Appendix 5.2:
Determinants of the Death Penalty
Instrumental probit, Cross-sectional analysis

Death Penalty, CROSS SECTION, 2000:

CROSS SECTION: 2000:

```
ivprobit death_penalty lagregdp1 chpolity  lgdpcap (iccprob=  lagregiccprob1
leg_brit ratproc), robust


Probit model with endogenous regressors           Number of obs   =        142
                                                  Wald chi2(4)    =      57.92
Log pseudolikelihood = -116.25174                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
     iccprob |  -2.233029    .627393    -3.56   0.000    -3.462697   -1.003361
   lagregdp1 |   1.328904   .7064638     1.88   0.060    -.0557394    2.713548
    chpolity |  -.0322526   .0181526    -1.78   0.076     -.067831    .0033258
     lgdpcap |  -.1804697   .1061934    -1.70   0.089    -.3886049    .0276656
       _cons |   2.792907   .9447113     2.96   0.003     .9413074    4.644508
-------------+----------------------------------------------------------------
    /lnsigma |  -1.063511   .0791258   -13.44   0.000    -1.218595   -.9084276
     /athrho |    .677706   .4656268     1.46   0.146    -.2349056    1.590318
-------------+----------------------------------------------------------------
       sigma |   .3452414   .0273175                      .2956452    .4031576
         rho |   .5900261   .3035278                     -.2306782     .920198
------------------------------------------------------------------------------
Instrumented:  iccprob
Instruments:   lagregdp1 chpolity lgdpcap lagregiccprob1 leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     2.12 Prob > chi2 = 0.1455

ivprobit death_penalty lagregdp1 chpolity civwar68 lgdpcap (iccprob=
lagregiccprob1 leg_brit ratproc), robust

Probit model with endogenous regressors           Number of obs   =        142
                                                  Wald chi2(5)    =      53.18
Log pseudolikelihood = -112.28294                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
     iccprob |   -2.10825   .6834812    -3.08   0.002    -3.447848   -.7686513
   lagregdp1 |   1.324744   .7138439     1.86   0.063    -.0743643    2.723852
    chpolity |  -.0326941   .0175246    -1.87   0.062    -.0670417    .0016536
    civwar68 |   .3767434   .3574868     1.05   0.292    -.3239177    1.077405
     lgdpcap |  -.1792451   .1048981    -1.71   0.087    -.3848415    .0263514
       _cons |   2.638239   .9789543     2.69   0.007     .7195242    4.556955
-------------+----------------------------------------------------------------
    /lnsigma |  -1.092371   .0767374   -14.24   0.000    -1.242773   -.9419682
     /athrho |   .5761926   .4228339     1.36   0.173    -.2525466    1.404932
-------------+----------------------------------------------------------------
       sigma |   .3354204   .0257393                      .2885828    .3898597
```

```
         rho |   .5198927   .3085468                      -.247311     .886413
------------------------------------------------------------------------------
Instrumented:  iccprob
Instruments:   lagregdp1 chpolity civwar68 lgdpcap lagregiccprob1 leg_british
               ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     1.86 Prob > chi2 = 0.1730


ivprobit death_penalty lagregdp1 polity chpolity trans7 civwar68  lgdpcap
(iccprob=  lagregiccprob1 leg_brit ratproc), robust

Probit model with endogenous regressors           Number of obs   =        142
                                                  Wald chi2(7)    =      51.92
Log pseudolikelihood = -110.22921                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
     iccprob |  -2.030347   .7131863    -2.85   0.004    -3.428167   -.6325275
   lagregdp1 |   1.370606   .6915032     1.98   0.047     .0152844    2.725927
      polity |   .0028901   .0057747     0.50   0.617    -.0084281    .0142082
    chpolity |  -.0315375   .0187903    -1.68   0.093    -.0683658    .0052907
      trans7 |  -.0053088   .2663987    -0.02   0.984    -.5274407     .516823
    civwar68 |   .3570548   .3554456     1.00   0.315    -.3396058    1.053715
     lgdpcap |  -.1848479   .1071516    -1.73   0.085    -.3948611    .0251654
       _cons |   2.577655    1.01747     2.53   0.011     .5834504     4.57186
-------------+----------------------------------------------------------------
    /lnsigma |  -1.106433   .0751773   -14.72   0.000    -1.253778   -.9590878
     /athrho |   .5392216    .415937     1.30   0.195    -.2759999    1.354443
-------------+----------------------------------------------------------------
       sigma |   .3307367   .0248639                      .2854246    .3832423
         rho |   .4923985   .3150904                     -.2691989    .8750979
------------------------------------------------------------------------------
