

The Belgian Labour Force Survey: Methodological Summary on the correction for the Breaks in Time Series exercise 2021

Following the entry into force of the new Integrated European Social Statistics Framework Regulation (Regulation (EU) 2019/1700), Statistics Belgium introduced a new survey questionnaire for the Belgian Labour Force survey in 2021. One of the elements of the new regulation was the implementation of a revised operational definition of the ILO employment and unemployment concepts.

This implementation of a new questionnaire and the related survey tools was, for the Belgian Labour Force Survey, the second step in a large-scale redesign of the survey. During the first phase of the redesign, in 2017, several methodological changes had already been implemented, of which the most important were: the introduction of a panel design, the switch to a mixed mode data collection and a review of the calibration method. This had inevitably led to a break in the time series for most indicators.

The pilot survey

It was expected that the introduction of the new questionnaire in 2021 would also lead to breaks in the time series of several of the indicators. In order to obtain insight in the impact of the new measurement on the indicators, Statistics Belgium ran a two-wave pilot survey during all four quarters of 2020 (except for Q1: only the 1st wave), for a sample size approximately $\frac{1}{4}$ of the size of the regular first and second waves of the survey. Besides obtaining information on the size and direction of the break in the time series of a number of core indicators, the pilot survey also served as a large-scale test of the new survey tools and the survey process as well as to make interviewers familiar with the new questionnaire and tools in the different data collection modes.

A first step in the analysis of the pilot survey with respect to the production of backcast factors consisted in calibrating the results from the pilot survey upon the regular survey, for the corresponding two first waves, thereby trying to eliminate sample composition effects as much as possible and making the samples as comparable as possible. Next, it was planned to further elaborate this by using time series models and/or exploring the possibility of the use of auxiliary variables from administrative sources.

However, with the start of the Covid-19 pandemic and some technical issues linked to the startup of the pilot survey, questions arose with respect to the suitability of the use of the pilot data as a basis for backcasting series back to 2009, for the indicators included in the European coordinated 'correction for breaks in time series exercise'. Indeed, the first analyses of the calibrated pilot results for the main ILO employment and unemployment indicators showed that the results were not very precise. Because the pilot sample size was much smaller than the regular LFS, the confidence intervals of the different breakdowns (age group, sex) were very large. Therefore, most of the estimates from the pilot survey did not significantly differ from those of the regular survey, even though the deviation between the estimates was sometimes very big.

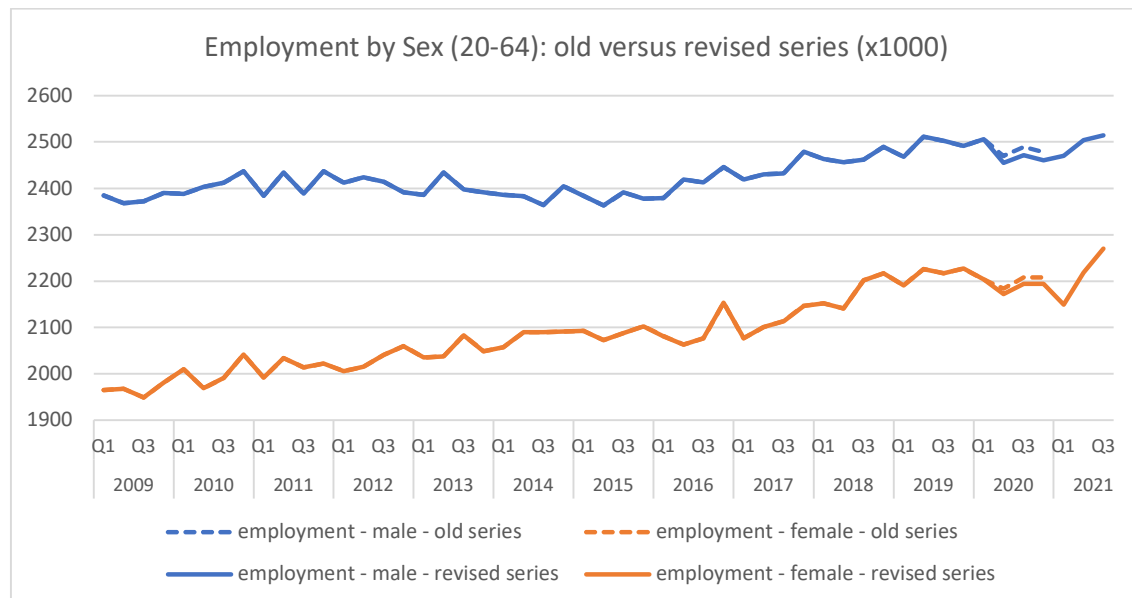
Furthermore, using the estimates of the pilot led to counterintuitive results based on what we would expect from the changes in the operational definition and our previous knowledge of Belgian labour market trends. We were afraid that, by using the results from the pilot survey as a basis for a revision of all of our old series back till 2009 would do more harm than good and would be difficult to justify to users. We therefore decided to follow a different approach and to focus on the specific elements of the definition that can have had an impact on the measurement of the main employment and unemployment indicators.

