**Impact of updating weights of the ISTAT Industry survey on tracking performance and volatility**

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As in the processing of BS the weighting is normally used to improve the quality of the estimates, this study intends to enter the debate on the real impact of weighting schemes. To this aim, some evaluations on the effect of updating weights on ISTAT Industry time series - in terms of volatility and tracking performance - are provided.

The main methodological features of the ISTAT Industry survey are: 1) the survey sample is a fixed panel of about 4000 enterprises with at least 5 employees; 2) the sample strata are identified by firm size (5-9; 10-49; 50-249; 250-999; 1000 and more), geographical area (North-west; North-east; Centre; South and Islands) and the economic sector (two-digit sectors of NACE rev.2 from 10 to 33, three-digit sectors of divisions 10,13,20,25,26,27,30,32); 3) the sampling method provides a random sampling scheme (allocated according to the Robust Optimal Allocation with Uniform Stratum Threshold - ROAUST) for firms with less than 1000 employees and a census sample for the ones with 1000 or more employees; 4) the weighting scheme considers size weights (the number of employees) *at firm level* and, *at stratum level*, a weighting coefficient reflecting the relative significance of each stratum in the population (the value added is used) in order to better reflect the structure of the economy.

Recently, ISTAT decided to update the weighting of the survey at stratum level, without changing the overall scheme. This updating is aimed at ensuring, firstly, that the base year of the weights is as close as possible to the year of the survey; secondly, at improving the quality of value added data using the new ISTAT Statistical Information System “SBS Frame”.

Thus, in the processing of the results the weights based on National Accounts information relating to year 2005 are replaced by a set of weights updated to year 2012. The value added data referring to 2012 are based on micro level information. In fact, for *small and medium enterprises* the new source is the new ISTAT SBS Frame, the integrated statistical information system for estimating structural economic variables on business accounts based on micro data from surveys and different administrative sources integrated with the information of the Statistical register of active enterprises (ASIA - Enterprises). For *large enterprises* the source is the Survey on enterprise accounting system integrated with the administrative sources. The benefits coming from the use of the new sources can be summarized in higher reliability of information for main economic aggregates (i.e., value added) and in higher levels of consistency between statistics on enterprises and National Accounts (starting from the 2011 Benchmark).

The comparison of the percentage composition of the weights in terms of value added according to the NACE rev.2 two-digit sectors shows small changes for all the divisions; Div.28, Manufacture of machinery and equipment n.e.c., presents the bigger change being around +3%. This is probably due to the better comparative economic performance shown by Italian mechanical firms during the post-2008 period economic crisis.

In our study, for the period Jan.2000-Sept. 2014 the confidence climate (COF) and component variables series (seasonally adjusted data) are analyzed. Since January 2009, the series are rebuilt using the updated value added. The volatility of the new COF and component series is compared to that of outdated series calculating - both for total Industry and for Main Industrial Groupings - the Month of cyclical dominance (MCD). This indicator is the ratio of the average percentage change of the error (irregular) component to that of the trend cycle, showing the number of months to be taken in account to ensure that the cyclical component is dominant on the irregular one. As a result, the MCD remains unchanged for all the considered series.

In the *Analysis of performance* we measure the correlation between the Confidence climate and the reference series, that is the industrial production index (year-on year percentage change) for both the updated and outdated series. The analysis shows a positive effect on tracking performance for updated series witnessed by an improvement of the cross-correlation analysis at lead-1 (months).

Concluding, a substantial qualitative improvement and updating of the weights seems to have only a small positive effect on the estimates of a survey fairly robust in terms of sample size.

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