Agriculture in 2016

2016년 7월 13일 수요일 오전 10:25

Tasks and Time table

1. Expand industry : This week (7/13-7/17)
    a. Introduce Agriculture composite (done in 7/13)
        i. CGE/SAM/Setwriting_agri_2016.r
        ii. CGE/SAM/Set_agri_recursive_2016.txt
        iii. CGE/Agri/Agri_2016.gms
    b. Standalone CGE => Linkable CGE
        i. Static version =>CGE/Agri/Agri_2016_static.gms.
            1) Agri_2016.gms => Agri_2016_recursive.gms.
            2) Parameter set => SAM/parameter/static/ | SAM/parameter/recursive/
                a) Parameter set generation file /SAM/paramete.r is modified. It can adjust length of time dependent parameter for given maximum time value 'Tmax'
                b) 

parameter

```
param.text=function(df,index,Tmax){
  P.TEXT={}
  ind=df[,(1:index)]
  param.number=dim(df)[2]-index
  for (i in (1:param.number)){
    if (index==1) {param.i=paste(colnames(df)
[index+i],"('",ind,"')=",df[,(index+i)],";",sep="")}
    else {param.i=paste(colnames(df)
[index+i],"('",paste2(ind,sep="','"),"')=",df[,(index+i)],";",sep=""
)}
    filename.i=paste(colnames(df)[index+i],"txt",sep=".")
    if (Tmax==0)
{filename.i=paste("parameter/static/",filename.i,sep="")} else
{filename.i=paste("parameter/recursive/",filename.i,sep="")}
    cat(param.i,file=filename.i,sep="₩n")
    P.TEXT=c(P.TEXT,param.i)}
  #  cat(P.TEXT, file=filename,sep="₩n")
}
xlsname="parameter.xlsx"
Tmax=25
param.d=loadWorkbook(xlsname)
index=sapply((strsplit(getSheets(param.d),"₩₩.")),FUN=length)
Ndata=length(index)
for (j in 1:Ndata){
  param.j=readWorksheet(param.d,sheet=j)
  if (as.numeric(is.na((match("t",colnames(param.j)))))==0)
{param.j=param.j[param.j$t<=Tmax,]}
  index.j=index[j]
  #print(param.j)
```

```
  param.text(param.j,index.j,Tmax)
}
```

      ii. Static link
   c. Data consistency
2. Recursive dynamics (year by year convergence) (7/18-7/24)
   a. Converge at time t => update state variable at time t+1 => converge at time t+1 반복
3. Recursive dynamics (multi-year convergence) (7/24-8/31)
   a. Run standalone CGE
   b. obtain export variable from t=0 to t=Tmax : EX0(T)
   c. Run Linked CGE with EX0(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=Tmax : 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=>e=>f=>d