17th Ottawa group meeting Rome, 7 – 10 June 2022

Title: The impact of expenditure weight shifts on inflation: Evidence for the euro area HICP

Authors: Thomas A. Knetsch, Patrick Schwind, Sebastian Weinand (Deutsche Bundesbank)

Abstract (maximum length of 400 words)

The shifts in household consumption caused by the coronavirus pandemic affect inflation measurement in the euro area via the updating of price item weights. A quantification of the impact of weight shifts on inflation rates is currently not provided by statistical offices. We propose a decomposition of the inflation rate, measured by the annual percentage change of the Harmonised Index of Consumer Prices (HICP), into an *aggregate price change*, keeping weights constant at previous year's level, and a *weighting component*. We discuss this decomposition against the backdrop of the HICP concept, considering the evolution of measurement rules over time and marking differences to a decomposition into *pure price change* and *volume component*.

We calculate weighting components for the euro area and its member states for the full HICP history. Our empirical results show that euro area inflation was affected by recognizable weighting effects in 2021 for the first time. While this evidence is shared by France and Italy, sizeable effects were perceptible in the German HICP already before 2021, albeit rarely. The significant decline of households' expenses in restaurants and for accommodation and travel during the pandemic, interplaying with the pronounced seasonal price variation of these services, plays an important role in explaining the appearance of sizeable weighting effects in 2021.

For the period from 2013 onwards, we also provide results for the decomposition of HICP inflation into pure price change and volume effects in these countries. While the volume effect may be praised to have a sound footing in index number theory, the weighting effect is advantageous from a practical perspective. First, the weighting effect can be directly derived from publicly available HICP data (price index numbers and weights). Second, its calculation avoids any case distinction over time and across countries, as it is required for volume effects to be properly interpretable. Our empirical analysis shows a close relation between weighting and volume effects in euro area inflation. Absolute differences tend to be small in phases when weight changes are sizeable, which is why we argue that a derivation of weighting effects from HICP inflation provides important information, in particular for analysts and policymakers.