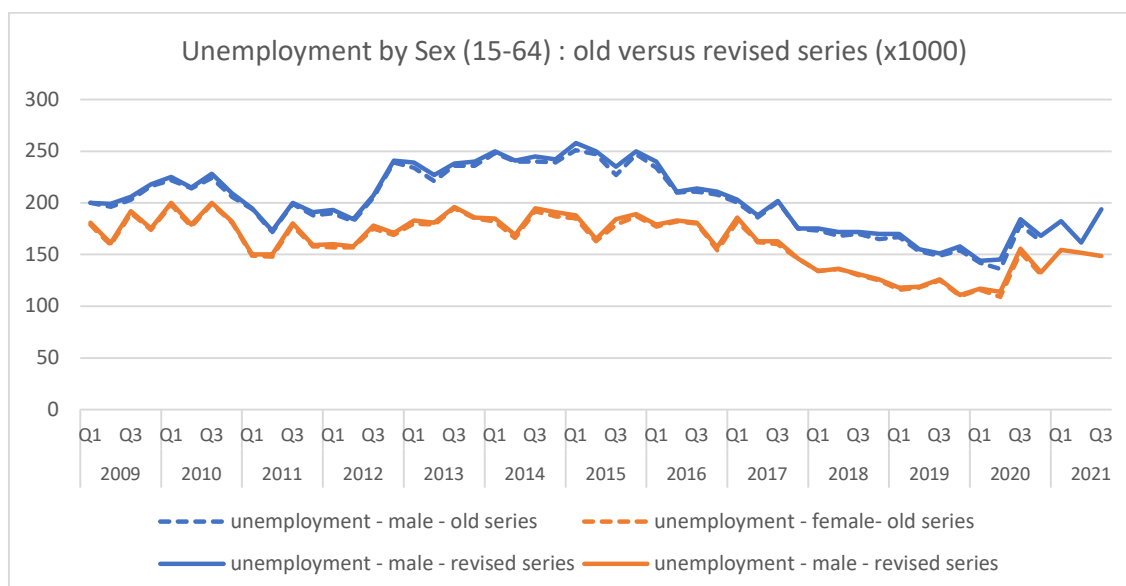
Correction for changes in the operational definitions

Among the different changes in the operational definition, four were applicable to the Belgian national situation. From 2021, changes have been made to the classification of people with a job but absent during the reference week. More specifically, it concerns changes in the classification of **lay-offs (in Belgium: persons in temporary unemployment)**, people on **parental leave** and people performing **seasonal work**. The fourth change lies in the update of the search methods of unemployed people. Since 2021, **the list of search methods no longer includes passive search methods**. Only if the respondent answers that he/she has not used any of the (active) search methods listed, the respondent is regarded as 'passively looking for a job' and therefore not as ILO unemployed.

Since the impact of the change in operational definition for parental leave and seasonal workers is very small/negligible, we only made corrections for temporary unemployment and for the change in the list of search methods. The correction for temporary unemployment was only applied in Q2, Q3 and Q4 of 2020 (Covid-19 crisis). The correction for the change in search methods was applied for the whole period 2009-2020.

The graphs below show the revised series versus the old series, for unemployment in the population 15-64 and for employment in the population 20-64. Next, some more detail is given on how we estimated the specific impact of the change in the operational definition.





Correction for Long-term absence due to Temporary unemployment ('layoff'): Series on employment and unemployment, 2020 (Q2-Q4)

Belgium has, since long, a system of 'temporary unemployment' which can be used by employers to compensate employees (mainly blue-collar workers) during an economic turndown caused by circumstances beyond the control of the employer, such as bad weather or an unforeseen event like a technical accident. During this period, these employees remain under contract with their employer and retain all rights related to the contract (such as entitlements to pension, social security and health benefits) and receive a minimum of 65% of their earnings. In normal times, the duration of this kind of temporary unemployment is short and is rarely longer than 3 months.

In 2020, as a response to the Covid-19 pandemic and the first lockdown that started in Belgium on the 13th March of 2020, the government temporarily introduced a specific system of 'Temporary Unemployment due to Force Majeure', extending the existing system to white-collar workers and increasing the compensation to 70% of the monthly earnings (capped at €2,754.76) + a daily supplement of 5.63 euro per day. The system was very popular and reached a peak of 1,415,628 employees in April 2020 (43% of total employees in the private sector). For a large amount of persons, the duration of absence exceeded the duration of 3 months, meaning that according to the old operational definition these people were classified as being employed up till the fourth quarter of 2020. This changed from the first quarter of 2021 on, when the new operational definition came into force, stating that long term absence due to temporary unemployment (= other reasons) should be counted as either inactive or unemployed, depending on availability and search behaviour.

