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Timely Official Statistics during the COVID-19 Pandemic in the Netherlands

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Abstract

The Dutch Labour Force Survey (DLFS) and the Dutch Health Survey (DHS), are two examples of key household surveys conducted by Statistics Netherlands. Data collection is based on a sequential mixed-mode design where a combination of internet participation (CAWI –Computer-assisted web interviewing), telephone interviewing (CATI -Computer-assisted telephone interviewing) and face-to-face interviewing (CAPI - Computer-assisted personal interviewing) is applied. The DLFS is based on all three modes, while the DHS is based on CAWI and CAPI only. The COVID-19 pandemic resulted in two problems. Due to the lockdown measures face-to-face interviewing partially stopped in the years 2020and 2021. It can be expected that this results in a sudden change in measurement and selection effects in the survey outcomes of the DHS. On top of that, this crisis made clear that there is a strong demand for timely figures on labour force and health related issues. The sample sizes of these surveys, however, doesn't allow to produce sufficiently precise direct estimates for short reference periods. Both issues are solved by developing a model-based inference method to estimate monthly labour force figures and quarterly health figures for the most important key variables of these two surveys. The method is based on multivariate structural time series models, which are used as a form of small area estimation. At the same time the time series models are used to correct for the sudden change in measurement error due to the loss of CAPI interviews during the lockdown. In the presentation the time series models underlying this approach is explained and results including estimates for the bias due to the loss of CAPI will be presented.