PS 236B Replication Set #1

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```
aer<-read.dta("maketable4.dta")
aer$other_con<-ifelse(aer$shortnam=="AUS"|aer$shortnam=="MLT"|aer$shortnam=="NZL",1,0)
```

PANEL A: Two Stage Least Square

COLUMN 1

```
iv_mod1a<-ivreg(logpgp95~avexpr|logem4, data=aer,subset=baseco==1)
summary(iv_mod1a)
```

```
##
## Call:
## ivreg(formula = logpgp95 ~ avexpr | logem4, data = aer, subset = baseco ==
##     1)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.44903 -0.56242  0.07311  0.69564  1.71752
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)   1.9097     1.0267   1.860   0.0676 .
## avexpr        0.9443     0.1565   6.033  9.8e-08 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9483 on 62 degrees of freedom
## Multiple R-Squared: 0.187,   Adjusted R-squared: 0.1739
## Wald test: 36.39 on 1 and 62 DF,  p-value: 9.799e-08
```

COLUMN 2

```
iv_mod2a<-ivreg(logpgp95~avexpr+lat_abst|logem4+lat_abst, data=aer,subset=baseco==1)
summary(iv_mod2a)
```

```
##
## Call:
## ivreg(formula = logpgp95 ~ avexpr + lat_abst | logem4 + lat_abst,
##     data = aer, subset = baseco == 1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.5611 -0.6557  0.0732  0.7572  1.8803
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)   1.6918     1.2930   1.308    0.196
```

```
## avexpr          0.9957      0.2217    4.492 3.21e-05 ***
## lat_abst       -0.6472      1.3351   -0.485    0.630
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.005 on 61 degrees of freedom
## Multiple R-Squared: 0.1025,  Adjusted R-squared: 0.07305
## Wald test: 17.01 on 2 and 61 DF,  p-value: 1.351e-06
```

COLUMN 7

```
iv_mod7a<-ivreg(logpgp95~avexpr+asia+africa+other_con|logem4+asia+africa+other_con, data=aer,subset=base
summary(iv_mod7a)
```

```
##
## Call:
## ivreg(formula = logpgp95 ~ avexpr + asia + africa + other_con |
##     logem4 + asia + africa + other_con, data = aer, subset = baseco ==
##     1)
##
## Residuals:
##       Min       1Q   Median       3Q      Max
## -2.42134 -0.49121 -0.04299  0.70128  1.86105
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)   2.0324     2.0116   1.010  0.31645
## avexpr        0.9822     0.2995   3.280  0.00175 **
## asia         -0.9242     0.4003  -2.309  0.02446 *
## africa       -0.4643     0.3580  -1.297  0.19976
## other_con    -0.9405     0.8480  -1.109  0.27190
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9469 on 59 degrees of freedom
## Multiple R-Squared: 0.2286,  Adjusted R-squared: 0.1763
## Wald test: 10.92 on 4 and 59 DF,  p-value: 1.084e-06
```

COLUMN 8

```
iv_mod8a<-ivreg(logpgp95~avexpr+lat_abst+asia+africa+other_con|logem4+lat_abst+asia+africa+other_con, da
summary(iv_mod8a)
```

```
##
## Call:
## ivreg(formula = logpgp95 ~ avexpr + lat_abst + asia + africa +
##     other_con | logem4 + lat_abst + asia + africa + other_con,
##     data = aer, subset = baseco == 1)
##
## Residuals:
##      Min       1Q  Median       3Q      Max
## -2.7155 -0.6381 -0.1535  0.8188  2.0714
##
## Coefficients:
```

```
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    1.4405     2.8396   0.507   0.6139
## avexpr         1.1071     0.4636   2.388   0.0202 *
## lat_abst      -1.1782     1.7554  -0.671   0.5048
## asia          -1.0471     0.5246  -1.996   0.0506 .
## africa        -0.4373     0.4242  -1.031   0.3069
## other_con     -0.9904     0.9980  -0.992   0.3251
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.082 on 58 degrees of freedom
## Multiple R-Squared: 0.01082, Adjusted R-squared: -0.07445
## Wald test: 6.847 on 5 and 58 DF,  p-value: 4.418e-05
```

PANEL B: First Stage

COLUMN 1

