Comparability of indicators when introducing new ICLS standards

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International Conference of Labour Statisticians (ICLS)

- Global standard-setting mechanism in labour statistics

- Tripartite structure: Governments (NSO, MoL), Employers' and Workers' representatives

- Meets every 5 years (since 1923)

- ILO hosts & acts as Secretariat

- Resolutions adopted following long development and consultation

Key recent standards (19th ICLS Resolution I)

- Resolution I – *statistics of work, employment and labour underutilization*

  - Changed definition of employment – work for pay or profit - activities to produce for own-consumption or without pay no longer included (e.g. subsistence farming)

  - Additional forms of work defined (own-use production, volunteer work, unpaid trainee work)

  - Stricter definition of unemployment

- Possible changes in estimates:

  - Depends on existing practices

  - In theory lower estimate of employment

  - Higher estimate of unemployment

- Need to produce additional estimates (labour underutilization, forms of work)

Employment – impact of 19th ICLS - example

Armenia
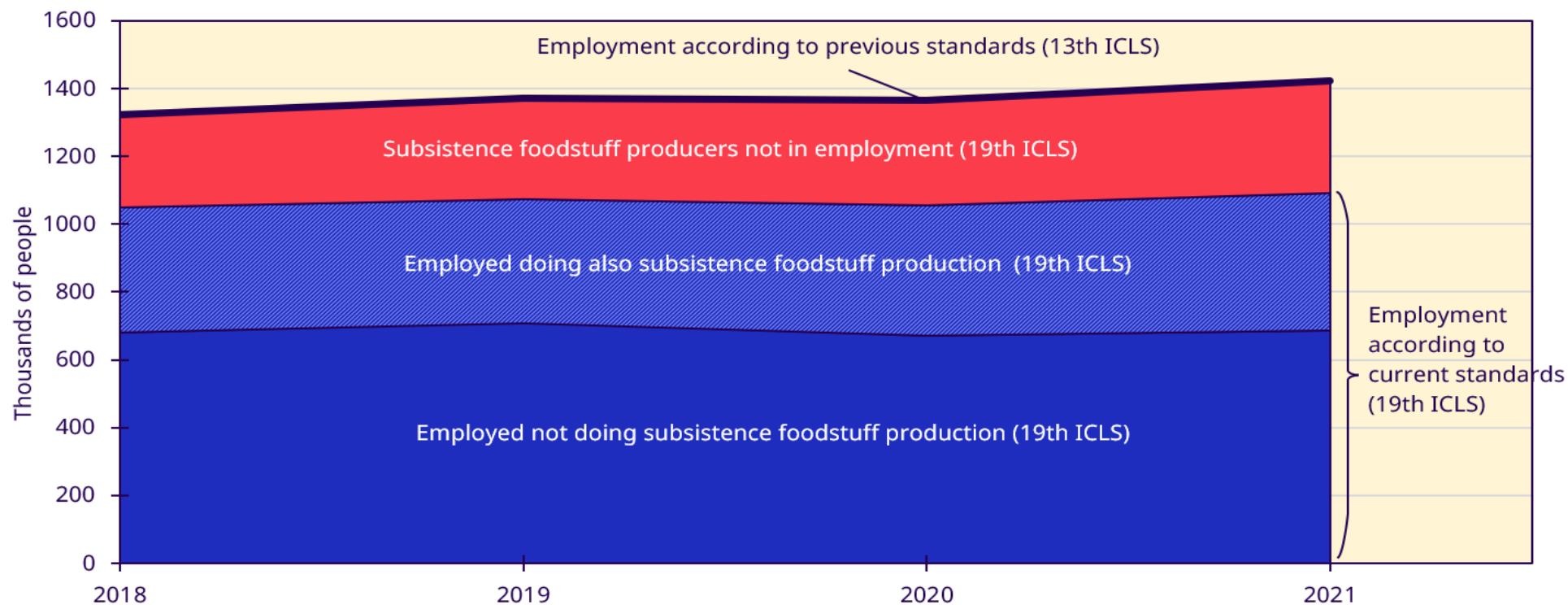
	2018	2019	2020	2021
Subsistence foodstuff producers not in employment (19th ICLS)	274.06	297.73	308.24	331.73
Subsistence foodstuff producers in employment (19th ICLS)	368.75	365.42	385.77	402.40
Employment according to current standards (19th ICLS)	679.8	709.2	670.3	688.0
Employment according to previous standards (13th ICLS)	1322.6	1372.3	1364.2	1422.1

**Source:** ILOSTAT (Household Labour Force Survey).

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Labour Force Status

The working-age population is classified by labour force status into 3 mutually-exclusive groups:

- ➤ *Employment*
- ➤ *Unemployment*
- ➤ *Outside the labour force*

Labour force

(previously not economically active)

Employment-to-population ratio
Unemployment-to-population ratio
Labour force participation rate
Inactivity rate

