THE DOUBLE WHAMMY ON THE KUWAITI ECONOMY
Macroeconomic Effects of the Coronavirus and Oil Price Shocks

Conference paper
The GCC Economies in the Wake of COVID19: Charting the Road to Recovery and Resilience

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TOPICS OF DISCUSSION

- Introduction

- Literature

- Model and Baseline Data

- Scenarios

- Results

- Conclusions

INTRODUCTION

- During the first quarter of 2020, the Kuwaiti economy began to receive two major concurrent shocks
  - Double whammy meant multiple shocks happening concurrently in space and time
    - ✓ The Coronavirus pandemic
    - ✓ The sharp fall in the price of oil in the world market
  - These were powerful events with double whammy effects on the country's economic fabric
- This paper focusses on quantifying the macroeconomic effects of the combined exogenous shocks
- Study context
  - Project: *The 2020 Coronavirus Outbreak and Global Growth and Trade Collapse: Impact on Kuwait's Overall Economy and Society, Its Sectors and Business-level Firms and Vital Fiscal Recovery Plan*
  - This paper constitutes a task in that project (further details of the projects and findings from other tasks will be presented via another paper by Dr Sulayman Qudsi)

LITERATURE…

- There is a body of literature on macroeconomic repercussions of exogenous shocks emanating from oil price shocks in the international markets, particularly the case of asymmetrical impacts of oil price shocks on importing and exporting countries

- The adverse impact of increase in oil price on importing countries tend to receive more attention in the literature than the impact of oil price falls on the economies of oil exporting countries (Zulfigarov & Neuenkirch 2020; Cunado et. al. 2015; Iwayemi and Fowowe 2011)

- The oil price shock enter economic models as exogenous changes in external prices which disturbs relationships between different components of the economy: reduction in quantity sold, oil revenues, etc.; impacts of the shock gets propagated through the economies through backward and forward economic linkages

… LITERATURE

- Pandemic induced supply and demand disruptions are classified into temporary and permanent shocks

- Transitory shocks

  - Supply side: related to absenteeism or loss of workdays and reduction in labor input; either due to sickness and hence inability to work or lockdown requires people to stay at home for reasons to do with social distance or capital productivity reduction due to idleness.

  - Demand side: increased international trade costs, reduction in household consumption (or increase in household savings) (Maliszewska et al. 2020; PwC 2020).

- The permanent shock are related reduction in the size of the work force due to mortality

… LITERATURE

- The disruptions and losses in economic activities are not uniform across sectors

  ✓ Restrictiveness of curtailment measures has often varied across economic sectors

  ✓ The pandemic causes supply and demand shocks more directly to restricted sectors

- Theoretical and policy implications
  ✓ There is a need to consider these variations in a multi-sector modelling framework
  ✓ Capturing both direct and indirect economy-wide effects

- Short time interval frame within which the coronavirus pandemic causes shocks means that producers and institutions would not have time to adjust to the shock
  ✓ This requires specifying models with elements of structural rigidities, particularly by imposing low elasticity of substitutions in production and demand functions, as suggested by Maliszewska et al. (2020)

THE MODEL AND BASELINE DATA …

- This study applied a Recursive Dynamic Computable General Equilibrium (CGE) model to undertake simulation experiments

- Economic models are often designed measure changes at margins; that is applying relatively small changes to simulate and understand big real-world events.

- CGE models come handy, best suited to conduct simulations, experimenting with marginal or relatively small changes

- The simulation results give a sense of magnitude, by experimenting with small changes and then getting a sense of direction (positive or negative) as well as sense of magnitude.

- The effects obtained from relatively smaller changes can give directions regarding the likelihood in magnitude of larger changes.

- This would be used to fine tune policy options, focusing on feedback effects of changes between different components in the economy, on the one hand, and synergies between different policy instruments on the other hand.

… THE MODEL AND BASELINE DATA

- The Kuwaiti model was initially developed using a comparative static framework (Gelan 2018a, 2018b) and then evolved into a recursive dynamic version (Gelan & Atkinson 2020, Gelan, Atkinson and Alawadhi 2020)

- A Kuwaiti SAM was originally developed with 2013 as a base year which was updated to 2019, the latest full baseline year using GDP and labor force growth rates between 2013 and 2019.