Instrumented:  iccprob
Instruments:   lagregdp1 polity chpolity trans7 civwar68 lgdpcap lagregiccprob1
               leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     1.68 Prob > chi2 = 0.1948


ivprobit death_penalty lagregdp1 polity chpolity trans7 civwar68 islam protestn
cath lgdpcap (iccprob=  lagregiccprob1 leg_brit ratproc), robust

Probit model with endogenous regressors           Number of obs   =        142
                                                  Wald chi2(10)   =      55.66
Log pseudolikelihood = -100.78166                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
     iccprob |  -1.781983   .7183124    -2.48   0.013    -3.189849   -.3741163
   lagregdp1 |   1.519405   .6442636     2.36   0.018     .2566718    2.782139
      polity |   .0052706   .0070194     0.75   0.453    -.0084871    .0190284
    chpolity |  -.0307891   .0192078    -1.60   0.109    -.0684356    .0068574
      trans7 |   .0507658   .2736055     0.19   0.853    -.4854911    .5870227
    civwar68 |   .3847988   .3723186     1.03   0.301    -.3449322     1.11453
       islam |  -.0347678   .3747226    -0.09   0.926    -.7692107    .6996751
    protestn |  -.3261505   .4609787    -0.71   0.479    -1.229652    .5773512
```

```
        cath |  -.3966875   .3582004    -1.11   0.268    -1.098747    .3053725
     lgdpcap |   -.141039   .0915251    -1.54   0.123     -.320425     .038347
       _cons |   2.067935   .9849686     2.10   0.036     .1374319    3.998438
-------------+----------------------------------------------------------------
    /lnsigma |  -1.155116   .0730944   -15.80   0.000    -1.298378   -1.011853
     /athrho |   .4999024   .3972232     1.26   0.208    -.2786408    1.278446
-------------+----------------------------------------------------------------
       sigma |   .3150211   .0230263                      .2729742    .3635446
         rho |   .4620404   .3124235                     -.2716467    .8560702
------------------------------------------------------------------------------
Instrumented:  iccprob
Instruments:   lagregdp1 polity chpolity trans7 civwar68 islam protestn cath
               lgdpcap lagregiccprob1 leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     1.58 Prob > chi2 = 0.2082


ivprobit death_penalty lagregdp1 polity chpolity trans7 civwar68 islam protestn
cath frac_ethnic frac_lang frac_rel lgdpcap lurbanpop (iccprob=  lagregiccprob1
leg_brit ratproc), robust

Probit model with endogenous regressors           Number of obs   =        137
                                                  Wald chi2(14)   =      87.99
Log pseudolikelihood = -96.404347                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
     iccprob |  -1.891035   .7514883    -2.52   0.012    -3.363925   -.4181446
   lagregdp1 |   1.618344   .7009528     2.31   0.021     .2445016    2.992186
      polity |  -.0013043   .0082929    -0.16   0.875    -.0175582    .0149495
    chpolity |  -.0289059   .0181811    -1.59   0.112    -.0645402    .0067285
      trans7 |   .1763237   .2784605     0.63   0.527    -.3694489    .7220964
    civwar68 |   .4264534   .3907228     1.09   0.275    -.3393492    1.192256
       islam |    .166048   .4632379     0.36   0.720    -.7418816    1.073978
    protestn |  -.6117468   .5944808    -1.03   0.303    -1.776908    .5534141
        cath |  -.3596751   .4056064    -0.89   0.375    -1.154649    .4352988
 frac_ethnic |  -.3512595   .7914957    -0.44   0.657    -1.902563    1.200044
   frac_lang |  -.4546624   .7203794    -0.63   0.528     -1.86658    .9572553
    frac_rel |    1.10062    .755142     1.46   0.145    -.3794316    2.580671
     lgdpcap |  -.1555231   .1545475    -1.01   0.314    -.4584306    .1473844
   lurbanpop |   .0646891   .4250008     0.15   0.879    -.7682971    .8976754
       _cons |    1.71656   1.234733     1.39   0.164    -.7034724    4.136592
-------------+----------------------------------------------------------------
    /lnsigma |    -1.1498   .0715398   -16.07   0.000    -1.290015   -1.009584
     /athrho |    .552977   .3904271     1.42   0.157    -.2122461      1.3182
-------------+----------------------------------------------------------------
       sigma |   .3167001   .0226567                      .2752666    .3643704
         rho |   .5027481   .2917445                     -.2091153    .8663356
------------------------------------------------------------------------------
Instrumented:  iccprob
Instruments:   lagregdp1 polity chpolity trans7 civwar68 islam protestn cath
               frac_ethnic frac_lang frac_rel lgdpcap lurbanpop lagregiccprob1
               leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     2.01 Prob > chi2 = 0.1567

note: 0 failures and 2 successes completely determined.


