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Climate Division

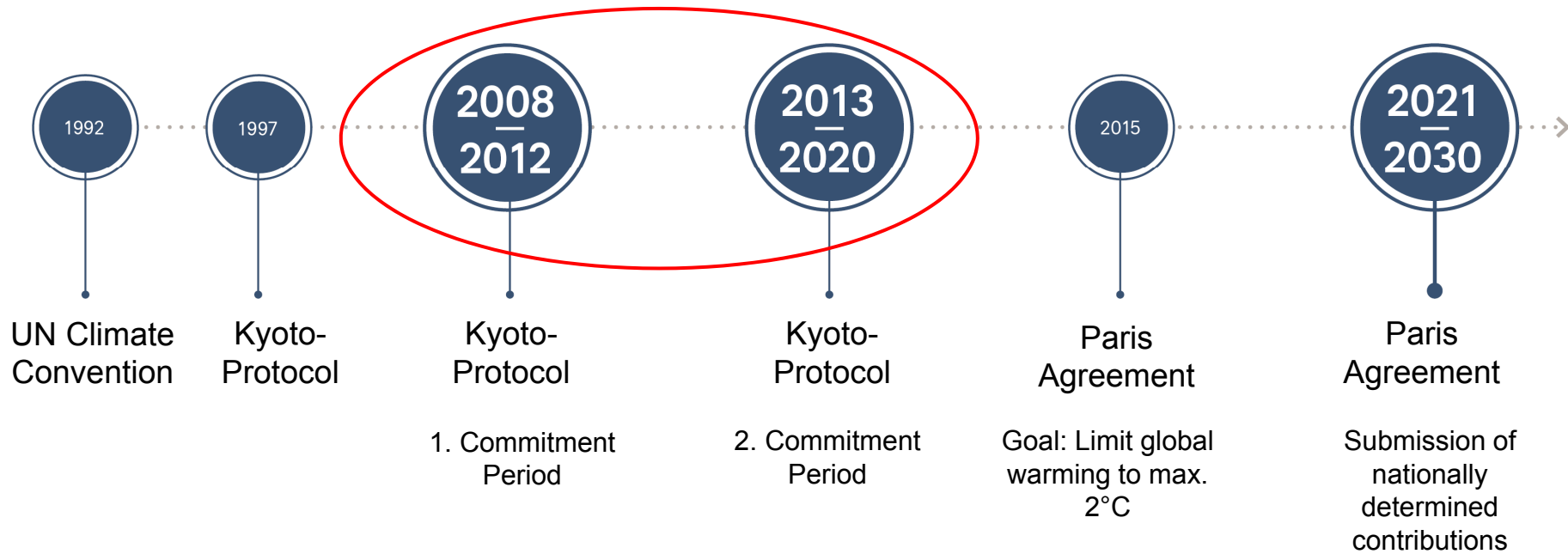
What is the effect of the Swiss climate policy mix on the energy consumption and emissions of firms in the industry and service sector?

