**HASIL UJI UNIT ROOT**

**UJI stasioner ADF menunjukkan bahwa data**

1. **Variabel pengeluaran pemerintah (LOG\_G) satsioner pada I(1) dengan include in test equation :intercept**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: D(LOG\_G) has a unit root | | | |  |
| Exogenous: Constant | | |  |  |
| Lag Length: 0 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | -6.079104 | 0.0000 |
| Test critical values: | 1% level |  | -3.639407 |  |
|  | 5% level |  | -2.951125 |  |
|  | 10% level |  | -2.614300 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(LOG\_G,2) | | | |  |
| Method: Least Squares | | |  |  |
| Date: 06/11/17 Time: 05:06 | | |  |  |
| Sample (adjusted): 1982 2015 | | |  |  |
| Included observations: 34 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| D(LOG\_G(-1)) | -1.071351 | 0.176235 | -6.079104 | 0.0000 |
| C | 0.168722 | 0.090154 | 1.871486 | 0.0704 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.535933 | Mean dependent var | | -0.000721 |
| Adjusted R-squared | 0.521430 | S.D. dependent var | | 0.722664 |
| S.E. of regression | 0.499930 | Akaike info criterion | | 1.508325 |
| Sum squared resid | 7.997758 | Schwarz criterion | | 1.598111 |
| Log likelihood | -23.64152 | Hannan-Quinn criter. | | 1.538944 |
| F-statistic | 36.95550 | Durbin-Watson stat | | 1.983103 |
| Prob(F-statistic) | 0.000001 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. **Variabel angka harapan hidup (ah) satsioner pada I(1) dengan include in test equation :intercept**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: D(ANGKA\_HARAPAN\_HIDUP) has a unit root | | | | |
| Exogenous: Constant | | |  |  |
| Lag Length: 0 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | -9.754452 | 0.0000 |
| Test critical values: | 1% level |  | -3.639407 |  |
|  | 5% level |  | -2.951125 |  |
|  | 10% level |  | -2.614300 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(ANGKA\_HARAPAN\_HIDUP,2) | | | |  |
| Method: Least Squares | | |  |  |
| Date: 06/11/17 Time: 04:58 | | |  |  |
| Sample (adjusted): 1982 2015 | | |  |  |
| Included observations: 34 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| D(ANGKA\_HARAPAN\_HIDUP(-1)) | -1.498740 | 0.153647 | -9.754452 | 0.0000 |
| C | 0.432009 | 0.375031 | 1.151928 | 0.2579 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.748327 | Mean dependent var | | 0.022941 |
| Adjusted R-squared | 0.740463 | S.D. dependent var | | 4.265547 |
| S.E. of regression | 2.173075 | Akaike info criterion | | 4.447186 |
| Sum squared resid | 151.1121 | Schwarz criterion | | 4.536972 |
| Log likelihood | -73.60216 | Hannan-Quinn criter. | | 4.477805 |
| F-statistic | 95.14933 | Durbin-Watson stat | | 2.323218 |
| Prob(F-statistic) | 0.000000 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. **Variabel angka kelahiran (akl) stasioner pada I(0) dengan include in test equation :intercept**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: ANGKA\_KELAHIRAN has a unit root | | | | |
| Exogenous: Constant | | |  |  |
| Lag Length: 9 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | -3.560189 | 0.0142 |
| Test critical values: | 1% level |  | -3.711457 |  |
|  | 5% level |  | -2.981038 |  |
|  | 10% level |  | -2.629906 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(ANGKA\_KELAHIRAN) | | | |  |
| Method: Least Squares | | |  |  |
| Date: 06/11/17 Time: 05:00 | | |  |  |
| Sample (adjusted): 1990 2015 | | |  |  |