Removing WEurope observations:
```

```
ivprobit death_penalty lagregdp1 polity chpolity trans7 civwar68 islam protestn
cath frac_ethnic frac_lang frac_rel lgdpcap lurbanpop (opdp=  lagregopdp1
leg_brit ratproc), robust
Probit model with endogenous regressors           Number of obs   =         97
                                                  Wald chi2(14)   =     268.18
Log pseudolikelihood = -77.185247                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
        opdp |  -2.792563    .548271    -5.09   0.000    -3.867155   -1.717972
   lagregdp1 |  -1.512599   .8628219    -1.75   0.080    -3.203699    .1785007
      polity |   .0000977   .0032823     0.03   0.976    -.0063354    .0065308
    chpolity |   .0016007   .0445355     0.04   0.971    -.0856872    .0888887
      trans7 |   .0369407    .241405     0.15   0.878    -.4362045    .5100859
    civwar68 |  -.1436012   .2351373    -0.61   0.541    -.6044619    .3172594
       islam |   .1970747   .3057701     0.64   0.519    -.4022237    .7963731
    protestn |   .4238156   .5822118     0.73   0.467    -.7172986     1.56493
        cath |   .2678445   .3089515     0.87   0.386    -.3376894    .8733784
 frac_ethnic |   .1687032   .5646556     0.30   0.765    -.9380014    1.275408
   frac_lang |  -.2362432   .4911521    -0.48   0.631    -1.198884    .7263972
    frac_rel |   .0609832   .2302445     0.26   0.791    -.3902878    .5122542
     lgdpcap |   .0601419   .1788335     0.34   0.737    -.2903654    .4106492
   lurbanpop |   .0156142   .3891518     0.04   0.968    -.7471092    .7783376
       _cons |   1.086532   .9618272     1.13   0.259    -.7986149    2.971678
-------------+----------------------------------------------------------------
    /lnsigma |  -.9725086   .0727546   -13.37   0.000    -1.115105   -.8299122
     /athrho |   3.274922   3.625873     0.90   0.366    -3.831659     10.3815
-------------+----------------------------------------------------------------
       sigma |   .3781333   .0275109                      .3278808    .4360876
         rho |   .9971434   .0206857                     -.9990609           1
------------------------------------------------------------------------------
Instrumented:  opdp
Instruments:   lagregdp1 polity chpolity trans7 civwar68 islam protestn cath
               frac_ethnic frac_lang frac_rel lgdpcap lurbanpop lagregopdp1
               leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     0.82 Prob > chi2 = 0.3664

note: 0 failures and 1 success completely determined.
