

Agriculture in 2016_static link

2016년 7월 22일 금요일 오후 2:07

Tasks and Time table

1. Expand industry : 7/13-7/25
 - a. Introduce Agriculture composite (done in 7/13)
 - b. Standalone CGE => Linkable CGE (done in 7/20) (/CGE/Agri)
 - i. Linkable CGE with linked industries : Agri_2016_static_link.gms/Agri_2016_recursive_link.gms
 - ii. Linkable CGE without linked industries: Agri_2016_static.gms/Agri_2016_recursive.gms
 - iii. Set writing R file is modified to produced sets with/without linked industries (CGE/SAM/Agri)
 - 1) Setwritting_agri_2016.r
 - c. Data consistency => BU has grain included in Rice and Barley. TD has grain in FOOD industry. We moved grain back into Rice and Barley to keep consistency (done in 7/25)
 - i. Change sector composition
 - 1) \SAM\IND\indcode_agri_20160621.csv)
 - ii. Generate SAM and GHG for new composition
 - 1) Aggreagation: \SAM\IO\agg_ari_20160621.r
 - 2) GHG aggregation: \SAM\GHG\agg_ghg_agri_20160621.r
 - 3) SAM construction:\SAM\Agri\samcost_pos_agri_20160621.r
 - iii. Obtain New Rice and Barley input data with Grain splits
 - 1) Obtain Rice and Barley adjustment info: \SAM\Agri\Consistency\TCIPmap_2016.r generate ricebarley_new_2016.csv
 - 2) Confirm Rice and Barley adjustment: \SAM\Agri\Consistency\confirm_2016.r
 - iv. Adjust SAM and GHG obtained in step ii : \SAM\Agri\samcost_pos_agri_consist_20160621.r
 - 1) SAM : \SAM\Agri\ b_sam_agri_model_(n)g_post_cons.csv
 - 2) GHG: \SAM\Agri\GHG_agri_model_process_cons.csv
 - v. Adjust GAMS linkable model to use adjusted SAM and GHG
 - 1) Adjust setwriting for new SAM/GHG : \SAM\Agri\setwriting_agri_2016_alt_cons.r
 - a) Set statement text files are
 - i) Set_agri_static_(non)link_2016_alt_cons.txt
 - ii) Set_agri_recursive_(non)link_2016_alt_cons.txt
 - 2) Adjust GAMS file loading statement: \CGE\Agri\
 - a) Linkable CGE with linked industries : Agri_2016_static_link_alt.gms/Agri_2016_recursive_link_alt.gms
 - b) Linkable CGE without linked industries: Agri_2016_static_alt.gms/Agri_2016_recursive_alt.gms
 - vi. Check if bottom up io-cost ratio and cost data can reconstruct Agri input in SAM
 - 1) \CGE\Agri\mapping_io_tc_cge_2016.gms => inputc.xls(intermediate demand)/inputf.xls(factor demand)/inputins.xls(tax and nres)
 - 2) Check 1) with b_sam_agri_model_(n)g_post_cons.csv=> identical.
2. Static link (7/27-7/31)
3. Recursive dynamics (year by year convergence) (8/1-8/7)
 - a. Converge at time t => update state variable at time t+1 => converge at time t+1 반복
4. Recursive dynamics (multi-year convergence) (8/8-8/14)

- a. Run standalone CGE
- b. obtain export variable from $t=0$ to $t=T_{\max}$: $EX_0(T)$
- c. Run Linked CGE with $EX_0(T)$ to obtain export variable $EX_i(T)$
- d. Run bottom up for each t with $EX_{i1}(T)$ as given
- e. Obtain import variable from $t=0$ to $t=T_{\max}$: $IM_i(T)$
- f. Run Linked CGE to with $IM_i(T)$ to update export variable $EX_{(i+1)}(T)$
- g. If $|EX_{(i+1)}(T) - EX_i(T)| < \epsilon$ stop, if not repeat $d \Rightarrow e \Rightarrow f \Rightarrow d$