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THE ECONOMIC EFFECTS OF THE FIXED ENERGY PRICE POLICY IN MALTA

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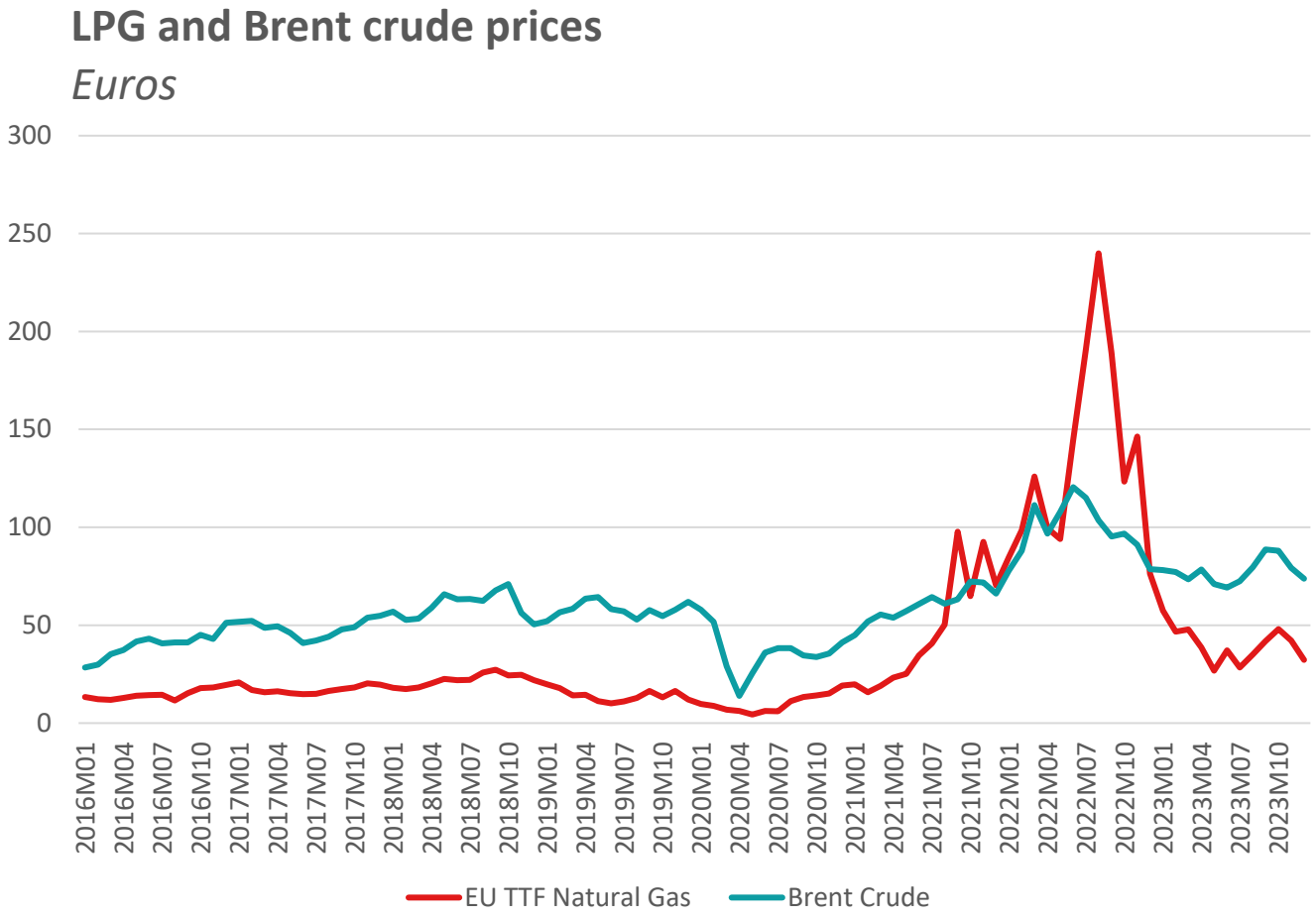
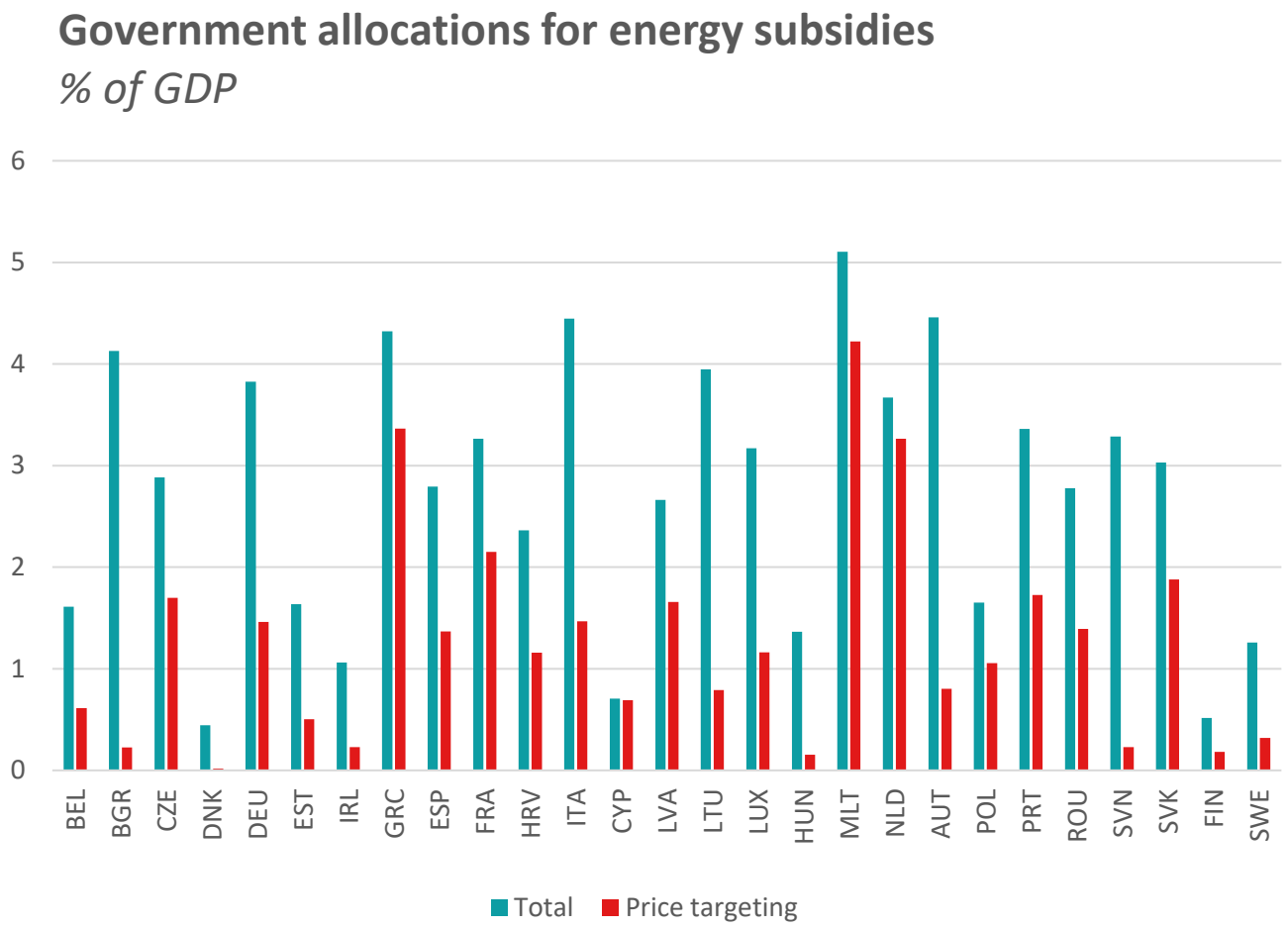
Motivation



