

LAMPIRAN OLAH DATA

Lampiran 1 Data Penelitian

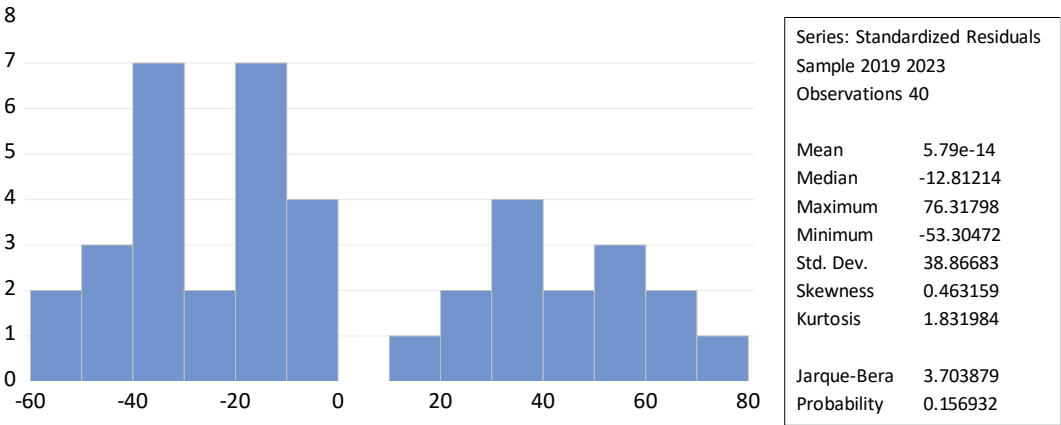
CROSS	TIME	Y	X1	X2	X3	X4
TAPTENG	2019	46,99	18426363,00	68,86	1232201296,00	2054450000,00
TAPTENG	2020	47,19	19159574,00	69,23	1264412075,00	2487490000,00
TAPTENG	2021	49,95	19359017,00	69,61	1218233881,00	2552327000,00
TAPTENG	2022	47,07	19874989,23	70,31	1254442594,00	2204000000,00
TAPTENG	2023	47,09	20063784,15	70,91	1077539741416,00	2492343974,00
ASAHAN	2019	70,53	35853217,00	69,92	1778430103,00	4592107000,00
ASAHAN	2020	66,32	34269170,00	70,29	1605680727,00	11863500325,00
ASAHAN	2021	69,29	35080599,00	70,49	1595269002,00	6224177303,00
ASAHAN	2022	64,49	36246667,18	71,13	1711055534,00	1755028011,00
ASAHAN	2023	61,69	37307141,14	71,56	1760976085410,00	4171711366,00
LABUHAN BATU	2019	41,52	46516864,00	71,94	1377312726,00	3419461329,00
LABUHAN BATU	2020	42,17	47272345,00	72,01	1188460182,00	3027832777,00
LABUHAN BATU	2021	45,03	48296859,00	72,09	1272896935,00	2943600000,00
LABUHAN BATU	2022	43,27	49812578,61	72,92	1306318265,00	2140095304,00
LABUHAN BATU	2023	42,58	51728177,51	73,69	1246946064008,00	1754000000,00
BATU BARA	2019	50,46	57372549,00	68,35	1208154445,00	505397000,00
BATU BARA	2020	49,78	58368433,00	68,36	1216867643,00	478765830,00
BATU BARA	2021	52,59	59263733,00	68,58	1213166634,00	93782473262,00
BATU BARA	2022	49,39	61201322,13	69,51	1198476628,00	3406824278,00
BATU BARA	2023	49,18	61604297,03	70,31	1318397851232,00	3063129738,00
MEDAN	2019	183,79	68575552,00	80,97	5080725686,00	229773000,00
MEDAN	2020	183,54	63321299,00	80,98	4003254231,00	701427955,00
MEDAN	2021	193,03	64078946,00	81,21	4499145144,00	751771595,00
MEDAN	2022	187,74	66193310,89	81,76	6047219172,00	1201004137,00
MEDAN	2023	187,28	70102688,33	82,19	6246261417557,00	1514083000,00
P. SIANTAR	2019	21,99	37562875,00	78,57	948523364,00	195850000,00
P. SIANTAR	2020	21,23	35261711,00	78,75	915323854,00	186100000,00
P. SIANTAR	2021	22,06	35261545,00	79,17	884906718,00	271350000,00
P. SIANTAR	2022	20,53	36046911,94	79,70	890199239,00	195900000,00
P. SIANTAR	2023	18,96	37461494,23	80,46	992102953093,00	2358689200,00
SIBOLGA	2019	10,82	40822377,00	73,41	581264116,00	644050000,00
SIBOLGA	2020	10,49	39360246,00	73,63	573796884,00	1561450000,00