| Included observations: 26 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| ANGKA\_KELAHIRAN(-1) | -0.004910 | 0.001379 | -3.560189 | 0.0028 |
| D(ANGKA\_KELAHIRAN(-1)) | 2.476707 | 0.230319 | 10.75336 | 0.0000 |
| D(ANGKA\_KELAHIRAN(-2)) | -2.239388 | 0.648142 | -3.455089 | 0.0035 |
| D(ANGKA\_KELAHIRAN(-3)) | 0.644474 | 0.871157 | 0.739791 | 0.4708 |
| D(ANGKA\_KELAHIRAN(-4)) | 0.093628 | 0.903705 | 0.103604 | 0.9189 |
| D(ANGKA\_KELAHIRAN(-5)) | 0.049452 | 0.937062 | 0.052774 | 0.9586 |
| D(ANGKA\_KELAHIRAN(-6)) | 0.294979 | 0.955710 | 0.308649 | 0.7618 |
| D(ANGKA\_KELAHIRAN(-7)) | -1.027561 | 0.892895 | -1.150820 | 0.2678 |
| D(ANGKA\_KELAHIRAN(-8)) | 1.083822 | 0.607947 | 1.782757 | 0.0949 |
| D(ANGKA\_KELAHIRAN(-9)) | -0.445638 | 0.195875 | -2.275109 | 0.0380 |
| C | 0.083958 | 0.025809 | 3.253093 | 0.0053 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.999823 | Mean dependent var | | -0.264962 |
| Adjusted R-squared | 0.999705 | S.D. dependent var | | 0.224485 |
| S.E. of regression | 0.003858 | Akaike info criterion | | -7.980977 |
| Sum squared resid | 0.000223 | Schwarz criterion | | -7.448705 |
| Log likelihood | 114.7527 | Hannan-Quinn criter. | | -7.827702 |
| F-statistic | 8460.635 | Durbin-Watson stat | | 2.245149 |
| Prob(F-statistic) | 0.000000 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. **Variabel angka kematian(ake) stasioner pada I(0) dengan include in test equation :intercept**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: ANGKA\_KEMATIAN has a unit root | | | | |
| Exogenous: Constant | | |  |  |
| Lag Length: 2 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | -5.050680 | 0.0002 |
| Test critical values: | 1% level |  | -3.646342 |  |
|  | 5% level |  | -2.954021 |  |
|  | 10% level |  | -2.615817 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(ANGKA\_KEMATIAN) | | | |  |
| Method: Least Squares | | |  |  |
| Date: 06/11/17 Time: 05:01 | | |  |  |
| Sample (adjusted): 1983 2015 | | |  |  |
| Included observations: 33 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| ANGKA\_KEMATIAN(-1) | -0.010236 | 0.002027 | -5.050680 | 0.0000 |
| D(ANGKA\_KEMATIAN(-1)) | 1.722408 | 0.061741 | 27.89739 | 0.0000 |
| D(ANGKA\_KEMATIAN(-2)) | -0.814840 | 0.054693 | -14.89855 | 0.0000 |
| C | 0.072645 | 0.014498 | 5.010848 | 0.0000 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.998754 | Mean dependent var | | -0.065970 |
| Adjusted R-squared | 0.998625 | S.D. dependent var | | 0.077774 |
| S.E. of regression | 0.002884 | Akaike info criterion | | -8.746068 |
| Sum squared resid | 0.000241 | Schwarz criterion | | -8.564673 |
| Log likelihood | 148.3101 | Hannan-Quinn criter. | | -8.685034 |
| F-statistic | 7747.658 | Durbin-Watson stat | | 0.821505 |
| Prob(F-statistic) | 0.000000 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. **Variabel usia produktif (log\_up) satsioner pada I(1) dengan include in test equation :none**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: D(LOG\_UP) has a unit root | | | |  |
| Exogenous: None | | |  |  |
| Lag Length: 0 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | -2.185864 | 0.0297 |
| Test critical values: | 1% level |  | -2.634731 |  |
|  | 5% level |  | -1.951000 |  |
|  | 10% level |  | -1.610907 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(LOG\_UP,2) | | | |  |
| Method: Least Squares | | |  |  |
| Date: 06/11/17 Time: 05:09 | | |  |  |
| Sample (adjusted): 1982 2015 | | |  |  |
