

16th meeting of Ottawa group on price indices
8-10 May 2019 – Rio de Janeiro (Brasil)

Combining data coming from scanner, traditional CPI data collection and other sources to compile sub-national PPPs in Italy

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Abstract

The measure of consumer prices differences across different geographical areas within a country (Regional Purchasing Power Parities regarding households consumptions, RPPPs) is a crucial statistical challenge in particular when socio-economic differences are relevant. Moreover, RPPPs are crucial not just to compare prices but also to better measure poverty and for assessing inequality in the distribution of real incomes and consumption expenditures across regions and geographical areas. The issue of computing RPPPs is one of the topic at the centre of attention in the debate within the International Comparison Programme at the World Bank and in different national contexts. In Italy, the National Statistical Institute (Istat) disseminated experimental regional PPPs in two occasions (2008 and 2010) detecting significant price differences that encouraged ISTAT to develop further projects for producing sub-national PPPs on a regular basis (Biggeri et al., 2016). Recently the availability of scanner data provided new push to the research in this field (Laureti and Polidoro, 2017; Laureti 2018) with interesting results concerning the differences between northern and southern towns in the consumer prices in modern distribution.

The main aim of the paper is to investigate how to deal, from the methodological and computational point of view, with the availability of different data sources of elementary data of consumer prices (data coming from traditional data collection, scanner data, administrative data, other sources) to compile RPPPs adopting a multi-sources approach (already on the way for consumer price survey). The first part of the paper concerns a description of the socio-economic differences among the main Italian regions. The second part briefly focusses on the results obtained in the previous experiments in terms of regional PPPs. The third part deals with the evolution of the sources of data in the field of consumer prices, with specific reference to scanner and administrative data. The fourth part is dedicated to the methodological issues regarding the treatment of the different data sources and to the solutions adopted separately and to combine each other. In this latter part, the focus is on different methodological solutions and models tested on scanner data, exploiting the granular information they provide. The fifth part is about the compilation of RPPPs for Italy using all of the available data sources. In the fifth part the authors deal with the issues of aggregation at different levels and present the main results obtained. The last part of the paper is dedicated to some conclusive remarks concerning the indices compiled and perspectives of the work on this challenging topic.