- Post Covid recovery led to disruptions in energy markets
- EU market further disrupted by start of Russia-Ukraine war
- EU dependency on Russian energy
  - 43% of refined fuel imported in EU
  - 45% of LPG imported in EU
- EU TTF natural gas prices peaked at €240 per MWh in Sept 2022(€20 per MWh long term average)
- refining margins increased to €80 per barrel

Motivation



- 2021-2023, EU-27 governments had earmarked around €540 billion in aid, equivalent to around 3.2% of EU-wide GDP
- 2 types of interventions: price caps or compensations schemes
- Cross-country heterogeneity in total amount and breakdown
- MT with highest expenditure, most of which in price-targeting measures
- Given the considerable expenditure, what has been the macro impact of his aid programme?

Outline

- Model Description
  1. Main features of the model
  2. Energy-related features
  3. Calibration
- Estimate impact of Energy Subsidies on MT
  1. Simulation Design
  2. Results
- Conclusion

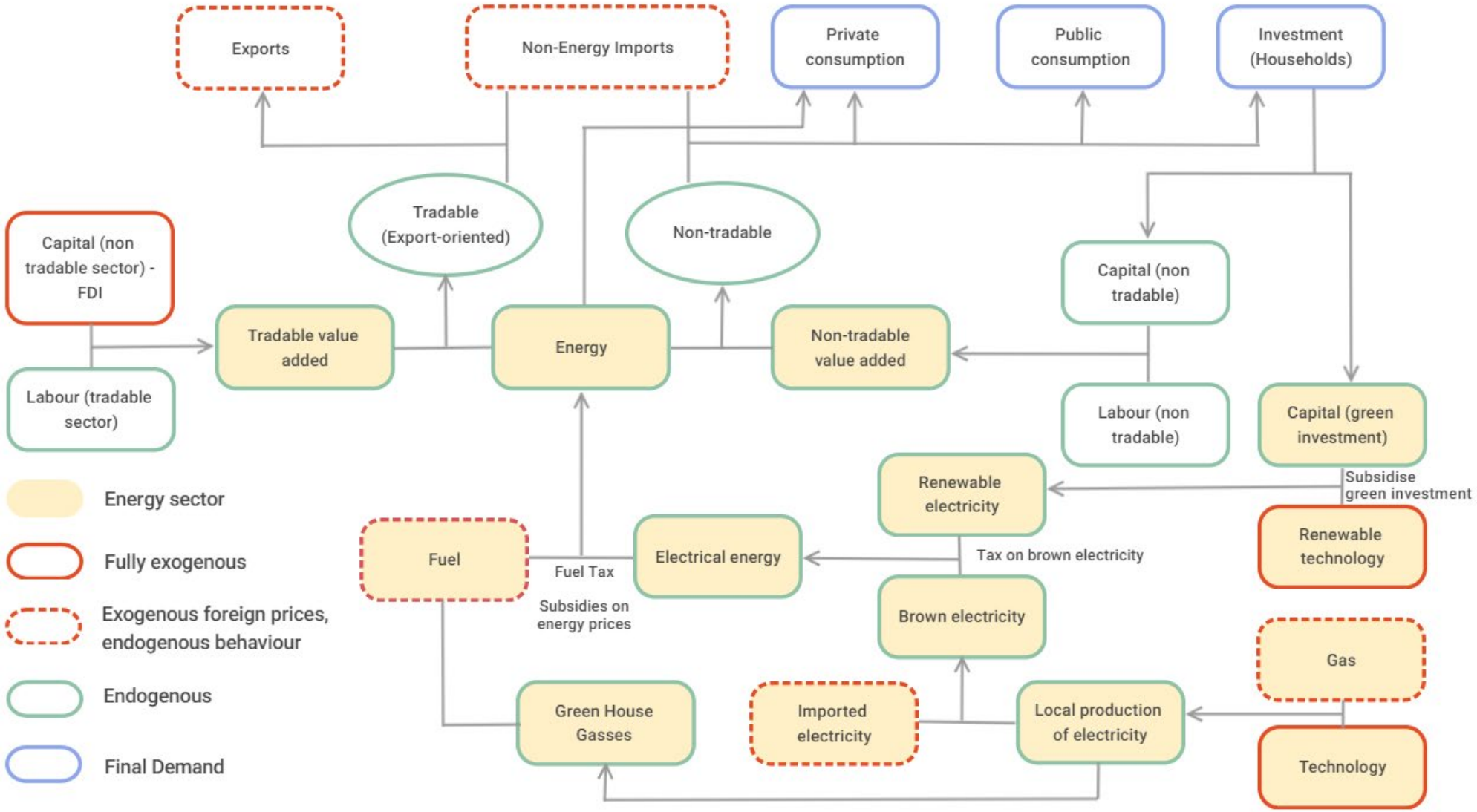
MEDSEA-Fiscal - an overview

- SOE - DSGE model with key features to account for Maltese characteristics, Rapa (2016).
- Malta within a MU with SOE assumption
- 5 agents; HH, intermediate producers, final good firms, government and aggregators
- 2 types of HH, Ricardian and non. Both derive utility from consuming, disutility from working, supply heterogeneous labour in monopolistic market
- 2 types of intermediate goods producers, one producing goods meant for local use and another explicitly exported
- Detailed final good structure with component-specific import intensities
- Detailed fiscal block; 4 taxes and 4 expenditure items

MEDSEA-NRG - an introduction

- Introduce energy in production and in HH consumption in line with Bartocci et al.(2022), Coenen et al. (2023) and Varga et al. (2021).
- Energy is a combination of fuel and electrical energy
- Electrical energy is a nested combination of brown elec and green elec
- Brown can be either imported (interconnector) or produced locally (combination of K,L and LNG).
- Green is produced locally with combination of L and green K which is owned and accumulated by HH
- Asymmetric effect of energy price shocks on HH (Kanzig, 2022)
- All energy prices can be fully administered with a system of taxes/subsidies