| Included observations: 34 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| D(LOG\_UP(-1)) | -0.019244 | 0.008804 | -2.185864 | 0.0360 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.020250 | Mean dependent var | | -0.000398 |
| Adjusted R-squared | 0.020250 | S.D. dependent var | | 0.001157 |
| S.E. of regression | 0.001145 | Akaike info criterion | | -10.67728 |
| Sum squared resid | 4.33E-05 | Schwarz criterion | | -10.63239 |
| Log likelihood | 182.5138 | Hannan-Quinn criter. | | -10.66197 |
| Durbin-Watson stat | 1.909701 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. **Variabel usia non produktif (log\_unp) satsioner pada I(1) dengan include in test equation :none**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: D(LOG\_UNP) has a unit root | | | |  |
| Exogenous: None | | |  |  |
| Lag Length: 0 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | -1.990664 | 0.0459 |
| Test critical values: | 1% level |  | -2.634731 |  |
|  | 5% level |  | -1.951000 |  |
|  | 10% level |  | -1.610907 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(LOG\_UNP,2) | | | |  |
| Method: Least Squares | | |  |  |
| Date: 06/11/17 Time: 05:08 | | |  |  |
| Sample (adjusted): 1982 2015 | | |  |  |
| Included observations: 34 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| D(LOG\_UNP(-1)) | -0.085664 | 0.043033 | -1.990664 | 0.0549 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.086649 | Mean dependent var | | -0.000324 |
| Adjusted R-squared | 0.086649 | S.D. dependent var | | 0.002169 |
| S.E. of regression | 0.002073 | Akaike info criterion | | -9.490634 |
| Sum squared resid | 0.000142 | Schwarz criterion | | -9.445741 |
| Log likelihood | 162.3408 | Hannan-Quinn criter. | | -9.475324 |
| Durbin-Watson stat | 1.797500 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Hasil UJI COINTEGRATION**

**Dengan Johansen Test diperoleh cointegration rank =4 . Ini kemudian dikurangkan dengan variable yang stasioner pada I(0)=2, 4-2=2, sehingga ada 2 cointegration rank. Dapat disimpulkan bahwa variable Y dan X memiliki hubungan jangka panjang**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Date: 06/11/17 Time: 06:17 | | |  |  |  |  |
| Sample (adjusted): 1982 2015 | | |  |  |  |  |
| Included observations: 34 after adjustments | | | |  |  |  |
| Trend assumption: Linear deterministic trend | | | |  |  |  |
| Series: LOG\_G AH AKE AKL LOG\_UNP LOG\_UP | | | |  |  |  |
| Lags interval (in first differences): 1 to 1 | | | |  |  |  |
|  |  |  |  |  |  |  |
| Unrestricted Cointegration Rank Test (Trace) | | | |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Hypothesized |  | Trace | 0.05 |  |  |  |
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.\*\* |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| None \* | 0.970178 | 270.7225 | 95.75366 | 0.0000 |  |  |
| At most 1 \* | 0.781239 | 151.2969 | 69.81889 | 0.0000 |  |  |
| At most 2 \* | 0.770329 | 99.62455 | 47.85613 | 0.0000 |  |  |
| At most 3 \* | 0.648919 | 49.60684 | 29.79707 | 0.0001 |  |  |
| At most 4 | 0.334455 | 14.01776 | 15.49471 | 0.0825 |  |  |
| At most 5 | 0.005125 | 0.174700 | 3.841466 | 0.6760 |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Trace test indicates 4 cointegrating eqn(s) at the 0.05 level | | | | |  |  |
| \* denotes rejection of the hypothesis at the 0.05 level | | | | |  |  |
| \*\*MacKinnon-Haug-Michelis (1999) p-values | | | |  |  |  |
