

### Lampiran 1. Sampel Penelitian

| No | Kode Saham | Nama Perusahaan                                 |
|----|------------|---|
| 1  | AISA       | Tiga Pilar Sejahtera Food Tbk                   |
| 2  | ALTO       | Tri Banyan Tirta Tbk                            |
| 3  | CAMP       | Campina Ice Cream Industry Tbk                  |
| 4  | CEKA       | Wilmar Cahaya Indonesia Tbk                     |
| 5  | CLEO       | Sariguna Primatirta Tbk                         |
| 6  | COCO       | Wahana Interfood Nusantara Tbk                  |
| 7  | DLTA       | Delta Djakarta Tbk                              |
| 8  | DMND       | Diamond Food Indonesia Tbk                      |
| 9  | FOOD       | Sentra Food Indonesia Tbk                       |
| 10 | GOOD       | Garudafood Putra Putri Jaya Tbk                 |
| 11 | HOKI       | Buyung Poetra Sembada Tbk                       |
| 12 | ICBP       | Indofood CBP Sukses Makmur Tbk                  |
| 13 | INDF       | Indofood Sukses Makmur Tbk                      |
| 14 | MLBI       | Multi Bintang Indonesia Tbk                     |
| 15 | MYOR       | Mayora Indah Tbk                                |
| 16 | PCAR       | Prima Cakrawala Abadi Tbk                       |
| 17 | PSDN       | Prashida Aneka Niaga Tbk                        |
| 18 | ROTI       | Nippon Indosari Corporindo Tbk                  |
| 19 | SKBM       | Sekar Bumi Tbk                                  |
| 20 | SKLT       | Sekar Laut Tbk                                  |
| 21 | STTP       | Siantar Top Tbk                                 |
| 22 | ULTJ       | Ultrajaya Milk Industry and Trading Company Tbk |

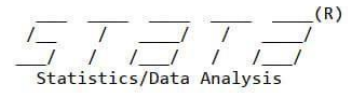


Lampiran 2. Tabulasi Data

| No | Kode Saham | Nama Perusahaan                | Tahun | Y | X1 | X2 (LN) | X3 (LN) |
|----|------------|--------------------------------|-------|---|----|---------|---------|
| 1  | AISA       | Tiga Pilar Sejahtera Food Tbk  | 2017  | 1 | 0  | 3.3434  | 2.0528  |
|    |            |                                | 2018  | 1 | 1  | 3.3403  | 2.041   |
|    |            |                                | 2019  | 0 | 1  | 3.3413  | 1.6399  |
|    |            |                                | 2020  | 0 | 1  | 3.3439  | -0.4751 |
|    |            |                                | 2021  | 0 | 1  | 3.3392  | -0.7023 |
| 2  | ALTO       | Tri Banyan Tirta Tbk           | 2017  | 0 | 1  | 3.3013  | -0.613  |
|    |            |                                | 2018  | 0 | 1  | 3.3006  | -0.6163 |
|    |            |                                | 2019  | 0 | 1  | 3.3015  | -0.4427 |
|    |            |                                | 2020  | 0 | 1  | 3.3226  | 1.2072  |
|    |            |                                | 2021  | 1 | 1  | 3.322   | 1.1968  |
| 3  | CAMP       | Campina Ice Cream Industry Tbk | 2017  | 0 | 1  | 3.3258  | -0.4553 |
|    |            |                                | 2018  | 0 | 1  | 3.3191  | -1.5997 |
|    |            |                                | 2019  | 0 | 1  | 3.321   | -1.5724 |
|    |            |                                | 2020  | 0 | 1  | 3.3219  | -1.548  |
|    |            |                                | 2021  | 0 | 1  | 3.3239  | -1.5537 |
| 4  | CEKA       | Wilmar Cahaya Indonesia Tbk    | 2017  | 0 | 1  | 3.3309  | 1.1913  |
|    |            |                                | 2018  | 0 | 0  | 3.3246  | 0.2568  |
|    |            |                                | 2019  | 0 | 0  | 3.3309  | 0.5653  |
|    |            |                                | 2020  | 0 | 0  | 3.3351  | 0.7212  |
|    |            |                                | 2021  | 0 | 0  | 3.3379  | 0.7344  |
| 5  | CLEO       | Sariguna Primatirta Tbk        | 2017  | 0 | 0  | 3.3038  | 0.5006  |
|    |            |                                | 2018  | 0 | 0  | 3.3123  | -0.1901 |
|    |            |                                | 2019  | 0 | 0  | 3.3268  | 0.6907  |
|    |            |                                | 2020  | 0 | 0  | 3.3287  | 0.5505  |
|    |            |                                | 2021  | 0 | 0  | 3.3297  | 0.3675  |
| 6  | COCO       | Wahana Interfood Nusantara Tbk | 2017  | 0 | 0  | 3.2318  | 4.4508  |
|    |            |                                | 2018  | 0 | 0  | 3.251   | 1.1969  |
|    |            |                                | 2019  | 0 | 1  | 3.2675  | 0.9236  |
|    |            |                                | 2020  | 0 | 1  | 3.2695  | 0.9959  |
|    |            |                                | 2021  | 0 | 0  | 3.2824  | 0.5344  |
| 7  | DLTA       | Delta Djakarta Tbk             | 2017  | 0 | 1  | 3.3295  | 2.5057  |
|    |            |                                | 2018  | 0 | 1  | 3.333   | 2.6877  |
|    |            |                                | 2019  | 0 | 0  | 3.3307  | 2.5749  |
|    |            |                                | 2020  | 0 | 1  | 3.3263  | 2.5529  |