SIBOLGA	2021	10,80	39982479,00	73,94	584399709,00	446800000,00
SIBOLGA	2022	10,05	41443400,51	74,74	584399709,00	1453100000,00
SIBOLGA	2023	10,02	42759175,58	75,20	684702131450,00	2160000000,00
TEBING TINGGI	2019	16,30	23924932,00	75,08	712955521,00	142500000,00
TEBING TINGGI	2020	16,32	22810098,00	75,17	663685660,00	3116295375,00
TEBING TINGGI	2021	17,37	23002800,00	75,42	688563872,00	4344805000,00
TEBING TINGGI	2022	16,34	23547032,84	76,17	690074101,00	271482655,00
TEBING TINGGI	2023	16,36	24328718,37	76,98	633607100047,00	126055000,00

Lampiran 2 Hasil Statistik Deskriptif

	Y	X1	X2	X3	X4
Mean	55.29000	41323132	74.08925	3.50E+11	4.42E+09
Median	46.01000	38461561	73.52000	1.26E+09	1.90E+09
Maximum	193.0300	70102688	82.19000	6.25E+12	9.38E+10
Minimum	10.02000	18426363	68.35000	5.74E+08	1.26E+08
Std. Dev.	53.64826	15569264	4.325845	1.06E+12	1.47E+10
Skewness	1.768874	0.223370	0.455796	4.598841	5.887136
Kurtosis	4.930979	1.970624	1.930580	25.65960	36.41022
Jarque-Bera	27.07390	2.098651	3.291094	996.7580	2091.461
Probability	0.000001	0.350174	0.192907	0.000000	0.000000
Sum	2211.600	1.65E+09	2963.570	1.40E+13	1.77E+11
Sum Sq. Dev.	112247.3	9.45E+15	729.8045	4.35E+25	8.37E+21
Observations	40	40	40	40	40

Lampiran 3 Hasil Uji Normalitas



Lampiran 4 Hasil Uji *Common Effect Model*

Dependent Variable: Y
Method: Panel Least Squares
Date: 03/10/25 Time: 15:52
Sample: 2019 2023
Periods included: 5
Cross-sections included: 8
Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	1.87E-06	4.65E-07	4.019362	0.0003
X2	2.871840	1.697037	1.692267	0.0995
X3	5.69E-12	6.61E-12	0.861488	0.3948
X4	-1.14E-10	4.81E-10	-0.237136	0.8139
C	-236.1880	122.1012	-1.934363	0.0612
Root MSE	38.37792	R-squared	0.475136	
Mean dependent var	55.29000	Adjusted R-squared	0.415151	
S.D. dependent var	53.64826	S.E. of regression	41.02772	
Akaike info criterion	10.38284	Sum squared resid	58914.58	
Schwarz criterion	10.59395	Log likelihood	-202.6568	
Hannan-Quinn criter.	10.45917	F-statistic	7.920979	
Durbin-Watson stat	0.080461	Prob(F-statistic)	0.000117	

Lampiran 5 Hasil Uji *Fixed Effect Model*

Dependent Variable: Y

Method: Panel Least Squares

Date: 03/10/25 Time: 15:53

Sample: 2019 2023

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	-1.11E-07	3.36E-07	-0.328860	0.7447
X2	-0.582949	0.660109	-0.883111	0.3847
X3	7.77E-15	4.36E-13	0.017831	0.9859
X4	2.82E-11	2.55E-11	1.108787	0.2770
C	102.9223	43.58210	2.361572	0.0254

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	1.750195	R-squared	0.998908
Mean dependent var	55.29000	Adjusted R-squared	0.998480
S.D. dependent var	53.64826	S.E. of regression	2.091883
Akaike info criterion	4.557331	Sum squared resid	122.5273
Schwarz criterion	5.063995	Log likelihood	-79.14663
Hannan-Quinn criter.	4.740525	F-statistic	2329.346
Durbin-Watson stat	2.028756	Prob(F-statistic)	0.000000

Lampiran 6 Hasil Uji *Random Effect Model*

Dependent Variable: Y

Method: Panel EGLS (Cross-section random effects)

