Parameterization of the model presented in Hübler & Schwerhoff (JAERE 2023)

The calibrated model provided by the Excel sheet "Model" can be used to replicate the results reported in Table 4 of Hübler & Schwerhoff (JAERE 2023). ("Model (2)" contains the same model.) The relevant parameter values to be changed are represented by blue "1s" or a blue "0" in the second column under "scenario-dependent parameters". In each experiment, please replace one of them by the corresponding number defined in the column "param. change" in Table 4. The red relative changes obtained under "solution variables" shall replicate the results reported in Table 4.

The Excel sheet "Output" can be used to replicate Table 4 as follows. Keep the standard settings in the sheet "Model". Change a scenario-dependent parameter (e. g., 1.5 * q) according to Table 4 in sheet "Model (2)". Then the upper table in sheet "Output" will summarize the results in terms of relative changes in parameter values between the shock/policy scenario and the baseline scenario without a shock/policy (red numbers).

Please note that different numbers of decimals and different ways of rounding can result in slightly different results.

To replicate the results of the sensitivity analysis reported in Table 6 of the web appendix for Hübler & Schwerhoff (JAERE 2023), we proceed in two steps. First, change one of the invariant parameter values (e. g., 0.9 * θ) in the same way in both sheets, "Model" and "Model (2)". Second, in addition to the modified invariant parameter value, change one scenario-dependent parameter in the "Model (2)" sheet (in Table 6, particularly, 1.05 * ηA). Now we can find the relative changes due to the shock/policy given the modified invariant parameter setting in the upper table of the "Output" sheet. We proceed accordingly by changing one invariant parameter value only and one scenario-dependent parameter only at a time. In the upper table of the "Output" sheet (italic numbers in Table 6), we can also find the relative difference between the new relative changes (with the modified invariant parameter setting) and the standard relative changes (as reported in Table 4 and in the first row of Table 6 regarding the specific policy 1.05 * ηA).