

Measuring Core Inflation under Price Divergence

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Core inflation is commonly understood as the component in headline inflation that is expected to persist over the medium term. Timely conventional measures include limited influence estimators (e.g. trimmed means and medians) and excluded-item measures (e.g. headline inflation excluding food and/or energy items). These measures are appropriate when a single component underlies persistent price changes in the basket of consumption items. However, in this paper we present statistical evidence suggesting that (i) prices of consumer items are diverging over time, and (ii) several sub-convergent clubs underlie this overall price divergence. Under price divergence, the conventional core inflation measures become inaccurate, and are likely to be biased over longer time intervals. However, because price changes within each convergence club share the same persistent component, we can construct an accurate measure based on these groupings. Indeed, we show that our proposed estimate performs better than extant measures when evaluated by the conventional statistical criteria. In particular, it provides a more accurate forecast of headline inflation in terms of mean square prediction error.

Keywords: Core Inflation, log t regression, time varying common factor representation, median estimator.