|    |      |                                 |      |   |   |        |         |
|----|------|---------------------------------|------|---|---|--------|---------|
|    |      |                                 | 2021 | 0 | 1 | 3.3286 | 2.9255  |
| 8  | DMND | Diamond Food Indonesia Tbk      | 2017 | 0 | 1 | 3.3658 | 1.7416  |
|    |      |                                 | 2018 | 0 | 1 | 3.3697 | 1.8367  |
|    |      |                                 | 2019 | 0 | 1 | 3.3792 | 2.4108  |
|    |      |                                 | 2020 | 0 | 0 | 3.3799 | 1.4657  |
|    |      |                                 | 2021 | 0 | 1 | 3.3834 | 1.6861  |
| 9  | FOOD | Sentra Food Indonesia Tbk       | 2017 | 1 | 1 | 3.2412 | 6.3517  |
|    |      |                                 | 2018 | 1 | 1 | 3.2412 | 0.3609  |
|    |      |                                 | 2019 | 1 | 1 | 3.2386 | -0.3781 |
|    |      |                                 | 2020 | 1 | 1 | 3.2368 | -0.0809 |
|    |      |                                 | 2021 | 1 | 0 | 3.2344 | -0.0352 |
| 10 | GOOD | Garudafood Putra Putri Jaya Tbk | 2017 | 0 | 1 | 3.3639 | 1.2481  |
|    |      |                                 | 2018 | 0 | 1 | 3.3697 | 0.8479  |
|    |      |                                 | 2019 | 0 | 1 | 3.376  | 1.1357  |
|    |      |                                 | 2020 | 0 | 1 | 3.3854 | 1.616   |
|    |      |                                 | 2021 | 0 | 1 | 3.3858 | 1.6219  |
| 11 | HOKI | Buyung Poetra Sembada Tbk       | 2017 | 0 | 1 | 3.2988 | -0.8446 |
|    |      |                                 | 2018 | 0 | 1 | 3.3089 | -0.1885 |
|    |      |                                 | 2019 | 0 | 1 | 3.313  | -0.1384 |
|    |      |                                 | 2020 | 0 | 1 | 3.3154 | 0.01    |
|    |      |                                 | 2021 | 0 | 1 | 3.3185 | 0.281   |
| 12 | ICBP | Indofood CBP Sukses Makmur Tbk  | 2017 | 0 | 0 | 3.4367 | 2.9638  |
|    |      |                                 | 2018 | 0 | 1 | 3.4394 | 2.9956  |
|    |      |                                 | 2019 | 0 | 1 | 3.444  | 3.0275  |
|    |      |                                 | 2020 | 0 | 1 | 3.4742 | 4.5148  |
|    |      |                                 | 2021 | 0 | 1 | 3.4782 | 4.688   |
| 13 | INDF | Indofood Sukses Makmur Tbk      | 2017 | 0 | 1 | 3.4691 | 3.8481  |
|    |      |                                 | 2018 | 0 | 0 | 3.472  | 3.9721  |
|    |      |                                 | 2019 | 0 | 1 | 3.4719 | 3.8676  |
|    |      |                                 | 2020 | 0 | 1 | 3.4882 | 4.5609  |
|    |      |                                 | 2021 | 0 | 1 | 3.4911 | 4.6597  |
| 14 | MLBI | Multi Bintang Indonesia Tbk     | 2017 | 1 | 1 | 3.3517 | 4.2281  |
|    |      |                                 | 2018 | 1 | 1 | 3.3566 | 4.4034  |
|    |      |                                 | 2019 | 1 | 0 | 3.3567 | 4.4201  |
|    |      |                                 | 2020 | 1 | 1 | 3.3568 | 4.2479  |
|    |      |                                 | 2021 | 1 | 1 | 3.357  | 4.4603  |
| 15 | MYOR | Mayora Indah Tbk                | 2017 | 0 | 1 | 3.4123 | 2.8279  |