From a national perspective, all employees in this temporary unemployment scheme would still be considered as being employed, regardless of the duration of their temporary unemployment. An exception was requested to Eurostat in order to treat this specific category as being employed, but Eurostat stressed we had to comply with the agreed flowchart annexed to the Implementing Act. So for reasons of harmonization between the European countries, we strictly applied the rules of the new Act, although it was not the most appropriate, given the national context.

So from 2021 on, persons in temporary unemployment for more than 3 months are no longer considered as employed. The success of this new 'temporary unemployment' schema because of the Covid-19 pandemic, in combination with the new operational definition of employment had an impact on the measurement of the number of employed, which would, in normal times not have been visible.

For national purposes, we published, aside from the official indicators, alternative indicators classifying these persons among the employed as before. The comparison of these two indicators shows that the effect was the largest in the first half of 2021 and diminished strongly as Covid-19 measures were released.

For the purpose of the break in time series exercise, we tried to estimate the share of employees that were absent due to long term temporary unemployment, in order to be able to revise the figures for the quarters two to four in 2020. As already mentioned, this kind of long term unemployment was highly exceptional before the start of the Covid-pandemic.

In order to be able to correct the series for 2020, we needed to estimate two specific components:

- We first needed an estimate of the number of long term temporary unemployed per quarter for 2020. This was done on the basis of a variable from the (old) questionnaire, measuring the total number of temporary unemployed that were absent from work during the whole reference week. By applying the share of long term unemployed that was known for 2021, we obtained a first estimate. This estimate was then corrected by comparing it with administrative figures on long term temporary unemployment and taking into account that the duration of 3 months could have started at the earliest in June 2020 (i.e. 3 months after the first lockdown)

- Next, we needed to determine what share of these persons, who were employed according to the old definition, would be inactive versus unemployed according to the new definition. Again, we used the regular survey 2021 in order to estimate these shares for 2020. The same approach was followed in order to apply corrections to the breakdowns according to age group and sex (i.e. using the observed proportions from 2021, and applying them to the 2020 data).

These estimates were used in order to correct the series for both employment and unemployment (and consequently, also the inactive population).

Correction for passive search methods: series on unemployment 2009-2020

An important change in the measurement of the number of unemployed people is the fact that from 2021 on, passive search methods are no longer included in the list of search methods. Only if the respondent answers that he/she has not used any of the (active) search methods listed, the respondent is regarded as 'passively looking for a job' and therefore not as ILO unemployed. Until 2020 the list of search methods in the Belgian LFS included 3 passive search methods and a category 'no initiative taken'. The 3 passive search methods were:

- have been waiting for an offer made by a public employment agency
- have been waiting for a call from an interim / a selection bureau, a head hunter's agency, a local employment agency
- have been waiting for the results of a competition for recruitment to the public sector

As a result of the exclusion of passive search methods from the list of search methods in 2021, the number of passive job searchers decreased. In the first three quarters of 2021, there were on average 4,000 available job seekers who declared not having used any of the listed (active) search methods. In 2020, an equal number of 4,000 available job seekers declared not having used any of the listed (active

+ passive) search methods (i.e. did not take any initiative to search), but almost 6,000 persons mentioned one of the 3 passive search methods.

Under the hypothesis that respondents seeking work and being available for work but reporting only passive search methods in 2009-2020, would most likely have reported an active search method if the current list of search methods would have been presented to them, we corrected the number of unemployed persons for the period 2009-2020. This led to a small increase of the number of unemployed persons.

Parental leave: no corrections

In Belgium, the maximum duration of paid full time parental leave is 4 months per child. These 4 months may be divided into periods of one month or multiples thereof. In the past, persons on parental leave were counted as being employed if the total duration of the parental leave was three months or less, regardless of whether they received a salary or benefit.

Following the new operational definition of employment, persons on parental leave are all counted as employed, unless they do not receive any salary or benefit from the National Employment Office (NEO) and are (or will be) on parental leave for more than three months. Based on the results of our pilot survey in 2020 and the results of the regular survey for the first three quarters of 2021, less than 1,000 persons in parental leave do not receive any salary or allowance from the NEO related to their job and are in parental leave for more than three months. Among those that receive an allowance from the NEO, only a very small proportion takes this parental leave for more than 3 months in a row. We considered it therefore unlikely to have had an impact on estimates of employment and did not correct for the change in definition of parental leave.

Seasonal workers: no corrections

Until 2020, there were no separate rules for seasonal workers in the Belgian LFS so they were counted as employed if they were at work during the reference week or if they answered that they were temporary absent from their job. From 2021 on seasonal workers outside the season are considered employed only if they still regularly perform tasks or chores (e.g. maintenance work) for their job or company during the off-season. The figures of the first three quarters of 2021 show that a small number of persons is absent because of seasonal work (on average 3,000 persons). On average 1,200 of them answered that they regularly perform tasks or small jobs for their work or their enterprise during off season. Since the impact on the employment figures is negligible, we did not correct for the change in definition of seasonal workers.