

# LAMPIRAN

**Lampiran 1. Data Panel Penelitian**

| <b>NEGARA</b>     | <b>TAHUN</b> | <b>GDP per capita (current US\$)</b> | <b>CO2 emissions (kt)</b> | <b>Energy use (kg of oil equivalent per capita)</b> | <b>Foreign direct investment, net inflows (BoP, current US\$)</b> |
|-------------------|--------------|--------------------------------------|---------------------------|---|---|
| Brunei Darussalam | 2005         | 26102.13345                          | 5005.455                  | 6073.836531   | 175068516.6   |
|                   | 2006         | 30980.96692                          | 4862.442                  | 8511.873059   | 87839128.31   |
|                   | 2007         | 32672.36717                          | 8415.765                  | 8609.084895   | 257635717.5   |
|                   | 2008         | 37951.2806                           | 9119.829                  | 9341.203211   | 222184549.5   |
|                   | 2009         | 27965.47504                          | 7862.048                  | 7928.681613   | 325586827.8   |
|                   | 2010         | 35268.10117                          | 8203.079                  | 8337.151561   | 480722547   |
|                   | 2011         | 47017.0273                           | 9695.548                  | 9829.333042   | 691170274.5   |
|                   | 2012         | 47651.25909                          | 9666.212                  | 9581.151125   | 864905527.5   |
|                   | 2013         | 44597.27968                          | 7803.376                  | 7498.245078   | 775641999.1   |
|                   | 2014         | 41590.86502                          | 9108.828                  | 8632.325651   | 567889727.2   |
|                   | 2015         | 30967.89051                          | 8,257.40                  | 9189.761804   | 173243339.6   |
| Cambodia          | 2005         | 474.2238766                          | 2775.919                  | 258.9191377   | 377180190.6   |
|                   | 2006         | 539.8791529                          | 2999.606                  | 254.5069427   | 483209382.7   |
|                   | 2007         | 631.675789                           | 3465.315                  | 254.3066515   | 867288538.6   |
|                   | 2008         | 745.7877873                          | 3898.021                  | 251.3355238   | 815180218   |
|                   | 2009         | 738.2326684                          | 4653.423                  | 360.581831  | 511114452   |
|                   | 2010         | 785.6928841                          | 5012.789                  | 370.3497303   | 735199191.4   |
|                   | 2011         | 882.4901462                          | 5207.14                   | 381.3350167   | 795460489.1   |
|                   | 2012         | 950.0244132                          | 5456.496                  | 390.8853203   | 1440978035  |
|                   | 2013         | 1028.419568                          | 5603.176                  | 397.009737  | 1345044252  |
|                   | 2014         | 1098.687123                          | 6684.941                  | 416.9396606   | 1730355930  |
|                   | 2015         | 1163.18977                           | 5292.3                    | 450.3624214   | 1700968602  |
| Indonesia         | 2005         | 1260.928834                          | 341991.754                | 792.9268815   | 8336257208  |
|                   | 2006         | 1586.20504                           | 345119.705                | 800.5394421   | 4914201435  |
|                   | 2007         | 1855.093915                          | 375544.804                | 785.9927772   | 6928480000  |
|                   | 2008         | 2160.527606                          | 416560.199                | 790.7844196   | 9318453650  |
|                   | 2009         | 2254.445606                          | 446409.579                | 843.4525271   | 4877369178  |
|                   | 2010         | 3113.480635                          | 428760.308                | 874.5806371   | 15292009411   |
|                   | 2011         | 3634.276805                          | 603665.207                | 831.5560284   | 20564938227   |
|                   | 2012         | 3687.953996                          | 637078.911                | 851.7314336   | 21200778608   |
|                   | 2013         | 3620.663981                          | 490226.562                | 863.0435104   | 23281742362   |
|                   | 2014         | 3491.595887                          | 464176.194                | 883.910977  | 25120732060   |
|                   | 2015         | 3336.106686                          | 502,961.30                | 889.8025819   | 19779127977   |

