

# Group-specific inflation in the Czech Republic: current and future perspectives

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# Motivation

- Macroeconomic statistics on households
  - National accounts indicators
  - Consumer price index
- Social statistics on households (census excluded)
  - Statistics on income and living conditions
  - Household budget survey
  - Household Finance and Consumption Survey
- Differences
  - Conceptual
  - Numerical, various data sources, ...
- Reconciliation
  - Household distributional accounts (Eurostat/OECD)

# Motivation

- Household sector
  - Heterogeneous
  - Satellite account – top priority of the Czech Statistical Office
    - Incomes, expenditures already published (time series since 2015)
    - Close cooperation of macro and social statistics
    - Wealth in progress
  - Elevated inflation recent years
    - Many countries (CZ 15.1% in 2022)
    - Who have been affected at most?
    - Official CPI/HICP – impact on ‚average‘ person
    - Satellite indices produced by the Czech Statistical Office
      - Households of pensioners
      - Households living in Prague (capital city)

# Motivation

- Research question (Who have been affected at most?)
  - CPI/HICP by social groups
  - Official statistics (Czech Statistical Office)
    - No capacity
    - Official statistics x experimental statistics x research
    - Cooperation with academia
      - Prague University of Economics and Business
      - Bachelor student (bachelor thesis)

# Methodology

- Definition of social groups
  - Types of income
  - Income quintiles
- Type of price index
  - Laspeyres type
- Data sources
  - Detailed data – price statistics (COICOP groups)
  - Household satellite account
  - Household budget survey partly

# Methodology

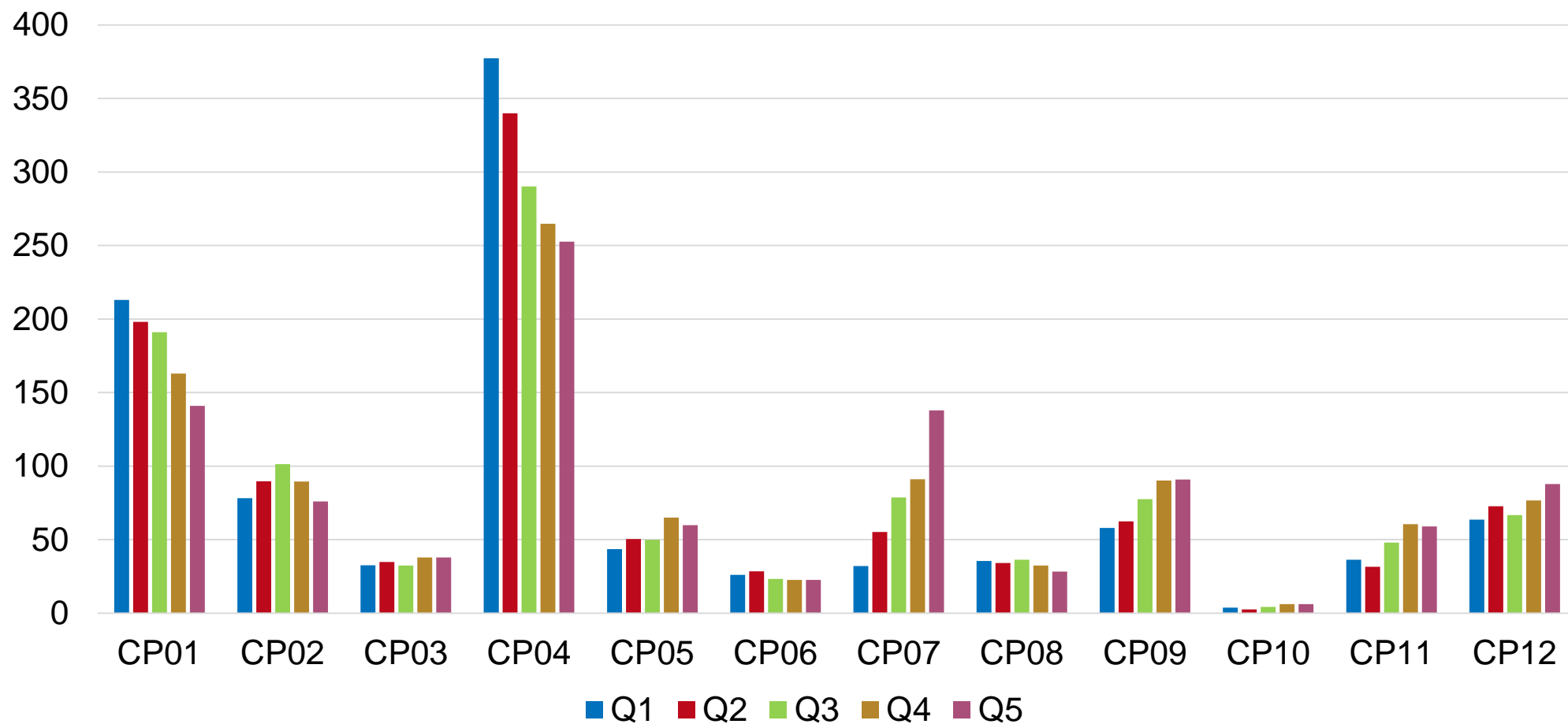
- Specific consumption baskets
  - Different concept in CPI/HICP (monetary expenditures) and national accounts concept (ESA 2010)
  - Income quintiles
  - Level of calculation (COICOP groups (which), representatives)?
  - Data sources
    - Mainly satellite account
  - Different consumption habits of social groups
    - Fast food vs fine dining restaurants
    - Changes in consumption habits
      - Volume change
    - Very challenging (almost impossible to capture)

