

LAMPIRAN 1

Tabel Data Panel Y1

Cross Section	Periode	X1	XC1	XC2	XC3	XC4	Y1
ADRO	2021	19	4332.72	0.412369	5044	40	
ADRO	2022	25	5102.4	0.394903	7686	41	72.96
ADRO	2023	37	2135.41	0.292566	4774	42	41.95
ADRO	2024	84	2078.69	0.198638	4644	43	56.12
ITMG	2021	65	2076.81	0.278879	1568	35	
ITMG	2022	78	3636.21	0.261308	2841	36	71.23
ITMG	2023	95	2374.32	0.182513	1882	37	61
ITMG	2024	96	2304.5	0.196436	1875	38	62.48
BUMI	2021	65	1008.21	0.84695	348.8	49	
BUMI	2022	85	1830.08	0.371997	1492	50	67.91
BUMI	2023	85	1679.95	0.339763	2050	51	50.53
BUMI	2024	79	1359.68	0.312043	2723	52	65.56
ABMM	2021	93	1021.87	0.655754	274	16	
ABMM	2022	96	1445.53	0.688527	581.8	17	
ABMM	2023	95	1493	0.648104	608	18	
ABMM	2024	90	1200.13	0.595672	605.6	19	
DOID	2021	19	910.54	0.837612	159.5	32	
DOID	2022	23	1553.71	0.836909	156.2	33	51.52
DOID	2023	79	1833.32	0.854577	167.7	34	54.85
DOID	2024	77	1756.31	0.878094	257.7	35	59.98
MEDC	2021	45	1212.18	0.783716	818.7	42	
MEDC	2022	65	2269.66	0.747902	1637	43	
MEDC	2023	65	2204.66	0.728507	1878	44	
MEDC	2024	63	2349.41	0.703411	1713	45	51.85
HRUM	2021	36	336.18	0.255173	1887	27	
HRUM	2022	40	904.44	0.22406	1390	28	75
HRUM	2023	30	925.52	0.280685	1155	29	62.25
HRUM	2024	52	1295.47	0.307581	856	30	57.86
ELSA	2021	16	490.15	0.477787	141.2	52	
ELSA	2022	13	741.31	0.534046	146.7	53	
ELSA	2023	39	756.89	0.540064	183.9	54	54.69
ELSA	2024	72	806.81	0.53864	195.9	55	
MDKA	2021	41	380.96	0.390414	6245	10	
MDKA	2022	64	869.88	0.477686	6382	11	61.85
MDKA	2023	74	1706.78	0.443208	4217	12	61.39

LAMPIRAN 2

Cross Section	Periode	X1	XC1	XC2	XC3	XC4	Y1
MDKA	2024	79	2239.03	0.44309	2450	13	51.45
INCO	2021	68	953.17	0.128747	3259	54	
INCO	2022	86	1179.45	0.114118	4545	55	70.5
INCO	2023	88	1232.26	0.123534	2782	56	69.92
INCO	2024	82	950.39	0.139696	2371	57	58.49
PTBA	2021	66	1762.74	0.328593	2182	72	
PTBA	2022	91	2569.19	0.36251	2731	73	81.58
PTBA	2023	95	2318.61	0.443748	1821	74	64.93
PTBA	2024	96	2576.2	0.458095	1967	75	66.96
PTRO	2021	46	415.74	0.511525	150.8	50	
PTRO	2022	65	476.32	0.500369	176.7	51	
PTRO	2023	71	577.62	0.67631	338.2	52	68.62
PTRO	2024	70	690.81	0.712027	1731	53	64.56
INDY	2021	72	3069.16	0.760606	563.4	22	
INDY	2022	86	4334.91	0.627096	915.1	23	80.02
INDY	2023	79	3026.84	0.557631	484.9	24	55.78
INDY	2024	72	2446.68	0.542595	483.3	25	35.97
ANTM	2021	62	2316.00	0.444787	3790	21	
ANTM	2022	92	2766.89	0.38057	3073	22	74.83
ANTM	2023	91	2472.75	0.375523	2661	23	62.75
ANTM	2024	91	4168.22	0.46776	2277	24	65.92
BRMS	2021	52	10.58	0.102831	960.6	19	
BRMS	2022	65	11.64	0.115827	1452	20	65.61
BRMS	2023	67	46.64	0.122657	1566	21	54.85
BRMS	2024	70	162.34	0.13889	3048	22	47.93
CITA	2021	12	275.808	0.147534	893.8	30	
CITA	2022	66	343.013	0.160648	987.5	31	43.93
CITA	2023	62	198.356	0.11293	542.8	32	40.98
CITA	2024	57	143.793	0.04061	900.6	33	41.21
DEWA	2021	44	322.74	0.519326	76.583	31	
DEWA	2022	64	389.78	0.596282	74.625	32	47.26
DEWA	2023	69	478.78	0.595788	85.166	33	49.92
DEWA	2024	66	374.77	0.624045	150.7	34	
DSSA	2021	16	2164.95	0.418548	2646	26	
DSSA	2022	28	5956.11	0.529337	1976	27	55.09
DSSA	2023	56	5014.66	0.438244	3203	28	57.35
DSSA	2024	59	3014.8	0.474007	14229	29	62.48

