Submitted by- Debashree Priya Sahoo(200307)

CODES

1. **OLS REGRESSION(STATA)**

   xtreg crimes L.crimes spi pd edu gr gsdp ur ir

2. **2SLS(STATA)**

   ivregress 2sls crimes L.crimes pd gr ur ir (spi= gsdp edu)

3. **Endogeneity test(STATA)**

   estat endog

4. **Test For Weak or Strong Instruments(STATA)**

   estat firststage

5. **Overidentification test(STATA)**

   estat overid

6. **Arellano Bover Estimation(STATA)**

xtdpdsys crimes pd gr ur ir, lags(1) twostep endog(spi) inst(edu gsdp) vce(robust) artests(2)

7. **Instrumental variable regression (RE, FE, BE, FD)(STATA)**

   xtivreg crimes l.crimes pd gr ur ir (spi = edu gsdp), re vce(robust)
   xtivreg crimes l.crimes pd gr ur ir (spi = edu gsdp), fe vce(robust)
   xtivreg crimes l.crimes pd gr ur ir (spi = edu gsdp), be vce(robust)
   xtivreg crimes l.crimes pd gr ur ir (spi = edu gsdp), fd vce(robust)

8. **Threshold Regression (STATA)**

   xthenreg crimes pd gr ur ir, endogenous(spi) inst(edu gsdp)

9. **Unit Root Tests(STATA)**
   xtunitroot llc crimes
   xtunitroot llc spi
   xtunitroot llc edu
   xtunitroot llc gr

xtunitroot llc gsdp
xtunitroot llc ur
xtunitroot llc ir
xtunitroot fisher dpd, dfuller lags(0)

xtunitroot llc pd
xtunitroot fisher dpd, dfuller lags(0)

10. Bounds Test(Rcode)

```
> library(readxl)
> ECO342_200307_DATASET <- read_excel("C:/Users/debas/OneDrive/Desktop/ECO
342-200307-DATASET.xlsx")
View(ECO342_200307_DATASET)
> attach(ECO342_200307_DATASET)
> library(plm)
Y<-cbind(CRIMES)
X<-cbind(SPI, PD, EDU, GR, GSDP, UR, IR )
> pdata<-pdata.frame(ECO342_200307_DATASET, index= c("STATES", "YEAR"))
> formula<-CRIMES~SPI+PD+EDU+GR+GSDP+UR+IR+lag(CRIMES,1)+lag(SPI,1)
> bounds_test<-pbgtest(formula, data=pdata, order=1)
> summary(bounds_test)
bounds_test$p.value
```

11. ARDL (STATA)

ssc install xtpmg, replace
xtpmg d.crimes d.spi d.pd d.gsdp, lr(l.crimes spi pd gsdp) ec(ECT) replace mg
xtpmg d.crimes d.spi d.pd d.gsdp, lr(l.crimes spi pd gsdp) ec(ECT) replace dfe
hausman mg DFE