Date: 03/10/25 Time: 15:54

Sample: 2019 2023

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	1.69E-06	1.15E-07	14.72255	0.0000
X2	1.459480	0.361539	4.036852	0.0003
X3	-1.96E-12	3.68E-13	-5.314179	0.0000
X4	3.27E-11	2.54E-11	1.285876	0.2069
C	-122.2789	25.80696	-4.738214	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			4.969227	0.8495
Idiosyncratic random			2.091883	0.1505
Weighted Statistics				
Root MSE	8.181208	R-squared		0.326853
Mean dependent var	10.22933	Adjusted R-squared		0.249921
S.D. dependent var	10.09857	S.E. of regression		8.746080
Sum squared resid	2677.287	F-statistic		4.248638
Durbin-Watson stat	0.222825	Prob(F-statistic)		0.006596
Unweighted Statistics				
R-squared	0.416633	Mean dependent var		55.29000
Sum squared resid	65481.41	Durbin-Watson stat		0.009110

Lampiran 7 Hasil Uji Chow

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
	1919.31279		
Cross-section F	1	(7,28)	0.0000
Cross-section Chi-square	247.020401	7	0.0000

Cross-section fixed effects test equation:

Dependent Variable: Y

Method: Panel Least Squares

Date: 03/10/25 Time: 15:54

Sample: 2019 2023

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	1.87E-06	4.65E-07	4.019362	0.0003
X2	2.871840	1.697037	1.692267	0.0995
X3	5.69E-12	6.61E-12	0.861488	0.3948
X4	-1.14E-10	4.81E-10	-0.237136	0.8139
C	-236.1880	122.1012	-1.934363	0.0612
Root MSE	38.37792	R-squared		0.475136
Mean dependent var	55.29000	Adjusted R-squared		0.415151
S.D. dependent var	53.64826	S.E. of regression		41.02772
Akaike info criterion	10.38284	Sum squared resid		58914.58
Schwarz criterion	10.59395	Log likelihood		-202.6568
Hannan-Quinn criter.	10.45917	F-statistic		7.920979
Durbin-Watson stat	0.080461	Prob(F-statistic)		0.000117

Lampiran 8 Hasil Uji Hausman

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	580.814918	4	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
X1	-0.000000	0.000002	0.000000	0.0000
X2	-0.582949	1.459480	0.305033	0.0002
X3	0.000000	-0.000000	0.000000	0.0000
X4	0.000000	0.000000	0.000000	0.0274

Cross-section random effects test equation:

Dependent Variable: Y

Method: Panel Least Squares

Date: 03/10/25 Time: 15:55

Sample: 2019 2023

Periods included: 5

Cross-sections included: 8

Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	102.9223	43.58210	2.361572	0.0254
X1	-1.11E-07	3.36E-07	-0.328860	0.7447
X2	-0.582949	0.660109	-0.883111	0.3847
X3	7.77E-15	4.36E-13	0.017831	0.9859
X4	2.82E-11	2.55E-11	1.108787	0.2770

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	1.750195	R-squared	0.998908
Mean dependent var	55.29000	Adjusted R-squared	0.998480
S.D. dependent var	53.64826	S.E. of regression	2.091883
Akaike info criterion	4.557331	Sum squared resid	122.5273
Schwarz criterion	5.063995	Log likelihood	-79.14663

Hannan-Quinn criter.	4.740525	F-statistic	2329.346
Durbin-Watson stat	2.028756	Prob(F-statistic)	0.000000

Lampiran 9 Hasil Uji Lagrange Multiplier

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	67.53961 (0.0000)	1.085987 (0.2974)	68.62559 (0.0000)
Honda	8.218248 (0.0000)	-1.042107 (0.8513)	5.074298 (0.0000)
King-Wu	8.218248 (0.0000)	-1.042107 (0.8513)	4.124476 (0.0000)
Standardized Honda	10.00481 (0.0000)	-0.762648 (0.7772)	3.691834 (0.0001)
Standardized King-Wu	10.00481 (0.0000)	-0.762648 (0.7772)	2.589330 (0.0048)
Gourieroux, et al.	--	--	67.53961 (0.0000)

Lampiran 10 Hasil Uji Multikolinearitas

	X1	X2	X3	X4
		0.271903858	0.274802138	0.161953589
X1	1	0890208	0069442	9814473
				-
	0.271903858		0.259417625	0.267139606
X2	0890208	1	6563983	25998
				-
	0.274802138	0.259417625		0.053186905
X3	0069442	6563983	1	85322199
		-	-	
	0.161953589	0.267139606	0.053186905	
X4	9814473	25998	85322199	1