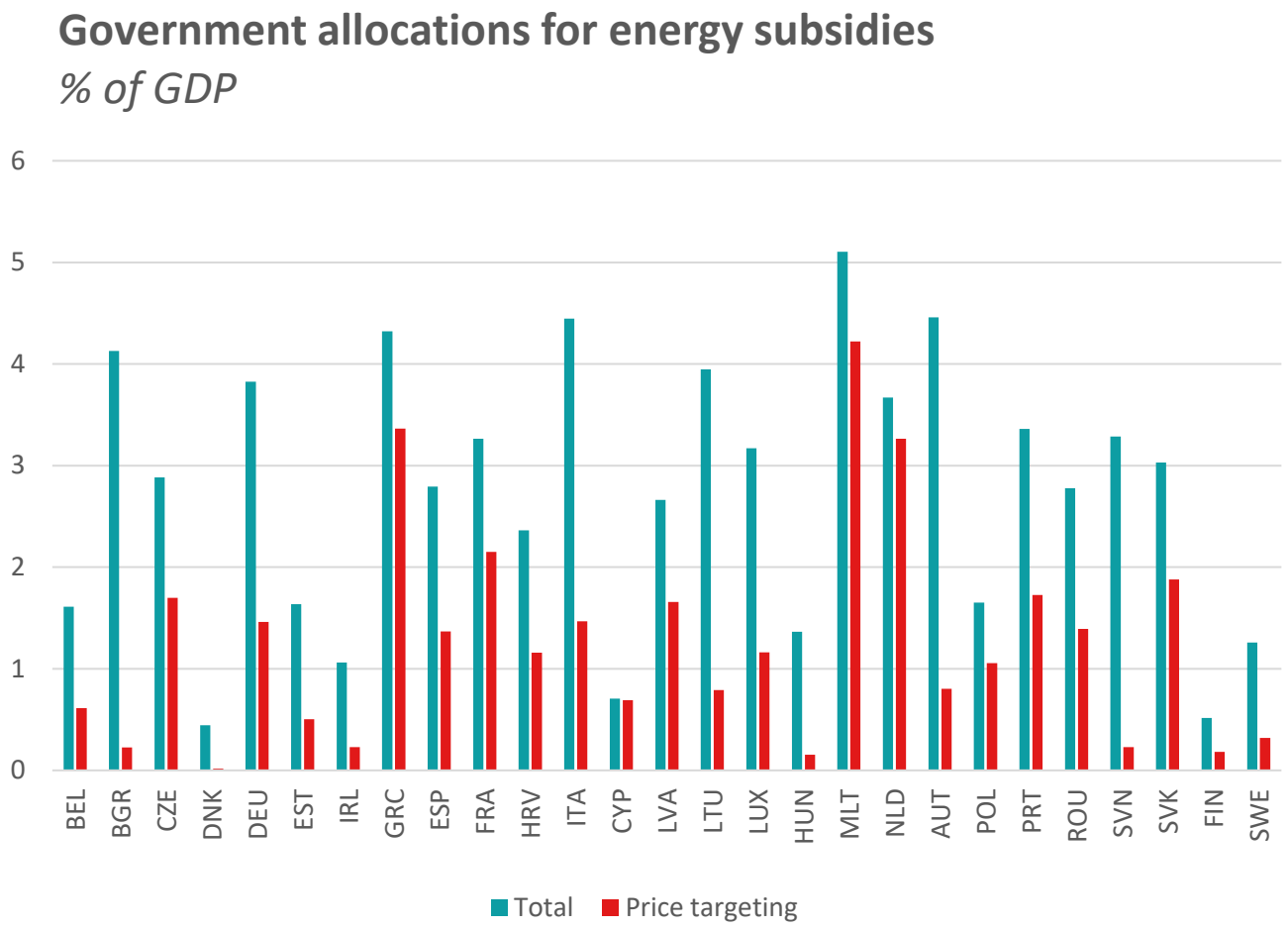
Birds-eye view of model



Simulation Design

- Calibrate energy crisis scenario with government aid in line with actual data (Baseline full-subsidy scenario)
    1. Complicated by unknown extent of effects of purchase and hedging agreements
    2. Don’t target international prices, but size of fiscal aid as % of GDP
    3. Size and dynamics of LNG, international electricity and international fuel price shocks calibrated such that model subsidies exactly match actual energy specific subsidy
    4. Government commits at start of simulation to fully subsidise energy price fluctuations for foreseeable future
- Run hypothetical scenarios with Gov subisidies turned off
    1. Government commits at start of simulation NOT to subsidise energy prices
- Effects of all counterfactuals are estimated as deviations from baseline (full-subsidy)scenario