|  |  |  |  |  |  |  |
| Unrestricted Cointegration Rank Test (Maximum Eigenvalue) | | | | |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Hypothesized |  | Max-Eigen | 0.05 |  |  |  |
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.\*\* |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| None \* | 0.970178 | 119.4256 | 40.07757 | 0.0000 |  |  |
| At most 1 \* | 0.781239 | 51.67238 | 33.87687 | 0.0002 |  |  |
| At most 2 \* | 0.770329 | 50.01771 | 27.58434 | 0.0000 |  |  |
| At most 3 \* | 0.648919 | 35.58908 | 21.13162 | 0.0003 |  |  |
| At most 4 | 0.334455 | 13.84307 | 14.26460 | 0.0582 |  |  |
| At most 5 | 0.005125 | 0.174700 | 3.841466 | 0.6760 |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level | | | | |  |  |
| \* denotes rejection of the hypothesis at the 0.05 level | | | | |  |  |
| \*\*MacKinnon-Haug-Michelis (1999) p-values | | | |  |  |  |
|  |  |  |  |  |  |  |
| Unrestricted Cointegrating Coefficients (normalized by b'\*S11\*b=I): | | | | |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| LOG\_G | AH | AKE | AKL | LOG\_UNP | LOG\_UP |  |
| 1.224460 | 0.291981 | -1.531768 | -0.348713 | -81.78881 | 37.66201 |  |
| -1.482197 | 0.490234 | 11.18678 | -5.745328 | 26.42963 | 18.28138 |  |
| -2.919315 | -0.052408 | -7.789862 | 4.741578 | -483.3479 | 271.0023 |  |
| -1.196008 | -0.920562 | 11.29314 | -9.094481 | 0.547091 | 39.98612 |  |
| -1.347013 | -0.153100 | -14.12934 | 8.624854 | -12.61458 | 57.55264 |  |
| -1.150097 | 0.266879 | -20.96188 | 2.958987 | -177.6283 | 125.3755 |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Unrestricted Adjustment Coefficients (alpha): | | | |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| D(LOG\_G) | -0.090199 | 0.348253 | -0.007329 | 0.044021 | -0.005900 | 0.009172 |
| D(AH) | -0.310882 | -1.015934 | 0.418404 | 1.163517 | -0.051644 | -0.047046 |
| D(AKE) | 0.003184 | -0.001569 | 0.003256 | -0.000786 | -0.001367 | -0.000132 |
| D(AKL) | -0.015037 | -0.007356 | 0.004698 | -0.005268 | -0.004324 | 3.07E-05 |
| D(LOG\_UNP) | 0.000485 | -0.000168 | 0.000433 | 0.000420 | 0.000662 | 6.38E-05 |
| D(LOG\_UP) | -0.000261 | 0.000113 | -0.000155 | -0.000255 | -0.000311 | -4.14E-05 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 1 Cointegrating Equation(s): | | Log likelihood | 611.4870 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Normalized cointegrating coefficients (standard error in parentheses) | | | | |  |  |
| LOG\_G | AH | AKE | AKL | LOG\_UNP | LOG\_UP |  |
| 1.000000 | 0.238457 | -1.250975 | -0.284789 | -66.79584 | 30.75807 |  |
|  | (0.03119) | (0.83595) | (0.41235) | (10.5087) | (4.95886) |  |
|  |  |  |  |  |  |  |
| Adjustment coefficients (standard error in parentheses) | | | |  |  |  |
| D(LOG\_G) | -0.110445 |  |  |  |  |  |
|  | (0.10047) |  |  |  |  |  |
| D(AH) | -0.380662 |  |  |  |  |  |
|  | (0.48490) |  |  |  |  |  |
| D(AKE) | 0.003899 |  |  |  |  |  |
|  | (0.00125) |  |  |  |  |  |
| D(AKL) | -0.018412 |  |  |  |  |  |
|  | (0.00343) |  |  |  |  |  |
| D(LOG\_UNP) | 0.000594 |  |  |  |  |  |
|  | (0.00039) |  |  |  |  |  |
| D(LOG\_UP) | -0.000320 |  |  |  |  |  |
|  | (0.00021) |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 2 Cointegrating Equation(s): | | Log likelihood | 637.3232 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Normalized cointegrating coefficients (standard error in parentheses) | | | | |  |  |
| LOG\_G | AH | AKE | AKL | LOG\_UNP | LOG\_UP |  |
