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LAMPIRAN

Data yang Digunakan (Sebelum LN)

Tahun	Inflasi (Persen)	Suku Bunga (Persen)	Nilai Tukar (Ribu)	*Shock* Pengeluaran Pemerintah (Miliar)	Output Gap (Miliar)
1988	5,47	15,25	1.685,70	-920,44	43,70
1989	5,97	11,33	1.770,06	-919,78	57,89
1990	9,53	19,85	1.842,81	-918,89	59,88
1991	9,52	21,76	1.950,32	-914,10	68,27
1992	4,94	17,81	2.029,92	-914,17	72,97
1993	9,77	13,15	2.087,10	-909,62	70,21
1994	9,24	13,96	2.160,75	-902,94	58,42
1995	8,6	14,12	2.248,61	-899,16	32,94
1996	6,5	13,82	2.342,30	-892,79	-11,09
1997	11,1	14,51	2.909,38	-881,66	-79,51
1998	77,60	49,32	10.013,62	-881,07	-181,27
1999	2,01	23,13	7.855,15	-711,35	-15,84
2000	9,35	12,55	8.421,77	-721,76	29,86
2001	12,55	16,62	10.260,85	-601,66	28,97
2002	10,03	14,95	9.311,19	-621,05	28,13
2003	5,06	9,94	8.577,13	-566,72	25,40
2004	6,40	7,45	8.938,85	-516,05	20,13
2005	17,11	9,12	9.704,74	-433,59	13,77
2006	6,60	11,83	9.159,32	-276,10	2,67
2007	6,59	8,60	9.141,00	-185,58	-8,86
2008	11,06	8,67	9.698,96	42,51	-25,55
2009	2,78	7,23	10.389,94	-5,84	-54,94
2010	6,96	6,50	9.090,43	98,89	-82,18
2011	3,79	6,58	8.770,43	351,77	-112,73
2012	4,30	5,77	9.386,63	548,19	-144,89
2013	8,38	6,47	10.461,24	707,34	-178,15
2014	8,36	7,54	11.865,21	833,96	-210,05
2015	3,35	7,52	13.389,41	863,29	-232,81
2016	3,02	6,00	13.308,33	921,05	-235,90
2017	3,61	4,56	13.380,83	1064,13	-208,58
2018	3,13	5,10	14.236,94	1269,89	-136,21
2019	2,72	5,62	14.147,67	1366,06	-4,72
2020	2,03	4,25	14.582,20	1652,26	126,95
2021	1,56	3,52	14.308,10	1843,19	379,55
2022	4,20	4,00	14.849,85	2153,04	747,39

Data yang Digunakan (Setelah LN)

Tahun	Inflasi (Persen)	Suku Bunga (Persen)	Nilai Tukar (Ribu)	*Shock* Pengeluaran Pemerintah (Miliar)	Output Gap (Miliar)
1988	5,47	15,25	7,43	6,82	3,78
1989	5,97	11,33	7,48	6,82	4,06
1990	9,53	19,85	7,52	6,82	4,09
1991	9,52	21,76	7,58	6,82	4,22
1992	4,94	17,81	7,62	6,82	4,29
1993	9,77	13,15	7,64	6,81	4,25
1994	9,24	13,96	7,68	6,81	4,07
1995	8,6	14,12	7,72	6,80	3,49
1996	6,5	13,82	7,76	6,79	2,41
1997	11,1	14,51	7,98	6,78	4,38
1998	77,60	49,32	9,21	6,78	5,20
1999	2,01	23,13	8,97	6,57	2,76
2000	9,35	12,55	9,04	6,58	3,40
2001	12,55	16,62	9,24	6,40	3,37
2002	10,03	14,95	9,14	6,43	3,34
2003	5,06	9,94	9,06	6,34	3,23
2004	6,40	7,45	9,10	6,25	3,00
2005	17,11	9,12	9,18	6,07	2,62
2006	6,60	11,83	9,12	5,62	0,98
2007	6,59	8,60	9,12	5,22	2,18
2008	11,06	8,67	9,18	3,75	3,24
2009	2,78	7,23	9,25	1,77	4,01
2010	6,96	6,50	9,11	4,59	4,41
2011	3,79	6,58	9,08	5,86	4,73
2012	4,30	5,77	9,15	6,31	4,98
2013	8,38	6,47	9,26	6,56	5,18
2014	8,36	7,54	9,38	6,73	5,35
2015	3,35	7,52	9,50	6,76	5,45
2016	3,02	6,00	9,50	6,83	5,46
2017	3,61	4,56	9,50	6,97	5,34
2018	3,13	5,10	9,56	7,15	4,91
2019	2,72	5,62	9,56	7,22	1,55
2020	2,03	4,25	9,59	7,41	4,84
2021	1,56	3,52	9,57	7,52	5,94
2022	4,20	4,00	9,61	7,67	6,62