Motivation



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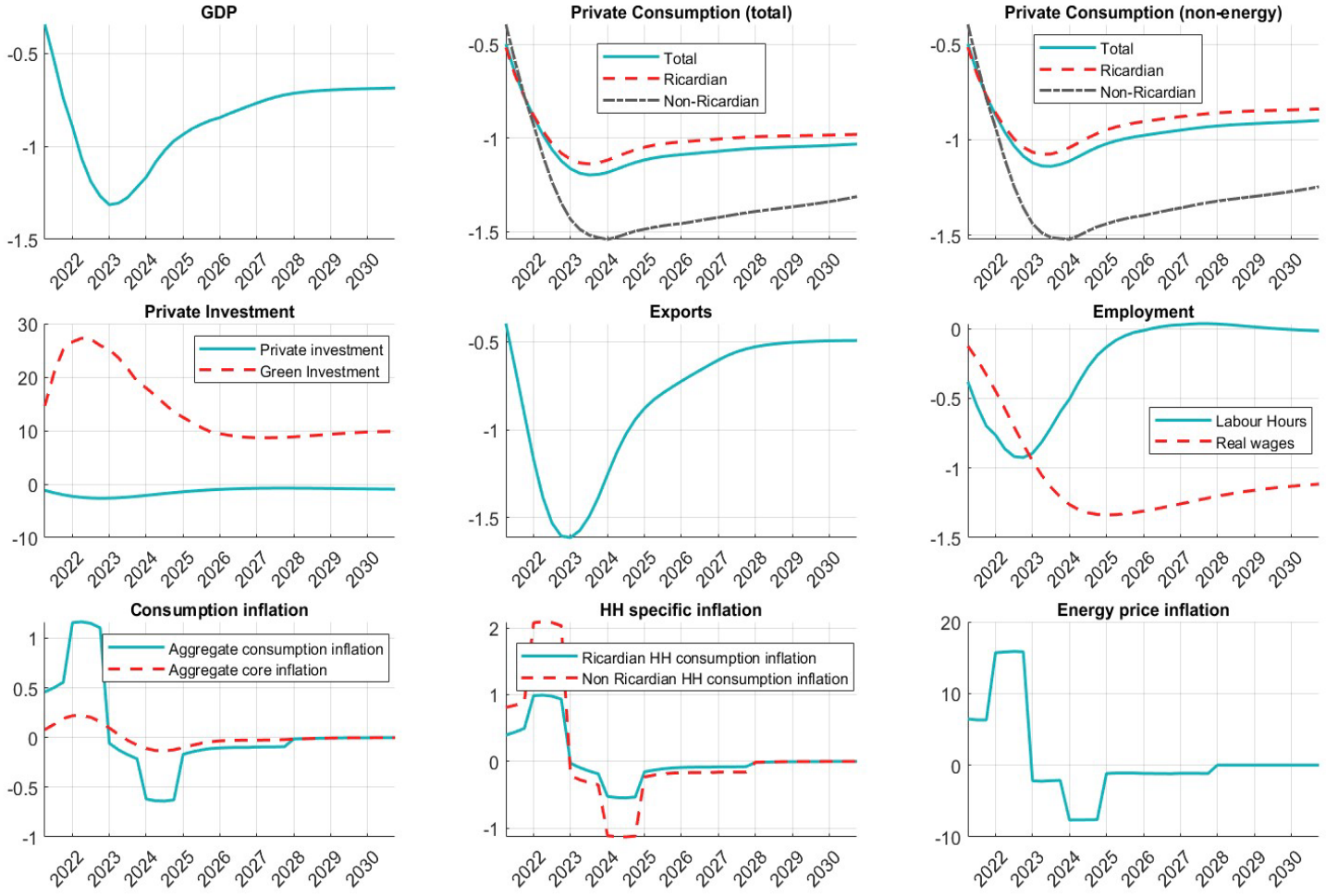
Results I

Energy counterfactual – macroeconomic results

% Deviations from full subsidy levels unless otherwise specified



- In the event of no Govt intervention, GDP ↓ 1.2% vs full subsidy scenario
- Imperfect substitutability of green and brown energy sources lead to ↑ energy prices
- Energy inflation ↑ by 6 pp and 16pp in 2021 and 2022
- ↓ energy demand and VA, ↓labour demand and investment
- ↓ nominal and real wages, but ↑MC, core inflation ↑ 0.2pp at peak