| NEGARA      | TAHUN | GDP per capita (current US\$) | CO2 emissions (kt) | Energy use (kg of oil equivalent per capita) | Foreign direct investment, net inflows (BoP, current US\$) |
|-------------|-------|-------------------------------|--------------------|--|--|
| Malaysia    | 2005  | 5593.822995                   | 174486.861         | 2561.608375                                  | 3924786635   |
|             | 2006  | 6222.982955                   | 167702.911         | 2527.964854                                  | 7690731246   |
|             | 2007  | 7269.17114                    | 184816.8           | 2718.084065                                  | 9071369835   |
|             | 2008  | 8513.629541                   | 204031.88          | 2790.464035                                  | 7572512432   |
|             | 2009  | 7326.744435                   | 198876.078         | 2603.932972                                  | 114664434.6  |
|             | 2010  | 9071.356987                   | 218476.193         | 2610.309534                                  | 10885614182  |
|             | 2011  | 10405.12062                   | 220405.035         | 2672.128164                                  | 15119371191  |
|             | 2012  | 10779.49641                   | 218707.214         | 2669.140585                                  | 8895774251   |
|             | 2013  | 10882.27842                   | 236510.499         | 2955.791557                                  | 11296278696  |
|             | 2014  | 11183.96191                   | 242821.406         | 2967.541304                                  | 10619431770  |
|             | 2015  | 9643.644683                   | 245,371.30         | 2909.524373                                  | 10962721673  |
| Myanmar     | 2005  | 247.2427006                   | 11598.721          | 307.2458098                                  | 234904379  |
|             | 2006  | 296.9007284                   | 12849.168          | 309.2750154                                  | 275812653  |
|             | 2007  | 410.4500001                   | 12874.837          | 318.7690346                                  | 709922015.3  |
|             | 2008  | 643.9513703                   | 9801.891           | 305.3896066                                  | 863880447.3  |
|             | 2009  | 741.0777116                   | 10230.93           | 287.4631054                                  | 1078972201   |
|             | 2010  | 987.7365832                   | 12515.471          | 279.5506235                                  | 901133534.9  |
|             | 2011  | 1186.423937                   | 14297.633          | 283.3469075                                  | 2519813313   |
|             | 2012  | 1171.508257                   | 11070.673          | 307.0757299                                  | 1333856137   |
|             | 2013  | 1168.803947                   | 12860.169          | 322.886268                                   | 2254603965   |
|             | 2014  | 1262.893782                   | 21631.633          | 371.8689107                                  | 2175015284   |
|             | 2015  | 1194.590137                   | 11639.7            | 327.4330869                                  | 4083839112   |
| Philippines | 2005  | 1194.697155                   | 74832.469          | 450.3500854                                  | 1664000000   |
|             | 2006  | 1391.772325                   | 67692.82           | 439.2396447                                  | 2707414997   |
|             | 2007  | 1672.685433                   | 72170.227          | 432.8067589                                  | 2918724841   |
|             | 2008  | 1919.466195                   | 78858.835          | 441.9199257                                  | 1340027563   |
|             | 2009  | 1825.341521                   | 77568.051          | 414.0776624                                  | 2064620678   |
|             | 2010  | 2129.499242                   | 84869.048          | 431.0102538                                  | 1070386940   |
|             | 2011  | 2352.518156                   | 85496.105          | 426.8219905                                  | 2007150725   |
|             | 2012  | 2581.818554                   | 91205.624          | 446.5388715                                  | 3215415155   |
|             | 2013  | 2760.289146                   | 98128.92           | 454.8566571                                  | 3737371740   |
|             | 2014  | 2842.938353                   | 105653.604         | 476.2447245                                  | 5739574024   |
|             | 2015  | 2878.33837                    | 113035.4           | 454.1423304                                  | 5639155962   |