Data Pengeluaran Pemerintah & *Shock* Pengeluaran Pemerintah

Tahun	Pengeluaran Pemerintah (Miliar)	*Shock* Pengeluaran Pemerintah (Miliar)
1988	22,78	-920,44
1989	23,44	-919,78
1990	24,33	-918,89
1991	29,12	-914,10
1992	29,05	-914,17
1993	33,60	-909,62
1994	40,28	-902,94
1995	44,06	-899,16
1996	50,43	-892,79
1997	61,56	-881,66
1998	62,15	-881,07
1999	231,87	-711,35
2000	221,46	-721,76
2001	341,56	-601,66
2002	322,17	-621,05
2003	376,50	-566,72
2004	427,17	-516,05
2005	509,63	-433,59
2006	667,12	-276,10
2007	757,64	-185,58
2008	985,73	42,51
2009	937,38	-5,84
2010	1.042,11	98,89
2011	1.294,99	351,77
2012	1.491,41	548,19
2013	1.650,56	707,34
2014	1.777,18	833,96
2015	1.806,51	863,29
2016	1.864,27	921,05
2017	2.007,35	1064,13
2018	2.213,11	1269,89
2019	2.309,28	1366,06
2020	2.595,48	1652,26
2021	2.786,41	1843,19
2022	3.096,26	2153,04
Standar Deviasi	**943,22**	

Data Output Aktual, Output Potensial, dan Output Gap

Tahun	Aktual (Miliar)	Potensial (Miliar)	Output Gap (Miliar)
1988	29,63	-14,07	43,70
1989	31,84	-26,05	57,89
1990	20,80	-39,08	59,88
1991	22,35	-45,92	68,27
1992	23,91	-49,06	72,97
1993	24,44	-45,77	70,21
1994	26,28	-32,14	58,42
1995	28,44	-4,50	32,94
1996	30,66	41,75	-11,09
1997	32,10	111,61	-79,51
1998	29,07	210,34	-181,27
1999	328,25	344,09	-15,84
2000	411,99	382,13	29,86
2001	427,00	398,03	28,97
2002	446,21	418,08	28,13
2003	467,54	442,14	25,40
2004	491,07	470,94	20,13
2005	519,02	505,25	13,77
2006	547,57	544,90	2,67
2007	582,32	591,18	-8,86
2008	617,34	642,89	-25,55
2009	645,91	700,85	-54,94
2010	686,41	768,59	-82,18
2011	728,76	841,49	-112,73
2012	772,70	917,59	-144,89
2013	815,64	993,79	-178,15
2014	856,48	1066,53	-210,05
2015	898,25	1131,06	-232,81
2016	943,46	1179,36	-235,90
2017	991,29	1199,87	-208,58
2018	1042,58	1178,79	-136,21
2019	1094,91	1099,63	-4,72
2020	1072,30	945,35	126,95
2021	1111,88	732,33	379,55
2022	1171,03	423,64	747,39