|    |      |   |      |   |   |        |         |
|----|------|---|------|---|---|--------|---------|
|    |      |   | 2018 | 0 | 1 | 3.4177 | 3.0075  |
|    |      |   | 2019 | 0 | 1 | 3.4203 | 3.0172  |
|    |      |   | 2020 | 0 | 0 | 3.4215 | 2.9456  |
|    |      |   | 2021 | 0 | 1 | 3.4217 | 2.9516  |
| 16 | PCAR | Prima Cakrawala Abadi Tbk                       | 2017 | 1 | 1 | 3.2453 | -0.4431 |
|    |      |   | 2018 | 1 | 1 | 3.2382 | -1.3929 |
|    |      |   | 2019 | 1 | 1 | 3.2406 | -1.0579 |
|    |      |   | 2020 | 1 | 1 | 3.2332 | -1.0785 |
|    |      |   | 2021 | 0 | 0 | 3.2353 | -0.9757 |
| 17 | PSDN | Prashida Aneka Niaga Tbk                        | 2017 | 0 | 1 | 3.3055 | 0.4405  |
|    |      |   | 2018 | 0 | 1 | 3.3058 | 0.5903  |
|    |      |   | 2019 | 1 | 1 | 3.3091 | 0.8465  |
|    |      |   | 2020 | 1 | 1 | 3.3092 | 0.9402  |
|    |      |   | 2021 | 1 | 1 | 3.3064 | 0.9631  |
| 18 | ROTI | Nippon Indosari Corporindo Tbk                  | 2017 | 0 | 1 | 3.3724 | 2.6432  |
|    |      |   | 2018 | 0 | 1 | 3.3711 | 2.4796  |
|    |      |   | 2019 | 0 | 1 | 3.3733 | 2.5531  |
|    |      |   | 2020 | 0 | 1 | 3.3716 | 2.2922  |
|    |      |   | 2021 | 0 | 1 | 3.3695 | 2.3837  |
| 19 | SKBM | Sekar Bumi Tbk                                  | 2017 | 0 | 0 | 3.3363 | 1.2456  |
|    |      |   | 2018 | 0 | 1 | 3.3394 | 1.4431  |
|    |      |   | 2019 | 0 | 1 | 3.3404 | 1.5141  |
|    |      |   | 2020 | 1 | 1 | 3.3394 | 1.5419  |
|    |      |   | 2021 | 1 | 1 | 3.3432 | 1.7321  |
| 20 | SKLT | Sekar Laut Tbk                                  | 2017 | 1 | 1 | 3.3024 | 1.56    |
|    |      |   | 2018 | 1 | 0 | 3.3083 | 1.7762  |
|    |      |   | 2019 | 1 | 1 | 3.3104 | 1.7821  |
|    |      |   | 2020 | 1 | 1 | 3.3096 | 1.6699  |
|    |      |   | 2021 | 1 | 1 | 3.3147 | 1.615   |
| 21 | STTP | Siantar Top Tbk                                 | 2017 | 1 | 1 | 3.3493 | 1.9893  |
|    |      |   | 2018 | 0 | 1 | 3.3534 | 2.0172  |
|    |      |   | 2019 | 0 | 0 | 3.3565 | 1.7227  |
|    |      |   | 2020 | 0 | 1 | 3.3628 | 1.7786  |
|    |      |   | 2021 | 0 | 1 | 3.3672 | 1.5519  |
| 22 | ULTJ | Ultrajaya Milk Industry and Trading Company Tbk | 2017 | 0 | 1 | 3.3768 | 0.5267  |
|    |      |   | 2018 | 0 | 1 | 3.3792 | 0.3015  |
|    |      |   | 2019 | 0 | 1 | 3.385  | 0.5009  |
|    |      |   | 2020 | 0 | 0 | 3.3945 | 1.9281  |
|    |      |   | 2021 | 0 | 1 | 3.3889 | 1.368   |



```
. import excel "D:\SKRIPSI\THESIS\8131\INPUT REGRES.xlsx", sheet("Sheet1") firstrow clear
(7 vars, 110 obs)

. tsset Perusahaan Tahun
  panel variable: Perusahaan (strongly balanced)
  time variable: Tahun, 2017 to 2021
  delta: 1 unit
```

```
. reg Y2 X1 X2 X3 Y1
```