| NEGARA    | TAHUN | GDP per capita (current US\$) | CO2 emissions (kt) | Energy use (kg of oil equivalent per capita) | Foreign direct investment, net inflows (BoP, current US\$) |
|-----------|-------|-------------------------------|--------------------|--|--|
| Singapore | 2005  | 29869.85398                   | 30359.093          | 5055.96632                                   | 18090329984  |
|           | 2006  | 33579.85948                   | 30799.133          | 5264.398658                                  | 36923890241  |
|           | 2007  | 39223.58187                   | 19926.478          | 4677.204306                                  | 47733209770  |
|           | 2008  | 39721.04818                   | 36134.618          | 5094.135714                                  | 12200705252  |
|           | 2009  | 38577.55822                   | 55932.751          | 4257.776277                                  | 23821209700  |
|           | 2010  | 46569.67951                   | 55643.058          | 5006.620992                                  | 55075864345  |
|           | 2011  | 53166.67581                   | 45221.444          | 5069.171794                                  | 49155975338  |
|           | 2012  | 54431.16199                   | 36372.973          | 4898.330465                                  | 56236647375  |
|           | 2013  | 56029.18914                   | 55676.061          | 4880.40607                                   | 64684568049  |
|           | 2014  | 56336.07234                   | 56372.791          | 5121.804318                                  | 73986661931  |
|           | 2015  | 53629.73746                   | 48531.5            | 4922.054079                                  | 70579746513  |
| Thailand  | 2005  | 2893.651356                   | 247467.495         | 1513.255342                                  | 8215637195   |
|           | 2006  | 3368.952576                   | 252047.578         | 1533.724439                                  | 8917470351   |
|           | 2007  | 3972.206475                   | 252447.281         | 1589.750409                                  | 8633903441   |
|           | 2008  | 4378.687406                   | 252443.614         | 1624.468441                                  | 8561557725   |
|           | 2009  | 4212.054902                   | 267602.992         | 1610.321449                                  | 6411458545   |
|           | 2010  | 5075.302176                   | 281926.294         | 1753.343029                                  | 14746672920  |
|           | 2011  | 5491.159981                   | 278317.966         | 1742.937338                                  | 2473685996   |
|           | 2012  | 5859.915622                   | 296597.961         | 1860.097607                                  | 12899036061  |
|           | 2013  | 6171.262444                   | 300088.945         | 1991.635583                                  | 15935960663  |
|           | 2014  | 5941.84071                    | 316212.744         | 1969.633659                                  | 4975455660   |
|           | 2015  | 5814.863134                   | 279253.2           | 2024.348301                                  | 9003516296   |
| Vietnam   | 2005  | 699.4997775                   | 98143.588          | 500.6759507                                  | 1954000000   |
|           | 2006  | 796.6715738                   | 102745.673         | 507.3890905                                  | 2400000000   |
|           | 2007  | 919.2092656                   | 104872.533         | 540.0819535                                  | 6700000000   |
|           | 2008  | 1164.612525                   | 117993.059         | 571.3794031                                  | 9579000000   |
|           | 2009  | 1232.369674                   | 128634.693         | 616.8350015                                  | 7600000000   |
|           | 2010  | 1333.583524                   | 142737.975         | 677.6743911                                  | 8000000000   |
|           | 2011  | 1542.670436                   | 152169.499         | 670.1831202                                  | 7430000000   |
|           | 2012  | 1754.547974                   | 142220.928         | 674.7836485                                  | 8368000000   |
|           | 2013  | 1907.564382                   | 147230.05          | 667.6464664                                  | 8900000000   |
|           | 2014  | 2052.319084                   | 166910.839         | 731.0079243                                  | 9200000000   |
|           | 2015  | 2107.012927                   | 206028.4           | 756.6173086                                  | 11800000000  |

Sumber : World Bank, 2017

## Lampiran 2. Model Regresi Data Panel

Dependent Variable: LOG(GDP?)