Hasil Uji VAR (Vector Autoregression)

1. Uji Stasioner

Shock Pengeluaran Pemerintah

Level

Null Hypothesis: M has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		3.197714	1.0000
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

First Difference

Null Hypothesis: D(M) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.921543	0.0536
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

Second Difference

Null Hypothesis: D(M,2) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.473400	0.0013
Test critical values:	1% level	-3.661661	
	5% level	-2.960411	
	10% level	-2.619160	

Output Gap

Level

Null Hypothesis: Z has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*

Augmented Dickey-Fuller test statistic		0.653579	0.9892
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

First Difference

Null Hypothesis: D(Z) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.002597	0.0450
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

2. Uji Lag Optimal

VAR Lag Order Selection Criteria
Endogenous variables: D(M) D(Y)
Exogenous variables: C
Date: 11/04/23 Time: 10:34
Sample: 1988 2022
Included observations: 29

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-431.3583	NA	3.27e+10	29.88678	29.98107	29.91631
1	-412.5652	33.69790*	1.18e+10*	28.86657*	29.14946*	28.95516*
2	-411.6254	1.555630	1.47e+10	29.07761	29.54909	29.22527
3	-409.2961	3.534122	1.67e+10	29.19283	29.85291	29.39956
4	-407.2193	2.864536	1.95e+10	29.32547	30.17413	29.59126
5	-406.4608	0.941533	2.53e+10	29.54902	30.58628	29.87388

Vector Autoregression Estimates
Date: 11/04/23 Time: 10:35
Sample (adjusted): 1990 2022
Included observations: 33 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	D(M)	D(Y)
D(M(-1))	0.553996	2.588947
	(0.15129)	(0.70443)
	[3.66193]	[3.67523]
D(Y(-1))	0.036911	0.207792
	(0.04521)	(0.21050)

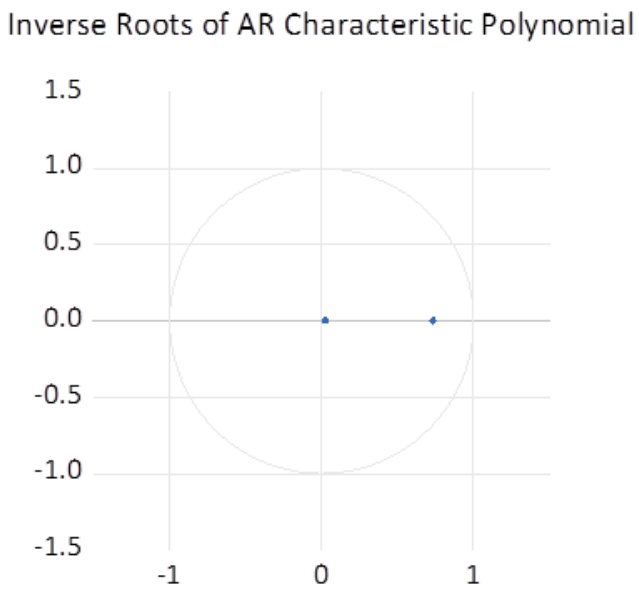
	[0.81648]	[0.98713]
C	-44.43399	127.2765
	(33.1924)	(154.554)
	[-1.33868]	[0.82351]

3. Uji Stabilitas VAR

Roots of Characteristic Polynomial
Endogenous variables: D(M) D(Y)
Exogenous variables: C
Lag specification: 1 1
Date: 11/04/23 Time: 10:36

Root	Modulus
0.735191	0.735191
0.026597	0.026597

No root lies outside the unit circle.
VAR satisfies the stability condition.



