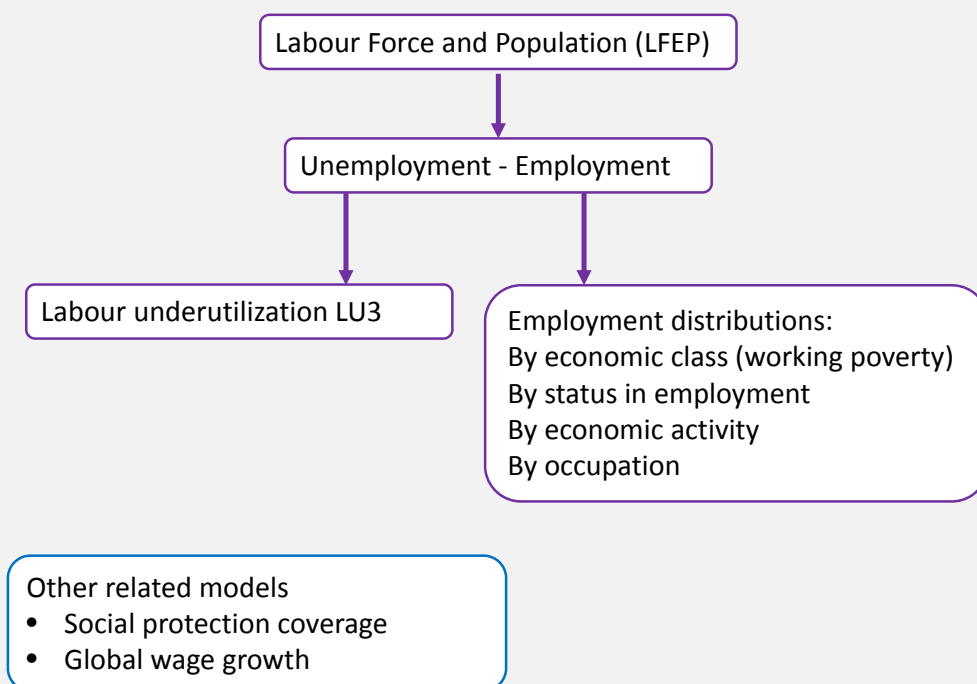
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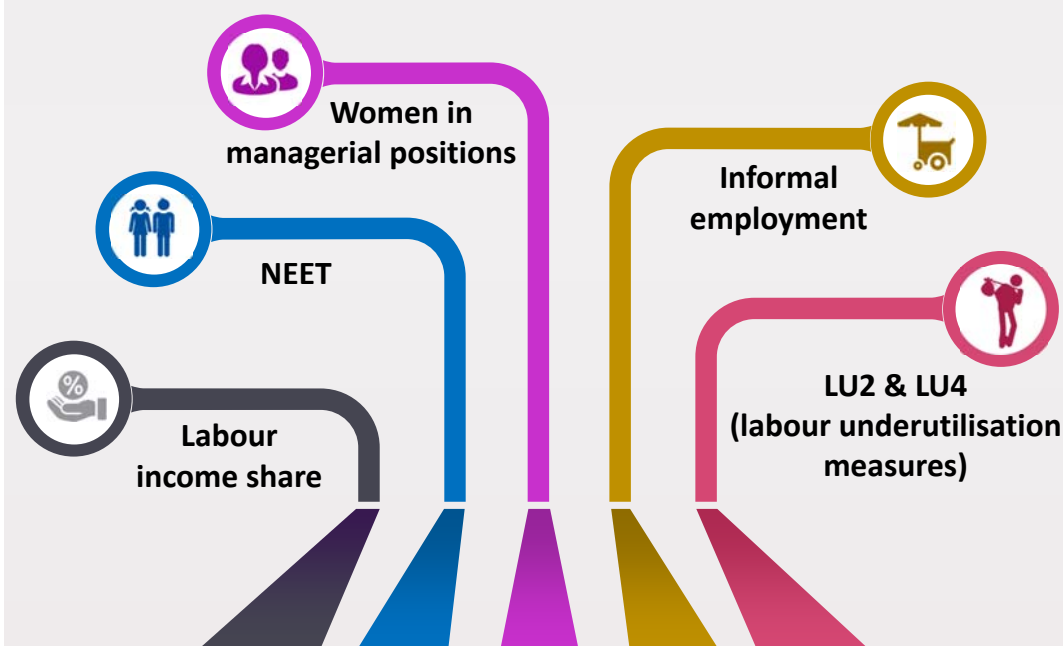
Key features



