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TRANSrisk
TRANSITION PATHWAYS AND RISK ANALYSIS FOR CLIMATE CHANGE POLICIES

The TRANSrisk project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 642260.

The costs of low-carbon transition for the labour market

Warsaw, October 2017

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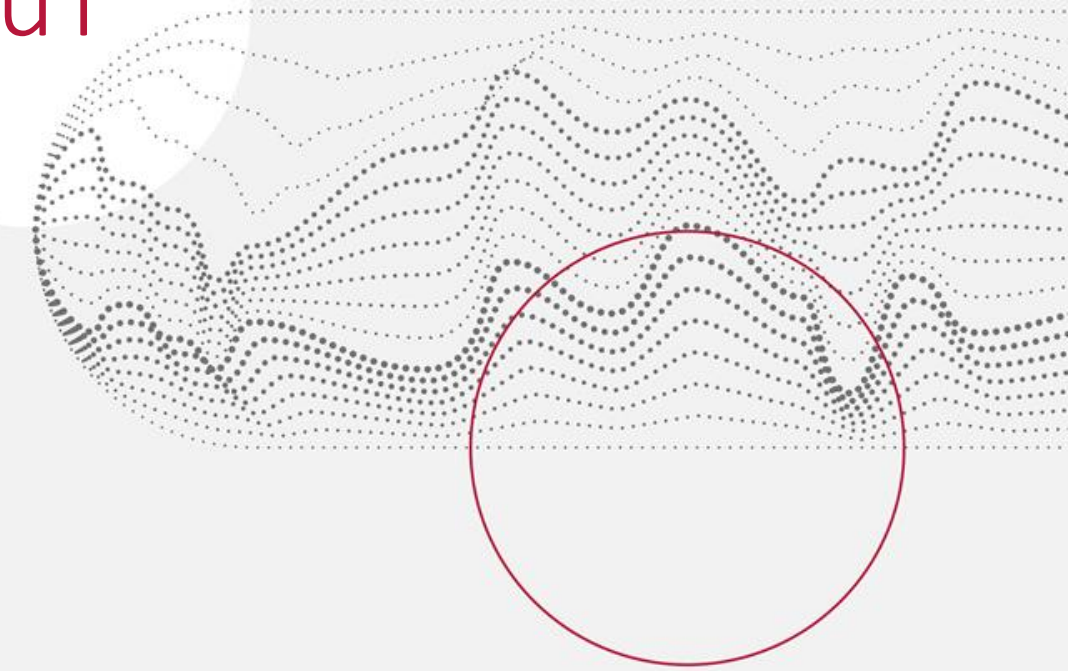
and Jan Witajewski-Baltvilks