According to 13th ICLS standards

WAP by labour force status

Not economically active
26.5%

Labour force
73.6%

Unemployed
3.8%
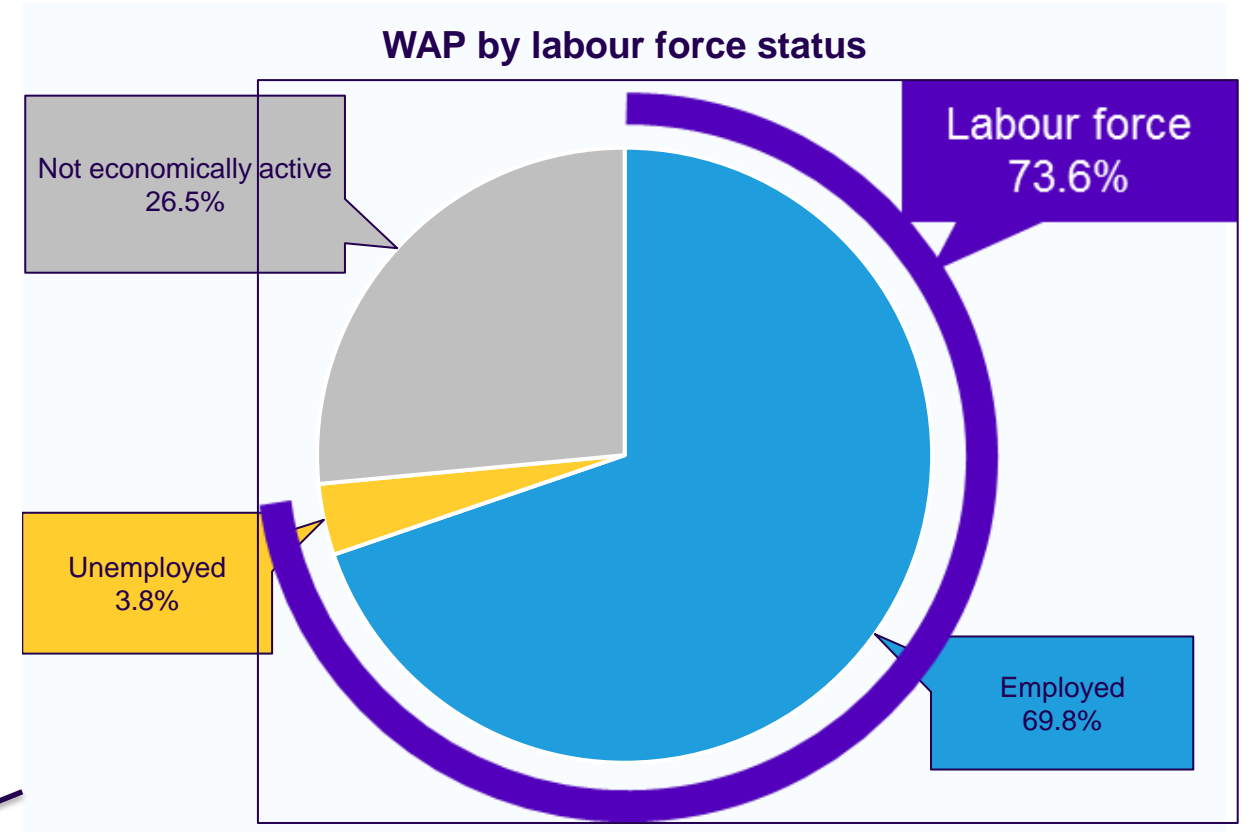
Employed
69.8%

(Based on data from ILO pilot studies)

Labour Force Status

- Pilot study data (10 countries)
- Employment to population ratio fell from 69.8% to 56.2%
- Unemployment rate increased from 3.8% to 5.0%
- LFPR fell from 73.6% to 61.2%
- *Note: Increased unemployment rate is due to increase in number of persons employed but also smaller labour force (lower denominator)*

Employment-to-population ratio
Unemployment-to-population ratio
Labour force participation rate
Inactivity rate

According to 19th ICLS standards

WAP by labour force status

Outside the labour force 38.8%

Employed 56.2%

Unemployed 5.0%
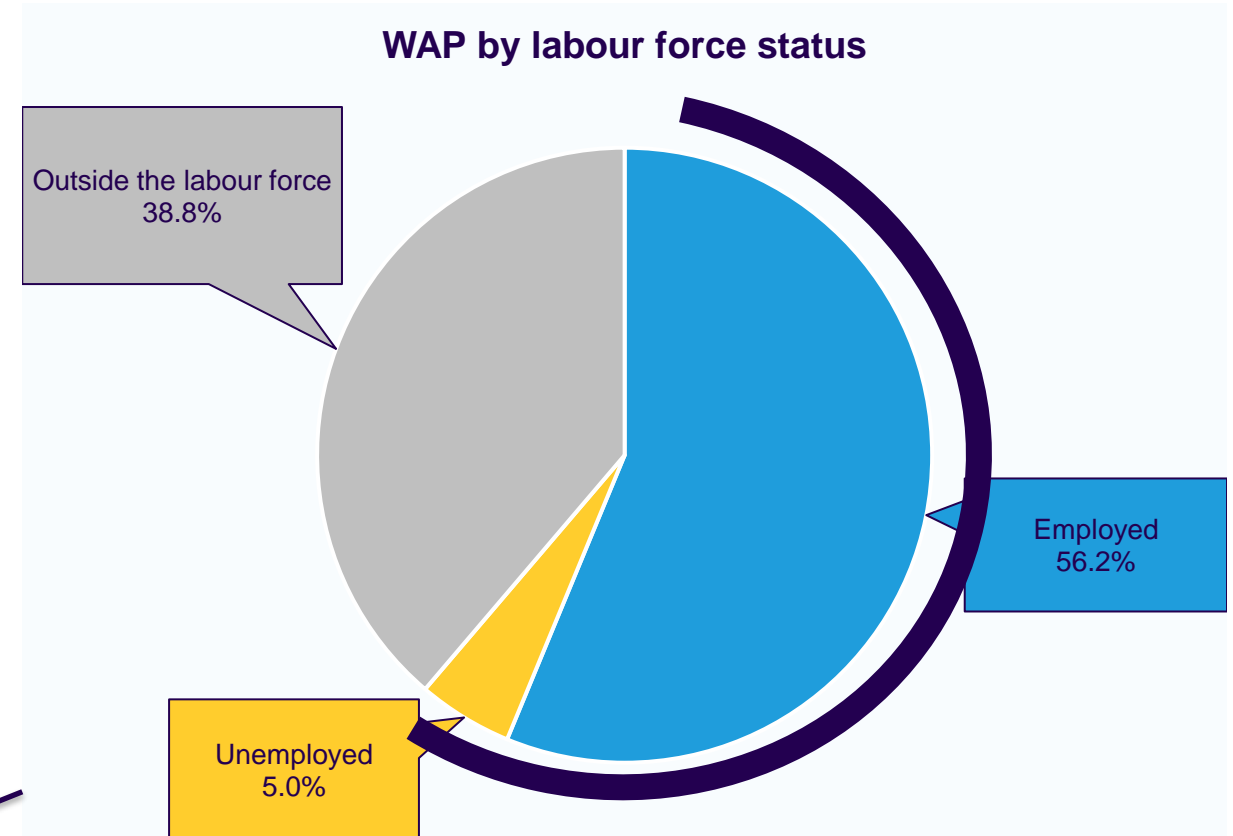
(Based on data from ILO pilot studies)