# Data sources

- Price data (about 1/3 each data source)
  - Scanner data (mainly food, tobacco, pharmaceutical and drug store products)
  - Centrally collected data (telecom, energy, rental services)
  - Field collection (mainly services – restaurants, hairdressers, ..)
- Match – representatives and social groups?

# Consumption baskets

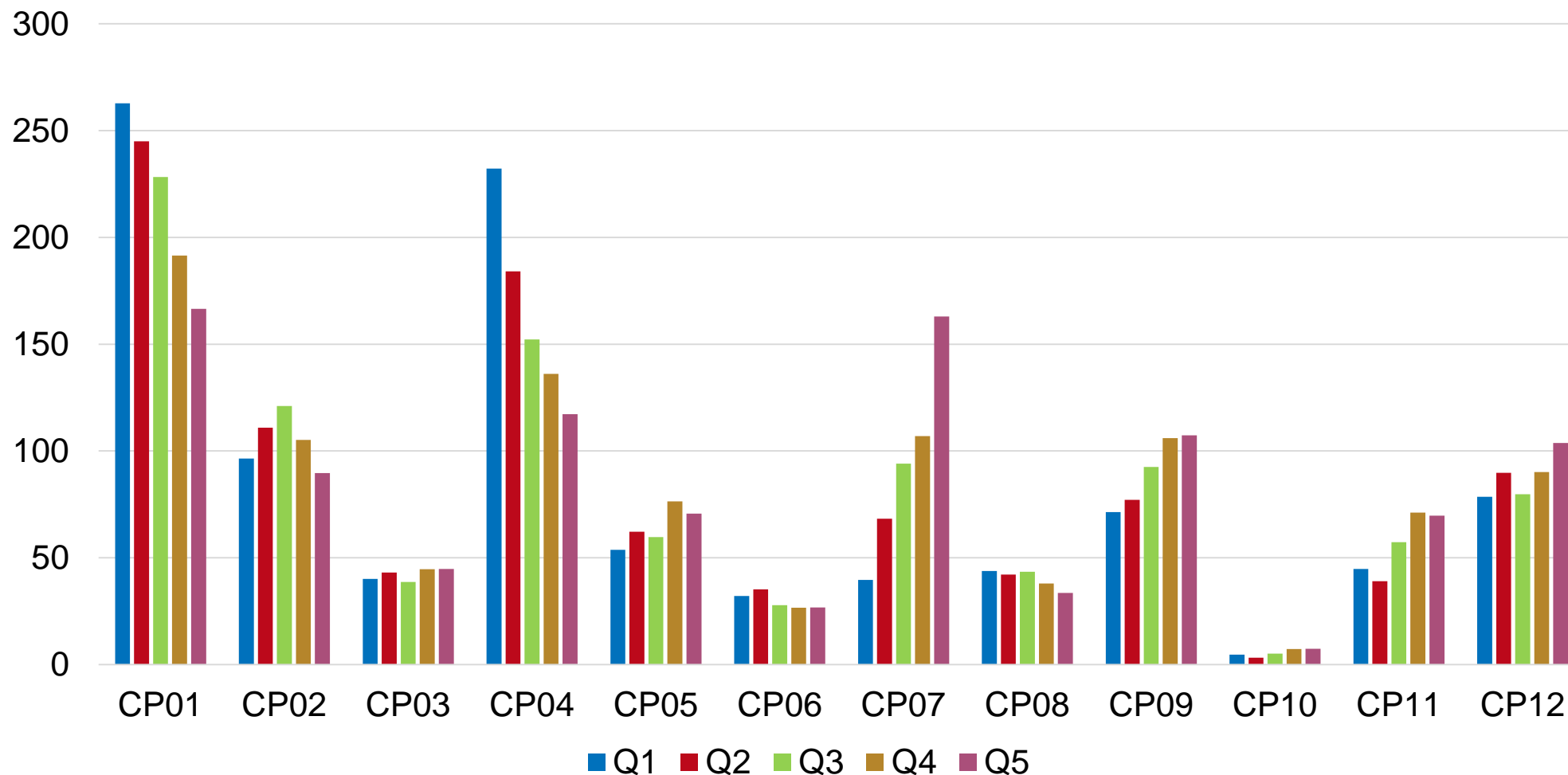
Consumption basket (CPI) by income quintiles in ‰, 2021