LAMPIRAN 3

Cross Section	Periode	X1	XC1	XC2	XC3	XC4	Y1
TOBA	2021	32	324.025	0.587204	620.6	15	
TOBA	2022	49	376.864	0.52886	313.8	16	49.8
TOBA	2023	38	388.875	0.552994	160.1	17	55.67
TOBA	2024	81	368.576	0.511424	202	18	55.31
PSSI	2021	10	108.73	0.288886	151.8	15	
PSSI	2022	7	119.28	0.186674	201.2	16	
PSSI	2023	19	102.39	0.172904	171.6	17	
PSSI	2024	46	81.21	0.165225	130.8	18	56.01
GEMS	2021	44	1585.95	0.618434	3278	25	
GEMS	2022	87	2919.96	0.505575	2672	26	80
GEMS	2023	89	2901.84	0.494596	2216	27	62.88
GEMS	2024	88	2705.52	0.466646	2883	28	49.55
MBSS	2021	32	63.0134	0.048018	133.7	26	
MBSS	2022	33	82.864	0.117968	134.7	27	
MBSS	2023	36	58.0735	0.146721	137.5	28	51.55
MBSS	2024	34	50.0328	0.111868	110.9	29	54.92
BULL	2021	32	63.0134	0.048018	133.7	26	
BULL	2022	33	82.864	0.117968	134.7	27	
BULL	2023	36	58.0735	0.146721	137.5	28	
BULL	2024	34	50.0328	0.111868	110.9	29	63.53

Tabel Statistik Deskriptif Y1

Series: Standardized Residuals			
Sample 2021 2024			
Observations 115			
Mean	-1.27E-15	Skewness	-0.107185
Median	0.914249	Kurtosis	2.52557
Maximum	35.33705		
Minimum	-41.96295	Jarque-Bera	0.580217
Std. Dev	0.734033	Probability	0.748182