19th ICLS impacts – some key messages (1)

- Impacts of changes differ across groups and across countries

- E.g. bigger impact in rural areas where agricultural work is concentrated

- Difference by gender may not be the same in each country but in many countries women are common in subsistence foodstuff production than men

  - If true - bigger labour force participation gap when the new standards are applied

- Not all countries have shown a significant impact on existing indicators

- Existing measurement practices may only focus on work for pay or profit

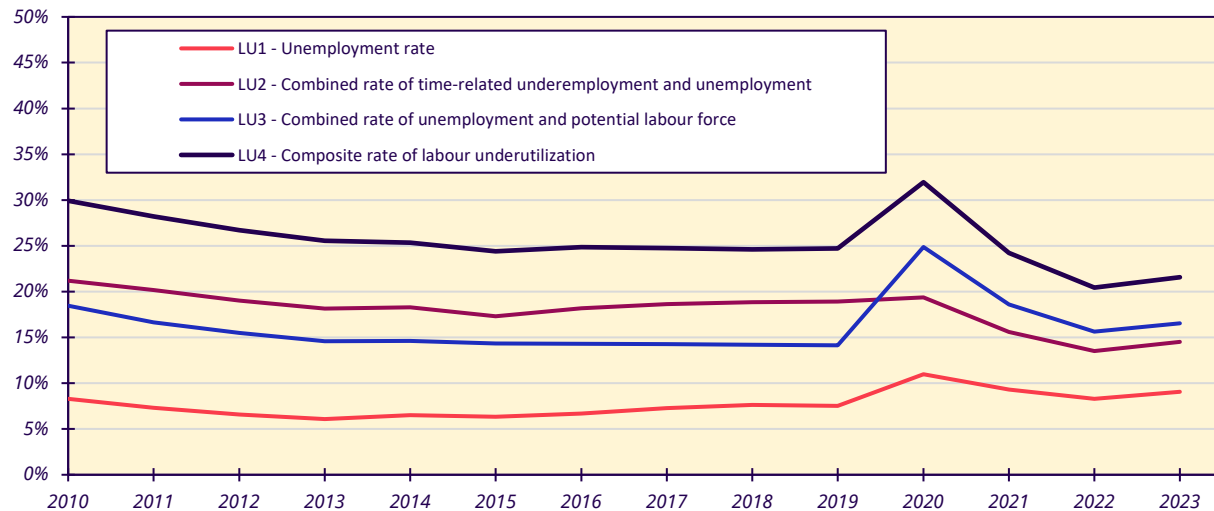# 19th ICLS impacts – some key messages (2)

- Benefits of the standards are a key issue:

  - Changes to existing definitions are designed to more closely align them with user needs

  - Also based on accumulated experiences of countries

  - Focus of employment on work for pay or profit – more closely aligned to employment policy

  - Break in series is necessary to achieve this benefit (depending on existing measurement approach)

  - Other benefits are a wider set of useful indicators:

    - Additional labour underutilization indicators to more completely described unmet needs for employment and participation in other forms of work

  - Highlighting these benefits and producing the additional data is crucial

Labour Underutilization (recommendation = publish multiple)

Headline labour underutilization indicators

- *LU1 - Unemployment rate,*

- *LU2 - Combined rate of time-related underemployment and unemployment,*

- *LU3 - Combined rate of unemployment and potential labour force,*

- *LU4 - Composite measure of labour underutilization*

Chile

Legend:
- LU1 - Unemployment rate
- LU2 - Combined rate of time-related underemployment and unemployment
- LU3 - Combined rate of unemployment and potential labour force
- LU4 - Composite rate of labour underutilization

Source: ILOSTAT (National Employment Survey).

South Africa

Legend:
- LU1 - Unemployment rate
- LU2 - Combined rate of time-related underemployment and unemployment
- LU3 - Combined rate of unemployment and potential labour force
- LU4 - Composite rate of labour underutilization
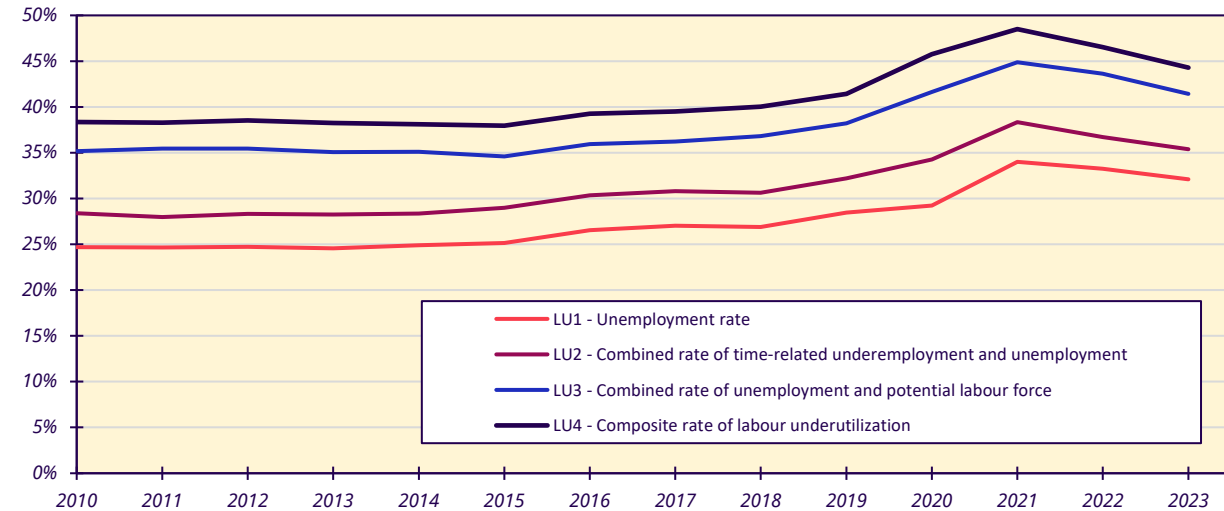
Source: ILOSTAT (Quarterly Labour Force Survey).