Existing models



Forthcoming models



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Use in SDG monitoring

SDG	Indicator	Global and regional data
1.1.1	Working poverty rate	Yes
1.3.1	Population covered by social protection floors/systems	Yes*
5.5.2	Female share of employment in managerial positions	Planned
8.2.1	Labour productivity	Yes
8.3.1	Informal employment	Yes*
8.5.1	Average hourly earnings by sex (by occupation)	No
8.5.2	Unemployment rate (by sex, age, disability status)	Yes
8.6.1	NEET rate	Planned
8.7.1	Number and proportion of children in child labour	Planned**
8.8.1	Fatal and non-fatal occupational injuries (by sex, migrant status)	No
9.2.2	Manufacturing employment	Yes
10.4.1	Labour income share as a percent of GDP	In progress

* Indicates single year estimates only; ** To be jointly developed with UNICEF



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Key principles

Transparency

Methods documented and publicly disseminated; imputed values clearly indicated

5

4

Modelling

Use of econometric/statistical models developed by ILO experts

3

Data patterns

Missing data patterns dictate methodology and scope of aggregation

2

Non-response

Identify and address non-response bias

1

Input data review

Extensive review of input data



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The process



- Data collection via various channels
- Compile data & metadata from various datasets in ILOSTAT

- Discard outliers and erroneous data
- Source homogenization: LFS + very restrictive use of household surveys and population census
- Coverage homogenization: nationally representative
- Age-group homogenization: standard age bands

- Enforce international standards
- Use the raw source (micro) data

- Country-level imputation
- Model non-response and differential response
- Model selection: pseudo out of sample performance



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Strengths

Integration with ILOSTAT

- Consistency checks
- Updates and data revision
- Metadata management system
- Improvements in data production
- Open access

Country level imputation

- Flexible groupings
- Offsetting of non-systematic errors: more stable aggregates
- Valuable model byproduct: country data for international comparisons

Statistical approach

- Objective & transparent
- Maximizes performance (pseudo) out of sample
- Uncertainty management: estimates of confidence in results

Model integration

- Outputs are fully compatible across models
- The same classifications and standards
- Input review is done globally
- Methodological improvements shared for all models



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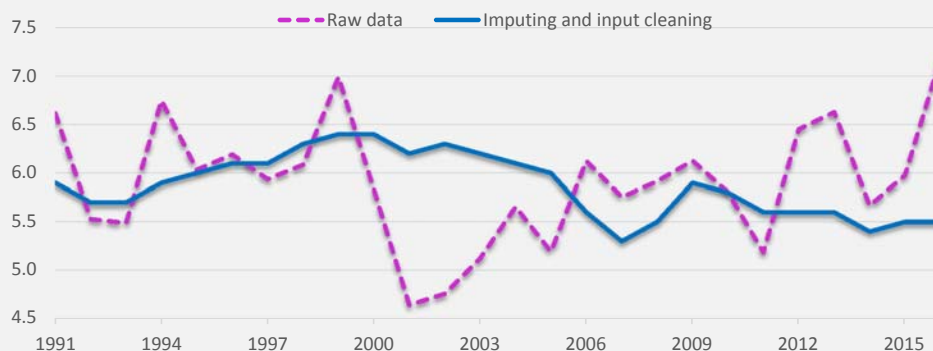
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Results: an example

- Data cleaning and harmonization avoid erroneous and non-comparable data entry
- Imputation deals with non-response and differential response
- Both reduce bias and volatility in global and regional aggregates

Global Unemployment Rate



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THANK YOU

www.ilo.org/ilostat
ilostat@ilo.org