| 1.000000 | 0.000000 | -3.888748 | 1.458383 | -46.28318 | 12.70554 |  |
|  |  | (0.95274) | (0.46780) | (12.1825) | (5.78814) |  |
| 0.000000 | 1.000000 | 11.06184 | -7.310213 | -86.02243 | 75.70559 |  |
|  |  | (3.76189) | (1.84711) | (48.1026) | (22.8545) |  |
|  |  |  |  |  |  |  |
| Adjustment coefficients (standard error in parentheses) | | | |  |  |  |
| D(LOG\_G) | -0.626625 | 0.144389 |  |  |  |  |
|  | (0.08744) | (0.02595) |  |  |  |  |
| D(AH) | 1.125152 | -0.588817 |  |  |  |  |
|  | (0.65797) | (0.19528) |  |  |  |  |
| D(AKE) | 0.006225 | 0.000160 |  |  |  |  |
|  | (0.00187) | (0.00056) |  |  |  |  |
| D(AKL) | -0.007510 | -0.007996 |  |  |  |  |
|  | (0.00461) | (0.00137) |  |  |  |  |
| D(LOG\_UNP) | 0.000843 | 5.90E-05 |  |  |  |  |
|  | (0.00061) | (0.00018) |  |  |  |  |
| D(LOG\_UP) | -0.000488 | -2.09E-05 |  |  |  |  |
|  | (0.00033) | (9.8E-05) |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 3 Cointegrating Equation(s): | | Log likelihood | 662.3321 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Normalized cointegrating coefficients (standard error in parentheses) | | | | |  |  |
| LOG\_G | AH | AKE | AKL | LOG\_UNP | LOG\_UP |  |
| 1.000000 | 0.000000 | 0.000000 | -0.346602 | 84.22528 | -52.66928 |  |
|  |  |  | (0.20909) | (8.73866) | (3.91613) |  |
| 0.000000 | 1.000000 | 0.000000 | -2.175797 | -457.2636 | 261.6692 |  |
|  |  |  | (1.00339) | (41.9354) | (18.7929) |  |
| 0.000000 | 0.000000 | 1.000000 | -0.464156 | 33.56053 | -16.81128 |  |
|  |  |  | (0.06063) | (2.53393) | (1.13555) |  |
|  |  |  |  |  |  |  |
| Adjustment coefficients (standard error in parentheses) | | | |  |  |  |
| D(LOG\_G) | -0.605229 | 0.144773 | 4.091090 |  |  |  |
|  | (0.15890) | (0.02605) | (0.62359) |  |  |  |
| D(AH) | -0.096301 | -0.610745 | -14.14814 |  |  |  |
|  | (1.16140) | (0.19038) | (4.55773) |  |  |  |
| D(AKE) | -0.003281 | -1.03E-05 | -0.047796 |  |  |  |
|  | (0.00257) | (0.00042) | (0.01010) |  |  |  |
| D(AKL) | -0.021224 | -0.008243 | -0.095846 |  |  |  |
|  | (0.00774) | (0.00127) | (0.03038) |  |  |  |
| D(LOG\_UNP) | -0.000420 | 3.64E-05 | -0.005996 |  |  |  |
|  | (0.00107) | (0.00018) | (0.00421) |  |  |  |
| D(LOG\_UP) | -3.54E-05 | -1.28E-05 | 0.002873 |  |  |  |
|  | (0.00059) | (9.7E-05) | (0.00231) |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 4 Cointegrating Equation(s): | | Log likelihood | 680.1266 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Normalized cointegrating coefficients (standard error in parentheses) | | | | |  |  |
| LOG\_G | AH | AKE | AKL | LOG\_UNP | LOG\_UP |  |
| 1.000000 | 0.000000 | 0.000000 | 0.000000 | 122.8457 | -75.20755 |  |
|  |  |  |  | (10.4911) | (4.67109) |  |
| 0.000000 | 1.000000 | 0.000000 | 0.000000 | -214.8235 | 120.1850 |  |
|  |  |  |  | (33.8715) | (15.0811) |  |
| 0.000000 | 0.000000 | 1.000000 | 0.000000 | 85.27948 | -46.99363 |  |
|  |  |  |  | (6.72859) | (2.99586) |  |
| 0.000000 | 0.000000 | 0.000000 | 1.000000 | 111.4259 | -65.02635 |  |
|  |  |  |  | (10.8606) | (4.83559) |  |
|  |  |  |  |  |  |  |
| Adjustment coefficients (standard error in parentheses) | | | |  |  |  |
| D(LOG\_G) | -0.657879 | 0.104249 | 4.588227 | -2.404477 |  |  |
|  | (0.16489) | (0.04840) | (0.79303) | (0.52492) |  |  |
| D(AH) | -1.487877 | -1.681834 | -1.008371 | -2.652410 |  |  |
|  | (0.89223) | (0.26187) | (4.29111) | (2.84036) |  |  |
| D(AKE) | -0.002340 | 0.000713 | -0.056674 | 0.030494 |  |  |