Method: Pooled Least Squares

Date: 12/04/17 Time: 12:42

Sample: 2005 2015

Included observations: 11

Cross-sections included: 9

Total pool (balanced) observations: 99

| Variable      | Coefficient | Std. Error | t-Statistic | Prob.  |
|---------------|-------------|------------|-------------|--------|
| C             | -5.353726   | 1.497435   | -3.575264   | 0.0006 |
| LOG(CO2?)     | 0.519687    | 0.145340   | 3.575669    | 0.0006 |
| LOG(ENERGY?)  | 0.523984    | 0.265871   | 1.970817    | 0.0519 |
| LOG(FDI?)     | 0.193231    | 0.035032   | 5.515776    | 0.0000 |
| Fixed Effects |             |            |             |        |
| (Cross)       |             |            |             |        |
| _BRUNEY--C    | 2.652763    |            |             |        |
| _KAMBOJA--C   | 0.632193    |            |             |        |
| _INDO--C      | -1.577029   |            |             |        |
| _MALAY--C     | -0.451800   |            |             |        |
| _MYANMAR--C   | 0.023926    |            |             |        |
| _PHILIP--C    | -0.293527   |            |             |        |
| _SINGA--C     | 1.366472    |            |             |        |
| _THAIL--C     | -1.018111   |            |             |        |
| _VIETNAM--C   | -1.334887   |            |             |        |

### Effects Specification

Cross-section fixed (dummy variables)

|                    |          |                       |          |
|--------------------|----------|-----------------------|----------|
| R-squared          | 0.979603 | Mean dependent var    | 8.294885 |
| Adjusted R-squared | 0.977024 | S.D. dependent var    | 1.480552 |
|                    |          |                       | -        |
| S.E. of regression | 0.224420 | Akaike info criterion | 0.037382 |
| Sum squared resid  | 4.381699 | Schwarz criterion     | 0.277178 |
| Log likelihood     | 13.85041 | Hannan-Quinn criter.  | 0.089889 |
| F-statistic        | 379.8461 | Durbin-Watson stat    | 0.828821 |
| Prob(F-statistic)  | 0.000000 |                       |          |

### Lampiran 3. Pemilihan Model

#### Uji Chow

Redundant Fixed Effects Tests  
Pool: PANEL  
Test cross-section fixed effects

| Effects Test             | Statistic  | d.f.   | Prob.  |
|--------------------------|------------|--------|--------|
| Cross-section F          | 21.247515  | (8,87) | 0.0000 |
| Cross-section Chi-square | 107.225970 | 8      | 0.0000 |

Cross-section fixed effects test equation:  
Dependent Variable: LOG(GDP?)  
Method: Panel Least Squares  
Date: 12/04/17 Time: 12:46  
Sample: 2005 2015  
Included observations: 11  
Cross-sections included: 9  
Total pool (balanced) observations: 99

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.  |
|--------------------|-------------|-----------------------|-------------|--------|
| C                  | -3.254271   | 0.547905              | -5.939483   | 0.0000 |
| LOG(CO2?)          | -0.148461   | 0.031229              | -4.753935   | 0.0000 |
| LOG(ENERGY?)       | 1.195446    | 0.033037              | 36.18472    | 0.0000 |
| LOG(FDI?)          | 0.213638    | 0.031599              | 6.760945    | 0.0000 |
| R-squared          | 0.939751    | Mean dependent var    | 8.294885    |        |
| Adjusted R-squared | 0.937848    | S.D. dependent var    | 1.480552    |        |
| S.E. of regression | 0.369105    | Akaike info criterion | 0.884092    |        |
| Sum squared resid  | 12.94264    | Schwarz criterion     | 0.988946    |        |
| Log likelihood     | -39.76257   | Hannan-Quinn criter.  | 0.926516    |        |
| F-statistic        | 493.9307    | Durbin-Watson stat    | 0.279178    |        |
| Prob(F-statistic)  | 0.000000    |                       |             |        |

## Uji Hausman

Correlated Random Effects - Hausman Test

Pool: PANEL

Test cross-section random effects

| Test Summary         | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob.  |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 17.173732         | 3            | 0.0007 |

Cross-section random effects test comparisons:

| Variable     | Fixed    | Random    | Var(Diff.) | Prob.  |
|--------------|----------|-----------|------------|--------|
| LOG(CO2?)    | 0.519687 | -0.003653 | 0.016076   | 0.0000 |
| LOG(ENERGY?) | 0.523984 | 1.169143  | 0.060994   | 0.0090 |
| LOG(FDI?)    | 0.193231 | 0.212094  | 0.000134   | 0.1028 |

Cross-section random effects test equation:

Dependent Variable: LOG(GDP?)