```
mod1b<-lm(avexpr~logem4,data=aer, subset=baseco==1)
summary(mod1b)
```

```
##
## Call:
## lm(formula = avexpr ~ logem4, data = aer, subset = baseco ==
##     1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.6606 -0.9922  0.0280  0.8266  3.3566
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   9.3414     0.6107   15.30  < 2e-16 ***
## logem4       -0.6068     0.1267   -4.79 1.08e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.265 on 62 degrees of freedom
##   (99 observations deleted due to missingness)
## Multiple R-squared:  0.2701, Adjusted R-squared:  0.2584
## F-statistic: 22.95 on 1 and 62 DF,  p-value: 1.077e-05
```

COLUMN 2

```
mod2b<-lm(avexpr~logem4+lat_abst,data=aer, subset=baseco==1)
summary(mod2b)
```

```
##
## Call:
## lm(formula = avexpr ~ logem4 + lat_abst, data = aer, subset = baseco ==
##     1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
```

3

```
## -2.7410 -0.9299  0.0393  0.8553  3.1693
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    8.5294     0.8123  10.500 2.67e-15 ***
## logem4        -0.5103     0.1410  -3.618 0.000603 ***
## lat_abst       2.0018     1.3372   1.497 0.139546
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.252 on 61 degrees of freedom
##   (99 observations deleted due to missingness)
## Multiple R-squared:  0.296,  Adjusted R-squared:  0.2729
## F-statistic: 12.82 on 2 and 61 DF,  p-value: 2.244e-05
```

COLUMN 7

```
mod7b<-lm(avexpr~logem4+asia+africa+other_con,data=aer,subset=baseco==1)
summary(mod7b)
```

```
##
## Call:
## lm(formula = avexpr ~ logem4 + asia + africa + other_con, data = aer,
##     subset = baseco == 1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.7058 -1.0679  0.1690  0.8081  3.1576
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    8.5378     0.7833  10.900 9.24e-16 ***
## logem4        -0.4324     0.1732  -2.497   0.0154 *
## asia           0.3335     0.4983   0.669   0.5059
## africa        -0.2692     0.4133  -0.651   0.5173
## other_con      1.2406     0.8422   1.473   0.1460
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.267 on 59 degrees of freedom
##   (99 observations deleted due to missingness)
## Multiple R-squared:  0.3035, Adjusted R-squared:  0.2563
## F-statistic: 6.428 on 4 and 59 DF,  p-value: 0.000231
```

COLUMN 8

```
mod8b<-lm(avexpr~logem4+lat_abst+asia+africa+other_con,data=aer,subset=baseco==1)
summary(mod8b)
```

```
##
## Call:
## lm(formula = avexpr ~ logem4 + lat_abst + asia + africa + other_con,
##     data = aer, subset = baseco == 1)
##
```

```
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.7697 -0.8871  0.1642  0.7842  2.9869
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)   7.7293     0.9569   8.077 4.55e-11 ***
## logem4       -0.3403     0.1831  -1.859   0.0681 .
## lat_abst      2.0093     1.3909   1.445   0.1539
## asia          0.4720     0.5030   0.938   0.3519
## africa       -0.2580     0.4096  -0.630   0.5313
## other_con     1.0615     0.8437   1.258   0.2134
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.255 on 58 degrees of freedom
##   (99 observations deleted due to missingness)
## Multiple R-squared:  0.3277, Adjusted R-squared:  0.2698
## F-statistic: 5.655 on 5 and 58 DF,  p-value: 0.000259
```

##PANEL C: OLS Regressions

COLUMN 1

```
mod1c<-lm(logpgp95~avexpr, data=aer, subset=baseco==1)
summary (mod1c)
```

```
##
## Call:
## lm(formula = logpgp95 ~ avexpr, data = aer, subset = baseco ==
##     1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.8715 -0.4644  0.1683  0.4610  1.1413
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  4.66038    0.40851  11.408  < 2e-16 ***
## avexpr       0.52211    0.06119   8.533 4.72e-12 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.7132 on 62 degrees of freedom
##   (99 observations deleted due to missingness)
## Multiple R-squared:  0.5401, Adjusted R-squared:  0.5327
## F-statistic: 72.82 on 1 and 62 DF,  p-value: 4.724e-12
```

COLUMN 2

```
mod2c<-lm(logpgp95~avexpr+lat_abst, data=aer,subset=baseco==1)
summary(mod2c)
```

