Using the Model-Simulation and Results Excel Sheets

April 27, 2020

1 Using the MS Excel Model Simulation and Calibration Interface

Regardless the number of sectors and number of regions, each Excel file contains the following sheets that will be explained in the following sections.

- Content
- Start
- Terminal
- Baseline
- Temperature
- Sea Level
- Adaptation
- Extremes
- Dynamics
- Structural Parameters
- Damage Functions TFP
- Damage Functions Labour
- Damage Functions Capital
- Data

1.1 Content

The classification of economic sectors (sector A–T) and the aggregation of individual sectors to the preferred number of sectors in the model are provided. For instance, in case of broad classification of 3 sectors (agriculture, industry and services), the classification is

- sector 1: A
- sector 2: B-F
- sector 3: G-T

In the case of 9 sectors, besides agriculture manufacturing, construction, transportation and storage, accommodation and food service activities are analyzed separately. All remaining sectors are aggregated to further production activities, services, state-related sectors and other service activities.

Furthermore, the number of regions is specified. In case of 2 regions, we divide Vietnam in coastal (Red River Delta, North Central and Central Coast, Southeast, Mekong river delta) and non-coastal regions (Northern Midlands and Mountains, Central Highlands). In the case of 3 regions, we consider the two delta regions and the remaining ones as an aggregate separately.

1.2 Data

Within this sheet we merge and link all data sources used for calibration. Data for different years is used. For instance, Supply-Use-Tables (SUT) refer the year 2016 while the Statistical Year Book 2018 refers to data end of 2017. That covers among other things

- Sectoral Gross Value Added Shares
- Sectoral Employment Shares
- Sectoral Labor Cost Shares sheet IO GRAS Economic Activity 3' does not exist!!!

1.3 Start

At the beginning we need to define initial values for economic variables, this includes, e.g. initial gross value added, initial price level, initial population, and initial employment level at the national level. Furthermore, at the sectoral and regional level sectoral gross value added shares, sectoral employment shares and labour cost shares.

Warum ist G18/19 und G25/26 auf Gesamtvietnam bezogen während die Zeilen darunter nur die 6 Regionen als Gesamtheit betrachten? Ich würde daher diese Zeilen auch nur auf die 6Regionen beziehen.

Irgendwie stimmt das was auch nicht... labor share und GVA share region bitte nochmal checken... auf Notebook lässt sich das blöd nebeneinander legen.

Zeile 11 für 3sect 2 region kann gelöscht werden (Inhalt löschen oder Spalte hochziehen?)

Warum steht in z.15 test for stability?

1.4 Terminal

Within this sheet we define the terminal values for the baseline scenario. Just adjust the red numbers to specify the target values. in z.3-6 habe ich Bezeichnung von initial zu terminal geändert

1.5 Baseline

In the standard version of the model we need to define how exogenous variables evolve over time. In the baseline, only population η_t^{Pop} is considered over 84 periods. wie wird Laufzeit bestimmt?

wäre das PoPT˙p im Sheet Terminal? Oder wo stehen die 108 million? Dann passt das noch nicht..

The evolution of the population is given by the projection of the GSO. The GSO published four different projections with different fertility rates of the Vietnamese population. We use the medium variant population projection. The population is expected to grow from roughly 95 million people in 2016 to 108 million people by 2050. After 2050 the population stays constant.

exo˙PoP exo˙T˙1 exo˙T˙2 exo˙SL exo˙GA˙1˙1 exo˙GA˙1˙2

für was stehen die restlichen Abkürzungen?

1.6 Temperature

In this sheet the terminal values for climate variables for the temperature scenario are defined. Hence, besides population also temperature in the regions are determined.

1.7 Sea Level

In this sheet the terminal values for climate variables for the sea level scenario are defined. Hence, besides population and regional temperature, also sea level is determined.

1.8 Adaptation

???

1.9 Extremes

In this sheet cyclones and droughts are additionally specified by a dummy variable, i.e. 1 in case of CYC or DRO or 0, respectively.

1.10 Dynamics

Values for structural parameters which influence the dynamics of the model are defined in the sheet Dynamics Z.11/18: muss das Initial nicht weg?

1.11 Structural Parameters

For each sector-region combination we define values for structural parameters mainly elasticities for labour and capital, adaptation cost effectiveness and taxes on capital and labor.

1.12 Damage Functions for TFP, Labour and Capital

Furthermore, we define the coefficients for the sectoral and regional damage functions to total factor productivity, labour productivity and capital stock for all sector-region combinations.

2 Interpreting the MS Excel Results and Scenario Interface

Regardless the number of sectors and number of regions, each Excel file contains the following sheets that will be explained in the following sections.

- Plot: shows how population evolves over time Unklar was die Balken sind? Add example figure when ready
- Comparison: GDP levels for various scenarios are shown over time Add example figure when ready

  Graphiken ggf. als volles Blatt?

  warum ist nur Auswahl für coast-agriculture, ist das nur ein Beispiel?

  For the remaining sheets all parameters are provided for 100 years:warum dann eigentlich bei vorgabe nur 84??
- Baseline
- Temperature
- Sea Level
- Adaptation
- Extremes

ggf. Untersection, je nachdem was wir hier noch schreiben soll, sonst direkt die Beschreibung hinter die Items
noch eine Seite wo die Definitionen der Parameter names/kürzel stehen