General methodology

Optimal energy mix model

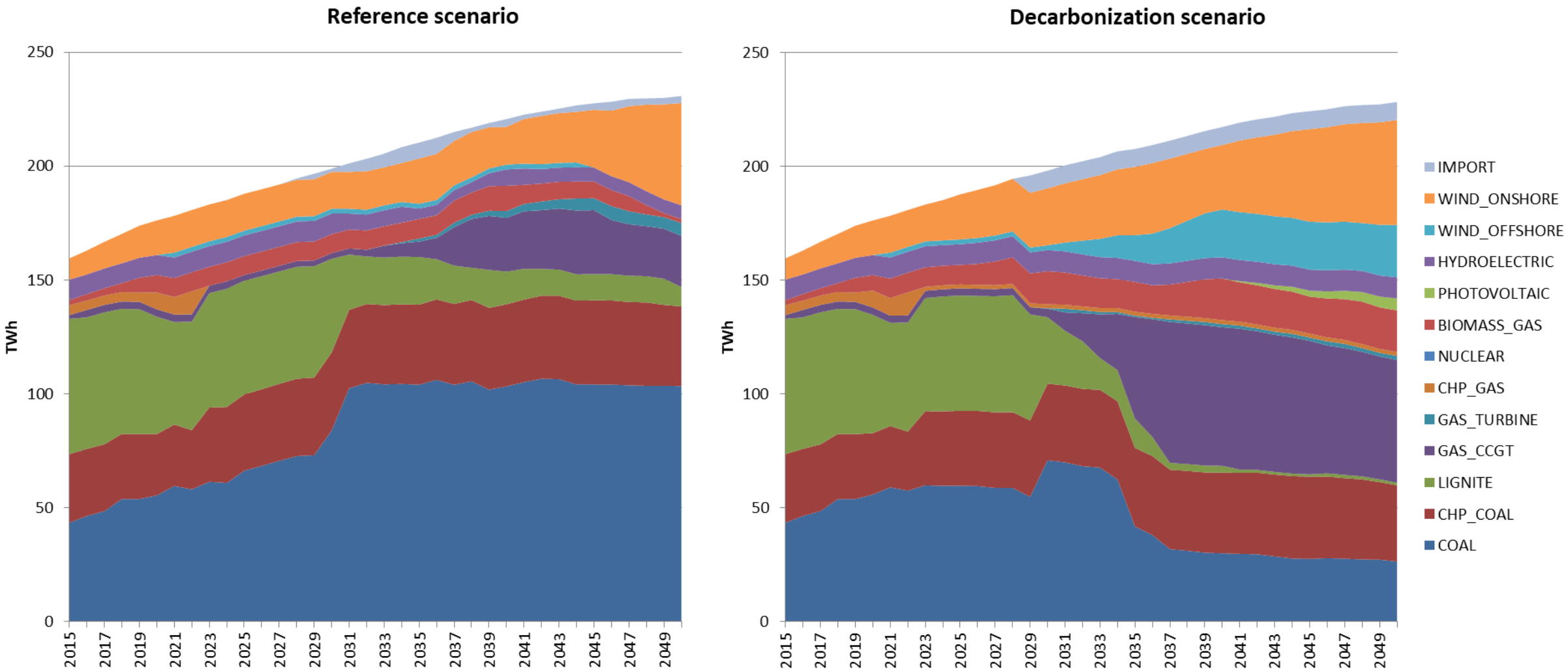
Macroeconomic DSGE model

Economy-wide cost

Optimal Energy Mix Model

- Developed by Department of Strategic Analysis of The Chancellery of the Prime Minister
- Bottom-up, cost optimization energy system model
- Horizon until 2060
- Model output: installed capacity, energy production, cost of energy
- We use two scenarios from optimal energy mix model:
  - Reference scenario with low ETS price
  - Decabonization scenario with high ETS price and requirement of 50% of RES by 2050