```
##
```

```
## Call:
## lm(formula = logpgp95 ~ avexpr + lat_abst, data = aer, subset = baseco ==
##     1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.6845 -0.4233  0.1408  0.4584  1.1858
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  4.72808    0.39732  11.900  < 2e-16 ***
## avexpr       0.46789    0.06416   7.292 7.29e-10 ***
## lat_abst     1.57688    0.71031   2.220   0.0301 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6917 on 61 degrees of freedom
##   (99 observations deleted due to missingness)
## Multiple R-squared:  0.5745, Adjusted R-squared:  0.5605
## F-statistic: 41.18 on 2 and 61 DF,  p-value: 4.805e-12
```

COLUMN 7

```
mod7c<- lm(logpgp95~avexpr+asia+africa+other_con, data=aer,subset=baseco==1)
summary(mod7c)
```

```
##
## Call:
## lm(formula = logpgp95 ~ avexpr + asia + africa + other_con, data = aer,
##     subset = baseco == 1)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.40774 -0.35016  0.00457  0.30849  1.46599
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  5.76649    0.40079  14.388  < 2e-16 ***
## avexpr       0.42383    0.05731   7.395 5.79e-10 ***
## asia        -0.63117    0.22987  -2.746  0.00799 **
## africa      -0.91761    0.16924  -5.422 1.15e-06 ***
## other_con    0.21551    0.37734   0.571  0.57009
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5862 on 59 degrees of freedom
##   (99 observations deleted due to missingness)
## Multiple R-squared:  0.7043, Adjusted R-squared:  0.6843
## F-statistic: 35.14 on 4 and 59 DF,  p-value: 5.332e-15
```

COLUMN 8

```
mod8c<- lm(logpgp95~avexpr+lat_abst+asia+africa+other_con, data=aer,subset=baseco==1)
summary(mod8c)
```

```
##
## Call:
## lm(formula = logpgp95 ~ avexpr + lat_abst + asia + africa + other_con,
##     data = aer, subset = baseco == 1)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.34817 -0.28815 -0.00018  0.31896  1.40937
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  5.73673    0.39820  14.407  < 2e-16 ***
## avexpr       0.40128    0.05912   6.788 6.65e-09 ***
## lat_abst     0.87530    0.62827   1.393   0.1689
## asia        -0.57675    0.23138  -2.493   0.0156 *
## africa      -0.88068    0.16998  -5.181 2.91e-06 ***
## other_con    0.10721    0.38236   0.280   0.7802
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5816 on 58 degrees of freedom
##   (99 observations deleted due to missingness)
## Multiple R-squared:  0.7139, Adjusted R-squared:  0.6892
## F-statistic: 28.95 on 5 and 58 DF,  p-value: 1.335e-14
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harva
## % Date and time: Thu, Feb 18, 2021 - 09:15:37
## \begin{table}[!htbp] \centering
##   \caption{Panel A:Two-Stage Least Squares}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{logpgp95} \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  avexpr & 0.944$^{***}$ & 0.996$^{***}$ & 0.982$^{***}$ & 1.107$^{**}$ \\
##   & (0.157) & (0.222) & (0.299) & (0.464) \\
##   & & & & \\
##  lat\_abst &  & $-$0.647 &  & $-$1.178 \\
##   &  & (1.335) &  & (1.755) \\
##   & & & & \\
##  asia &  &  & $-$0.924$^{**}$ & $-$1.047$^{*}$ \\
##   &  &  & (0.400) & (0.525) \\
##   & & & & \\
##  africa &  &  & $-$0.464 & $-$0.437 \\
##   &  &  & (0.358) & (0.424) \\
##   & & & & \\
```