4. Uji Kausalitas Granger

Pairwise Granger Causality Tests
Date: 11/04/23 Time: 10:39
Sample: 1988 2022
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
Y does not Granger Cause M	34	4.50889	0.0418

M does not Granger Cause Y	11.2394	0.0021

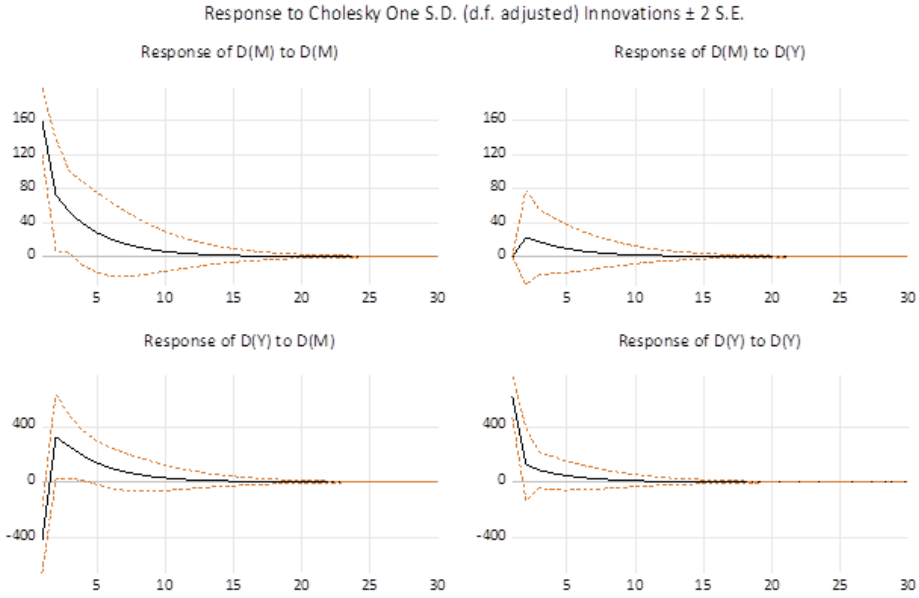
5. Uji Kointegrasi

Date: 11/04/23 Time: 10:40
Sample (adjusted): 1991 2022
Included observations: 32 after adjustments
Trend assumption: Linear deterministic trend
Series: D(M) D(Y)
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.296090	14.17785	15.49471	0.0782
At most 1	0.087853	2.942516	3.841465	0.0863

6. Impulse Response



Response of D(M): Period	D(M)	D(Y)
1	159.3043	0.000000
2	72.92954	22.68954
3	52.44179	17.28462
4	38.52345	12.72355
5	28.32125	9.354660

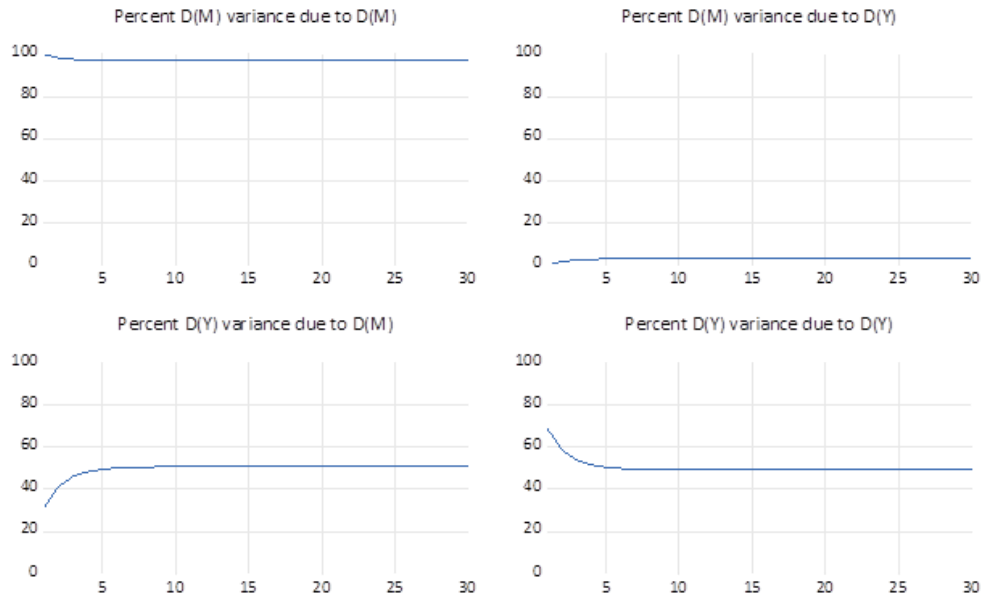
6	20.82150	6.877470
7	15.30777	5.056252
8	11.25413	3.717310
9	8.273933	2.732931
10	6.082918	2.009226
11	4.472105	1.477164
12	3.287850	1.085997
13	2.417197	0.798415
14	1.777101	0.586987
15	1.306508	0.431548
16	0.960532	0.317270
17	0.706174	0.233254
18	0.519173	0.171486
19	0.381691	0.126075
20	0.280616	0.092689
21	0.206306	0.068144
22	0.151674	0.050099
23	0.111510	0.036832
24	0.081981	0.027079
25	0.060272	0.019908
26	0.044311	0.014636
27	0.032577	0.010760
28	0.023950	0.007911
29	0.017608	0.005816
30	0.012945	0.004276