- The SAM updated in such a manner gave the baseline condition in the Kuwaiti economy during the fourth quarter of 2019

- The simulation period covers nine quarters, 2019Q4 to 2021Q4

SIMULATION SCENARIOS

Category	Descriptions
Baseline projection	• Base
Coronavirus shocks	• RLF1: Reduction in the size of the labor force due to mortality • RLI2: Reduction in labor input due to lockdown • RKP3: Reduction in capital productivity due to idleness caused by the curtailment lockdown • RHC4: Reduction in household spending or increase in household savings • ITC5: increase in export trade costs
Oil Price shock	• OPS6: decrease in oil price in the world market
Policy responses	• IGS7: increase in government spending through transfers • TFP8: recovery measures introduced through improvements in total factor productivity Improvements
Combined shocks	• ALL1-6: Combined double whammy shocks with no policy responses • ALL1-7: Combined double whammy shocks with increases in government spending as the only policy response • ALL1-8: Combined double whammy shocks with government spending being accompanied with improvements in total factor productivity

SHOCKS APPLIED TO THE MODEL (% CHANGES)

|		2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
BASELINE PROJECTION										
Labor		0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Capital		0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
COVID-19 Shocks										
1	RLF1	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01
2	RLI2	0.00	-3.33	-10.00	-7.50	-3.75	-1.25	-0.75	-0.50	-0.25
3	RKP3	0.00	-0.10	-1.04	-3.13	-2.34	-1.17	-0.39	-0.23	-0.16
4	RHC4	0.00	1.91	7.64	6.43	5.22	4.01	2.80	1.59	0.38
5	ITC5	0.00	1.00	10.00	10.00	5.00	4.00	3.00	2.00	1.00
Oil price shock										
6	OPS6	0.00	-1.31	-3.03	-1.95	-2.00	-1.88	-1.75	-1.62	-1.46
Policy responses										
7	IGS7	0.00	1.50	6.00	6.00	4.50	4.50	3.00	3.00	1.50
8	TFP8	0.00	0.50	0.50	1.00	1.00	1.75	1.75	1.75	1.75
Combined shocks										
9	ALL1-6 (RLF1, RLI2, RKP3, RHC4, ITC5, OPS6)									
10	ALL1-7 (RLF1, RLI2, RKP3, RHC4, ITC5, OPS6, IGS7)									
