sum ph ur engry tech G H D L io

asdoc summarize ph ur engry tech G H D L io

gen lnpgdp =ln(pgdp)

\*Panel space weight matrix construction

clear

cd D:

set matsize 360

use D:/weight\_econ.dta

spcs2xt anhui- chongqing, matrix(W2) time(12)

spatwmat using W2xt,name(WW) standardize

\*Debug Data Extractor

 clear

 use D:\202109-\data.dta

\*Moran

spatwmat using D:/weight.dta,name(W2) standardize

preserve

spatgsa ur ,weights(W) moran twotail

\*\*LM

reg ph ur engry engre\_s tech G H D L io

asdoc reg ph ur engry engre\_s tech G H D L io

spatdiag , weight(WW) //

asdoc spatdiag , weight(WW) //

est store m1

esttab m1 using LM检验.doc,r2 se star(\* 0.1 \*\* 0.05 \*\*\* 0.01)replace nogap

\*\*\*Hausman

spatwmat using W2xt,name(WW) standardize

xtset id year

xsmle ph ur engre\_s tech G H D L ,fe wmat(W2) model(sdm) durbin(ur) nolog effects

est store sdm\_fe //

xtset id year

xsmle ph ur engre\_s tech G H D L, model(sdm) durbin(engry) wmat(W2) re nolog effects

est store sdm\_re /

hausman sdm\_fe sdm\_re //

asdoc hausman sdm\_fe sdm\_re //

est store m1

esttab m1 using Hausman检验.doc,r2 se star(\* 0.1 \*\* 0.05 \*\*\* 0.01)replace nogap

\*Model robustness test - LR test

spatwmat using W2xt,name(WW) standardize

xsmle ph ur engre\_s tech G H D L ,fe model(sdm) wmat(W2) type(time) nolog effects

est store sdm\_a

xsmle ph ur engre\_s tech G H D L ,fe model(sar) wmat(W2) type(time) nolog effects

est store sar\_a

xsmle ph ur engre\_s tech G H D L ,fe model(sem) emat(W2) type(time) nolog effects

est store sem\_a

lrtest sdm\_a sar\_a //

lrtest sdm\_a sem\_a //

\*Individual fixed effect VS time fixed effect VS double fixed effect

\*Time fixed effect model

xtset id year

xsmle ph ur engry tech G H D L , fe model(sdm) wmat(W2) type(time) nolog noeffects

est store sdm\_time

\*Individual fixed effect model

xsmle ph ur engry tech G H D L,fe model(sdm) wmat(W2) type(ind) nolog noeffects

est store sdm\_ind

\*Double fixed effect model, spatial Durbin model

xtset id year

xsmle ph ur tech G H D , fe model(sdm) wmat(W2) type(both) nolog effects

est store sdm\_both

lrtest sdm\_both sdm\_time,df(15) //

lrtest sdm\_both sdm\_ind, df(15) //

xtset id year

xsmle ph engry popu third io tech G H D L,wmat(W) model(sdm) type(both) dlag(3) nolog effects fe

\*\*Spatial lag explains the direct, indirect and total effects of variables

xtset id year

gen lngreen1 = L.lngreen

xsmle ph engry popu third io tech G H D L, fe model(sdm) wmat(W) type(both) nolog effects robust

\*Winsorization

 help winsor2

winsor2 engry, cut(1 99) replace

\*Intermediate effect test

gen struc = third/second

\*Road infrastructure construction

xsmle ph engry popu io tech G H D , fe model(sdm) wmat(W) type(both) nolog effects

xsmle D engry popu io tech G H L , fe model(sdm) wmat(W) type(both) nolog effects

xsmle ph D popu io tech G H L, fe model(sdm) wmat(W) type(both) nolog effects

\*so2

xsmle ph elec popu io tech G H D , fe model(sdm) wmat(W) type(both) nolog effects

xsmle lso2 engry popu io tech G H , fe model(sdm) wmat(W) type(both) nolog effects

xsmle ph lso2 popu io tech G H , fe model(sdm) wmat(W) type(both) nolog effects

\*Adjustment effect test

xtset id year

xtreg ph ur ecod engry engre\_s tech G H D L io , fe //

est store f1

gen J= ur\* ecod //

xtreg ph ur ecod J engry engre\_s tech G H D L io, fe

//The moderating effect of population agglomeration

xtset id year

xtreg ph ur popu engre\_s tech G H D L io , fe //

est store f2

gen J2= ur\* popu //

xtreg ph ur popu J2 engre\_s tech G H D L io, fe

est store f2\_jh

\*Threshold effect test

xthreg ph tech H L D io , rx(ur) qx(struc) thnum(2) grid(100) trim( 0.01 0.01 ) bs( 300 300) r

drop if id ==2

drop if id ==3

drop if id ==5

drop if id ==12

drop if id ==13

drop if id ==15

drop if id ==17

drop if id ==18

drop if id ==21

drop if id ==24

drop if id ==26

drop if id ==29

drop if id ==30

//well-developed region

drop if id ==1

drop if id ==4

drop if id ==6

drop if id ==7

drop if id ==8

drop if id ==9

drop if id ==10

drop if id ==11

drop if id ==14

drop if id ==16

drop if id ==19

drop if id ==20

drop if id ==22

drop if id ==23

drop if id ==25

drop if id ==27

drop if id ==28

//Eastern Region

drop if id ==1

drop if id ==4

drop if id ==7

drop if id ==10

drop if id ==11

drop if id ==12

drop if id ==13

drop if id ==14

drop if id ==16

drop if id ==18

drop if id ==19

drop if id ==20

drop if id ==22

drop if id ==23

drop if id ==25

drop if id ==27

drop if id ==28

drop if id ==30

//Middle Region

drop if id ==2

drop if id ==3

drop if id ==4

drop if id ==5

drop if id ==6

drop if id ==7

drop if id ==8

drop if id ==9

drop if id ==15

drop if id ==17

drop if id ==19

drop if id ==20

drop if id ==21

drop if id ==24

drop if id ==26

drop if id ==27

drop if id ==28

drop if id ==29

//the west area

drop if id ==1

drop if id ==2

drop if id ==3

drop if id ==5

drop if id ==6

drop if id ==8

drop if id ==9

drop if id ==10

drop if id ==11

drop if id ==12

drop if id ==13

drop if id ==14

drop if id ==15

drop if id ==16

drop if id ==18

drop if id ==17

drop if id ==21

drop if id ==22

drop if id ==23

drop if id ==24

drop if id ==26

drop if id ==29

drop if id ==30