Method: Panel Least Squares

Date: 12/04/17 Time: 12:47

Sample: 2005 2015

Included observations: 11

Cross-sections included: 9

Total pool (balanced) observations: 99

| Variable     | Coefficient | Std. Error | t-Statistic | Prob.  |
|--------------|-------------|------------|-------------|--------|
| C            | -5.353726   | 1.497435   | -3.575264   | 0.0006 |
| LOG(CO2?)    | 0.519687    | 0.145340   | 3.575669    | 0.0006 |
| LOG(ENERGY?) | 0.523984    | 0.265871   | 1.970817    | 0.0519 |
| LOG(FDI?)    | 0.193231    | 0.035032   | 5.515776    | 0.0000 |

### Effects Specification

Cross-section fixed (dummy variables)

|                    |          |                       |           |
|--------------------|----------|-----------------------|-----------|
| R-squared          | 0.979603 | Mean dependent var    | 8.294885  |
| Adjusted R-squared | 0.977024 | S.D. dependent var    | 1.480552  |
| S.E. of regression | 0.224420 | Akaike info criterion | -0.037382 |
| Sum squared resid  | 4.381699 | Schwarz criterion     | 0.277178  |
| Log likelihood     | 13.85041 | Hannan-Quinn criter.  | 0.089889  |
| F-statistic        | 379.8461 | Durbin-Watson stat    | 0.828821  |
| Prob(F-statistic)  | 0.000000 |                       |           |

## Lampiran 4. Uji Asumsi Klasik

### Uji Multikolinearitas

|              | C         | LOG(CO2?) | LOG(ENERGY?) | LOG(FDI?) |
|--------------|-----------|-----------|--------------|-----------|
| C            | 2.242312  | -0.040075 | -0.242293    | -0.004006 |
| LOG(CO2?)    | -0.040075 | 0.021124  | -0.022006    | -0.001589 |
| LOG(ENERGY?) | -0.242293 | -0.022006 | 0.070688     | -0.000801 |
| LOG(FDI?)    | -0.004006 | -0.001589 | -0.000801    | 0.001227  |

### Uji Heteroskedastisitas

Dependent Variable: RESID?  
 Method: Pooled Least Squares  
 Date: 12/04/17 Time: 13:00  
 Sample: 2005 2015  
 Included observations: 11  
 Cross-sections included: 9  
 Total pool (balanced) observations: 99

| Variable              | Coefficient | Std. Error | t-Statistic | Prob.  |
|-----------------------|-------------|------------|-------------|--------|
| C                     | 0.379864    | 0.093134   | 4.078696    | 0.0001 |
| CO2?                  | -6.17E-07   | 3.97E-07   | -1.554775   | 0.1236 |
| ENERGY?               | -5.28E-05   | 3.60E-05   | -1.466063   | 0.1462 |
| FDI?                  | -2.42E-12   | 1.84E-12   | -1.318437   | 0.1908 |
| Fixed Effects (Cross) |             |            |             |        |
| _BRUNEY--C            | 0.200123    |            |             |        |
| _KAMBOJA--C           | -0.289057   |            |             |        |
| _INDO--C              | 0.117240    |            |             |        |
| _MALAY--C             | 0.067807    |            |             |        |
| _MYANMAR--C           | -0.000591   |            |             |        |
| _PHILIP--C            | -0.147070   |            |             |        |
| _SINGA--C             | 0.141327    |            |             |        |
| _THAIL--C             | 0.041497    |            |             |        |
| _VIETNAM--C           | -0.131276   |            |             |        |

#### Effects Specification

#### Cross-section fixed (dummy variables)

|                    |          |                       |           |
|--------------------|----------|-----------------------|-----------|
| R-squared          | 0.329343 | Mean dependent var    | 0.150268  |
| Adjusted R-squared | 0.244547 | S.D. dependent var    | 0.147988  |
| S.E. of regression | 0.128626 | Akaike info criterion | -1.150598 |
| Sum squared resid  | 1.439392 | Schwarz criterion     | -0.836038 |
| Log likelihood     | 68.95459 | Hannan-Quinn criter.  | -1.023326 |
| F-statistic        | 3.883957 | Durbin-Watson stat    | 1.626300  |
| Prob(F-statistic)  | 0.000141 |                       |           |