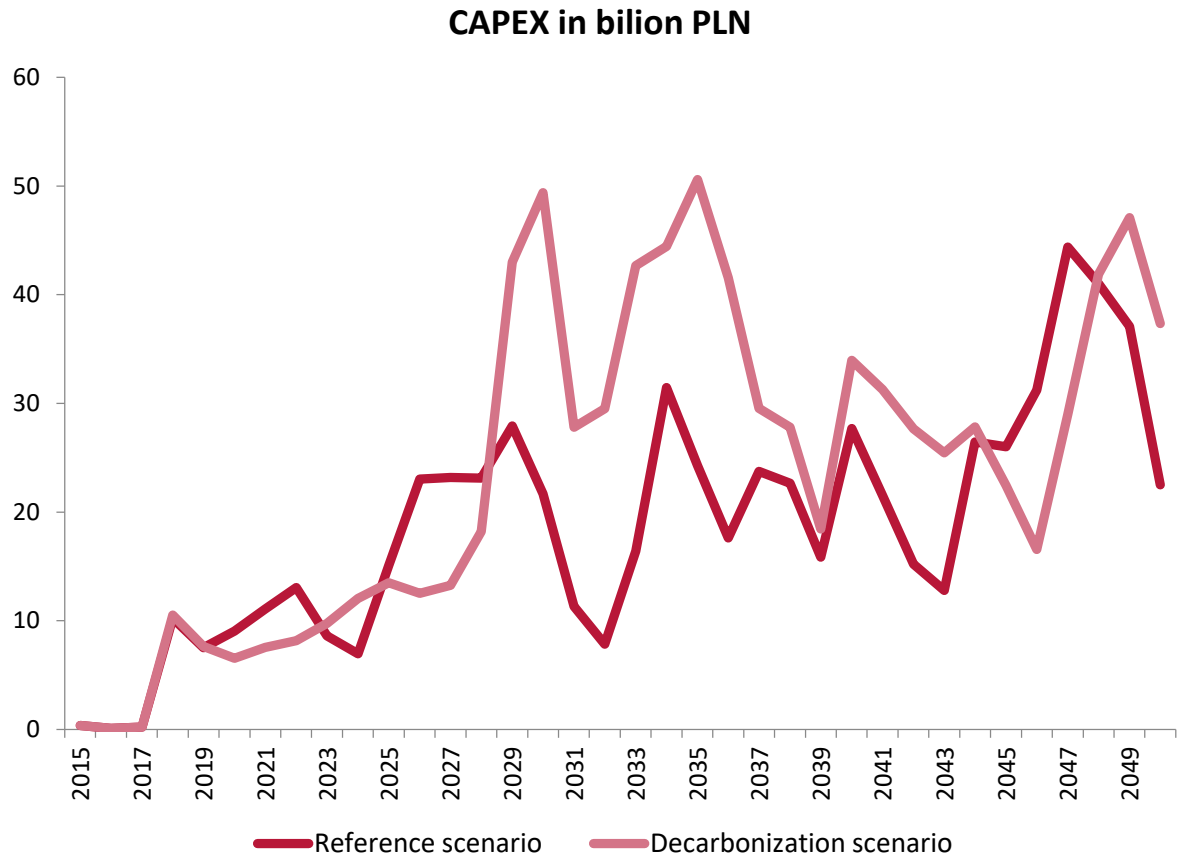
Energy mix scenarios

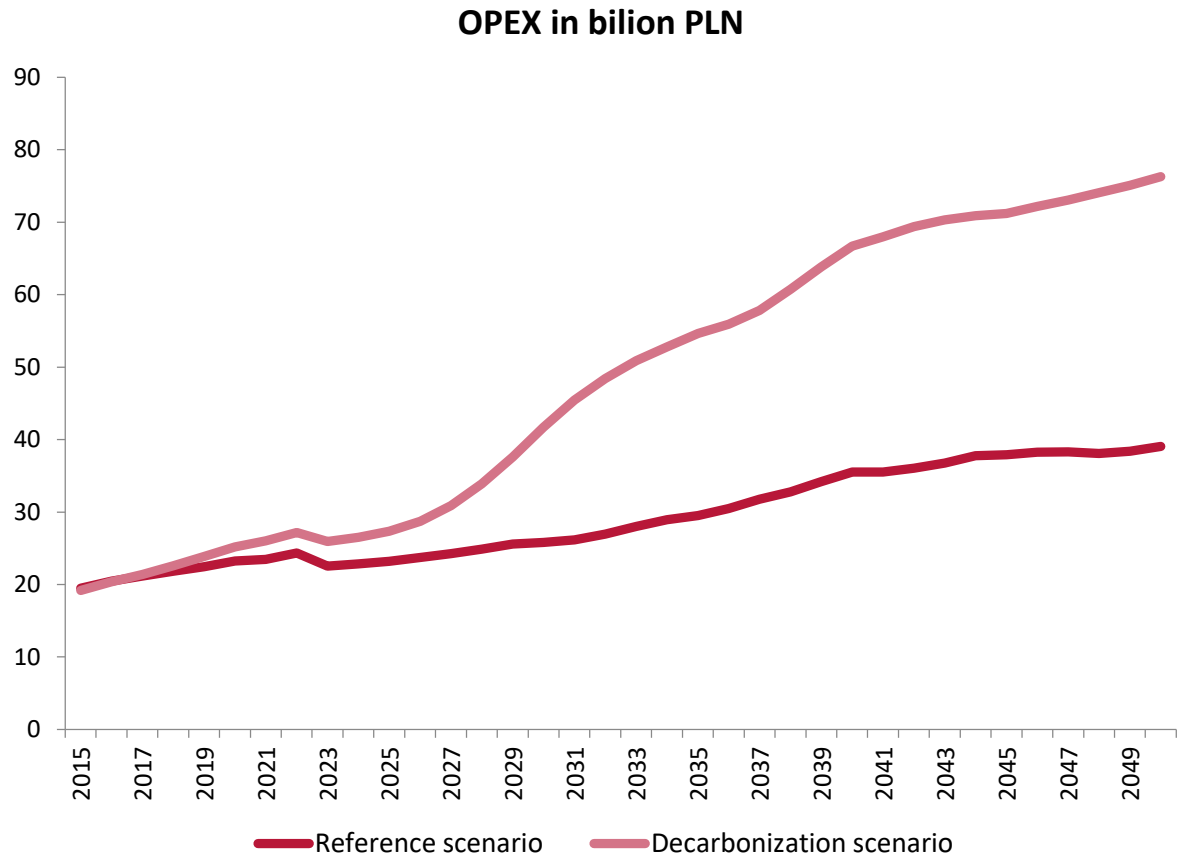


Macroeconomic MEMO model

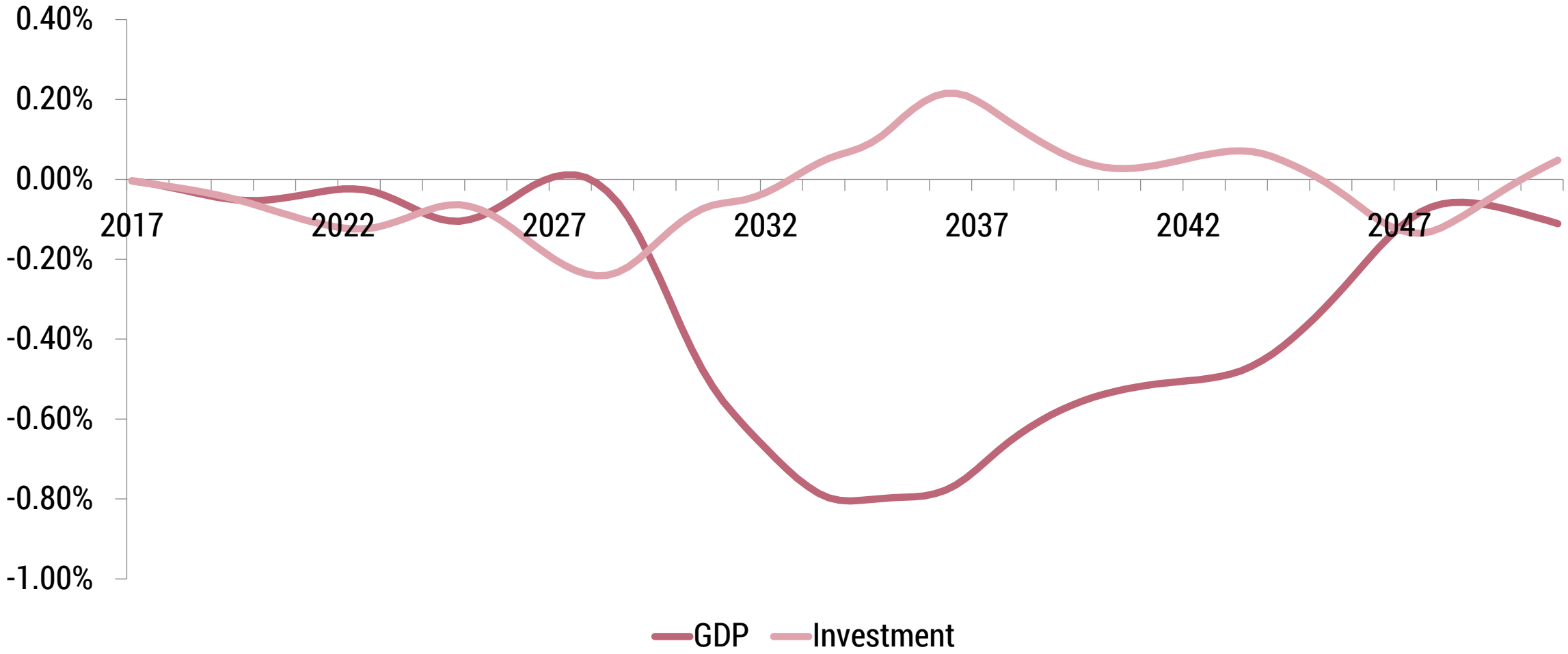
- Input output model
- General equilibrium framework
- Search and matching mechanism on labour market
- Model uses following output from optimal mix model
  - increase in investment dedicated to new power installations,
  - change in the use of resources in the power sector,
  - a change in the cost of production of energy and
  - change in the value of imported fuel.

