Carli and Jevons

The Jevons and the Carli – being the geometric mean and the arithmetic mean of the price relatives satisfy the classic inequality:

\[ t_{\text{Carli}} = \frac{1}{n} \sum_{i=1}^{n} p_{t,i} p_{0,i} \]

\[ t_{\text{Jevons}} = \sqrt[n]{\prod_{i=1}^{n} \frac{p_{t,i}}{p_{0,i}}} \]

\[ = \sqrt[n]{\frac{\prod_{i=1}^{n} p_{t,i}}{\prod_{i=1}^{n} p_{0,i}}} \]

That is, the more dispersion there is in price relatives, the lower the Jevons index will be relative to the Carli.

The improvements to the measurement of clothing inflation were:

- increased sample size each month;
- prices collected in the base period (January) better reflect consumer spending patterns;
- increased number of price quotes used in the calculation of the base period index.

Led to an increase in the variance of the price relatives for clothing items… and so the gap widened.

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