| Source   | SS         | df  | MS         | Number of obs | = | 110    |
|----------|------------|-----|------------|---------------|---|--------|
| Model    | 7.53082974 | 4   | 1.88270744 | F(4, 105)     | = | 14.82  |
| Residual | 13.3418975 | 105 | .127065691 | Prob > F      | = | 0.0000 |
|          |            |     |            | R-squared     | = | 0.3608 |
|          |            |     |            | Adj R-squared | = | 0.3364 |
| Total    | 20.8727273 | 109 | .191492911 | Root MSE      | = | .35646 |

| Y2    | Coef.     | Std. Err. | t     | P> t  | [95% Conf. Interval] |
|-------|-----------|-----------|-------|-------|----------------------|
| X1    | .1905882  | .0816299  | 2.33  | 0.021 | .0287312 .3524452    |
| X2    | -5.353007 | .7208854  | -7.43 | 0.000 | -6.78239 -3.923625   |
| X3    | .1194222  | .0254636  | 4.69  | 0.000 | .0689325 .1699119    |
| Y1    | -.4097778 | .1685084  | -2.43 | 0.017 | -.7438989 -.0756567  |
| _cons | 17.84271  | 2.383436  | 7.49  | 0.000 | 13.1168 22.56862     |

```
. estimates store CEM
```

```
. xtreg Y2 X1 X2 X3 Y1 , fe
```

|                                   |                  |   |        |
|-----------------------------------|------------------|---|--------|
| Fixed-effects (within) regression | Number of obs    | = | 110    |
| Group variable: <b>Perusahaan</b> | Number of groups | = | 22     |
| R-sq:                             | Obs per group:   |   |        |
| within = <b>0.0851</b>            | min =            |   | 5      |
| between = <b>0.0147</b>           | avg =            |   | 5.0    |
| overall = <b>0.0006</b>           | max =            |   | 5      |
| corr(u_i, Xb) = <b>-0.4084</b>    | F(4,84)          | = | 1.95   |
|                                   | Prob > F         | = | 0.1092 |

