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# Covid-19, ICP and online price and product data

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# Motivation

Covid-19 disrupted official price statistics by:

1. Disruption of (in-person) price collection
2. Changes in expenditure patterns

Inflation numbers were still produced, but their meaningfulness decreased.



# Question

To what extent is PPP measurement affected?

- Lockdowns in different countries at different times
- How representative would annual PPP figures be?



# 1. Exploration of available data (1)

Two available data sources:

## 1. Billion Prices Project

- Monthly observations from 2017 through 2021
- 26 basic headings: food (COICOP 01), fuel (7221), electronics (911)
- 11 countries (Argentina, Australia, Brazil, China, France, Germany, Japan, South Africa, Spain, UK and USA)

## 2. Eurostat

- a. BH PPPs and expenditures for 2017–2020
- b. Eurostat price surveys for 2020 for services, furniture and health



# 1. Exploration of available data (2)

General, exploratory question: are PPPs under Covid-19 ‘different’?

- BPP: compute monthly BH PPPs for 2017Q1–2021Q3 using CPD regressions => are PPPs showing different patterns of change if one or more countries impose lockdowns?
- BPP: Are within-2020 PPPs more volatile than in earlier years?
- Eurostat: are BH PPP changes different for surveyed BHs vs. extrapolated BHs? => are (partially imputed) CPIs leading to differences?



# Broader questions

- To what extent are the conceptual challenges that face inflation measurement under Covid-19 (Reinsdorf, Diewert/Fox) also relevant for PPP measurement?
  - May lead to sharper questions to ask of the available data
- Can we infer changes in expenditure patterns from changes in product availability (following Antoniadou, Feenstra & Xu, 2019)?