Response of D(Y): Period	D(M)	D(Y)
1	-415.1661	614.7017
2	326.1620	127.7302
3	256.5846	85.28337
4	189.0853	62.47020
5	139.0256	45.92141
6	102.2107	33.76083
7	75.14434	24.82064
8	55.24542	18.24791
9	40.61592	13.41569
10	29.86045	9.863091
11	21.95312	7.251253
12	16.13973	5.331053
13	11.86578	3.919341
14	8.723611	2.881463
15	6.413518	2.118425
16	4.715158	1.557446
17	3.466541	1.145020
18	2.548568	0.841808
19	1.873684	0.618889
20	1.377515	0.455002
21	1.012736	0.334513
22	0.744554	0.245931
23	0.547389	0.180806
24	0.402436	0.132927
25	0.295867	0.097727
26	0.217519	0.071848
27	0.159918	0.052822
28	0.117570	0.038834

29	0.086436	0.028550
30	0.063547	0.020990

Cholesky Ordering: D(M) D(Y)

7. Forecast Error Decomposition of Variance



Variance Decomposition of D(M): Period	S.E.	D(M)	D(Y)
1	159.3043	100.0000	0.000000
2	176.6675	98.35055	1.649447
3	185.0953	97.62532	2.374684
4	189.4894	97.28331	2.716693
5	191.8224	97.11116	2.888837
6	193.0717	97.02154	2.978462
7	193.7436	96.97405	3.025949
8	194.1057	96.94866	3.051343
9	194.3012	96.93501	3.064990
10	194.4068	96.92766	3.072343
11	194.4638	96.92369	3.076311
12	194.4947	96.92155	3.078454
13	194.5113	96.92039	3.079611
14	194.5203	96.91976	3.080237
15	194.5252	96.91943	3.080575
16	194.5278	96.91924	3.080757
17	194.5292	96.91914	3.080856
18	194.5300	96.91909	3.080910
19	194.5304	96.91906	3.080938
20	194.5307	96.91905	3.080954

21	194.5308	96.91904	3.080962
22	194.5308	96.91903	3.080967
23	194.5309	96.91903	3.080969
24	194.5309	96.91903	3.080971
25	194.5309	96.91903	3.080972
26	194.5309	96.91903	3.080972
27	194.5309	96.91903	3.080972
28	194.5309	96.91903	3.080972
29	194.5309	96.91903	3.080972
30	194.5309	96.91903	3.080972