| Y2      | Coef.     | Std. Err.                         | t     | P> t  | [95% Conf. Interval] |
|---------|-----------|-----------------------------------|-------|-------|----------------------|
| X1      | .0636309  | .0730855                          | 0.87  | 0.386 | -.0817076 .2089693   |
| X2      | .7393956  | 3.263246                          | 0.23  | 0.821 | -5.749927 7.228718   |
| X3      | .0638817  | .0320976                          | 1.99  | 0.050 | .0000521 .1277113    |
| Y1      | -.2500407 | .1529599                          | -1.63 | 0.106 | -.5542183 .054137    |
| _cons   | -2.348223 | 10.89378                          | -0.22 | 0.830 | -24.0117 19.31526    |
| sigma_u | .41915136 |                                   |       |       |                      |
| sigma_e | .25563926 |                                   |       |       |                      |
| rho     | .72887644 | (fraction of variance due to u_i) |       |       |                      |

F test that all u\_i=0: F(21, 84) = 5.72 Prob > F = 0.0000

```

. estimates store FEM
. xtreg Y2 X1 X2 X3 Y1 , re sa

Random-effects GLS regression              Number of obs   =   110
Group variable: Perusahaan              Number of groups =    22

R-sq:                                       Obs per group:
  within = 0.0684                          min =           5
  between = 0.4911                         avg =          5.0
  overall = 0.3536                         max =           5

corr(u_i, X) = 0 (assumed)                  Wald chi2(4)    =   21.62
                                              Prob > chi2     =   0.0002
    
```

| Y2      | Coef.     | Std. Err.                         | z     | P> z  | [95% Conf. Interval] |
|---------|-----------|-----------------------------------|-------|-------|----------------------|
| X1      | .1003912  | .0704633                          | 1.42  | 0.154 | -.0377142 .2384967   |
| X2      | -4.259011 | 1.088918                          | -3.91 | 0.000 | -6.39325 -2.124772   |
| X3      | .0844569  | .0279703                          | 3.02  | 0.003 | .0296361 .1392778    |
| Y1      | -.2860201 | .1474839                          | -1.94 | 0.052 | -.5750833 .003043    |
| _cons   | 14.30146  | 3.619886                          | 3.95  | 0.000 | 7.206618 21.39631    |
| sigma_u | .25675742 |                                   |       |       |                      |
| sigma_e | .25563926 |                                   |       |       |                      |
| rho     | .5021822  | (fraction of variance due to u_i) |       |       |                      |

```

. estimates store REM
. regress Y2 X1 X2 X3 Y1 i.Perusahaan

Source |             SS           df           MS      Number of obs   =   110
-----|-----
Model | 15.383207           25      .615328279   F(25, 84)       =   9.42
Residual | 5.4895203           84      .065351432   Prob > F         =   0.0000
Total | 20.8727273          109     .191492911   R-squared        =   0.7370
                                           Adj R-squared    =   0.6587
                                           Root MSE        =   .25564
    
```