Discussion

29 May 2018



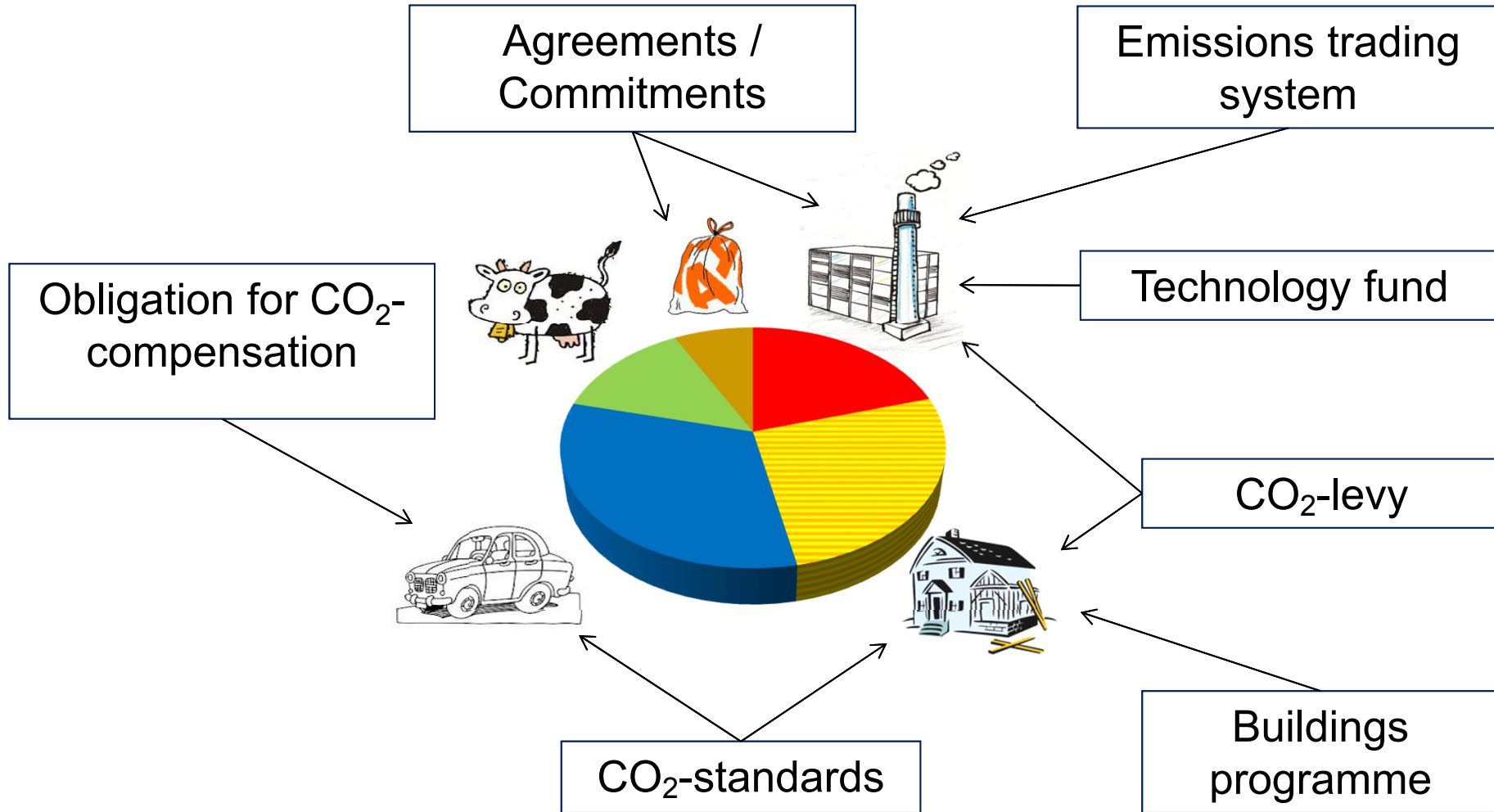
Timeline of (Swiss) Climate Policy Milestones