Variance Decomposition of D(Y): Period	S.E.	D(M)	D(Y)
1	741.7688	31.32611	68.67389
2	820.3156	41.42327	58.57673
3	863.7283	46.18873	53.81127
4	886.3873	48.40804	51.59196
5	898.3982	49.51704	50.48296
6	904.8238	50.09229	49.90771
7	908.2779	50.39648	49.60352
8	910.1395	50.55899	49.44101
9	911.1441	50.64627	49.35373
10	911.6866	50.69329	49.30671
11	911.9797	50.71865	49.28135
12	912.1381	50.73235	49.26765
13	912.2237	50.73975	49.26025
14	912.2699	50.74375	49.25625
15	912.2949	50.74591	49.25409
16	912.3084	50.74708	49.25292
17	912.3158	50.74771	49.25229
18	912.3197	50.74805	49.25195
19	912.3218	50.74823	49.25177
20	912.3230	50.74833	49.25167
21	912.3236	50.74839	49.25161
22	912.3239	50.74842	49.25158
23	912.3241	50.74843	49.25157
24	912.3242	50.74844	49.25156
25	912.3243	50.74845	49.25155
26	912.3243	50.74845	49.25155
27	912.3243	50.74845	49.25155
28	912.3243	50.74845	49.25155
29	912.3243	50.74845	49.25155
30	912.3243	50.74845	49.25155

Cholesky Ordering: D(M) D(Y)

Hasil Uji Hipotesis

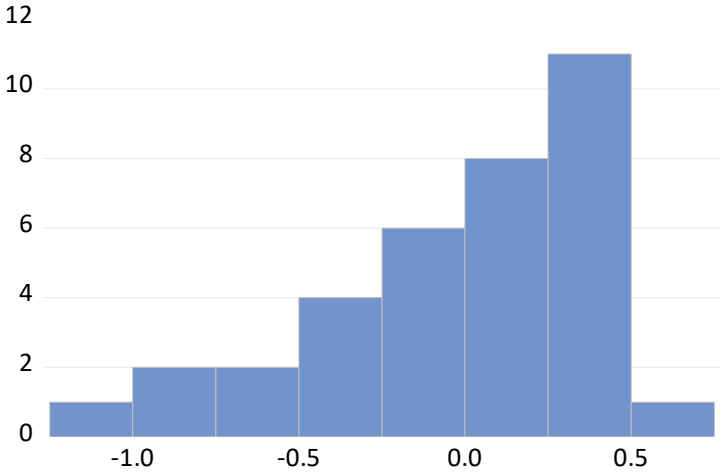
Sub Struktural I

Dependent Variable: M
Method: Least Squares
Date: 11/17/23 Time: 14:36
Sample: 1988 2022
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.154982	1.407755	5.792898	0.0000
X1	0.016433	0.024659	0.666402	0.5101
X2	0.075170	0.029731	2.528372	0.0168
X3	-0.291355	0.141020	-2.066057	0.0473

R-squared	0.650651	Mean dependent var	6.498571
Adjusted R-squared	0.616843	S.D. dependent var	0.738210
S.E. of regression	0.456950	Akaike info criterion	1.378723
Sum squared resid	6.472889	Schwarz criterion	1.556477
Log likelihood	-20.12765	Hannan-Quinn criter.	1.440084
F-statistic	19.24549	Durbin-Watson stat	0.257712
Prob(F-statistic)	0.000000		

1. Uji Normalitas



Series: Residuals
Sample 1988 2022
Observations 35

Mean	-3.36e-16
Median	0.143551
Maximum	0.611162
Minimum	-1.123716
Std. Dev.	0.436325
Skewness	-0.907256
Kurtosis	3.155561
Jarque-Bera	4.836788
Probability	0.089065

2. Uji Multikolinearitas

Variance Inflation Factors
Date: 11/23/23 Time: 23:53
Sample: 1988 2022
Included observations: 35

