



# Tackling increased non-response, change of mode and wave effects in the LFS during the COVID-19 crisis

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**Data Collection and the impact, challenges and opportunities of the COVID-19 pandemic: virtual workshop 5 – 8 October 2020**

# COVID-19 outbreak: from CAPI/PAPI to CATI/CAWI

Previous common method (in most countries):

- Select a sample,
- CAPI/PAPI for the first wave,
- Ask the phone number,
- CATI/CAWI the following waves.

Confinement: CAPI/PAPI impossible

Linking with a register of phone numbers

# Consequences of COVID-19 outbreak on LFS

## Data Collection:

- decreased volume of interviews
- higher and unequal non-response (possible self-selection bias by the linking)
- Mode effect: changes in the shares of interview modes (from PAPI or CAPI to CATI or CAWI)

## Estimates:

- Bias due to change in survey mode
- Loss of precision due to lower samples and potential bias due to different response rates among population groups

# Mode effect, wave effect

## Mode effect

- Face to face (CAPI/PAPI) to remote (CATI/CAWI):
- -1.08 pp on the unemployment rate.

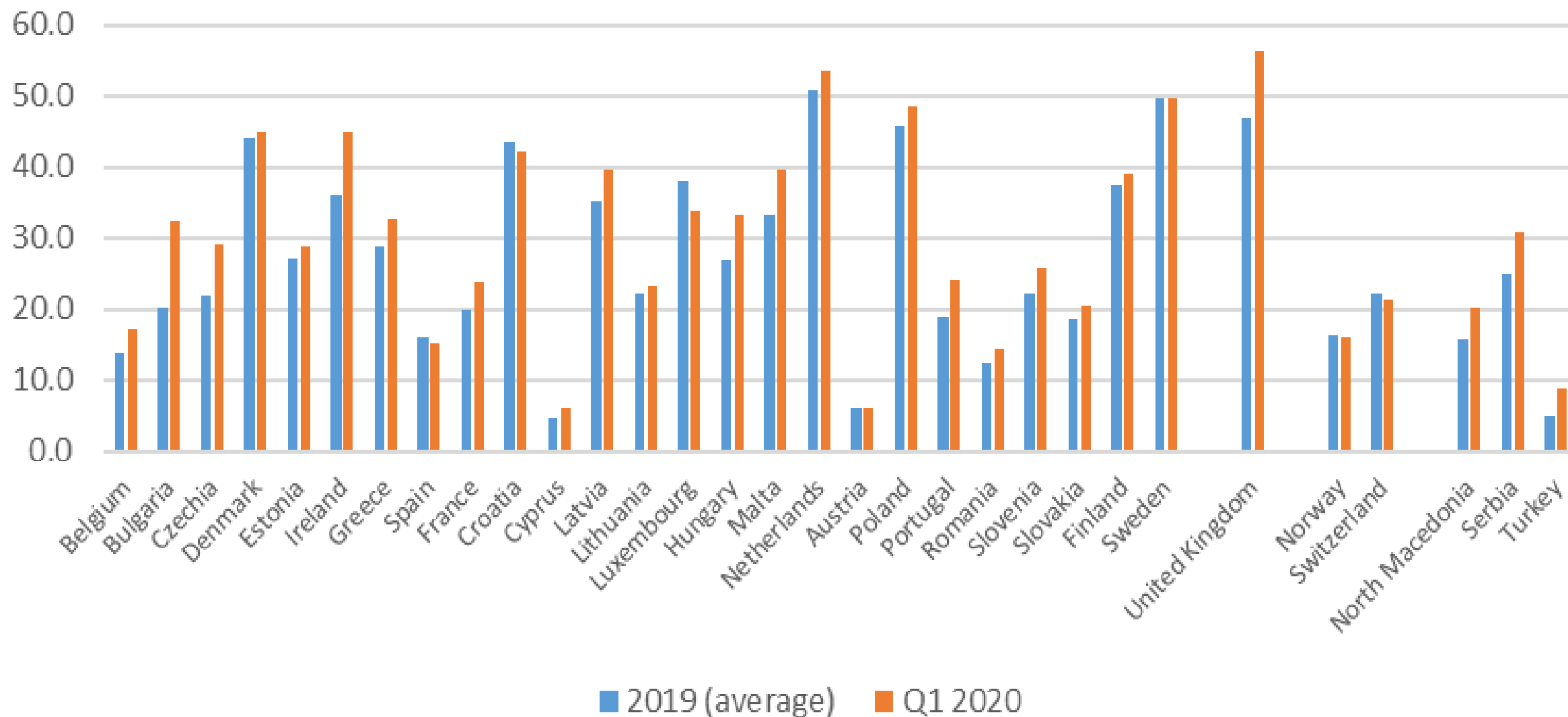
## Wave effect

- From the first to the last wave: -0.74pp

Hypothesis: first wave 20% of the sample,

- 1/2 from CAPI to PAPI: -0.11pp
- 1/2 unknown in the phone register: -0.046pp

## EU-LFS: non-response rate



# Recommendations on tackling non-response 1

What should be **avoided** about imputation:

- Use **Administrative or register data** to derive or impute information on the labour force status.
- Use **non-traditional sources** of information for replacing non-responding units or imputing missing information on labour force status.
- Use **longitudinal imputation** of missing units using information resulting from previous interviews
- **Replace non-responding units by imputation** using donors

# Recommendations on tackling non-response 2

What should be **favoured** for increasing response rate:

- Send to households/individuals **introductory letters**, requesting contact details for a remote interview.
- **Prolong** the period for carrying out data collection to some extent.
- **Simplify or shorten** the national questionnaires, where possible, in order to reduce the survey burden.
- **Increase the size** of the sample by over-sampling or replacing non-responding units with other units selected from an additional list.
- **Re-use of old sub-samples** or prolonging the presence of the subsamples in the survey for further waves.
- 7 • Promote **communication** to foster participation in the survey.

# What to do with item non-response

What should be **favoured**:

- Introduce or extend **item non-response imputation where partial information exists**, in order to improve the quality of the statistics.