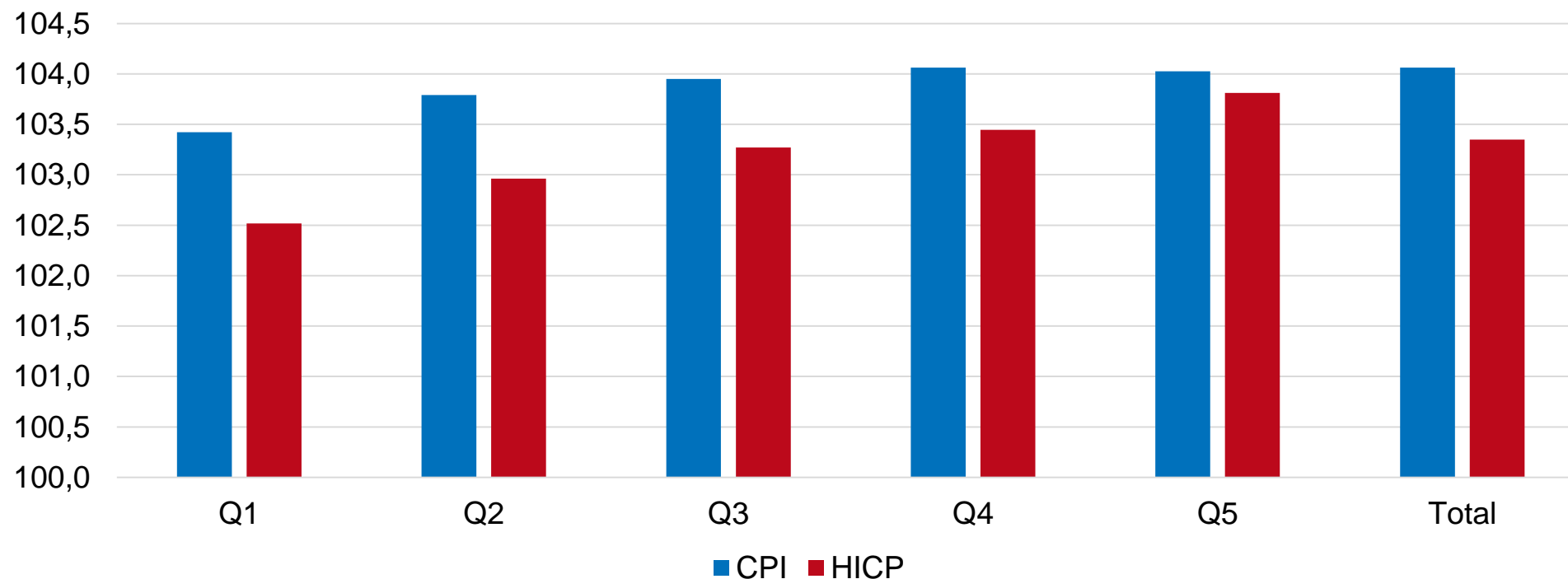
# Consumption baskets

Consumption basket (HICP) by income quintiles in %, 2021



# Results (y-o-y indices)

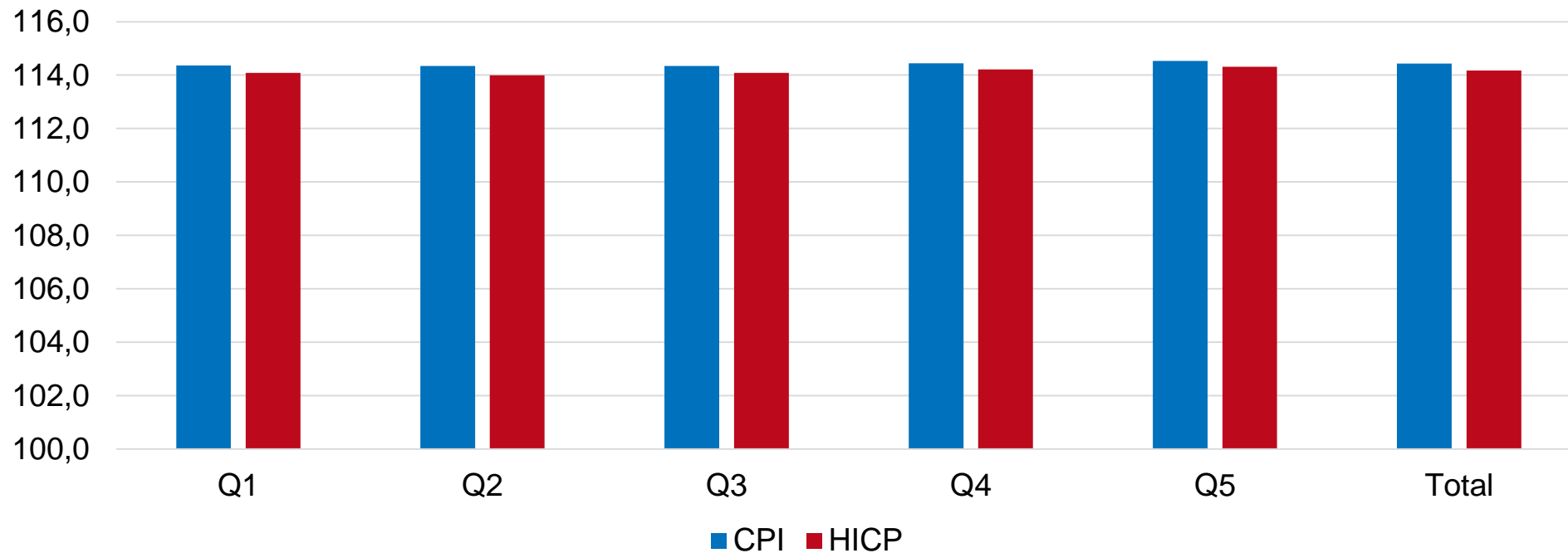
Price indices by income quintiles, 2021



- Surprising findings?

# Results (y-o-y indices)

Price indices by income quintiles, 2022



- Surprising findings?

# Results (contribution to growth, 2022)

Income quintiles COICOP group	CPI						HICP					
	Q1	Q2	Q3	Q4	Q5	Total	Q1	Q2	Q3	Q4	Q5	Total
CP00	14,4	14,3	14,3	14,4	14,5	14,4	14,1	14,0	14,1	14,2	14,3	14,2
CP01	3,6	3,2	3,2	2,6	2,3	2,8	4,3	4,0	3,9	3,0	2,7	3,4
CP02	0,5	0,6	0,6	0,5	0,4	0,5	0,6	0,7	0,7	0,6	0,5	0,6
CP03	0,6	0,6	0,6	0,7	0,8	0,7	0,7	0,8	0,7	0,8	0,9	0,8
CP04	6,0	5,9	5,9	4,5	4,4	5,0	4,1	3,6	3,1	2,6	2,3	2,9
CP05	0,6	0,6	0,6	0,8	0,7	0,7	0,7	0,7	0,7	0,9	0,8	0,8
CP06	0,3	0,3	0,3	0,2	0,2	0,2	0,3	0,3	0,2	0,2	0,2	0,3
CP07	0,7	1,0	1,0	2,0	2,5	1,7	0,8	1,2	1,7	2,4	3,0	2,1
CP08	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
CP09	0,7	0,7	0,7	1,1	1,1	1,0	0,8	0,8	1,0	1,2	1,2	1,1
CP10	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
CP11	0,8	0,7	0,7	1,3	1,3	1,1	0,9	0,8	1,2	1,5	1,5	1,3
CP12	0,6	0,7	0,7	0,8	0,9	0,8	0,8	0,9	0,8	0,9	1,0	0,9

# Conclusion

- Cooperation with academia is very beneficial
- Cooperation within statistical domains is crucial (national accounts, price statistics, social statistics)
- Goal achieved
  - Methodology prepared
  - Prerequisite – Distributional National Accounts already available
  - Preliminary results available
    - Thesis is publically available
    - No publication on our website
  - Room for improvement
    - Detailed level of calculation (COICOP groups)
    - Transition from household expenditure (ESA 2010) to monetary expenditure (price statistics)
    - Further analysis
    - A new student interested (master thesis) 😊

# Challenges

- Compilation issues
  - Human resources
  - Relevant and reliable data sources
- International methodology
  - Recommendation
  - Harmonization
- Price statistics - achievements / challenges
  - Games of chance (HICP)
  - Owner occupied housing price index (HICP)
    - Critical issue – overall HICP
  - Commercial real estate

# Count on us

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