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.981775	332.1895	NA

X1	0.000608	7.852096	2.088408
X2	0.000884	20.09142	3.497557
X3	0.019887	262.5445	2.067165

3. Uji Heteroskedastisitas

Heteroskedasticity Test: Glejser
Null hypothesis: Homoskedasticity

F-statistic	3.577204	Prob. F(3,31)	0.0249
Obs*R-squared	9.000526	Prob. Chi-Square(3)	0.0293
Scaled explained SS	7.421004	Prob. Chi-Square(3)	0.0596

4. Uji Autokorelasi

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.823442	0.740933	-1.111359	0.2755
X1	-0.019117	0.013133	-1.455669	0.1562
X2	0.024204	0.015724	1.539264	0.1346
X3	0.078105	0.074373	1.050179	0.3023
RESID(-1)	1.037538	0.182515	5.684678	0.0000
RESID(-2)	-0.127257	0.198423	-0.641340	0.5263

R-squared	0.746817	Mean dependent var	-3.36E-16
Adjusted R-squared	0.703164	S.D. dependent var	0.436325
S.E. of regression	0.237721	Akaike info criterion	0.119367
Sum squared resid	1.638828	Schwarz criterion	0.385998
Log likelihood	3.911073	Hannan-Quinn criter.	0.211408
F-statistic	17.10830	Durbin-Watson stat	1.898772
Prob(F-statistic)	0.000000		

Sub Struktural II

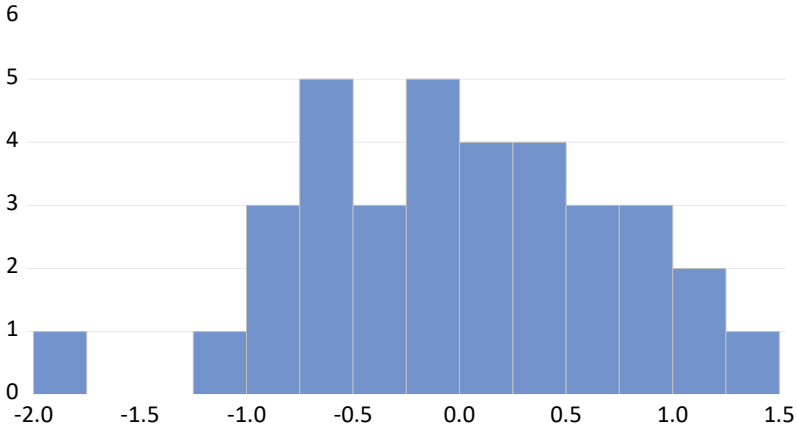
Dependent Variable: Y
Method: Least Squares
Date: 11/17/23 Time: 14:38
Sample: 1988 2022
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.52444	3.424409	4.825488	0.0000
X1	-0.055616	0.041864	-1.328510	0.1940
X2	-0.051546	0.055041	-0.936508	0.3565
X3	-0.681645	0.253548	-2.688428	0.0116
M	-0.824802	0.302750	-2.724365	0.0106

R-squared	0.532684	Mean dependent var	4.175143
Adjusted R-squared	0.470375	S.D. dependent var	1.058399
S.E. of regression	0.770254	Akaike info criterion	2.447370
Sum squared resid	17.79871	Schwarz criterion	2.669562

Log likelihood	-37.82897	Hannan-Quinn criter.	2.524070
F-statistic	8.549084	Durbin-Watson stat	0.577929
Prob(F-statistic)	0.000100		

1. Uji Normalitas



Series: Residuals	
Sample 1988 2022	
Observations 35	
Mean	1.19e-15
Median	-0.017115
Maximum	1.277492
Minimum	-1.767120
Std. Dev.	0.723527
Skewness	-0.170544
Kurtosis	2.534658
Jarque-Bera	0.485455
Probability	0.784485

2. Uji Multikolinearitas

Variance Inflation Factors
Date: 11/23/23 Time: 23:55
Sample: 1988 2022
Included observations: 35