```
##   other\_con &   &   & $-$0.941 & $-$0.990 \\
##    &   &   & (0.848) & (0.998) \\
##    & & & & \\
##   Constant & 1.910$^{*}$ & 1.692 & 2.032 & 1.440 \\
##    & (1.027) & (1.293) & (2.012) & (2.840) \\
##    & & & & \\
## \hline \\[-1.8ex]
## Observations & 64 & 64 & 64 & 64 \\
## R$^{2}$ & 0.187 & 0.102 & 0.229 & 0.011 \\
## Adjusted R$^{2}$ & 0.174 & 0.073 & 0.176 & $-$0.074 \\
## Residual Std. Error & 0.948 (df = 62) & 1.005 (df = 61) & 0.947 (df = 59) & 1.082 (df = 58) \\
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
stargazer(mod1b,mod2b,mod7b,mod8b,type="latex", title= "Panel B: First Stage for Average Protection Agai
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harva
## % Date and time: Thu, Feb 18, 2021 - 09:15:38
## \begin{table}[!htbp] \centering
##   \caption{Panel B: First Stage for Average Protection Against Expropriation Risk in 1985-1995}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{avexpr} \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##   logem4 & $-$0.607$^{***}$ & $-$0.510$^{***}$ & $-$0.432$^{**}$ & $-$0.340$^{*}$ \\
##    & (0.127) & (0.141) & (0.173) & (0.183) \\
##    & & & & \\
##   lat\_abst &   & 2.002 &   & 2.009 \\
##    &   & (1.337) &   & (1.391) \\
##    & & & & \\
##   asia &   &   & 0.333 & 0.472 \\
##    &   &   & (0.498) & (0.503) \\
##    & & & & \\
##   africa &   &   & $-$0.269 & $-$0.258 \\
##    &   &   & (0.413) & (0.410) \\
##    & & & & \\
##   other\_con &   &   & 1.241 & 1.062 \\
##    &   &   & (0.842) & (0.844) \\
##    & & & & \\
##   Constant & 9.341$^{***}$ & 8.529$^{***}$ & 8.538$^{***}$ & 7.729$^{***}$ \\
##    & (0.611) & (0.812) & (0.783) & (0.957) \\
##    & & & & \\
## \hline \\[-1.8ex]
## Observations & 64 & 64 & 64 & 64 \\
## R$^{2}$ & 0.270 & 0.296 & 0.304 & 0.328 \\
## Adjusted R$^{2}$ & 0.258 & 0.273 & 0.256 & 0.270 \\
```

```
## Residual Std. Error & 1.265 (df = 62) & 1.252 (df = 61) & 1.267 (df = 59) & 1.255 (df = 58) \\
## F Statistic & 22.947$^{***}$ (df = 1; 62) & 12.824$^{***}$ (df = 2; 61) & 6.428$^{***}$ (df = 4; 59)
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```r
stargazer(mod1c,mod2c,mod7c,mod8c,type="latex", title= "Panel C: Ordinary Least Squares")
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harva
## % Date and time: Thu, Feb 18, 2021 - 09:15:38
## \begin{table}[!htbp] \centering
##   \caption{Panel C: Ordinary Least Squares}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{logpgp95} \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  avexpr & 0.522$^{***}$ & 0.468$^{***}$ & 0.424$^{***}$ & 0.401$^{***}$ \\
##   & (0.061) & (0.064) & (0.057) & (0.059) \\
##   & & & & \\
##  lat\_abst &  & 1.577$^{**}$ &  & 0.875 \\
##   & & (0.710) & & (0.628) \\
##   & & & & \\
##  asia &  &  & $-$0.631$^{***}$ & $-$0.577$^{**}$ \\
##   & & & (0.230) & (0.231) \\
##   & & & & \\
##  africa &  &  & $-$0.918$^{***}$ & $-$0.881$^{***}$ \\
##   & & & (0.169) & (0.170) \\
##   & & & & \\
##  other\_con &  &  & 0.216 & 0.107 \\
##   & & & (0.377) & (0.382) \\
##   & & & & \\
##  Constant & 4.660$^{***}$ & 4.728$^{***}$ & 5.766$^{***}$ & 5.737$^{***}$ \\
##   & (0.409) & (0.397) & (0.401) & (0.398) \\
##   & & & & \\
## \hline \\[-1.8ex]
## Observations & 64 & 64 & 64 & 64 \\
## R$^{2}$ & 0.540 & 0.574 & 0.704 & 0.714 \\
## Adjusted R$^{2}$ & 0.533 & 0.561 & 0.684 & 0.689 \\
## Residual Std. Error & 0.713 (df = 62) & 0.692 (df = 61) & 0.586 (df = 59) & 0.582 (df = 58) \\
## F Statistic & 72.816$^{***}$ (df = 1; 62) & 41.179$^{***}$ (df = 2; 61) & 35.137$^{***}$ (df = 4; 59)
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```