Swiss Climate Policy Mix 2012-2020

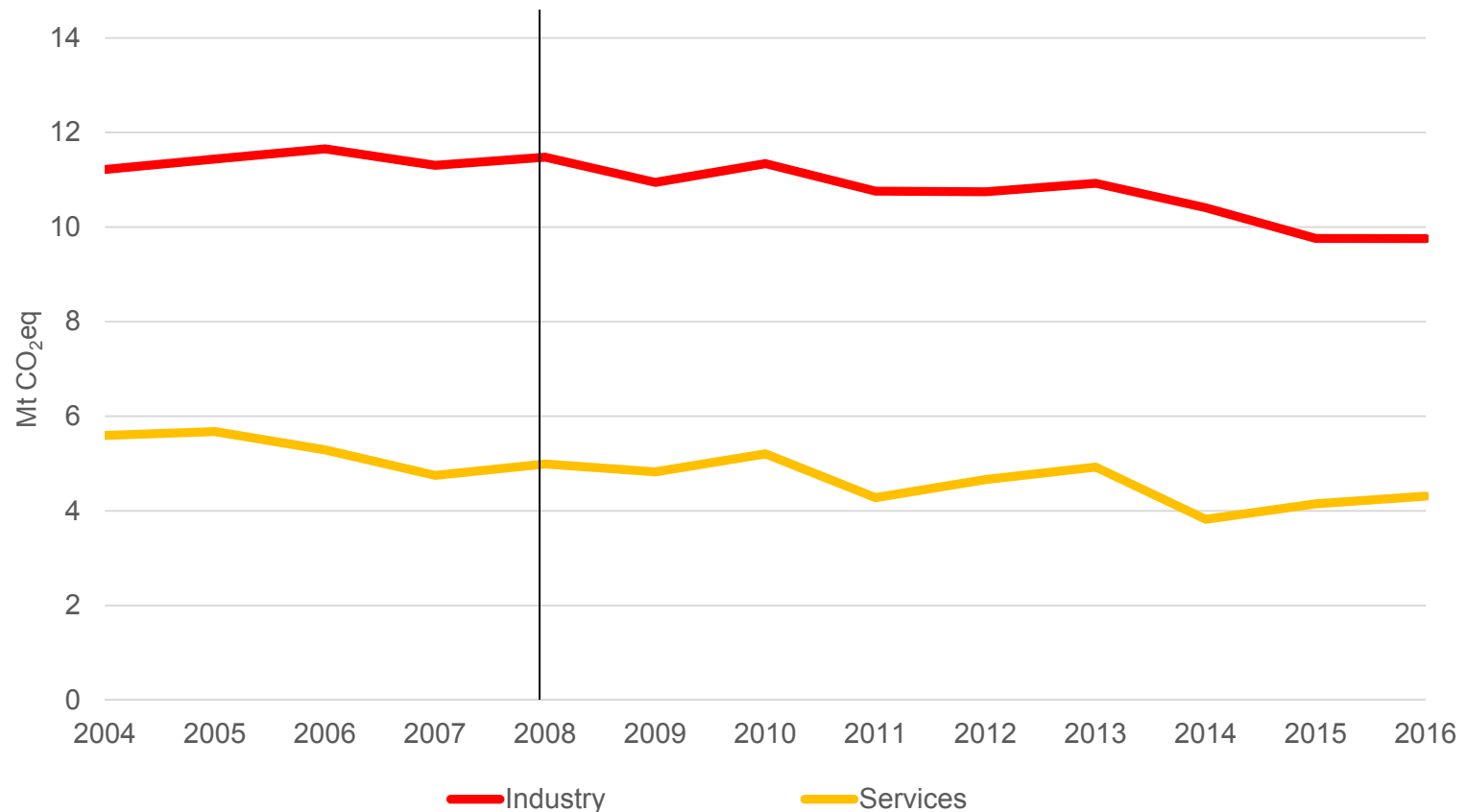
Measures and Instruments





Historical emissions 2004-2016

Industry and services



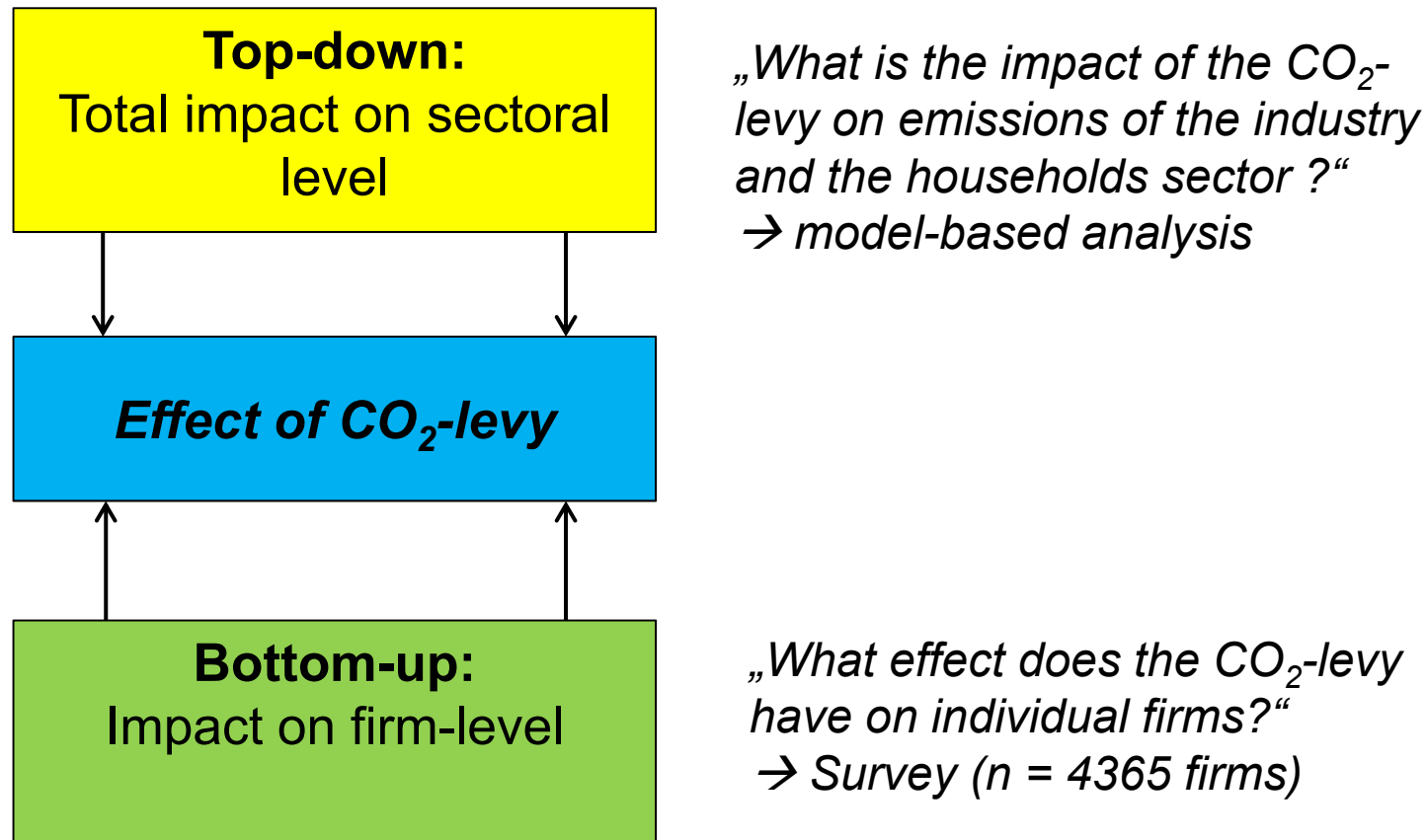
- Declining trend in both sectors, 2008 not a turning point
- But: Steady growth of GDP, value added and population



Evaluation of CO₂-levy (FOEN)

Research approach

Two perspectives:





Evaluation of CO₂-levy (FOEN)