| Y2         | Coef.     | Std. Err. | t     | P> t  | [95% Conf. Interval] |
|------------|-----------|-----------|-------|-------|----------------------|
| X1         | .0636309  | .0730855  | 0.87  | 0.386 | -.0817076 .2089693   |
| X2         | .7393956  | 3.263246  | 0.23  | 0.821 | -5.749927 7.228718   |
| X3         | .0638817  | .0320976  | 1.99  | 0.050 | .0000521 .1277113    |
| Y1         | -.2500407 | .1529599  | -1.63 | 0.106 | -.5542183 .054137    |
| Perusahaan |           |           |       |       |                      |
| 2          | -.0026278 | .2099313  | -0.01 | 0.990 | -.4200992 .4148436   |
| 3          | -.2540395 | .1852617  | -1.37 | 0.174 | -.6224527 .1143738   |
| 4          | -.3371075 | .1695588  | -1.99 | 0.050 | -.6742938 .0000789   |
| 5          | -.3003895 | .1829031  | -1.64 | 0.104 | -.6641123 .0633334   |
| 6          | -.277131  | .3157646  | -0.88 | 0.383 | -.9050637 .3508016   |
| 7          | -.5024138 | .1773602  | -2.83 | 0.006 | -.855114 -.1497136   |
| 8          | -.4846242 | .1956997  | -2.48 | 0.015 | -.8737945 -.095454   |
| 9          | .6557404  | .3751246  | 1.75  | 0.084 | -.0902361 1.401717   |
| 10         | -.46362   | .1959875  | -2.37 | 0.020 | -.8533626 -.0738775  |
| 11         | -.3203593 | .1919577  | -1.67 | 0.099 | -.7020883 .0613697   |
| 12         | -.6585481 | .3994828  | -1.65 | 0.103 | -1.452963 .1358672   |
| 13         | -.710999  | .4713477  | -1.51 | 0.135 | -1.648326 .2263275   |
| 14         | .3695772  | .1972374  | 1.87  | 0.064 | -.0226511 .7618055   |
| 15         | -.5878833 | .2977186  | -1.97 | 0.052 | -1.179929 .0041628   |
| 16         | .6273079  | .3698594  | 1.70  | 0.094 | -.1081981 1.362814   |
| 17         | .2217943  | .1979928  | 1.12  | 0.266 | -.1719362 .6155248   |
| 18         | -.5353016 | .1913647  | -2.80 | 0.006 | -.9158512 -.1547519  |

|       |           |          |       |       |           |           |
|-------|-----------|----------|-------|-------|-----------|-----------|
| 19    | -.0368334 | .1629886 | -0.23 | 0.822 | -.3609541 | .2872873  |
| 20    | .5740605  | .1970606 | 2.91  | 0.005 | .1821839  | .965937   |
| 21    | -.2703401 | .1711938 | -1.58 | 0.118 | -.6107778 | .0700976  |
| 22    | -.4302261 | .2146226 | -2.00 | 0.048 | -.8570266 | -.0034256 |
| _cons | -2.178952 | 10.89411 | -0.20 | 0.842 | -23.84308 | 19.48518  |

. testparm i.Perusahaan

- ( 1) 2.Perusahaan = 0
- ( 2) 3.Perusahaan = 0
- ( 3) 4.Perusahaan = 0
- ( 4) 5.Perusahaan = 0
- ( 5) 6.Perusahaan = 0
- ( 6) 7.Perusahaan = 0
- ( 7) 8.Perusahaan = 0
- ( 8) 9.Perusahaan = 0
- ( 9) 10.Perusahaan = 0
- (10) 11.Perusahaan = 0
- (11) 12.Perusahaan = 0
- (12) 13.Perusahaan = 0
- (13) 14.Perusahaan = 0
- (14) 15.Perusahaan = 0
- (15) 16.Perusahaan = 0
- (16) 17.Perusahaan = 0
- (17) 18.Perusahaan = 0
- (18) 19.Perusahaan = 0
- (19) 20.Perusahaan = 0
- (20) 21.Perusahaan = 0
- (21) 22.Perusahaan = 0

F( 21, 84) = 5.72  
 Prob > F = 0.0000

. hausman FEM REM

|    | Coefficients |            | (b-B)<br>Difference | sqrt(diag(V_b-V_B))<br>S.E. |
|----|--------------|------------|---------------------|-----------------------------|
|    | (b)<br>FEM   | (B)<br>REM |                     |                             |
| X1 | .0636309     | .1003912   | -.0367604           | .0194014                    |
| X2 | .7393956     | -4.259011  | 4.998407            | 3.076204                    |
| X3 | .0638817     | .0844569   | -.0205752           | .0157453                    |
| Y1 | -.2500407    | -.2860201  | .0359794            | .0405616                    |

b = consistent under Ho and Ha; obtained from xtreg  
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V\_b-V\_B)^(-1)](b-B)  
 = 7.33  
 Prob>chi2 = 0.1195

