

To: Pete Klenow and Data Editor

From: Fernando Alvarez, David Argente, and Francesco Lippi

Subject: Summary Response to Data/Replicator Editor of Conditionally Accepted MS AERI-2020- 0201.R2 - A Simple Planning Problem for COVID-19 Lockdown, Testing and Tracing

Date: November 20, 2020

We have implemented the following changes in our Replication Package.

- We provide codes explicitly named to replicate each figure and table in the paper as well as in the appendix. The codes do not need to be modified manually to replicate the results of the paper. The codes in the replication files replicate all of our results. In particular the file “All_Figures.m” produces all the underlying .mat files and reproduces all figures.
- The following codes replicate the files you requested:
 - “SimplePlanningProblem_quadratic_tau1.m” → “SPP_vsl_40_gridsize200k5_tau1_quadratic.mat”
 - “SimplePlanningProblem_tau1.m” → “SPP_vsl_40_gridsize200k5_tau1.mat”
 - “SimplePlanningProblem_TTQ.m” → “SPP_vsl_40_gridsize200k5_TTQ_zeta0.mat”
 - “SimplePlanningProblem_TTQ_zeta1.m” → “SPP_vsl_40_gridsize200k5_TTQ_zeta1.mat”.

We are including these files, as asked, so that no input has to be changed in any file, but these *.m files which are themselves run by the the All_Figures.m script.

- We updated the README file with detailed instructions on how to run each code.
- We remove the reference to the JHU to avoid further confusion. In the previous version we comment the following about the value that we use “approximately tracks the data on daily increases in active cases from the World Health

Organization (WHO)". In our first version the value came from our own previous analysis of WHO data. But in the conditionally accepted version of the paper we have changed the values relative to the first version as requested by two referees, as summarized in the editor's letter points 5 and 6. As consequence, in the conditionally accepted version recall that we have chosen values of the parameters beta and gamma to reach a compromise between the different studies and suggestions of referees. In order to also comply with the data editor, we are keeping the same values but we have now revised the text to say that our chosen values are close but slightly larger than the ones by Jones and Villaverde (2020), and smaller than the ones in Atkeson, Kopecky and Zha (2020). I think the data editor want us to have an exact reference, but we can't give one, since our parameter is in between the two, as explained above. We followed Jones and Villaverde (2020) closely for two reasons: they gave an estimate for the entire US, and they do have an explicit R_0 estimate reported in their Table 1. Instead, Atkeson, Kopecky and Zha (2020) they don't have an estimate for the entire US, but have four regions/cities in common with Jones and Villaverde. Additionally, Atkeson, Kopecky and Zha (2020) do not explicitly report their R_0 estimates, but one has to read them from their graphs – which at time $t=0$ can be wavy. We believe this entire discussion has too much detail for the paper, and hence we have only an abbreviated version of it in the paper. **We will appreciate if you can explain this to the data editor so we don't enter into yet another revision for this reason –keeping in mind that we have now removed the reference to the original data source.**

- We have updated the files in openICPSR.

We attach our updated manuscript, wordcount, disclosure statements, as well as data and code archive agreement.

Sincerely,

Fernando Alvarez, David Argente, Francesco Lippi