Summary – example of Rwanda

Rwanda Labour force survey 2022: Summary labour force indicators

Working age population 16 years old and over 7,963,586 persons							
Outside the labour force 3,500,290 person		**Labour force 4,463,296 persons** Labour force participation rate **56.0%**					
Subsistence foodstuff producers: **37.5%**	Others outside the labour force: **62.5%**	**Employed** (All who worked for pay or profit) **3,546,352 persons** Employment to population ratio: **44.5%**			**Unemployed** (All not employed but seeking and available to work for pay or profit) **916,944 persons** Unemployment rate:**20.5%**		
Primary or below: **79.6%** Secondary (Lower and Upper): **14.4 %** Tertiary: **1.0%**		Agriculture excluding subsistence foodstuff production **44.5 %**	Industry **11.5 %**	Services **44.0 %**	Primary education or below **70.4 %**	Secondary education (Lower and upper) **24.0 %**	Tertiary education **5.6%**
Supplied weekly labour: 107 million hours							
Labour underutilization (3,288,473 persons): Unemployed (**916,944**) + Time-related underemployed (1,125,425) + Potential labour force 1,246,103) Composite measure of labour underutilization (57.6 %)							

Source: National Institute of Statistics of Rwanda (NISR), Labour Force Survey, 2022

Table 1. 1: Main labour force indicators, LFS 2022

Numbers in ('000)	Total	Male	Female	Urban	Rural	Participated in subsistence agriculture	Not participated in subsistence agriculture
Population 16 years old and over	7,964	3,754	4,210	1,637	6,327	2,991	4,973
Labour force	4,463	2,407	2,056	1,069	3,394	1,680	2,783
- Employed	3,546	1,978	1,569	851.4	2,695	1,232	2,315
- Unemployed	917	430	487	218	699	449	468
Outside labour force	3,500	1,346	2,154	567.892	2,932	1,311	2,190
Labour underutilization	3,288	1,459	1,829	523.3	2,765	1,714	1,575
- Unemployed	916.9	429.7	487.2	217.8	699.2	448.5	468.4
- Time-related underemployed	1,125	586.1	539.3	130.1	995.3	567.733	557.7
- Potential labour force	1,246	443.2	802.9	175.4	1,071	697.4	548.7
Labour force participation rate (%)	56.0	64.1	48.8	65.3	53.6	56.2	56.0
Employment-to-population ratio (%)	44.5	52.7	37.3	52.0	42.6	41.2	46.5
Time related underemployment rate (%)	31.7	29.6	34.4	15.3	36.9	46.1	24.1
LU1 - Unemployment rate (%)	20.5	17.9	23.7	20.4	20.6	26.7	16.8
LU2 - Combined rate of unemployment and time-related underemployment (%)	45.8	42.2	49.9	32.5	49.9	60.5	36.9
LU3-Combined rate of unemployment and potential labour force (%)	37.9	30.6	45.1	31.6	39.6	48.2	30.5
LU4 - Composite measure of labour underutilization (%)	57.6	51.2	64.0	42.1	61.9	72.1	47.3

Source: National Institute of Statistics of Rwanda (NISR), Labour Force Survey, 2022

Implementing and communicating changes

Implementation of changes creates different challenges

- Technical challenges
  - Development and testing of new questionnaires
  - Different testing options
- Communications challenges
  - Possible breaks in series
  - Wider range of estimates

Development and testing of new questionnaires

- Minimum requirements to implement statistical standards:

- https://www.ilo.org/publications/note-implementation-statistical-standards-19th-20th-and-21st-icls-through

- ILO model questionnaires:

- https://ilostat.ilo.org/resources/lfs-toolkit/

- Spanish translations of documents are planned

- Referring to ILO questionnaires can reduce development and testing

Development and testing of new questionnaires

- Multiple options with different costs and benefits

- Always – technical/pilot testing

  - Ensures questionnaire works as intended

- If resources allow – qualitative testing (e.g. cognitive testing)

  - In depth assessment of question wording and flow

- If resources allow – parallel testing – old and new questionnaire with same sample design

  - Generation of detailed estimates of impact of moving from old survey to new survey (not just old to new standards)

  - Also can support historical recalculation of time-series

Considerations

- Frequency of LFS – irregular LFS - parallel survey not as relevant (still can give interesting information)

- 19th ICLS questionnaires can be designed to generate estimates based on 13th ICLS

  - Need to identify subsistence foodstuff producers

  - Need to identify their job search, desire, availability and some information on their activity