. xtreg Y2 X1 X2 X3 Y1 , re sa

```

Random-effects GLS regression           Number of obs   =       110
Group variable: Perusahaan             Number of groups =        22

R-sq:                                   Obs per group:
    within = 0.0684                      min =           5
    between = 0.4911                     avg =          5.0
    overall = 0.3536                     max =           5

corr(u_i, X) = 0 (assumed)              Wald chi2(4)    =       21.62
                                           Prob > chi2     =       0.0002
    
```

| Y2      | Coef.     | Std. Err.                         | z     | P> z  | [95% Conf. Interval] |
|---------|-----------|-----------------------------------|-------|-------|----------------------|
| X1      | .1003912  | .0704633                          | 1.42  | 0.154 | -.0377142 .2384967   |
| X2      | -4.259011 | 1.088918                          | -3.91 | 0.000 | -6.39325 -2.124772   |
| X3      | .0844569  | .0279703                          | 3.02  | 0.003 | .0296361 .1392778    |
| Y1      | -.2860201 | .1474839                          | -1.94 | 0.052 | -.5750833 .003043    |
| _cons   | 14.30146  | 3.619886                          | 3.95  | 0.000 | 7.206618 21.39631    |
| sigma_u | .25675742 |                                   |       |       |                      |
| sigma_e | .25563926 |                                   |       |       |                      |
| rho     | .5021822  | (fraction of variance due to u_i) |       |       |                      |

. estimates store REM

. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

$$Y2[\text{Perusahaan},t] = Xb + u[\text{Perusahaan}] + e[\text{Perusahaan},t]$$

Estimated results:

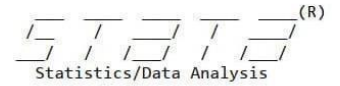
|    | Var      | sd = sqrt(Var) |
|----|----------|----------------|
| Y2 | .1914929 | .437599        |
| e  | .0653514 | .2556393       |
| u  | .0659244 | .2567574       |

Test: Var(u) = 0

```

          chibar2(01) =    40.81
        Prob > chibar2 =    0.0000
    
```





. regress Y2 X1 X2 X3 Y1

| Source   | SS         | df  | MS         | Number of obs | = | 110    |
|----------|------------|-----|------------|---------------|---|--------|
| Model    | 7.53082974 | 4   | 1.88270744 | F(4, 105)     | = | 14.82  |
| Residual | 13.3418975 | 105 | .127065691 | Prob > F      | = | 0.0000 |
|          |            |     |            | R-squared     | = | 0.3608 |
|          |            |     |            | Adj R-squared | = | 0.3364 |
| Total    | 20.8727273 | 109 | .191492911 | Root MSE      | = | .35646 |

|       | Y2 | Coef.     | Std. Err. | t     | P> t  | [95% Conf. Interval] |
|-------|----|-----------|-----------|-------|-------|----------------------|
| X1    |    | -.1905882 | .0816299  | -2.33 | 0.021 | -.0287312 - .3524452 |
| X2    |    | -5.353007 | .7208854  | -7.43 | 0.000 | -6.78239 -3.923625   |
| X3    |    | .1194222  | .0254636  | 4.69  | 0.000 | .0689325 .1699119    |
| Y1    |    | .4097778  | .0685084  | 2.43  | 0.017 | .7438989 .0756567    |
| _cons |    | 17.84271  | 2.383436  | 7.49  | 0.000 | 13.1168 22.56862     |

. regress Y1 X1 X2 X3

| Source   | SS         | df  | MS         | Number of obs | = | 110    |
|----------|------------|-----|------------|---------------|---|--------|
| Model    | .23004158  | 3   | .076680527 | F(3, 106)     | = | 1.82   |
| Residual | 4.47491651 | 106 | .042216193 | Prob > F      | = | 0.1486 |
|          |            |     |            | R-squared     | = | 0.0489 |
|          |            |     |            | Adj R-squared | = | 0.0220 |
| Total    | 4.70495809 | 109 | .043164753 | Root MSE      | = | .20547 |

|       | Y1 | Coef.     | Std. Err. | t     | P> t  | [95% Conf. Interval] |
|-------|----|-----------|-----------|-------|-------|----------------------|
| X1    |    | .9020185  | .0470435  | 2.19  | 0.038 | -.0842497 .1022868   |
| X2    |    | -.7359999 | .4093242  | -1.80 | 0.075 | -1.547525 .0755251   |
| X3    |    | -.0022525 | .0146757  | -0.15 | 0.878 | -.0313484 .0268434   |
| _cons |    | 2.505162  | 1.352097  | 3.85  | 0.007 | -.1755026 5.185827   |