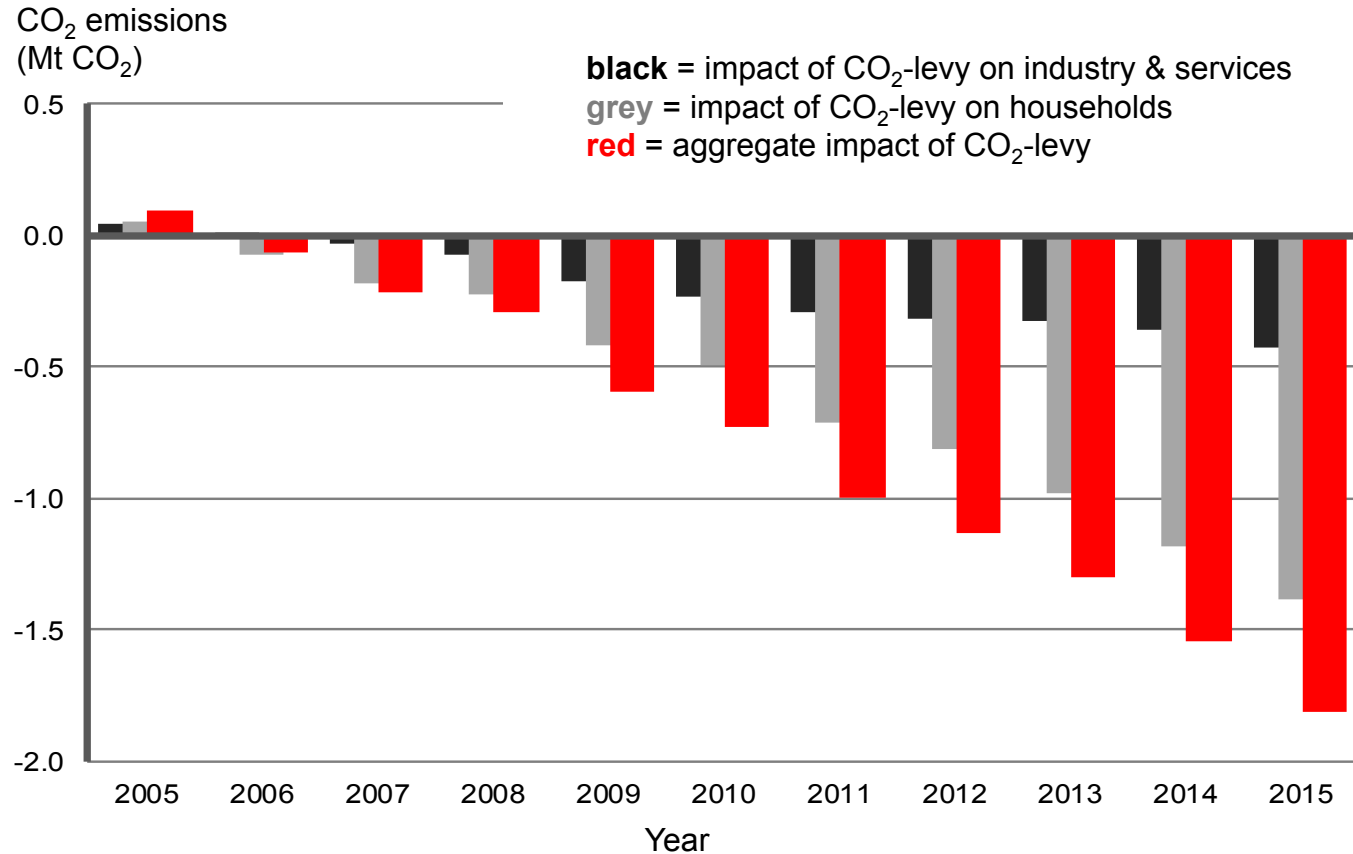
Econometric model

- **Model:** Multivariate regression model
- **Idea:** Simultaneous estimation of shares of energy sources (oil, gas, renewables)
 - With CO₂-levy
 - Without CO₂-levy (hypothetical scenario)
 - Difference indicates impact of CO₂-levy
- **Data:** Energy consumption (by source and by sector) and energy prices from Overall Energy Statistics (SFOE, 1978-2015)



Evaluation of CO₂-levy (FOEN)

Main result



→ Significant impact

→ Includes other measures affecting CO₂-emissions → overestimation



Difficulties / lessons learned

- Results indicate policy effect, but disentangling the impacts of different policies and other channels remains a challenge
- Different policies 2008-2012 and 2013-2020 (less self-selection post 2012, EHS mandatory for some firms...) → adds to challenge...
- Quality of available data on firm level probably insufficient (small sample, no information on firm-specific policies) → «instrument-level» data (based on sectors) as a solution?