  - Included in ILO model questionnaires

  - Could make add questions in advance of main change

  - This should allow estimates consistent with 13th ICLS to be generated….. However
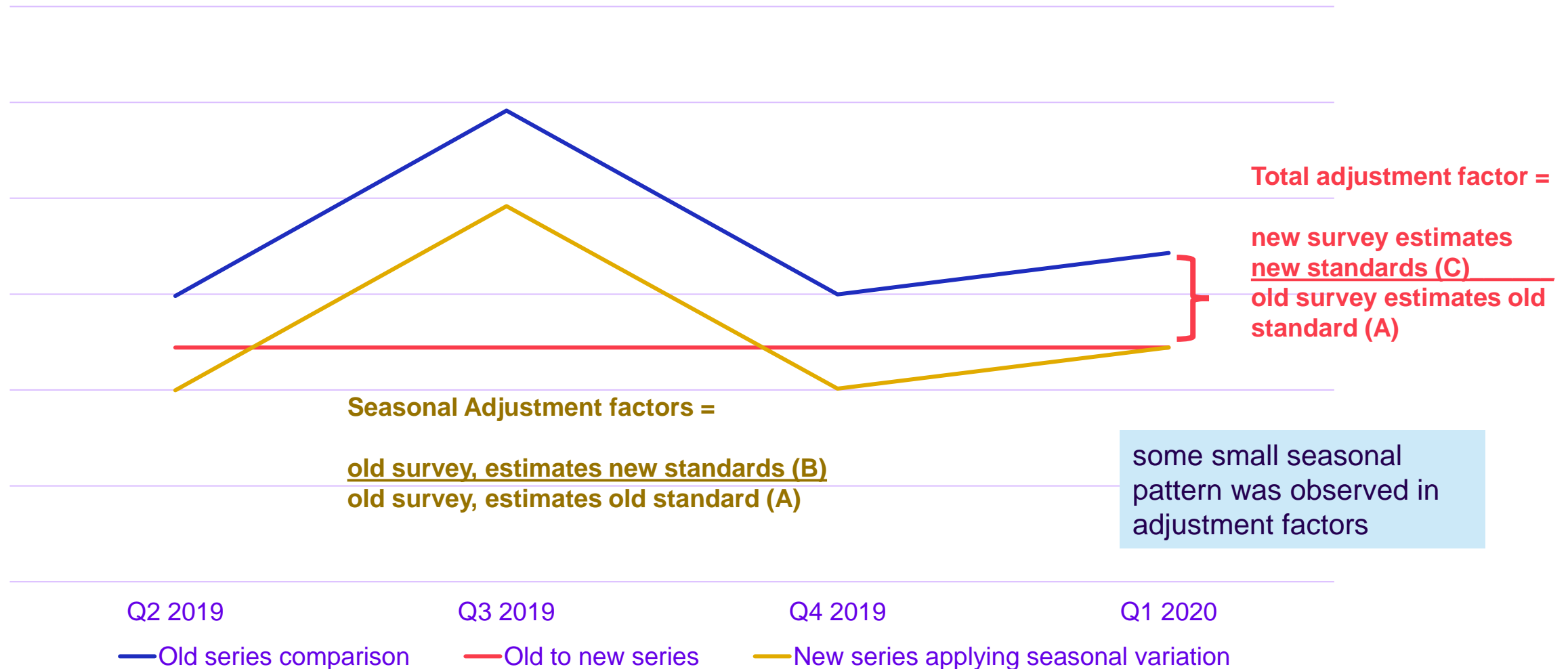
Considerations contd.

- However – if the questionnaire is changed this can also influence estimates

- E.g. ILO studies show that casual, part-time work and work helping in family businesses are very sensitive to questionnaire content

- Parallel survey allows estimation of full impact to move from old survey to new survey

- If parallel survey not possible careful design of new questionnaire still a useful way to understand impacts and provide information

- Note - impact may be seasonally different if level of agriculture/fishing work is seasonal – a single parallel survey won't identify this

Georgia example

Background – testing approach in Georgia

▶ *Geostat started a process to introduce the 19th ICLS standards in 2019*

- in close cooperation with the ILO and Statistics Denmark

▶ *Testing/piloting involved 2 steps*

- From Q2 2019 to Q1 2020, **many additional questions included in existing LFS,** for example

  - to identify intended destination of agriculture production (main job)

    - Hence identify own-use producers that must be excluded from employment

  - to identify own-use producers of foodstuff who searched for job and were available

    - to identify own-use producers of foodstuff that are in labour underutilization

  - to assess likely impact on key indicators over different quarters

- In Q1 2020, **a parallel new survey with a new questionnaire** alongside the old survey - same sample design and size

  - to assess likely overall impact on key indicators due to the new questionnaire

Calculation of adjustment factors - Employment

Comparison of adjustment factors - employment

Total adjustment factor =

$$\frac{\text{new survey estimates new standards (C)}}{\text{old survey estimates old standard (A)}}$$

Seasonal Adjustment factors =

$$\frac{\text{old survey, estimates new standards (B)}}{\text{old survey, estimates old standard (A)}}$$

some small seasonal pattern was observed in adjustment factors

Q2 2019   Q3 2019   Q4 2019   Q1 2020

— Old series comparison   — Old to new series   — New series applying seasonal variation

▸ ilo.org

Historical recalculation - steps

▶ *Theoretically can calculate adjustment factors in the same way for any desired series or disaggregation*

▶ *However – various approaches and various problems*

- **Adjusting totals directly** makes assumptions that any structural changes over time would not have impacted the correct adjustment factor to apply (e.g. change in the prevalence of agriculture sector)