11	ALL1-8 (RLF1, RLI2, RKP3, RHC4, ITC5, OPS6, IGS7, TFP8)									
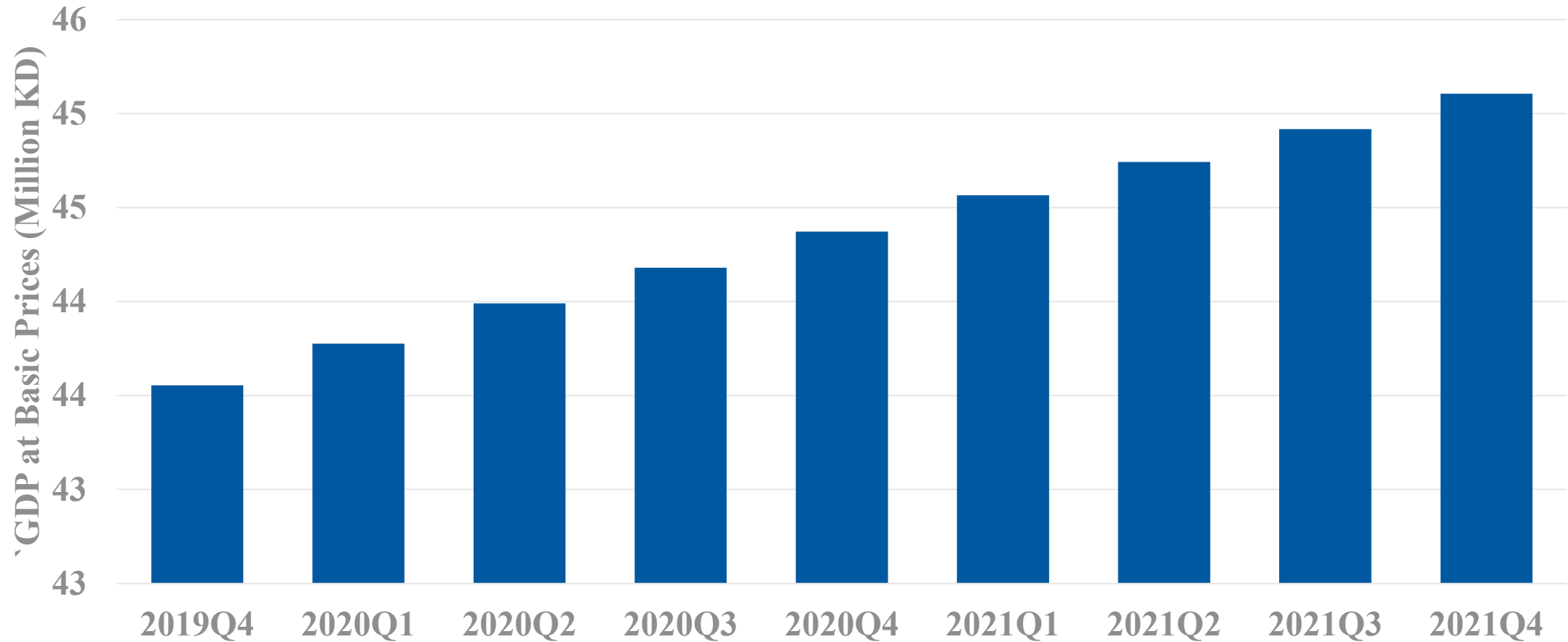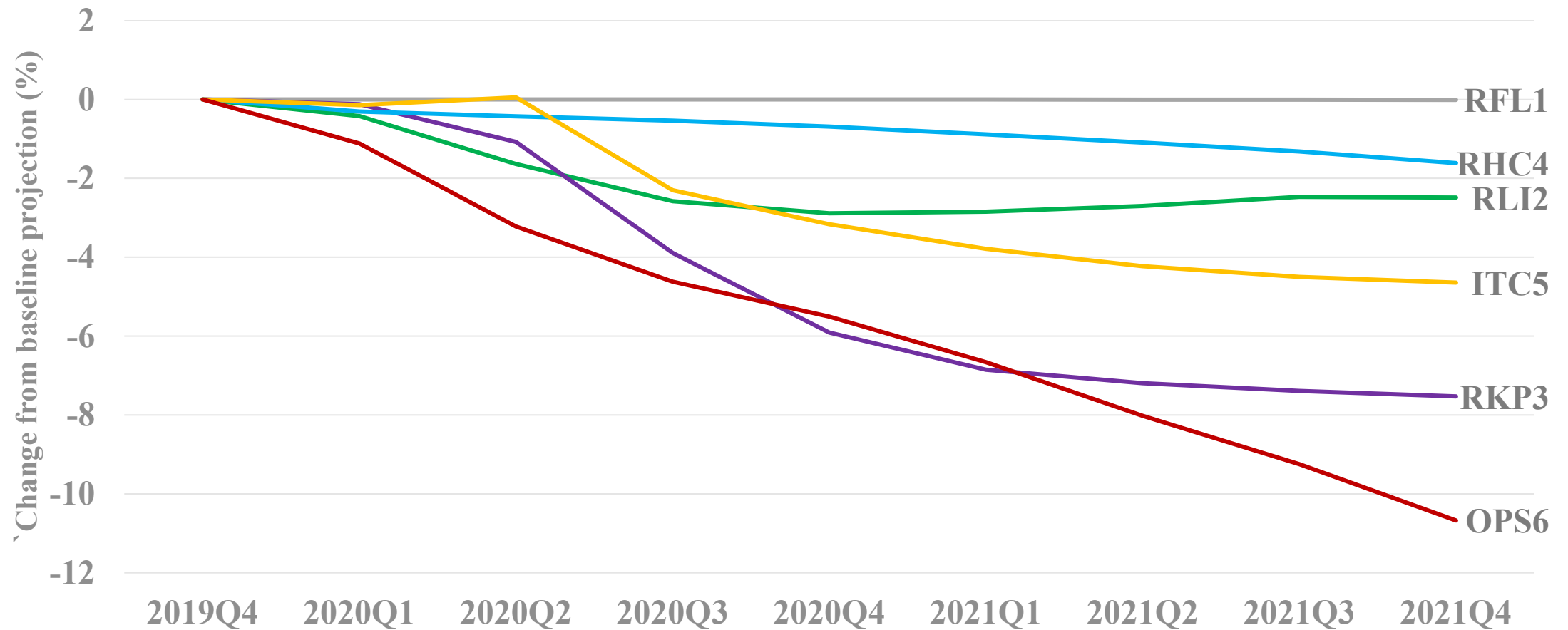
RESULTS
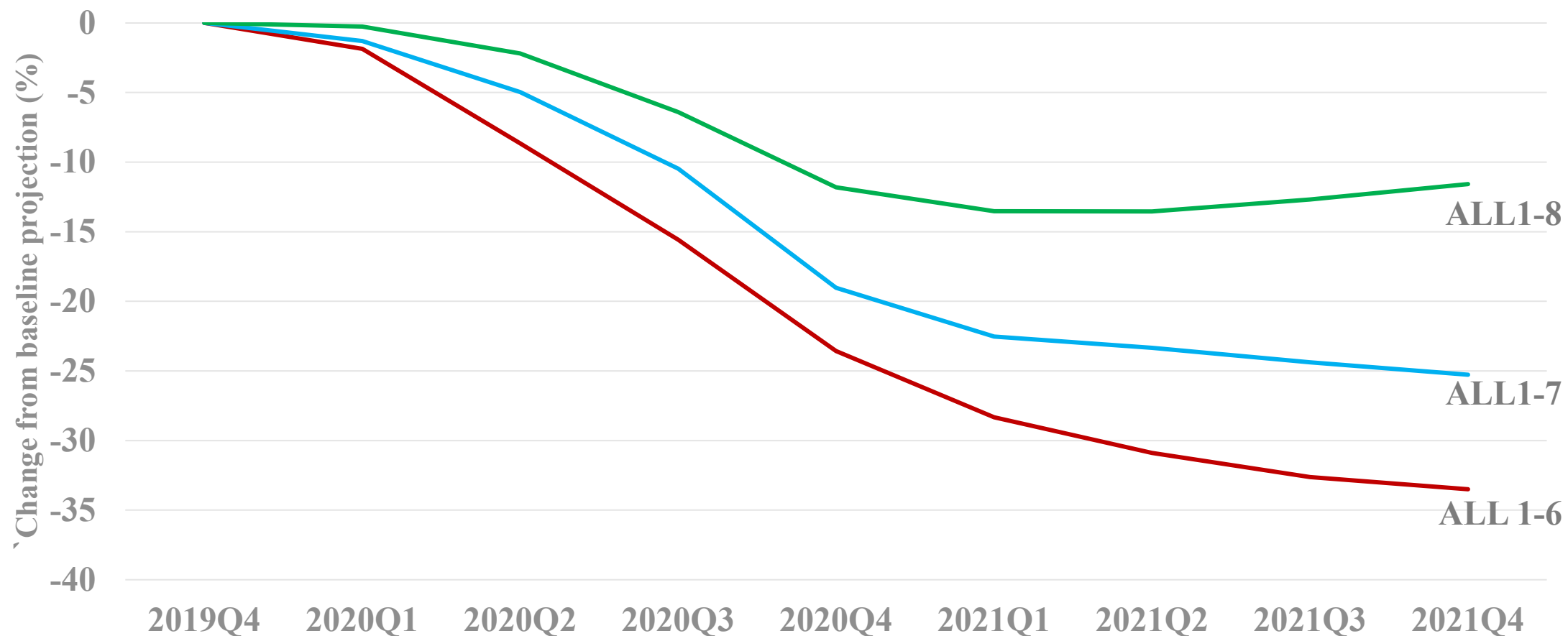## *Policy Responses*
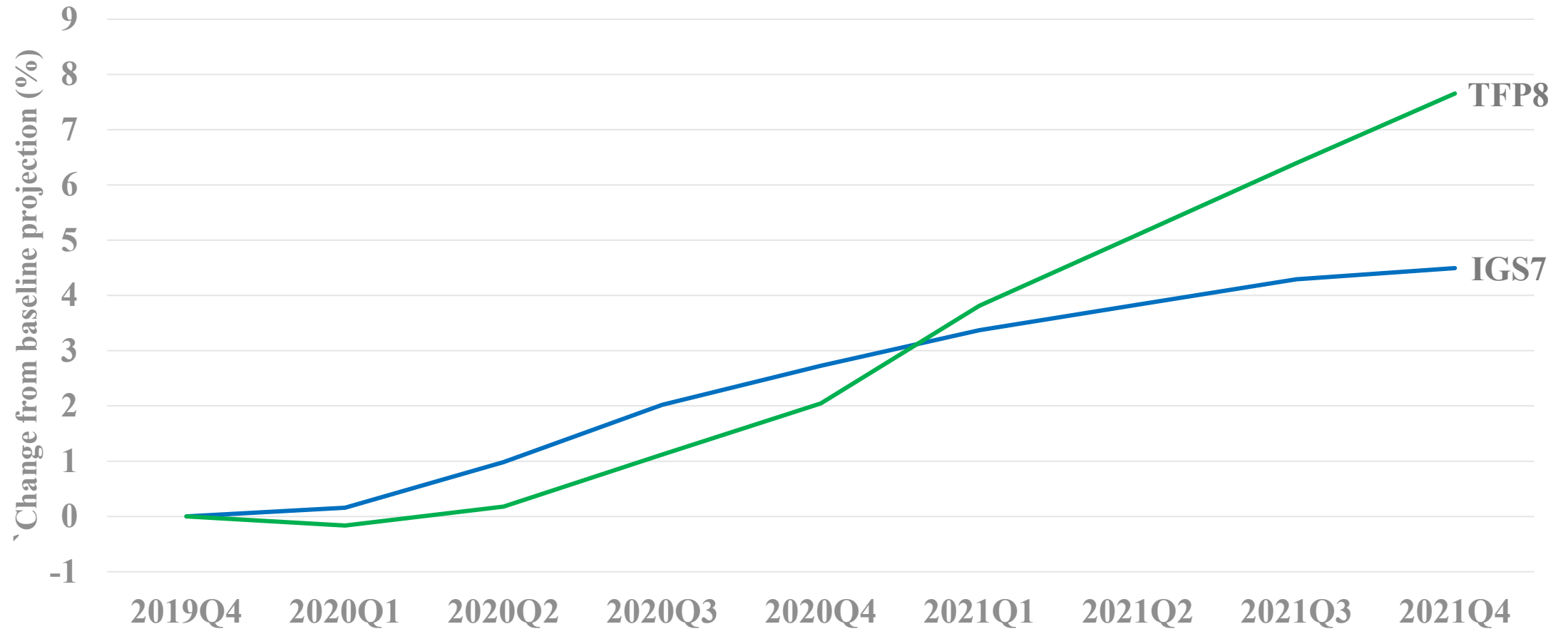
RESULTS
Combined Shocks

CONCLUDING REMARKS

- An experiment on ways to handle double whammy shocks (multiple exogenous shocks)

- Deliberately focused on GDP to concisely measure impacts of numerous shocks

- Isolated shocks – quantifying relationships between sizes of shocks and corresponding impacts

- Policy synergies: government spending and TFP

- Theoretical perspectives: Demand vs Supply shocks (also demand stimulus or supply stimulus)

Thank You