```

DROPPING COUNTRIES THAT HAVE OT RATIFIED THE ICCPR:

```
ivprobit death_penalty lagregdp1  (opdp=  lagregopdp1 leg_brit ratproc), robust

Probit model with endogenous regressors           Number of obs   =        140
                                                  Wald chi2(2)    =     281.88
Log pseudolikelihood = -117.92745                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
        opdp |  -3.186541   .2018702   -15.79   0.000    -3.582199   -2.790882
   lagregdp1 |  -1.596392    .764797    -2.09   0.037    -3.095367   -.0974176
       _cons |   2.126405    .471711     4.51   0.000     1.201869    3.050942
-------------+----------------------------------------------------------------
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```
    /lnsigma |  -.9788957   .0659111   -14.85   0.000    -1.108079   -.8497123
     /athrho |   1.259919    .506517     2.49   0.013     .2671636    2.252674
-------------+----------------------------------------------------------------
       sigma |   .3757258   .0247645                      .3301926    .4275379
         rho |   .8510417   .1396609                      .2609836     .978142
------------------------------------------------------------------------------
Instrumented:  opdp
Instruments:   lagregdp1 lagregopdp1 leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     6.19 Prob > chi2 = 0.0129

[note above is robust to dropping either weurope or eeurope]

ivprobit death_penalty lagregdp1 polity chpolity trans7 civwar68  (opdp=
lagregopdp1 leg_brit ratproc), robust


Probit model with endogenous regressors           Number of obs   =        125
                                                  Wald chi2(6)    =     295.10
Log pseudolikelihood = -103.35294                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
        opdp |  -3.156642   .2092802   -15.08   0.000    -3.566824    -2.74646
   lagregdp1 |  -1.659191   1.091557    -1.52   0.129    -3.798604    .4802228
      polity |   .0003597   .0024966     0.14   0.885    -.0045335     .005253
    chpolity |  -.0744608   .0956354    -0.78   0.436    -.2619028    .1129812
      trans7 |  -.2014794   .2288503    -0.88   0.379    -.6500178     .247059
    civwar68 |  -.1848603   .2344971    -0.79   0.431    -.6444662    .2747455
       _cons |   2.281907   .6468227     3.53   0.000     1.014158    3.549656
-------------+----------------------------------------------------------------
    /lnsigma |  -.9938715   .0683007   -14.55   0.000    -1.127738   -.8600047
     /athrho |   1.280421   .8160017     1.57   0.117    -.3189129    2.879755
-------------+----------------------------------------------------------------
       sigma |   .3701409   .0252809                      .3237647    .4231601
         rho |   .8565971   .2172535                     -.3085236    .9937145
------------------------------------------------------------------------------
Instrumented:  opdp
Instruments:   lagregdp1 polity chpolity trans7 civwar68 lagregopdp1
               leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     2.46 Prob > chi2 = 0.1166


ivprobit death_penalty lagregdp1 polity chpolity trans7 civwar68 islam protestn
cath  (opdp=  lagregopdp1 leg_brit ratproc), robust


Probit model with endogenous regressors           Number of obs   =        125
                                                  Wald chi2(9)    =     313.06
Log pseudolikelihood = -96.311417                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
        opdp |  -3.131601    .348442    -8.99   0.000    -3.814535   -2.448668
   lagregdp1 |  -2.247524    .698384    -3.22   0.001    -3.616332   -.8787164
      polity |   .0004942   .0038523     0.13   0.898    -.0070562    .0080446
```

```
    chpolity |  -.0663319   .0790931    -0.84   0.402    -.2213516    .0886878
      trans7 |  -.0916129   .2198769    -0.42   0.677    -.5225637     .339338
    civwar68 |  -.2397684   .1969821    -1.22   0.224    -.6258463    .1463094
       islam |    .340218   .2553481     1.33   0.183    -.1602551    .8406912
    protestn |   .1069502   .4699359     0.23   0.820    -.8141071    1.028008
        cath |   .0520412   .3990683     0.13   0.896    -.7301183    .8342007
       _cons |    2.44141   .4918605     4.96   0.000     1.477381    3.405439
-------------+----------------------------------------------------------------
    /lnsigma |   -1.00318   .0686737   -14.61   0.000    -1.137778   -.8685824
     /athrho |   1.831057   .9525689     1.92   0.055    -.0359438    3.698058
-------------+----------------------------------------------------------------
       sigma |   .3667113   .0251834                      .3205304    .4195459
         rho |   .9499294   .0930033                     -.0359283    .9987735
------------------------------------------------------------------------------
Instrumented:  opdp
Instruments:   lagregdp1 polity chpolity trans7 civwar68 islam protestn cath
               lagregopdp1 leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     3.69 Prob > chi2 = 0.0546

.