- **Disaggregations** won't sum to a directly adjusted total

▶ *Detailed study done to decide what level of disaggregation was most appropriate*
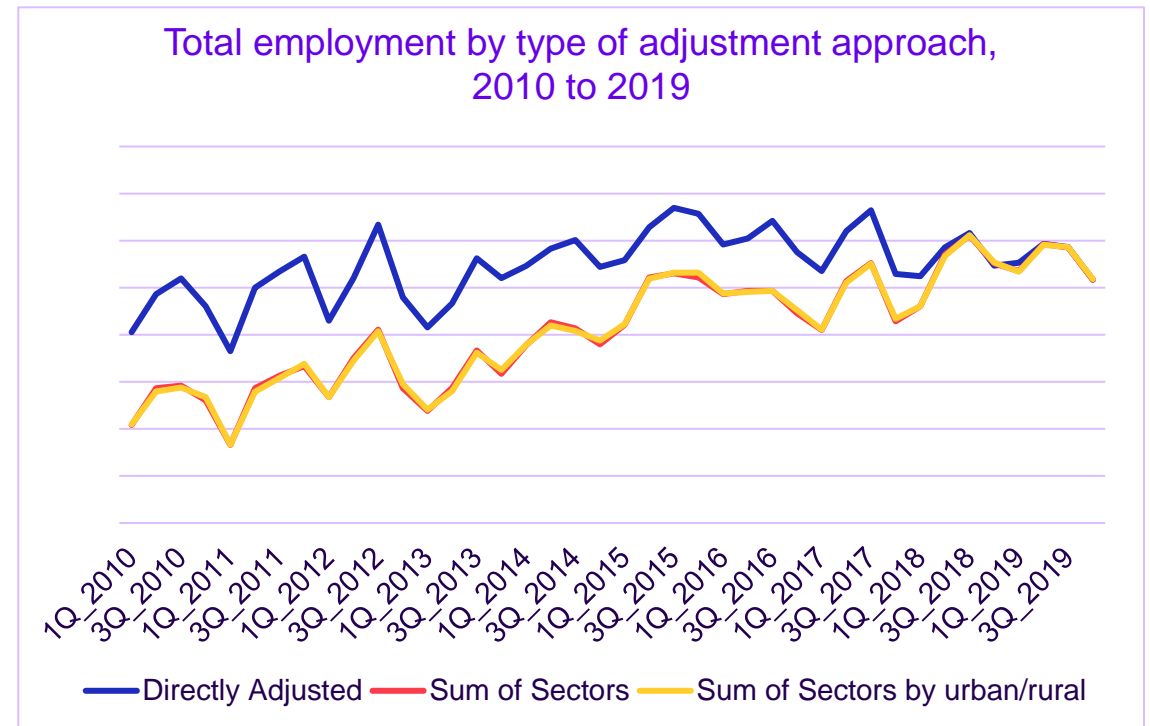
▶ *Showed that size of main sectors changed over time*

Deciding the 'correct' total – employment (2)

▶ *Some redistribution of employment since 2010:*

- **Agriculture (down 10pps)**

- **Services (up 10pps)**

- **Industry (Stable)**

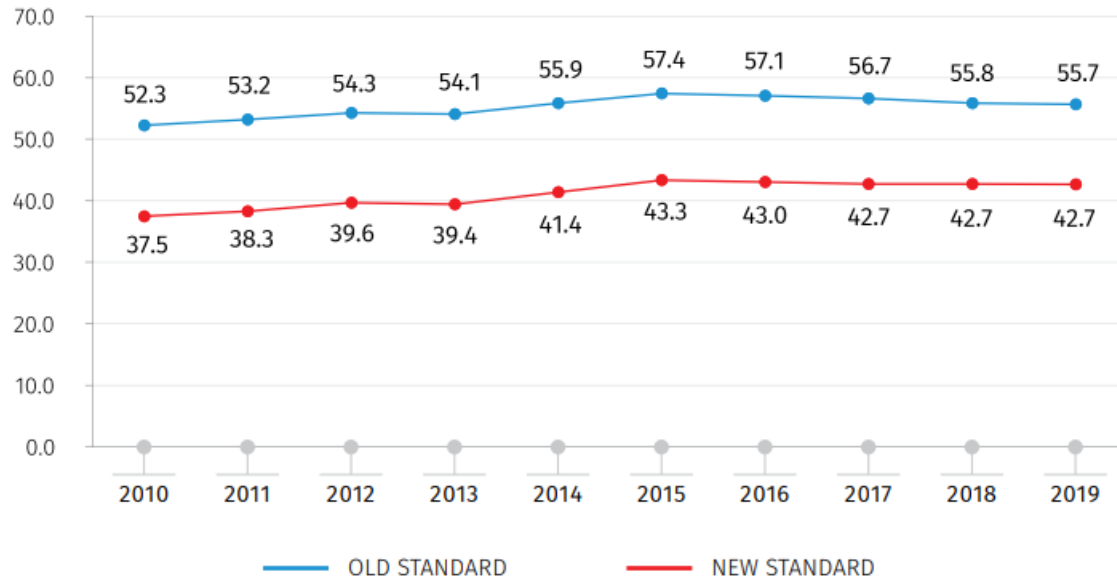Distribution of total employment by sector (old standards), 2010 to 2020
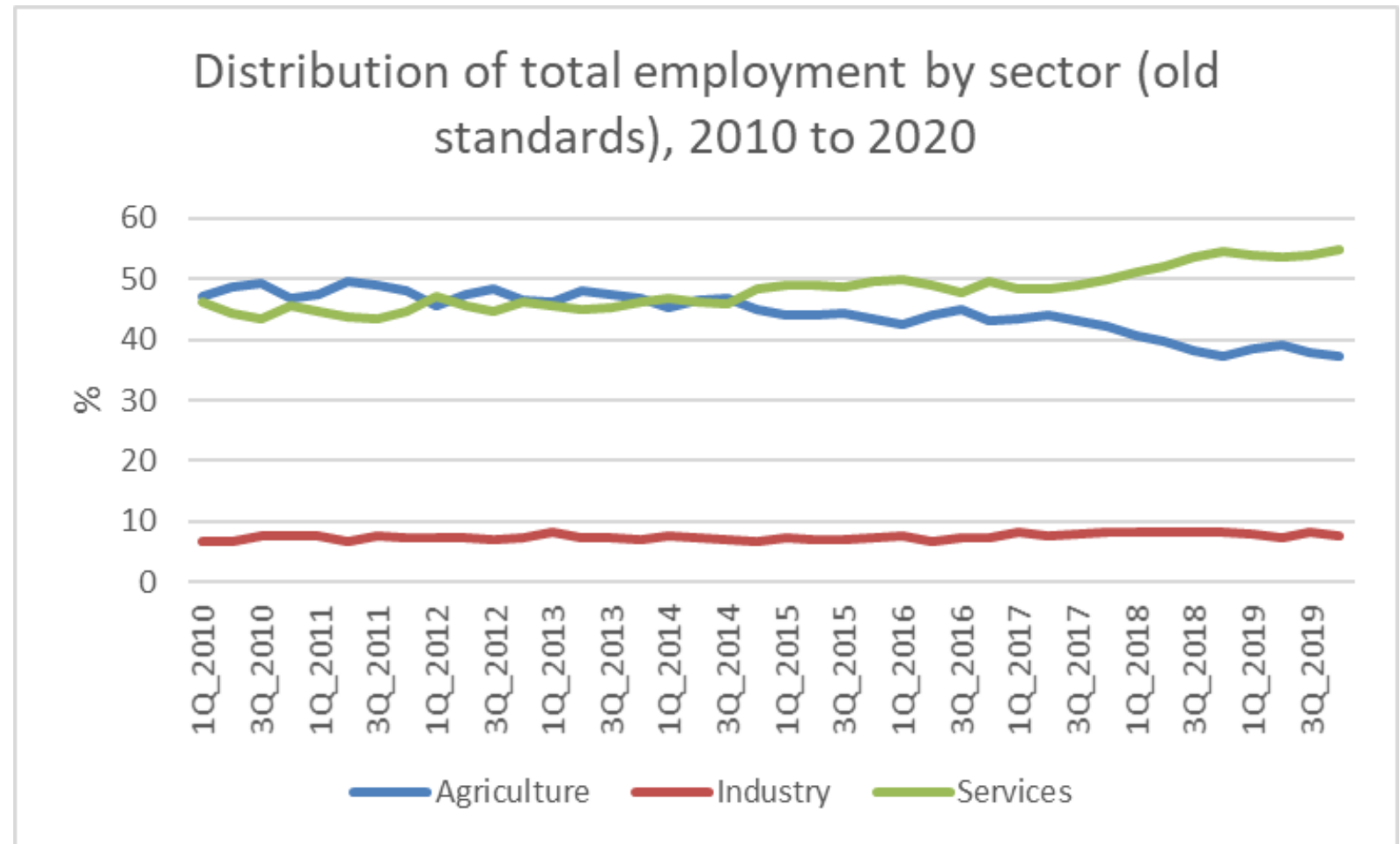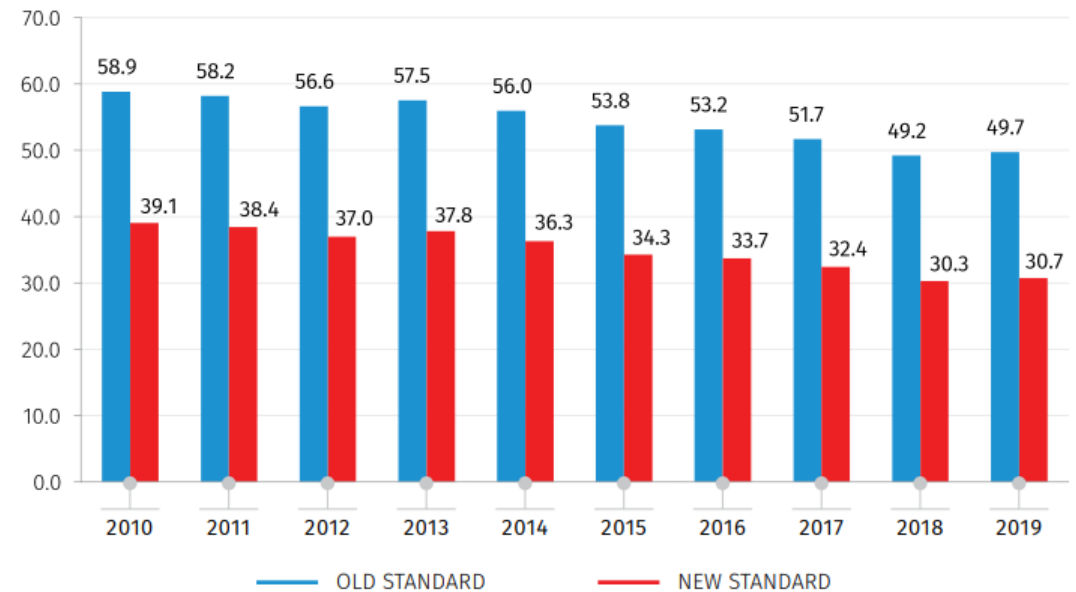
Employment alternatives