LAMPIRAN 4

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

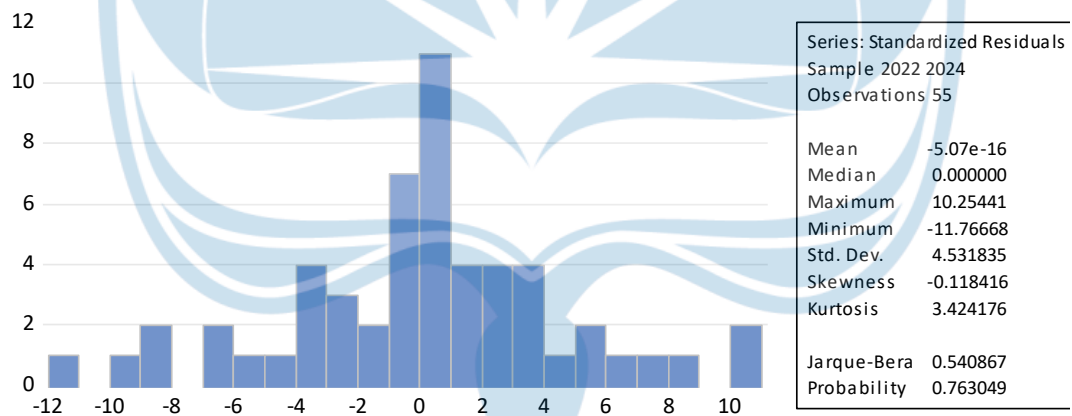
Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.937733	(21,28)	0.0004
Cross-section Chi-square	75.600288	21	0.0000

Gambar Hasil Uji Chow Y1

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.645648	5	0.0859

Gambar Hasil Uji Hausman Y1



Gambar Hasil Uji Normalitas Y1

LAMPIRAN 5

Variance Inflation Factors

Date: 12/06/25 Time: 17:47

Sample: 1 92

Included observations: 55

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	27.99949	17.21104	NA
X1	0.004080	12.58952	1.123517
XC1	1.15E-06	3.557426	1.423774
XC2	43.44280	5.240306	1.181769
XC3	3.81E-07	2.266361	1.258284
XC4	0.007629	6.647637	1.086412

Gambar Hasil Uji Multikolinearitas Y1

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 2 lags

F-statistic	1.022803	Prob. F(2,47)	0.3674
Obs*R-squared	2.293953	Prob. Chi-Square(2)	0.3176

Gambar Hasil Uji Breusch-Godfrey S. C. LM Y1

Dependent Variable: Y

Method: Panel Least Squares

Date: 12/06/25 Time: 11:36

Sample (adjusted): 2022 2024

Periods included: 3

Cross-sections included: 22

Total panel (unbalanced) observations: 55

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	45.20165	5.291455	8.542386	0.0000
X1	0.092360	0.063874	1.445988	0.1545
XC1	0.001868	0.001071	1.743564	0.0875
XC2	-2.207079	6.591115	-0.334857	0.7392
XC4	0.125607	0.087345	1.438049	0.1568
XC3	0.000528	0.000617	0.855815	0.3963

R-squared	0.226731	Mean dependent var	59.25618
Adjusted R-squared	0.147826	S.D. dependent var	10.24681
S.E. of regression	9.459166	Akaike info criterion	7.434514
Sum squared resid	4384.315	Schwarz criterion	7.653496
Log likelihood	-198.4491	Hannan-Quinn criter.	7.519196
F-statistic	2.873471	Durbin-Watson stat	1.394531
Prob(F-statistic)	0.023640		

