Improving the accuracy of the CPI by using big data in Japan Hideaki Nakamura(Statistics Bureau of Japan)

Abstract

Statistics Bureau of Japan (SBJ) has been calculating the price indices of PCs since 2000 and those of digital camera since 2003 by hedonic method using scanner data purchased from data providers.

In recent years, due to the development of ICT, the proportion of online shopping by consumers is rapidly increasing in Japan. In March 2018, it was described in the "Master Plan Concerning the Development of Official Statistics", decided by the cabinet meeting, that SBJ should further examine how to collect and use online prices for calculating the CPI.

At present, SBJ is examining how to calculate the price indices of consumer electronics such as TV by using scanner data including online prices and those of travel related services such as airline tickets and accommodations by using web-scraped online price data. In this paper, I introduce current status of our research and practical challenges faced by SBJ in calculating price indices by using scanner data and web-scraped data.