Differences in scenarios from MEMO point of view

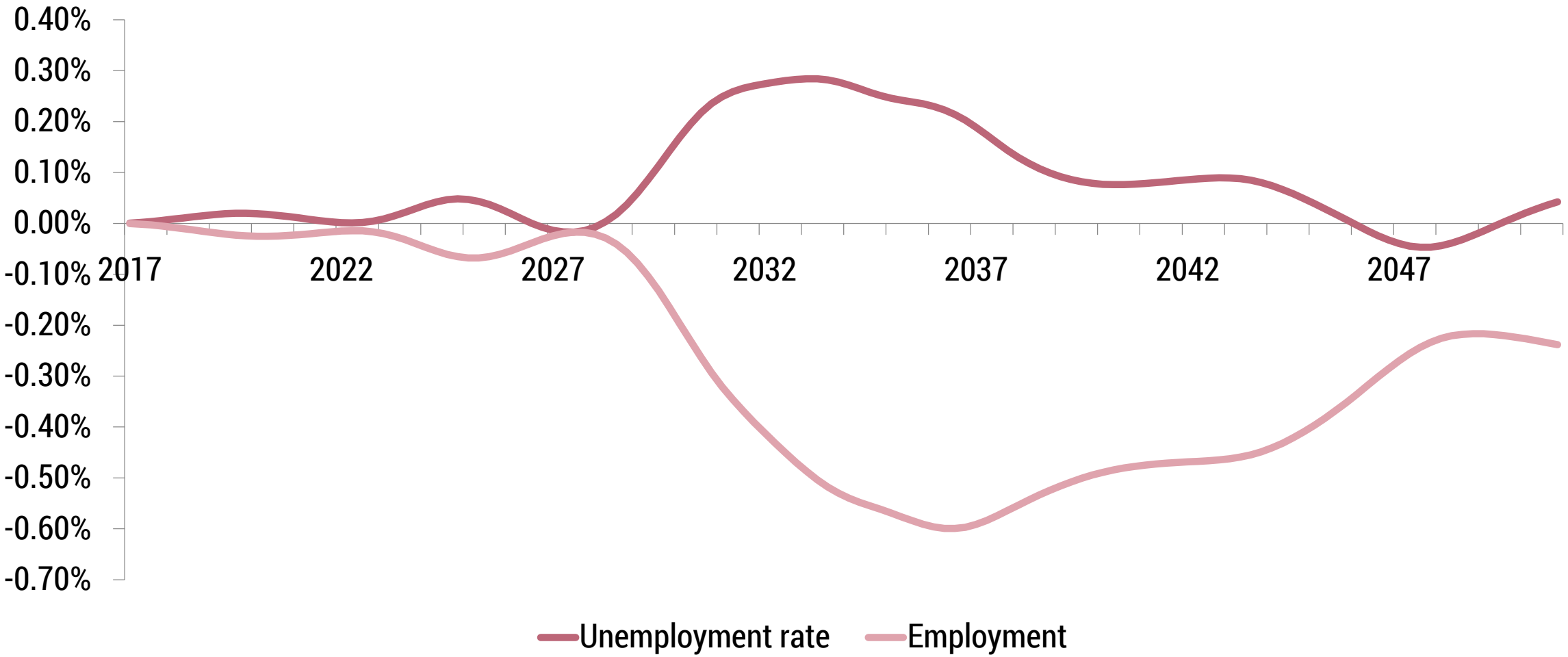




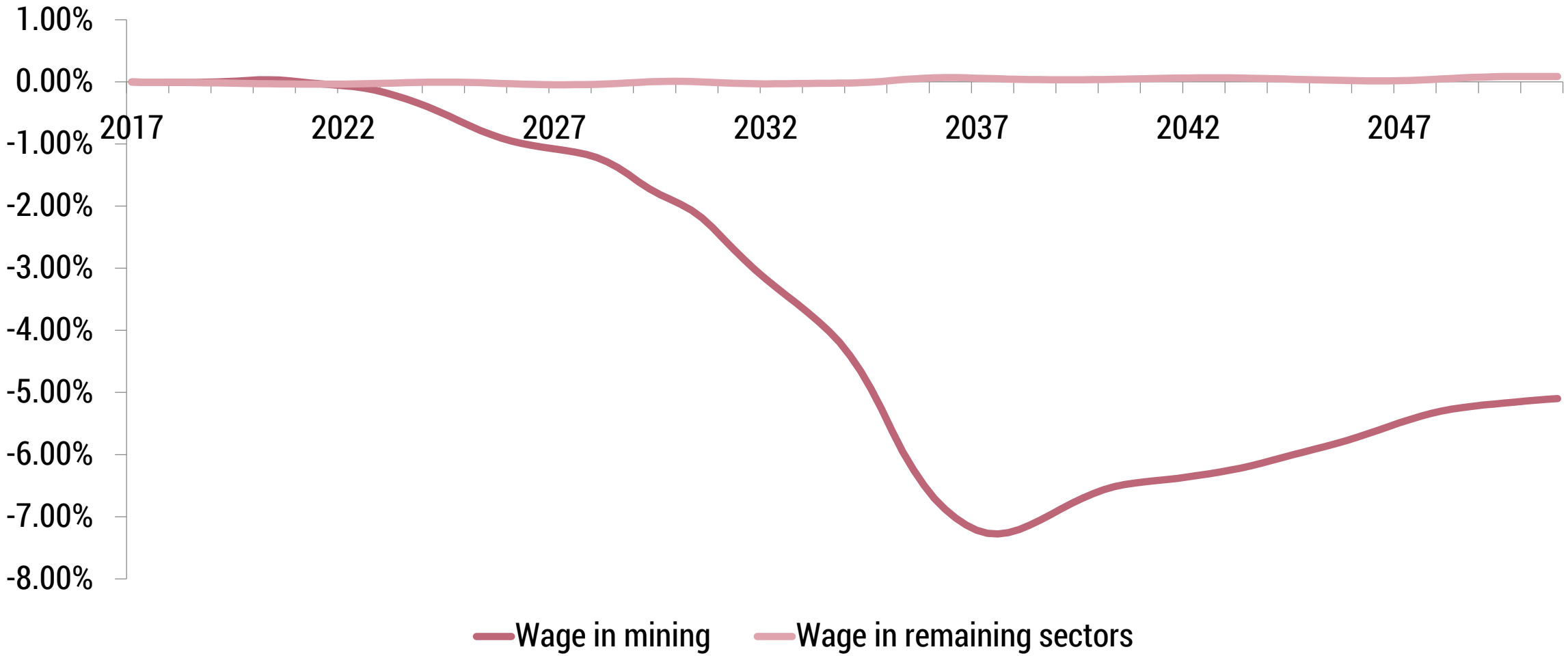
Small and temporary slowdown of GDP growth



Most job losses offset by 2050



Wages unchanged except for mining sector



Concluding remarks

- Method for assesssing economy-wide consequences of various policies
- The drop in employment and GDP is small and temporary
- Model results shows more adjustments in wages than in employment
- Revise certain assumptions

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