. predict simpan\_data\_residual, residuals

. pnorm simpan\_data\_residual

. swilk simpan\_data\_residual

Shapiro-Wilk W test for normal data

| Variable     | Obs | W       | V      | z     | Prob>z  |
|--------------|-----|---------|--------|-------|---------|
| simpan_dat~1 | 110 | 0.39234 | 54.339 | 8.909 | 0.00000 |

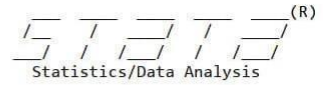
. vif

| Variable | VIF  | 1/VIF    |
|----------|------|----------|
| X2       | 1.54 | 0.651114 |
| X3       | 1.52 | 0.656988 |
| X1       | 1.01 | 0.987448 |
| Mean VIF | 1.36 |          |

```
. gen abs_residual = abs(simpan_data_residual)
. regress abs_residual Y2 X1 X2 X3 Y1
```

| Source   | SS         | df  | MS         | Number of obs | = | 110    |
|----------|------------|-----|------------|---------------|---|--------|
| Model    | 3.48918165 | 5   | .69783633  | F(5, 104)     | = | 494.88 |
| Residual | .146652294 | 104 | .001410118 | Prob > F      | = | 0.0000 |
|          |            |     |            | R-squared     | = | 0.9597 |
|          |            |     |            | Adj R-squared | = | 0.9577 |
| Total    | 3.63583395 | 109 | .033356275 | Root MSE      | = | .03755 |

| abs_residual | Coef.     | Std. Err. | t     | P> t  | [95% Conf. Interval] |
|--------------|-----------|-----------|-------|-------|----------------------|
| Y2           | .0249732  | .0102806  | 2.43  | 0.017 | .0045864 .04536      |
| X1           | .0159063  | .0088197  | 1.80  | 0.074 | -.0015835 .0333961   |
| X2           | .0045458  | .0937852  | 0.05  | 0.961 | -.1814338 .1905255   |
| X3           | -.0057872 | .0029501  | -1.96 | 0.052 | -.0116373 .0000629   |
| Y1           | .8567337  | .0182445  | 46.96 | 0.000 | .8205541 .8929134    |
| _cons        | .0202564  | .3109512  | 0.07  | 0.948 | -.5963714 .6368843   |



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Notes:

1. Unicode is supported; see [help unicode advice](#).
2. More than 2 billion observations are allowed; see [help obs advice](#).
3. Maximum number of variables is set to 5000; see [help set maxvar](#).

. import excel "D:\SKRIPSI\THESIS\8131\INPUT REGRES.xlsx", sheet("Sheet1") firstrow  
 (7 vars, 110 obs)

. sktest Y2 X1 X2 X3 Y1

| Skewness/Kurtosis tests for Normality |     |              |              |             |                 |
|---------------------------------------|-----|--------------|--------------|-------------|-----------------|
| Variable                              | Obs | Pr(Skewness) | Pr(Kurtosis) | adj chi2(2) | joint Prob>chi2 |
| Y2                                    | 110 | 0.0000       | 0.0290       | 18.23       | 0.0001          |
| X1                                    | 110 | 0.0000       | 0.6163       | 18.05       | 0.0001          |
| X2                                    | 110 | 0.1134       | 0.4349       | 3.19        | 0.0027          |
| X3                                    | 110 | 0.1352       | 0.8714       | 2.31        | 0.0149          |
| Y1                                    | 110 | 0.0000       | 0.0000       | .           | 0.0000          |