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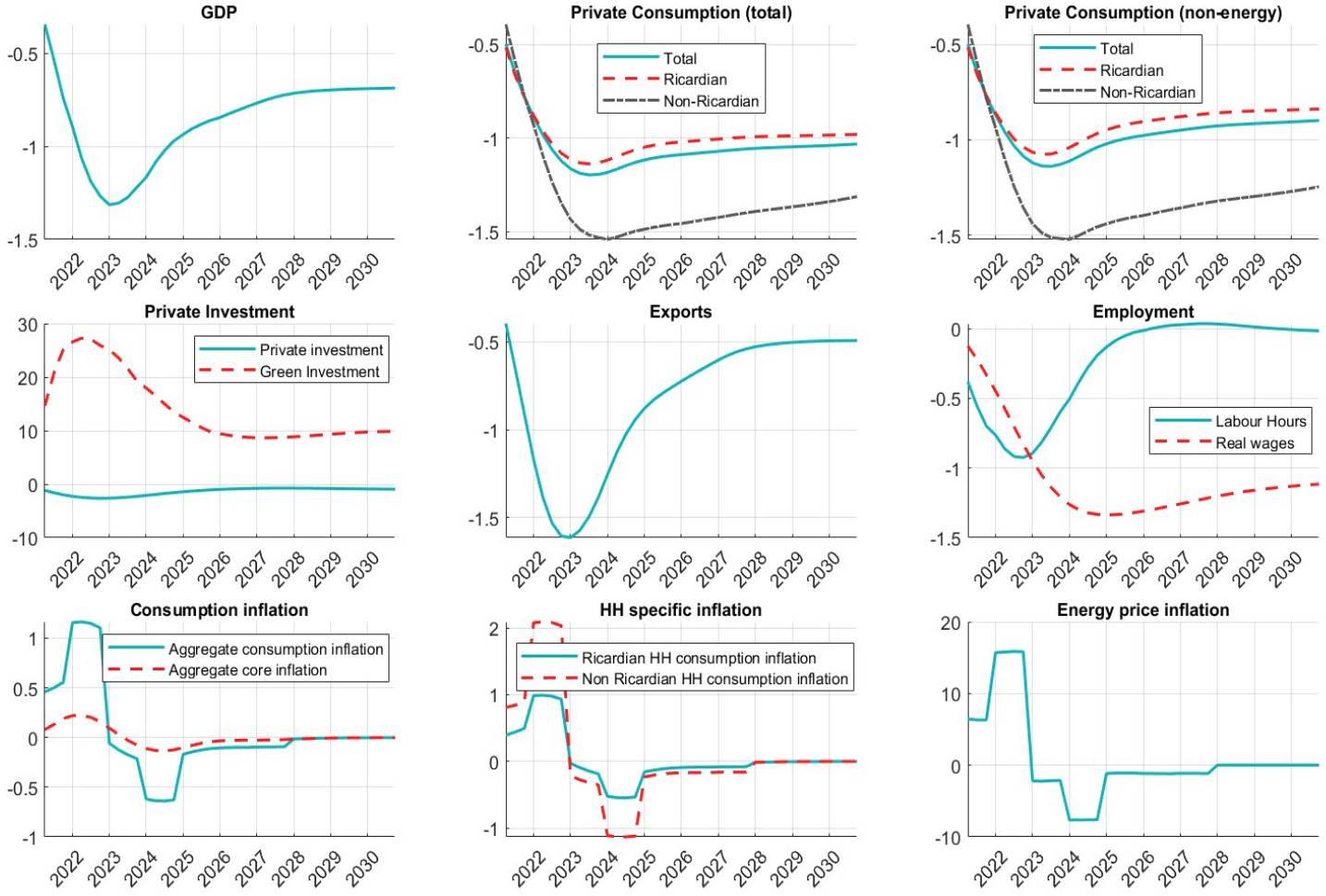
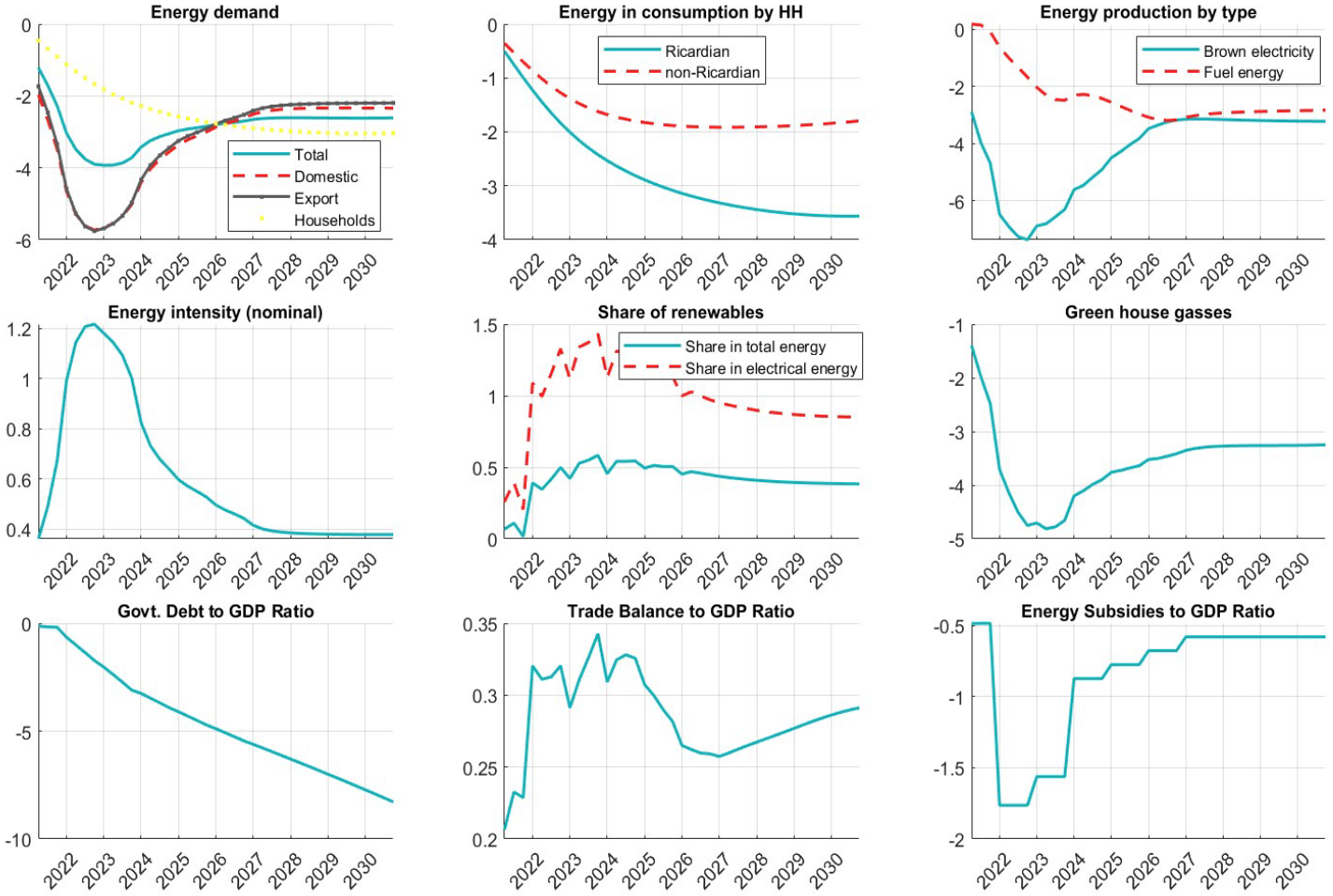