▶ *Including sectors in the adjustment process made a substantial difference*

▶ *Urban/rural distinction made no additional difference*

    ▶ *If the sector was already included*

▶ *Other dimensions assessed (age/sex) made no difference*

▶ *Conclusion – worthwhile to calculate total employment as the sum of the three sectors*
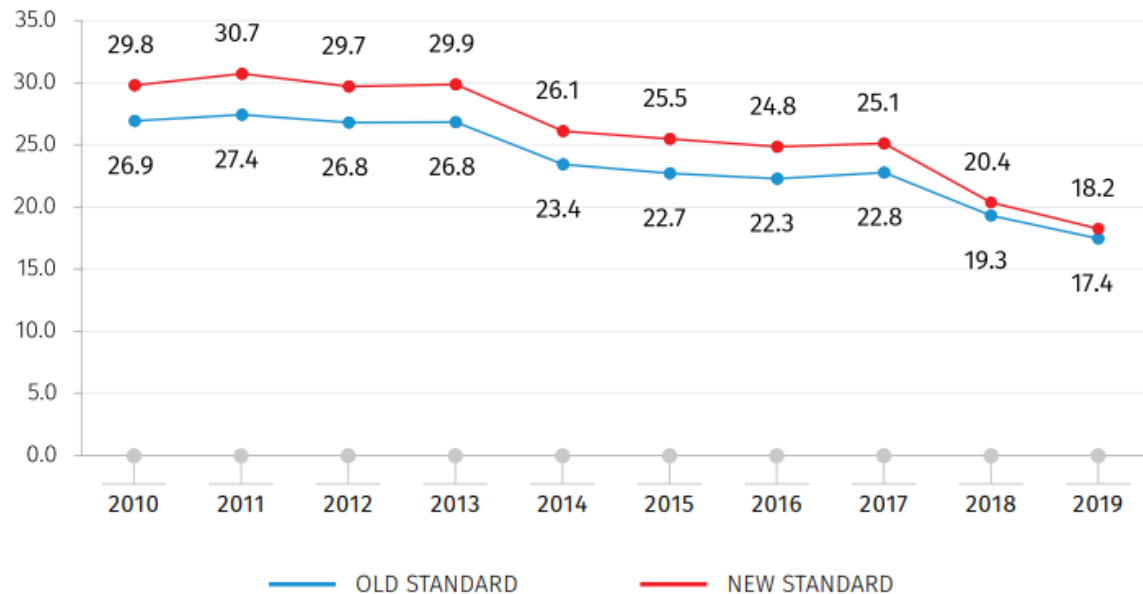
Total employment by type of adjustment approach, 2010 to 2019