|  | (0.00266) | (0.00078) | (0.01279) | (0.00847) |  |  |
| D(AKL) | -0.014923 | -0.003393 | -0.155339 | 0.117688 |  |  |
|  | (0.00724) | (0.00212) | (0.03481) | (0.02304) |  |  |
| D(LOG\_UNP) | -0.000923 | -0.000351 | -0.001247 | -0.000974 |  |  |
|  | (0.00109) | (0.00032) | (0.00525) | (0.00348) |  |  |
| D(LOG\_UP) | 0.000269 | 0.000222 | -3.43E-06 | 0.001023 |  |  |
|  | (0.00059) | (0.00017) | (0.00286) | (0.00189) |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 5 Cointegrating Equation(s): | | Log likelihood | 687.0482 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Normalized cointegrating coefficients (standard error in parentheses) | | | | |  |  |
| LOG\_G | AH | AKE | AKL | LOG\_UNP | LOG\_UP |  |
| 1.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | -31.82666 |  |
|  |  |  |  |  | (3.42866) |  |
| 0.000000 | 1.000000 | 0.000000 | 0.000000 | 0.000000 | 44.32373 |  |
|  |  |  |  |  | (6.94878) |  |
| 0.000000 | 0.000000 | 1.000000 | 0.000000 | 0.000000 | -16.87862 |  |
|  |  |  |  |  | (2.36193) |  |
| 0.000000 | 0.000000 | 0.000000 | 1.000000 | 0.000000 | -25.67819 |  |
|  |  |  |  |  | (3.23753) |  |
| 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000000 | -0.353133 |  |
|  |  |  |  |  | (0.02775) |  |
|  |  |  |  |  |  |  |
| Adjustment coefficients (standard error in parentheses) | | | |  |  |  |
| D(LOG\_G) | -0.649931 | 0.105153 | 4.671597 | -2.455367 | 20.22242 |  |
|  | (0.17545) | (0.04886) | (1.01286) | (0.65072) | (21.9112) |  |
| D(AH) | -1.418312 | -1.673928 | -0.278681 | -3.097829 | -202.3707 |  |
|  | (0.94885) | (0.26424) | (5.47765) | (3.51916) | (118.497) |  |
| D(AKE) | -0.000499 | 0.000923 | -0.037358 | 0.018703 | -1.858849 |  |
|  | (0.00263) | (0.00073) | (0.01516) | (0.00974) | (0.32806) |  |
| D(AKL) | -0.009099 | -0.002731 | -0.094245 | 0.080395 | -1.183474 |  |
|  | (0.00694) | (0.00193) | (0.04009) | (0.02576) | (0.86724) |  |
| D(LOG\_UNP) | -0.001814 | -0.000452 | -0.010595 | 0.004731 | -0.261336 |  |
|  | (0.00104) | (0.00029) | (0.00603) | (0.00387) | (0.13037) |  |
| D(LOG\_UP) | 0.000689 | 0.000269 | 0.004397 | -0.001663 | 0.103069 |  |
|  | (0.00059) | (0.00016) | (0.00338) | (0.00217) | (0.07307) |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**HASIL ECM**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dependent Variable: D(LOG\_G) | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 06/11/17 Time: 05:16 | | |  |  |
| Sample (adjusted): 1981 2015 | | |  |  |
| Included observations: 35 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| D(AKL) | 1.366815 | 0.614670 | 2.223655 | 0.0344 |
| D(AKE) | -7.916111 | 3.927866 | -2.015372 | 0.0536 |
| D(AH) | -0.116135 | 0.025757 | -4.508847 | 0.0001 |
| D(LOG\_UNP) | -36.46254 | 30.00097 | -1.215378 | 0.2344 |
| D(LOG\_UP) | -55.81012 | 45.65219 | -1.222507 | 0.2317 |
| ECT | -0.406627 | 0.144425 | -2.815487 | 0.0088 |
| C | 1.589056 | 0.917192 | 1.732523 | 0.0942 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.545994 | Mean dependent var | | 0.162613 |
| Adjusted R-squared | 0.448707 | S.D. dependent var | | 0.487207 |
| S.E. of regression | 0.361747 | Akaike info criterion | | 0.981112 |
| Sum squared resid | 3.664100 | Schwarz criterion | | 1.292181 |
| Log likelihood | -10.16945 | Hannan-Quinn criter. | | 1.088493 |
| F-statistic | 5.612208 | Durbin-Watson stat | | 1.847815 |
| Prob(F-statistic) | 0.000631 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |