LAMPIRAN

Populasi

No.	Perusahaan	Laporan Keuangan				
		2016	**2017**	**2018**	**2019**	**2020**
1	PT Adaro Energi Tbk	✓	✓	✓	✓	✓
2	PT Atlas Resources Tbk	✓	✓	✓	✓	✓
3	PT Borneo Olah Sarana Sukses Tbk	×	✓	✓	✓	✓
4	PT Baramulti Suksessarana Tbk	✓	✓	✓	✓	✓
5	PT Bumi Resources Tbk	✓	✓	✓	✓	✓
6	PT Bayan Resources Tbk	✓	✓	✓	✓	✓
7	PT Darma Henwa Tbk	✓	✓	✓	✓	✓
8	PT Delta Dunia Makmur Tbk	✓	✓	✓	✓	✓
9	PT Dian Swastatika Sentosa Tbk	✓	✓	✓	✓	✓
10	PT Alfa Energi Investama Tbk	×	✓	✓	✓	✓
11	PT Golden Energy Mines Tbk	✓	✓	✓	✓	✓
12	PT Garda Tujuh Buana Tbk	✓	✓	✓	✓	×
13	PT Harum Energy Tbk	✓	✓	✓	✓	✓
14	PT Indika Energi Tbk	✓	✓	✓	✓	✓
15	PT Indo Tambangraya Megah Tbk	✓	✓	✓	✓	✓
16	PT Resource Alam Indonesia Tbk	✓	✓	✓	✓	✓
17	PT Mitrabara Adiperdana Tbk	✓	✓	✓	✓	✓
18	PT Samindo Resources Tbk	✓	✓	✓	✓	✓
19	PT Perdana Karya Perkasa Tbk	✓	✓	✓	✓	✓
20	PT Bukit Asam Tbk	✓	✓	✓	✓	✓
21	PT Petrosea Tbk	✓	✓	✓	✓	✓
22	PT Golden Eagle Energy Tbk	✓	✓	✓	✓	✓
23	PT Toba Bara Sejahtera Tbk	✓	✓	✓	✓	✓

Hasil perhitungan DER (Struktur Modal)

No.	Perusahaan	2016	2017	2018	2019	2020	Rata-Rata
1	ADRO	72%	67%	64%	81%	61%	69%
2	ARII	487%	722%	118%	690%	79%	419%
3	BSSR	75%	40%	63%	47%	38%	53%
4	BUMI	-211%	210%	676%	762%	190%	325%
5	BYAN	3%	72%	70%	106%	88%	68%
6	DEWA	69%	77%	80%	135%	104%	93%
7	DOID	598%	547%	353%	321%	269%	418%
8	DSSA	74%	116%	124%	127%	83%	105%
9	GEMS	43%	102%	122%	118%	133%	103%
10	HRUM	16%	16%	20%	12%	10%	15%
11	INDY	63%	98%	87%	246%	303%	159%
12	ITMG	33%	42%	49%	37%	37%	39%
13	KKGI	17%	19%	35%	35%	29%	27%
14	MBAP	27%	31%	40%	32%	32%	32%
15	MYOH	37%	33%	33%	31%	17%	30%
16	PKPK	126%	132%	130%	400%	70%	172%
17	PTBA	76%	59%	49%	42%	42%	54%
18	PTRO	131%	141%	191%	159%	129%	150%
19	SMMT	67%	71%	75%	56%	62%	66%
20	TOBA	77%	99%	133%	140%	165%	123%
Rata-Rata		94%	135%	125%	179%	97%	
MIN							15%
MAX							419%

Hasil Perhitungan Struktur Aktiva

No.	Perusahaan	2016	2017	2018	2019	2020	Rata-Rata
1	ADRO	0,76	0,72	0,77	0,72	0,73	0,74
2	ARII	0,89	0,87	0,85	1,14	0,83	0,92
3	BSSR	0,89	0,62	0,63	0,69	0,64	0,69
4	BUMI	0,83	0,81	0,88	0,87	0,88	0,86
5	BYAN	0,73	0,65	0,57	0,59	0,53	0,61
6	DEWA	0,66	0,71	0,74	0,64	0,60	0,67
7	DOID	0,66	0,63	0,63	0,60	0,62	0,63
8	DSSA	0,81	0,75	0,77	0,77	0,61	0,74
9	GEMS	0,46	0,30	0,53	0,53	0,50	0,46
10	HRUM	0,35	0,31	0,34	0,35	0,50	0,37
11	INDY	0,63	0,63	0,60	0,60	0,60	0,61
12	ITMG	0,55	0,41	0,47	0,61	0,64	0,54
13	KKGI	0,60	0,62	0,75	0,69	0,70	0,67
14	MBAP	0,35	0,32	0,38	0,31	0,31	0,34
15	MYOH	0,43	0,37	0,32	0,29	0,23	0,33
16	PKPK	0,61	0,69	0,71	0,82	0,90	0,75
17	PTBA	0,55	0,49	0,51	0,55	0,65	0,55
18	PTRO	0,62	0,61	0,55	0,60	0,58	0,59
19	SMMT	0,97	0,67	0,63	0,55	0,55	0,67
20	TOBA	0,73	0,71	0,72	0,87	0,91	0,79
Rata-Rata		0,65	0,60	0,62	0,64	0,63	
MIN							0,33
MAX							0,92

Hasil Perhitungan Risiko Bisnis

No.	Perusahaan	2016	2017	2018	2019	2020	Rata-Rata
1	ADRO	0,09	0,14	0,13	0,09	0,04	0,10
2	ARII	-0,39	-0,35	-0,05	-0,05	-0,02	-0,17
3	BSSR	0,07	0,53	0,38	0,17	0,16	0,26
4	BUMI	0,00	-0,01	-0,01	0,01	0,01	0,00
5	BYAN	0,09	0,50	0,61	0,25	0,28	0,35
6	DEWA	0,02	-0,07	0,03	-0,04	-0,06	-0,02
7	DOID	0,13	0,14	0,14	0,08	0,02	0,10
8	DSSA	0,06	0,11	0,10	0,06	0,06	0,08
9	GEMS	0,14	0,29	0,20	0,14	0,16	0,18
10	HRUM	0,08	0,16	0,10	0,05	0,12	0,10
11	INDY	-0,01	-0,01	0,14	0,08	0,03	0,05
12	ITMG	0,17	0,29	0,30	0,15	0,09	0,20
13	KKGI	0,15	0,18	0,01	0,05	-0,01	0,08
14	MBAP	0,31	0,49	0,39	0,25	0,20	0,33
15	MYOH	0,19	0,13	0,27	0,20	0,19	0,20
16	PKPK	-0,09	-0,13	-0,02	0,04	0,03	-0,04
17	PTBA	0,14	0,27	0,26	0,19	0,10	0,19
18	PTRO	0,04	0,06	0,09	0,10	0,09	0,08
19	SMMT	-0,04	0,00	0,06	-0,02	0,00	0,00
20	TOBA	0,11	0,18	0,20	0,13	0,08	0,14
Rata-Rata		0,06	0,14	0,17	0,10	0,08	
MIN							-0,17
MAX							0,35

Hasil Perhitungan Profitabilitas (ROA)

No.	Perusahaan	2016	2017	2018	2019	2020	Rata-Rata
1	ADRO	0,05	0,08	0,07	0,06	0,02	0,06
2	ARII	-0,05	-0,05	-0,08	-0,02	-0,05	-0,05
3	BSSR	0,05	0,39	0,28	0,12	0,12	0,19
4	BUMI	0,04	0,07	0,04	0,03	-0,10	0,02
5	BYAN	0,02	0,38	0,46	0,18	0,21	0,25
6	DEWA	0,027	0,01	0,02	0,01	0,02	0,02
7	DOID	0,04	0,05	0,06	0,02	-0,02	0,03
8	DSSA	0,03	0,05	0,04	0,02	-0,02	0,02
9	GEMS	0,09	0,20	0,14	0,09	0,12	0,13
10	HRUM	0,04	0,12	0,09	0,05	0,12	0,08
11	INDY	-0,01	0,09	0,03	-0,02	-0,03	0,01
12	ITMG	0,11	0,19	0,18	0,10	0,03	0,12
13	KKGI	0,10	0,13	0,00	0,04	-0,01	0,05
14	MBAP	0,23	0,36	0,29	0,18	0,15	0,24
15	MYOH	0,14	0,09	0,20	0,14	0,17	0,15
16	PKPK	-0,09	-0,08	-0,03	-0,58	0,15	-0,12
17	PTBA	0,11	0,21	0,21	0,15	0,10	0,16
18	PTRO	-0,02	0,03	0,04	0,06	0,06	0,03
19	SMMT	-0,04	0,00	0,06	0,11	-0,15	-0,01
20	TOBA	0,06	0,12	0,14	0,07	0,05	0,09
Rata-Rata		0,05	0,12	0,11	0,04	0,05	
MIN							-0,12
MAX							0,25

Common Effect Model

Dependent Variable: DER
Method: Panel Least Squares
Date: 06/07/22 Time: 05:16
Sample: 2016 2020
Periods included: 5
Cross-sections included: 20
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.376837	0.715634	-0.526577	0.5997
SA	3.073561	0.997530	3.081171	0.0027
RB	-1.546922	1.645344	-0.940182	0.3495
ROA	-1.140227	1.917140	-0.594754	0.5534

R-squared	0.226178	Mean dependent var	1.293900
Adjusted R-squared	0.201996	S.D. dependent var	1.648054
S.E. of regression	1.472224	Akaike info criterion	3.650603
Sum squared resid	208.0745	Schwarz criterion	3.754810
Log likelihood	-178.5302	Hannan-Quinn criter.	3.692777
F-statistic	9.353186	Durbin-Watson stat	1.157174
Prob(F-statistic)	0.000017		

Fixed Effect Model

Dependent Variable: DER
Method: Panel Least Squares
Date: 06/07/22 Time: 05:20
Sample: 2016 2020
Periods included: 5
Cross-sections included: 20
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.240670	1.150313	-0.209221	0.8348
SA	2.785280	1.737642	1.602908	0.1130
RB	-0.823225	1.783164	-0.461665	0.6456
ROA	-1.618205	1.815500	-0.891327	0.3755

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.558484	Mean dependent var	1.293900
Adjusted R-squared	0.432336	S.D. dependent var	1.648054
S.E. of regression	1.241700	Akaike info criterion	3.469476
Sum squared resid	118.7201	Schwarz criterion	4.068665
Log likelihood	-150.4738	Hannan-Quinn criter.	3.711979
F-statistic	4.427230	Durbin-Watson stat	2.034610
Prob(F-statistic)	0.000001		

Random Effect Model

Dependent Variable: DER
Method: Panel EGLS (Cross-section random effects)
Date: 06/07/22 Time: 05:21
Sample: 2016 2020
Periods included: 5
Cross-sections included: 20
Total panel (balanced) observations: 100
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.362155	0.872958	-0.414860	0.6792
SA	3.017188	1.230972	2.451062	0.0161
RB	-1.134112	1.608939	-0.704881	0.4826
ROA	-1.476481	1.748134	-0.844604	0.4004

Effects Specification

	S.D.	Rho
Cross-section random	0.891568	0.3402
Idiosyncratic random	1.241700	0.6598

Weighted Statistics

R-squared	0.141401	Mean dependent var	0.684060
Adjusted R-squared	0.114569	S.D. dependent var	1.300724
S.E. of regression	1.223946	Sum squared resid	143.8123
F-statistic	5.270005	Durbin-Watson stat	1.673511
Prob(F-statistic)	0.002082		

Unweighted Statistics

R-squared	0.225479	Mean dependent var	1.293900
Sum squared resid	208.2625	Durbin-Watson stat	1.155616

Uji Chow

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

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.050200	(19,77)	0.0003
Cross-section Chi-square	56.112714	19	0.0000

Cross-section fixed effects test equation:
Dependent Variable: DER
Method: Panel Least Squares
Date: 06/02/22 Time: 06:20
Sample: 2016 2020
Periods included: 5
Cross-sections included: 20
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SA	3.073561	0.997530	3.081171	0.0027
RB	-1.546922	1.645344	-0.940182	0.3495
ROA	-1.140227	1.917140	-0.594754	0.5534
C	-0.376837	0.715634	-0.526577	0.5997

R-squared	0.226178	Mean dependent var	1.293900
Adjusted R-squared	0.201996	S.D. dependent var	1.648054
S.E. of regression	1.472224	Akaike info criterion	3.650603
Sum squared resid	208.0745	Schwarz criterion	3.754810
Log likelihood	-178.5302	Hannan-Quinn criter.	3.692777
F-statistic	9.353186	Durbin-Watson stat	1.157174
Prob(F-statistic)	0.000017		

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	0.274366	3	0.9648

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
SA	2.785280	3.017188	1.504108	0.8500
RB	-0.823225	-1.134112	0.590987	0.6859
ROA	-1.618205	-1.476481	0.240067	0.7724

Cross-section random effects test equation:
Dependent Variable: DER
Method: Panel Least Squares
Date: 06/02/22 Time: 06:21
Sample: 2016 2020
Periods included: 5
Cross-sections included: 20
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.240670	1.150313	-0.209221	0.8348
SA	2.785280	1.737642	1.602908	0.1130
RB	-0.823225	1.783164	-0.461665	0.6456
ROA	-1.618205	1.815500	-0.891327	0.3755

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.558484	Mean dependent var	1.293900
Adjusted R-squared	0.432336	S.D. dependent var	1.648054
S.E. of regression	1.241700	Akaike info criterion	3.469476
Sum squared resid	118.7201	Schwarz criterion	4.068665
Log likelihood	-150.4738	Hannan-Quinn criter.	3.711979
F-statistic	4.427230	Durbin-Watson stat	2.034610
Prob(F-statistic)	0.000001		

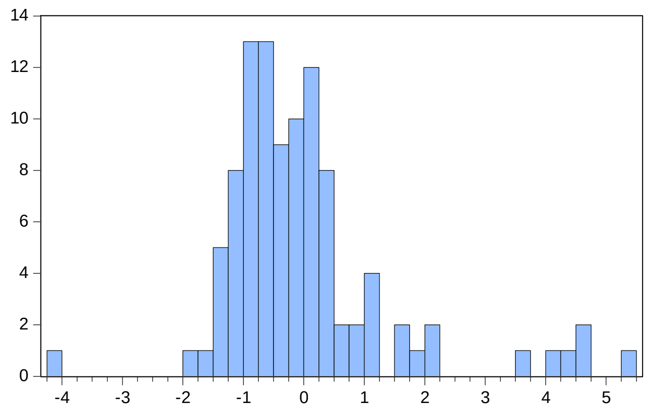
Uji Lagrange Multiplier

Lagrange multiplier (LM) test for panel data
Date: 06/02/22   Time: 06:06
Sample: 2016 2020
Total panel observations: 100
Probability in ()

Null (no rand. effect) Alternative	Cross-section One-sided	Period One-sided	Both
Breusch-Pagan	16.22269 (0.0001)	0.003532 (0.9526)	16.22622 (0.0001)
Honda	4.027739 (0.0000)	0.059431 (0.4763)	2.890066 (0.0019)
King-Wu	4.027739 (0.0000)	0.059431 (0.4763)	1.733700 (0.0415)
GHM	-- --	-- --	16.22622 (0.0001)

Uji Normalitas

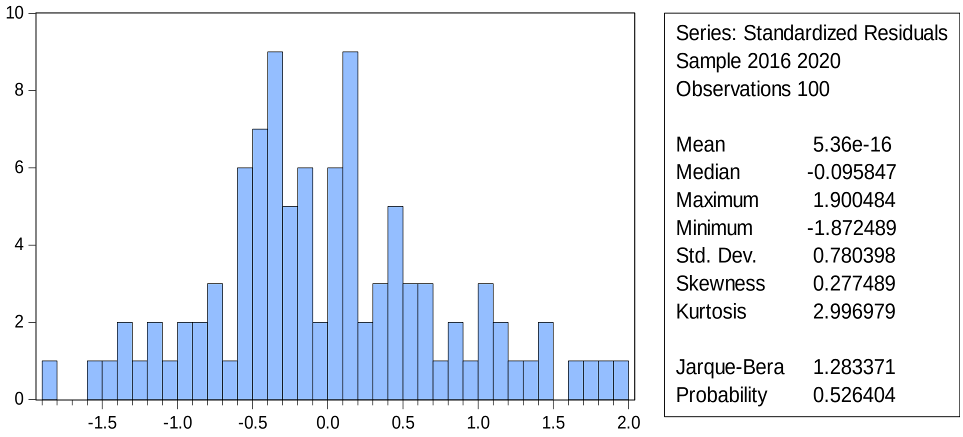
Dengan data awal



Series: Standardized Residuals
Sample 2016 2020
Observations 100

Mean	5.91e-16
Median	-0.339590
Maximum	5.412837
Minimum	-4.193052
Std. Dev.	1.450401
Skewness	1.594863
Kurtosis	7.042084
Jarque-Bera	110.4700
Probability	0.000000

Penyembuhan uji normalitas dengan transformasi data variabel Y



Uji Multikolineritas

Variance Inflation Factors
Date: 06/02/22   Time: 06:08
Sample: 1 100
Included observations: 100

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0,136760	23,62839	NA
SA	0,265723	19,39189	1,389483
RB	0,722922	4,290972	2,782417
ROA	0,981489	3,498996	2,580418

Uji Autokorelasi

Weighted Statistics			
R-squared	0,169577	Mean dependent var	-0,052077
Adjusted R-squared	0,152455	S.D. dependent var	0,462756
S.E. of regression	0,426024	Sum squared resid	17,605163
F-statistic	9,904017	Durbin-Watson stat	1,609432
Prob(F-statistic)	0,000121		