- On the external side, ↑ export prices, ↓ exports
- Negative wealth and income effects ↓ private consumption
- More pronounced negative income effects for non-Ricardians, lead to stronger cuts in consumption
- Consumer inflation estimated to peak at 1.5pp higher in case of no support scenario
- Ricardian inflation peaks around 1.2pp, 2.5pp for non-Ricardians

Results II

Energy counterfactual – energy-specific results

% Deviations from full subsidy levels unless otherwise specified



- ↓ energy demand, mostly that used in production
- Energy consumed by HH, drops less, with non-Ricardians cutting back less
- No subsidy scenario consistent with ↑ share of green energy by around 1.5pp
- GHGs down by 4%-5% mostly due to lower energy demand
- Debt and trade balance ratio would have been lower by 3pp by end 2023,

Conclusion

- Energy shocks and associated fiscal response key determinant of inflation dynamics in recent years
- MT Government policy resting solely on fixed energy prices
- Study estimates macro impact of this policy
    1. Fixed energy pricing strategy propped up aggregate economic activity
    2. Shielded consumers (mostly poor HH) from negative income effects
    3. Helped maintain external competitiveness
    4. Had (and is expected to have) a non significant negative impact on government debt
    5. Negative impact on external indebtedness through negative impacts on TB

- Study being extended by looking at suspension of policy at current juncture with different fiscal recycling policies

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Thank You