

## **Early estimates for the retail trade with a mixed model**

Pieter Vlag (Statistics Netherlands)

Like several other European countries, Statistics Netherlands increasingly uses the Value Added Tax (VAT) registration as administrative data source for small and medium (SM) sized enterprises. Yearly, quarterly and monthly turnover estimates are based on the VAT-registration. Problem when using VAT for quarterly and monthly turnover estimates is that part of the VAT-data are missing because they arrive late or are reported for another periodicity. This is especially the case for the first estimates of the retail trade – 28 days after the end of the month - when no VAT data at all are available. Hence, these early estimates have to be based on a survey for the largest enterprises only.

These early estimates are slightly biased compared to later definitive monthly estimates when part of the VAT data for the SM enterprises become available. This bias becomes even more pronounced when relating them to quarterly turnover estimates, when also data from quarterly VAT reporters can be incorporated in the estimates. Previous research revealed that this bias is mainly caused by a generally slightly lower growth rate for SM enterprises compared to large enterprises (due to economic reasons).

In this study we present a method to correct the bias in the first monthly estimates. The method is based on using observed differences in growth rates between SM and large enterprises in previous periods. During the presentation several methodological options to include the difference in growth rate for the previous periods in the first estimates will be discussed. The results show that this approach seems to be quite promising as it is quite robust for changes in the business cycle whatever the exact methodological solution chosen.