ivprobit death_penalty lagregdp1 polity chpolity trans7 civwar68 islam protestn
cath frac_ethnic frac_lang frac_rel  (opdp=  lagregopdp1 leg_brit ratproc),
robust


Probit model with endogenous regressors           Number of obs   =        121
                                                  Wald chi2(12)   =     319.36
Log pseudolikelihood = -92.136826                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
        opdp |  -3.114745   .3331424    -9.35   0.000    -3.767692   -2.461798
   lagregdp1 |  -2.202708   .6288585    -3.50   0.000    -3.435248   -.9701679
      polity |    .001811    .003086     0.59   0.557    -.0042375    .0078595
    chpolity |  -.0631068     .08065    -0.78   0.434     -.221178    .0949643
      trans7 |  -.0603058    .225961    -0.27   0.790    -.5031812    .3825695
    civwar68 |  -.2424212   .2132924    -1.14   0.256    -.6604667    .1756243
       islam |   .3223563   .2661997     1.21   0.226    -.1993856    .8440981
    protestn |   .1562837   .5204452     0.30   0.764    -.8637701    1.176338
        cath |   .0970572   .4119761     0.24   0.814    -.7104012    .9045156
 frac_ethnic |   .1060825   .5506019     0.19   0.847    -.9730774    1.185242
   frac_lang |  -.1301884   .4451972    -0.29   0.770    -1.002759    .7423821
    frac_rel |   .0000487   .0001764     0.28   0.782     -.000297    .0003944
       _cons |   2.383311   .5218162     4.57   0.000      1.36057    3.406052
-------------+----------------------------------------------------------------
    /lnsigma |  -1.008129    .069586   -14.49   0.000    -1.144515   -.8717428
     /athrho |   1.902835   .9335244     2.04   0.042     .0731611     3.73251
-------------+----------------------------------------------------------------
       sigma |   .3649011    .025392                      .3183783     .418222
         rho |   .9564795   .0794867                      .0730308    .9988551
------------------------------------------------------------------------------
Instrumented:  opdp
Instruments:   lagregdp1 polity chpolity trans7 civwar68 islam protestn cath
               frac_ethnic frac_lang frac_rel lagregopdp1 leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     4.15 Prob > chi2 = 0.0415
```

ivprobit death_penalty lagregdp1 polity chpolity trans7 civwar68 islam protestn cath frac_ethnic frac_lang frac_rel lgdpcap lurbanpop (opdp= lagregopdp1 leg_brit ratproc), robust

```
Probit model with endogenous regressors           Number of obs   =        115
                                                  Wald chi2(14)   =     243.39
Log pseudolikelihood = -89.742093                 Prob > chi2     =     0.0000

------------------------------------------------------------------------------
             |               Robust
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
death_pena~y |
        opdp |  -3.046769   .3456702    -8.81   0.000     -3.72427   -2.369268
   lagregdp1 |  -2.068206   .6322897    -3.27   0.001    -3.307471    -.828941
      polity |   .0026815   .0032423     0.83   0.408    -.0036732    .0090362
    chpolity |  -.0423618   .0685887    -0.62   0.537    -.1767931    .0920696
      trans7 |   .0241497   .2309051     0.10   0.917    -.4284159    .4767153
    civwar68 |   -.144898   .2311916    -0.63   0.531    -.5980253    .3082292
       islam |   .3339019   .2575584     1.30   0.195    -.1709034    .8387071
    protestn |   .0523284   .5225879     0.10   0.920    -.9719251    1.076582
        cath |   .0561908   .3648973     0.15   0.878    -.6589946    .7713763
 frac_ethnic |   .3828425   .5791331     0.66   0.509    -.7522374    1.517922
   frac_lang |  -.2321505   .5104874    -0.45   0.649    -1.232687    .7683863
    frac_rel |   .0000688   .0002451     0.28   0.779    -.0004115    .0005492
     lgdpcap |   .1172041   .1608349     0.73   0.466    -.1980265    .4324346
   lurbanpop |   -.126451   .3717516    -0.34   0.734    -.8550707    .6021687
       _cons |    1.75527   1.107322     1.59   0.113    -.4150412     3.92558
-------------+----------------------------------------------------------------
    /lnsigma |  -.9951195   .0703163   -14.15   0.000    -1.132937   -.8573022
     /athrho |   2.031813   1.047127     1.94   0.052    -.0205172    4.084144
-------------+----------------------------------------------------------------
       sigma |   .3696793   .0259945                      .322086    .4243052
         rho |   .9662076   .0695741                    -.0205143    .9994332
------------------------------------------------------------------------------
Instrumented:  opdp
Instruments:   lagregdp1 polity chpolity trans7 civwar68 islam protestn cath
               frac_ethnic frac_lang frac_rel lgdpcap lurbanpop lagregopdp1
               leg_british ratproc
------------------------------------------------------------------------------
Wald test of exogeneity (/athrho = 0): chi2(1) =     3.77 Prob > chi2 = 0.0523
```