Gambar Hasil Uji Regresi Y1

LAMPIRAN 6

Tabel Data Panel Y2

Cross Section	Periode	X1	XC1	XC2	XC3	XC4	Y2
ADRO	2021	19	4332.72	0.412369	5044	40	0.664827
ADRO	2022	25	5102.4	0.394903	7686	41	0.712834
ADRO	2023	37	2135.41	0.292566	4774	42	0.455851
ADRO	2024	84	2078.69	0.198638	4644	43	0.692914
ITMG	2021	65	2076.81	0.278879	1568	35	0.941041
ITMG	2022	78	3636.21	0.261308	2841	36	1.076063
ITMG	2023	95	2374.32	0.182513	1882	37	0.860205
ITMG	2024	96	2304.5	0.196436	1875	38	0.779127
PGAS	2021	70	3036.1	0.562648	2336	57	0.311013
PGAS	2022	45	3568.59	0.521635	2749	58	0.382078
PGAS	2023	72	3646.3	0.463514	1779	59	0.269576
PGAS	2024	72	3788.62	0.42775	2395	60	0.373288
AKRA	2021	75	2333.1	0.519369	1137	62	0.802864
AKRA	2022	78	2535.36	0.516147	1780	63	1.086819
AKRA	2023	73	2863.85	0.536484	1891	64	1.036111
AKRA	2024	74	1548.62	0.558303	1375	65	0.689396
BUMI	2021	65	1008.21	0.84695	348.8	49	0.08258
BUMI	2022	85	1830.08	0.371997	1492	50	0.332438
BUMI	2023	85	1679.95	0.339763	2050	51	0.487783
BUMI	2024	79	1359.68	0.312043	2723	52	0.654033
ABMM	2021	93	1021.87	0.655754	274	16	0.2643
ABMM	2022	96	1445.53	0.688527	581.8	17	0.293456
ABMM	2023	95	1493	0.648104	608	18	0.281913
ABMM	2024	90	1200.13	0.595672	605.6	19	0.289007
DOID	2021	19	910.54	0.837612	159.5	32	0.097496
DOID	2022	23	1553.71	0.836909	156.2	33	0.099421
DOID	2023	79	1833.32	0.854577	167.7	34	0.089459
DOID	2024	77	1756.31	0.878094	257.7	35	0.162378
MEDC	2021	45	1212.18	0.783716	818.7	42	0.144039
MEDC	2022	65	2269.66	0.747902	1637	43	0.236154
MEDC	2023	65	2204.66	0.728507	1878	44	0.251462
MEDC	2024	63	2349.41	0.703411	1713	45	0.2161
HRUM	2021	36	336.18	0.255173	1887	27	2.15741
HRUM	2022	40	904.44	0.22406	1390	28	1.086948
HRUM	2023	30	925.52	0.280685	1155	29	0.70724
HRUM	2024	52	1295.47	0.307581	856	30	0.332487

LAMPIRAN 7

Cross Section	Periode	X1	XC1	XC2	XC3	XC4	Y2
ELSA	2021	16	490.15	0.477787	141.2	52	0.323976
ELSA	2022	13	741.31	0.534046	146.7	53	0.275599
ELSA	2023	39	756.89	0.540064	183.9	54	0.317945
ELSA	2024	72	806.81	0.53864	195.9	55	0.30597
MDKA	2021	41	380.96	0.390414	6245	10	4.884287
MDKA	2022	64	869.88	0.477686	6382	11	1.646258
MDKA	2023	74	1706.78	0.443208	4217	12	0.849472
MDKA	2024	79	2239.03	0.44309	2450	13	0.46782
INCO	2021	68	953.17	0.128747	3259	54	1.317923
INCO	2022	86	1179.45	0.114118	4545	55	1.709855
INCO	2023	88	1232.26	0.123534	2782	56	0.950786
INCO	2024	82	950.39	0.139696	2371	57	0.746412
PTBA	2021	66	1762.74	0.328593	2182	72	1.002699
PTBA	2022	91	2569.19	0.36251	2731	73	0.999458
PTBA	2023	95	2318.61	0.443748	1821	74	0.779787
PTBA	2024	96	2576.2	0.458095	1967	75	0.781423
PTRO	2021	46	415.74	0.511525	150.8	50	0.283065
PTRO	2022	65	476.32	0.500369	176.7	51	0.296268
PTRO	2023	71	577.62	0.67631	338.2	52	0.464592
PTRO	2024	70	690.81	0.712027	1731	53	1.995918
INDY	2021	72	3069.16	0.760606	563.4	22	0.152622
INDY	2022	86	4334.91	0.627096	915.1	23	0.254628
INDY	2023	79	3026.84	0.557631	484.9	24	0.155761
INDY	2024	72	2446.68	0.542595	483.3	25	0.163125
ANTM	2021	62	2316.00	0.444787	3790	21	2.316683
ANTM	2022	92	2766.89	0.38057	3073	22	1.955967
ANTM	2023	91	2472.75	0.375523	2661	23	1.419503
ANTM	2024	91	4168.22	0.46776	2277	24	1.434746
ISSP	2021	10	324.025	0.121892	197.1	51	0.12048
ISSP	2022	21	376.864	0.125053	112	52	0.071288
ISSP	2023	20	388.875	0.107762	134	53	0.071482
ISSP	2024	44	368.576	0.123427	117.7	54	0.074163
BRMS	2021	52	10.58	0.102831	960.6	19	0.979764
BRMS	2022	65	11.64	0.115827	1452	20	1.344158
BRMS	2023	67	46.64	0.122657	1566	21	1.417361
BRMS	2024	70	162.34	0.13889	3048	22	2.639258
CITA	2021	12	275.808	0.147534	893.8	30	3.445874