- Introduce or extend **item non-response imputation using administrative data**, provided that this administrative data meets quality requirements.

Be careful as these procedures can generate results that might be biased with regard to the “normal” situation.



# Non-response adjustment via weights 1

All countries adjust non-response by weighting procedure:

- Some countries tackle non-response in one of the post-stratification or calibration steps within the weighting procedure:
  - at the beginning when the design weight is computed;
  - at the end when the final weight is computed by calibrating to the margins of the variables used in the weighting procedure.
- Other countries use an additional step, in their weighting procedure, specifically addressed to non-response adjustment.

# Non-response adjustment via weights 2

Although countries could be tempted to change their weighting procedure because of COVID crisis, **it is not recommended that countries introduce changes or revisions to their weighting and non-response adjustment processes.**

If a change is considered, **a recalculation of previous series** using the updated weighting approach should take place to assess the impact of the change. A testing stage using available data from previous periods is recommended.

**Information on the variables relating to the definition of the labour force status shall not be used in the weighting process.**

# How some countries deal with higher non-response

**Spain:** an additional calibration at NUT2 level for the weeks 11 to 13 has been included, based on the information of the same weeks for the previous year.

**France:** exploratory analysis concerning the possible bias due to the higher non response and the change in mode for the production of the Q1 2020. The results were not clear compared with all the past of the series; no change in the weighting procedure for Q1 2020.

**Italy:** to correct the bias a new calibration constraint based on education qualification has been included in the quarterly and monthly processing.

**Poland:** in case of too low interviews response rate, data estimate by means of the advanced statistical methods should be taken into account.

**Portugal:** strong decrease in the response rates poses a problem of data comparability over time. No actions has been foreseen for the time being

# Further considerations and recommendations

According to the information collected from countries it appears that while some countries will not change strategy, others **will change strategy** for the new sample in the first wave in Q2 2020.

**Any change should be implemented with care as it might also introduce bias** (Ex.: selecting a sample using a phone list can hide the part of the population whose phone number is not in the list.).