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How does early statistical output become late statistical input?

Topic 3 – More rapid statistics and indicators on new phenomena

Keywords: timeliness, process timing, cut-off

Introduction

Timeliness is a key feature for the usefulness of statistics, in particular in policy context. As a corollary, demand for higher frequency data is increasing as well. Timeliness and frequency are not the only important aspects for users, though, and may well conflict with other quality requirements. Accuracy, proxied by absence of revisions, is another key feature that may not always go well with improved timeliness. Timeliness of statistical products has improved slowly but steadily.

As a typical example, the original version of ESA 1995, which introduced compulsory compilation of quarterly national accounts in 1998, asked for transmission after 4 months. This was shortened to 70 days with an amendment in 2007, and to 60 days with the change to ESA 2010 in 2013. This and other improvements, including additions to the scope of statistics available, have however not sufficed to quench user thirst, and calls for improvements in timeliness remain. We'll try to look into the reasons for what seems to be users' ingratitude and insatiable demands and the statistical community's stubborn and sluggish responses to them.

Methods / Problem statement

The work processes of statistical producers and statistical users have many things in common. In fact, the distinction is not that straightforward. To other statistical domains, such as those dealing with price or enterprise surveys, the compilation of national accounts has all the features of a user while to policy makers, the production of economic forecasts does appear like a statistical production process not fundamentally different from what statistical institutes do.

An important difference however concerns the way processes are timed: The timing of statistical producers tends to be driven mainly by input availability considerations. Take the moment the latest necessary input becomes available, add the necessary processing time and you get the earliest time for the availability of the new statistical output. The target is to make output available as quickly as possible. The timing of user processes tends to be driven also by output demand considerations. Take the (exogenously fixed) time that the final results are needed, subtract the necessary processing time and you get the cut-off date for the incorporation of inputs.

The target hence is to use as much and as fresh input as possible. In consequence, producers provide statistical outputs arrive in a quasi-continuous stream and users look for calm periods in this stream for fixing their cut-off times. Any statistics coming (shortly) after the cut-off are too late by definition and can even constitute a nuisanc

Results / Proposed solution

We'll review some general options for dealing with time pressure on (user) processes and illustrate them with a practical example. Not all available options actually involve more timely statistics, but not surprisingly, accelerating processes by pressing for getting the necessary inputs – or more precisely: those that are on the critical path – earlier is the "via regia" – at least from the user perspective.

We also argue that as regards perceptions, there are in fact some self-defeating features in accelerating statistical production: For example, earlier data can serve as input to more user processes, and this will in turn further increase the pressure on timeliness (but also punctuality and accuracy).

For another example, addressing timeliness by increasing reporting frequency makes reporting periods outdate faster: Measured against the length of the reporting period, quarterly data at t+70 days is relatively later than annual data at t+9 months.

Conclusions

Timeliness is a moving target. The conflict between the timeliness demands of users and the capacity of producers to comply with them will not be comprehensively solved any time soon. Both users and producers have to make an effort to understand the restrictions on the other side(s) better.

What can be done

- Raising mutual awareness of timing constraints on the other side
- Education of users about the trade-off between timeliness and other quality aspects
- Better coordination / integration of statistical production processes across domains, but also within
- Harmonised release and revision policies (including also coordinated releases via different channels – NSI, ESTAT, Commercial providers, international organisations)

And, of course, statistical production can in fact be further accelerated. The options depend largely on the particular domain, but two aspects feature prominently:

- Increased use of administrative sources and integration of administrative databases
- Adequate resources and political support for statistical production if a strong policy need has been identified.