LAMPIRAN 8

Cross Section	Periode	X1	XC1	XC2	XC3	XC4	Y2
CITA	2023	62	198.356	0.11293	542.8	32	1.447628
CITA	2024	57	143.793	0.04061	900.6	33	1.881964
DEWA	2021	44	322.74	0.519326	76.583	31	0.135906
DEWA	2022	64	389.78	0.596282	74.625	32	0.145431
DEWA	2023	69	478.78	0.595788	85.166	33	0.161159
DEWA	2024	66	374.77	0.624045	150.7	34	0.275432
DSSA	2021	16	2164.95	0.418548	2646	26	0.879049
DSSA	2022	28	5956.11	0.529337	1976	27	0.304132
DSSA	2023	56	5014.66	0.438244	3203	28	1.045615
DSSA	2024	59	3014.8	0.474007	14229	29	3.850807
TOBA	2021	32	324.025	0.587204	620.6	15	0.723226
TOBA	2022	49	376.864	0.52886	313.8	16	0.348926
TOBA	2023	38	388.875	0.552994	160.1	17	0.16891
TOBA	2024	81	368.576	0.511424	202	18	0.226017
BTON	2021	14	6.79097	0.269347	21.699	15	1.330787
BTON	2022	31	9.16691	0.308655	20.04	16	0.965494
BTON	2023	32	8.40658	0.288621	20.764	17	0.95318
BTON	2024	33	7.71239	0.295049	19.863	18	0.831164
GDST	2021	30	100.738	0.502457	59.545	33	0.624028
GDST	2022	44	156.295	0.496857	52.654	34	0.414944
GDST	2023	37	152.107	0.428264	72.886	35	0.543015
GDST	2024	41	156.296	0.414332	53.416	36	0.321798
PSSI	2021	10	108.73	0.288886	151.8	15	0.941454
PSSI	2022	7	119.28	0.186674	201.2	16	1.121829
PSSI	2023	19	102.39	0.172904	171.6	17	0.841713
PSSI	2024	46	81.21	0.165225	130.8	18	0.690019
GEMS	2021	44	1585.95	0.618434	3278	25	3.954019
GEMS	2022	87	2919.96	0.505575	2672	26	2.366508
GEMS	2023	89	2901.84	0.494596	2216	27	1.688973
GEMS	2024	88	2705.52	0.466646	2883	28	2.325807
MBSS	2021	32	63.0134	0.048018	133.7	26	0.752646
MBSS	2022	33	82.864	0.117968	134.7	27	0.638419
MBSS	2023	36	58.0735	0.146721	137.5	28	0.555915
MBSS	2024	34	50.0328	0.111868	110.9	29	0.446907
BULL	2021	32	63.0134	0.048018	133.7	26	0.752646
BULL	2022	33	82.864	0.117968	134.7	27	0.638419
BULL	2023	36	58.0735	0.146721	137.5	28	0.555915

LAMPIRAN 9

Cross Section	Periode	X1	XC1	XC2	XC3	XC4	Y2
BULL	2024	34	50.0328	0.111868	110.9	29	0.446907

Tabel Statistik Deskriptif Y2

Series: Standardized Residuals			
Sample 2021 2024			
Observations 115			
Mean	1.49E-17	Skewness	-0.107185
Median	-0.059241	Kurtosis	2.52557
Maximum	1.867625	Jarque-Bera Probability	0.580217 0.748182
Minimum	-1.984364		
Std. Dev	0.734033		

