Spatial Differences in Price Levels between French Regions and Cities with Scanner Data*

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Key Question

The purpose of this article is to present the spatial differences in prices across regions and large cities in metropolitan France, for food consumption products sold in supermarkets. Since the 1970s, various researches have been carried out at Insee on the subject. Scanner data from distribution chains, which are today used to calculate the consumer price index (CPI), make it possible to re-examine this question with a larger volume of data than before.

Methodology

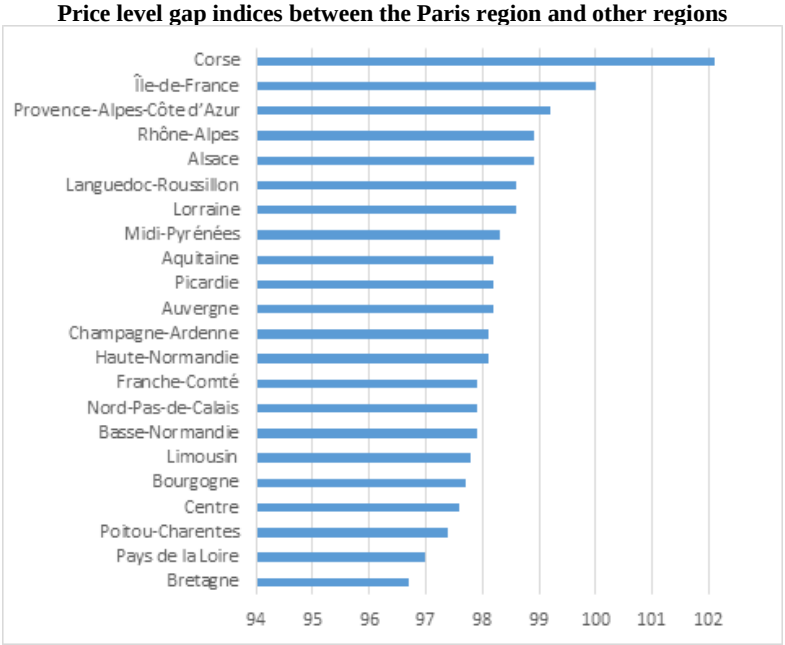
The study is based on a set of scanner data from several distribution chains available for the year 2013, at the level of each outlet and covering food consumption products. For each product identified by its barcode and for each store concerned, the weekly turnover and the number of units sold are available. Since barcodes are common to products sold in different stores, it is possible to infer from these observations a measure of the difference in price levels between regions. The study uses data from more than 1,800 supermarkets covering more than 13,000 different barcodes.

Main Results

• The average gap in price level between French cities and between regions are within a range of 10 percentage points.

• Compared to the Île-de-France region, prices are about 2 points higher in Corsica, while they are about 1 to 3 points lower in the other French regions.

Price level gap indices between the Paris region and other regions



Reading note: According to the estimate in which the observations are weighted by their turnover, prices are on average 3.3% lower in Brittany than in the Île-de-France region.
Sources: Insee, scanner data 2013.

Message

Various similar researches carried out by Insee since the 1970s, although on less extensive datasets, show that price level differences between regions seem relatively stable over time for food products. The differences between regions would therefore be essentially structural. This study also shows the richness of scanner data sets of distribution chains for the statistical analysis of consumer prices, data that Insee will integrate in particular into the calculation of the CPI from 2020 onwards. Thus, a single week of data is sufficient to establish precise estimates of the differences in regional price levels. It is therefore possible to study the evolution of these differences during the year; the only periods for which price level differences between regions change slightly correspond to the end-of-year holidays, during which the products sold are very typical and the populations move quite significantly.

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