— Directly Adjusted   — Sum of Sectors   — Sum of Sectors by urban/rural

▶ ilo.org

Impact on main indicators from 2010 to 2019

EMPLOYMENT RATE (%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
OLD STANDARD	52.3	53.2	54.3	54.1	55.9	57.4	57.1	56.7	55.8	55.7
NEW STANDARD	37.5	38.3	39.6	39.4	41.4	43.3	43.0	42.7	42.7	42.7

SHARE OF THE SELF-EMPLOYED (%)

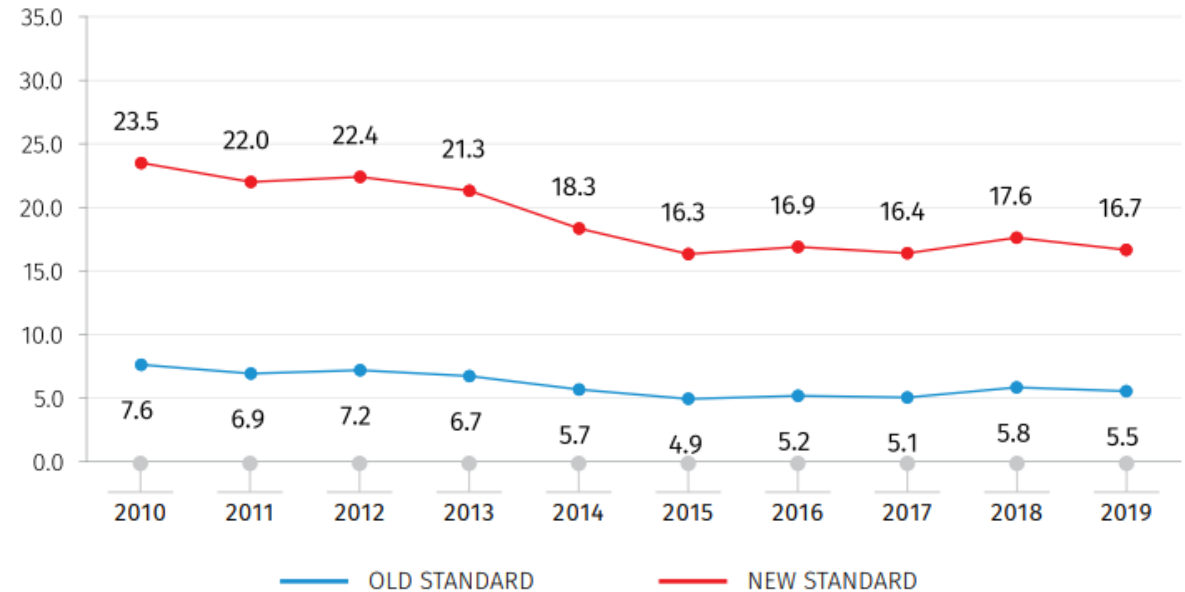|	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
OLD STANDARD	58.9	58.2	56.6	57.5	56.0	53.8	53.2	51.7	49.2	49.7
NEW STANDARD	39.1	38.4	37.0	37.8	36.3	34.3	33.7	32.4	30.3	30.7

The employment rate calculated with the new standard is 13-15 percentage points lower than with the old standard

The introduction of the new standard caused a significant decrease in the share of the self-employed in the total number of employed (decreased from 49.7% to 30.7% in 2019).

▶ ilo.org

Impact on main indicators from 2010 to 2019

UNEMPLOYMENT RATE IN URBAN AREAS (%)

NEW STANDARD: 29.8, 30.7, 29.7, 29.9, 26.1, 25.5, 24.8, 25.1, 20.4, 18.2

OLD STANDARD: 26.9, 27.4, 26.8, 26.8, 23.4, 22.7, 22.3, 22.8, 19.3, 17.4

UNEMPLOYMENT RATE IN RURAL AREAS (%)

NEW STANDARD: 23.5, 22.0, 22.4, 21.3, 18.3, 16.3, 16.9, 16.4, 17.6, 16.7

OLD STANDARD: 7.6, 6.9, 7.2, 6.7, 5.7, 4.9, 5.2, 5.1, 5.8, 5.5

With the new standard, compared to the old standard,
the unemployment rate is significantly higher in rural settlements (approximately 3 times),
while the difference in urban settlements is relatively insignificant

In 2019 to total unemployment rate with the new standard is 17.6%, while is 11.6% with the old one

▶ ilo.org

Back-casting methods

- Several possible methods of back-casting:
  - Micro approach
  - Macro approach
  - Mixed micro-macro approach
  - Modelled data approach

References

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Effective communication of the changes implemented

- Measurement and technical challenges are only one part of the new standards' implementation process

  ➢ communicational challenges may be the obstacle to taking full profit of the efforts

- Effective communication drives the success of statistical results

- Important especially in times of change

- Good strategy required – starting in advance of the change

20th and 21st ICLS standards

- 20th ICLS standards – ICSE-18 v ICSE-93

    - Not comparable – but ICSE-93 estimates can generally continue to be produced from self-declared status in employment

- 21st ICLS – informality

- Comparability of estimates for 20th and 21st ICLS impacted by 19th ICLS change also as all standards are linked

- Similar principles apply as those for 19th ICLS change

- If changing all at the same time can study jointly (less breaks in series)