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	6.562177	(27,79)	0.0000
Cross-section Chi-square	131.759904	27	0.0000

Gambar Hasil Uji Chow Y2

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	41.43105 (0.0000)	0.601085 (0.4382)	42.03214 (0.0000)

Gambar Hasil Uji Hausman Y2

LAMPIRAN 10

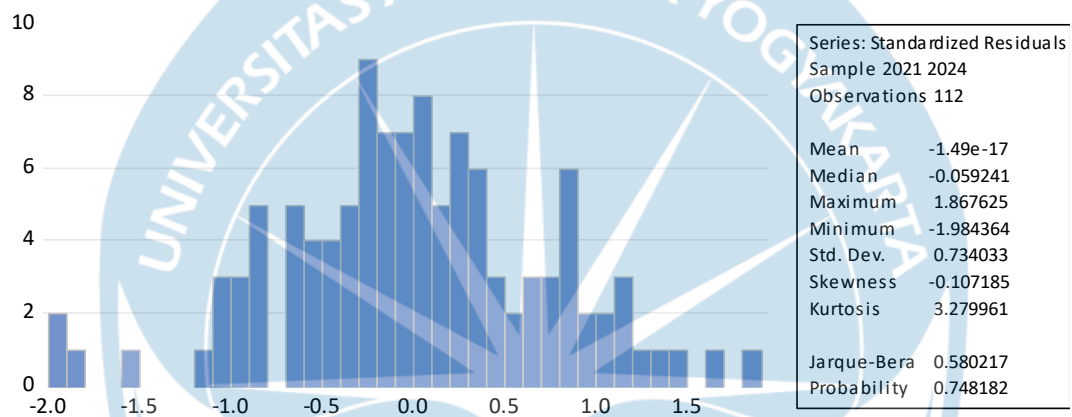
Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.645648	5	0.0859

Gambar Hasil Uji Lagrange-Multiplier Y2



Gambar Hasil Uji Normalitas Y2

Variance Inflation Factors

Date: 12/06/25 Time: 17:22

Sample: 1 112

Included observations: 112

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.045513	11.97904	NA
X1	7.39E-06	7.534325	1.229004
XC1	3.76E-09	3.723599	1.763861
XC2	0.101630	5.599468	1.229523
XC3	1.41E-09	2.299828	1.417990
XC4	1.59E-05	6.355055	1.082582

Gambar Hasil Uji Multikolinearitas Y2

LAMPIRAN 11

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	2.826820	Prob. F(2,103)	0.0638
Obs*R-squared	5.775729	Prob. Chi-Square(2)	0.0557

Gambar Hasil Uji Breusch-Godfrey S. C. LM Y2

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Date: 12/06/25 Time: 11:24
Sample: 2021 2024
Periods included: 4
Cross-sections included: 28
Total panel (balanced) observations: 112
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.291855	0.306625	4.213139	0.0001
X1	-0.004239	0.002605	-1.627630	0.1066
XC1	-0.000187	6.17E-05	-3.035745	0.0030
XC2	-0.099367	0.412296	-0.241010	0.8100
XC3	0.000327	3.19E-05	10.23780	0.0000
XC4	-0.010811	0.006506	-1.661608	0.0995

Effects Specification

	S.D.	Rho
Cross-section random	0.502385	0.5891
Idiosyncratic random	0.419612	0.4109

Weighted Statistics

R-squared	0.514523	Mean dependent var	0.333535
Adjusted R-squared	0.491623	S.D. dependent var	0.601269
S.E. of regression	0.428708	Sum squared resid	19.48182
F-statistic	22.46840	Durbin-Watson stat	1.303738
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.417950	Mean dependent var	0.865505
Sum squared resid	48.72300	Durbin-Watson stat	0.521298

Gambar Hasil Uji Regresi Y2