New developments on online cash registers and road traffic data

Gábor Valkó, Zoltán Vereczkei, Csaba Gilyán, Áron Kincses
Hungarian Central Statistical Office

Abstract

The use of new data sources plays a key role in official statistics, as access to data of higher quality and quantity is necessary in order to reduce reporting burden. In the HCSO, there are two developments for the use of new kinds of sources near completion, and it is planned to use their results in official data releases from the beginning of next year.

One of these sources is the online cash register. For the purpose of reducing the abuses committed during the use of cash registers, the government of Hungary decided to introduce an online connection of cash registers with the National Tax Authority in October 2014. As such, cash machines involved in the online cash register system send online retail chain sales information to the Hungarian tax office. These data contribute to reducing the reporting burden of retail trade. Since the estimation of the retail selling is based at shop level in the HCSO, matching shops and cash machines was necessary. The mistakes made by cashiers and some missing data problems needed to be handled. Since some of the retailers are not obliged to use an online system, a part of the retail trade need to be estimated without these data. The new methodology, based on a source with similarities to big data is planned to be launched by the HCSO in 2019, and it is expected to reduce reporting burden by 75%.

The other source is the traffic watcher camera data of the National Toll Payment Service and the police. At the HCSO, there is a new development concerning the introduction of road traffic camera data. The main goal is to improve the data quality of tourism statistics. Beyond the existing methods (manual border traffic counting), in addition to the National Toll Payment Services Plc roadside traffic data, we will also examine the licence plate data and the Hungarian National Police Headquarters vehicle traffic data. Using these new big data sources, we can produce estimations for certain typical subcategories of the population (e.g. transit, daily commuters), which can be

used beyond the main objective (a more accurate estimation of the nationality distribution of the travellers) to validate the results of the data collection on "Tourism and other expenditures of foreigners in Hungary" and "Hungarian travellers abroad" recordings. The quality of tourism statistics is improved by the fact that the results can be used in statistical surveys of Hungarian tourism, which serves as a basis for the definition of tourism expenditures, and is used for the estimation of the exports and imports of tourism for the calculation of GDP.

The goal of this paper is to share innovations and some of the most important experiences of using non-conventional data sources, which reduce the burden of data providers and achieve a more accurate and efficient use of administrative data. Using alternative data sources, with the help of a newly created data strategy, it is possible to reduce the administrative burden on enterprises and increase the accuracy of official statistics.