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	11.72658	691.7864	NA
X1	0.001753	7.964582	2.118326
X2	0.003029	24.23457	4.218805
X3	0.064286	298.6959	2.351806
M	0.091658	231.2149	2.862467

3. Uji Heteroskedastisitas

Heteroskedasticity Test: Glejser
Null hypothesis: Homoskedasticity

F-statistic	0.811595	Prob. F(4,30)	0.5277
Obs*R-squared	3.417613	Prob. Chi-Square(4)	0.4905
Scaled explained SS	2.677069	Prob. Chi-Square(4)	0.6132

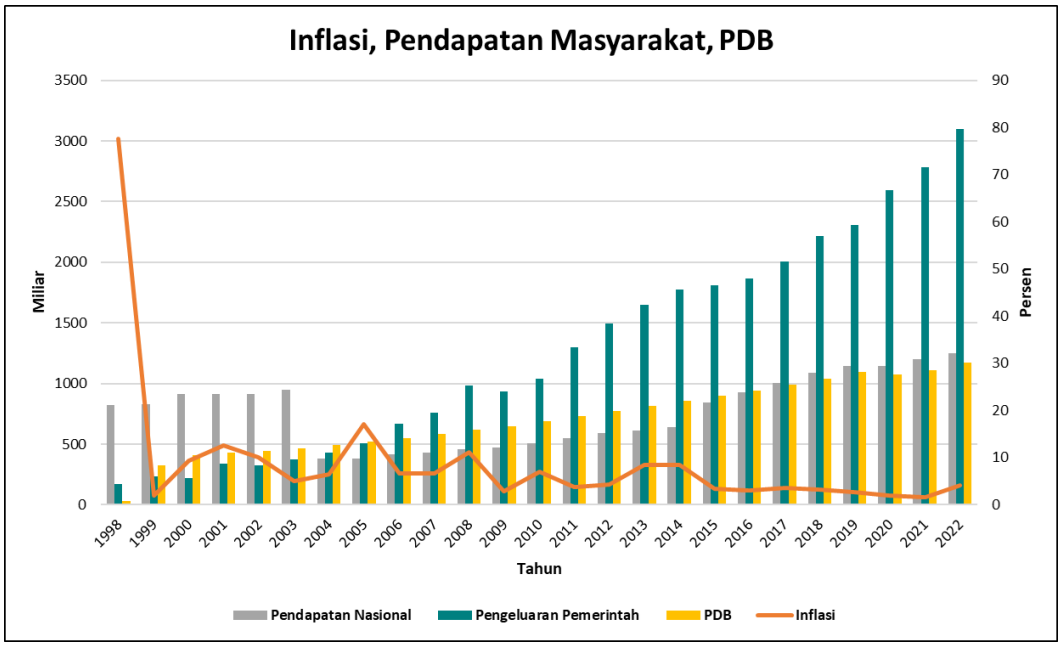
4. Uji Autokorelasi

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.414535	2.464046	1.385743	0.1768
X1	0.084957	0.031834	2.668707	0.0125
X2	-0.070448	0.039592	-1.779373	0.0860
X3	-0.263274	0.184160	-1.429592	0.1639
M	-0.147880	0.208463	-0.709381	0.4840
RESID(-1)	0.976753	0.191070	5.112022	0.0000
RESID(-2)	-0.186380	0.180743	-1.031191	0.3113

R-squared	0.565843	Mean dependent var	1.19E-15
Adjusted R-squared	0.472809	S.D. dependent var	0.723527
S.E. of regression	0.525338	Akaike info criterion	1.727307
Sum squared resid	7.727443	Schwarz criterion	2.038377
Log likelihood	-23.22787	Hannan-Quinn criter.	1.834688
F-statistic	6.082124	Durbin-Watson stat	1.849487
Prob(F-statistic)	0.000360		

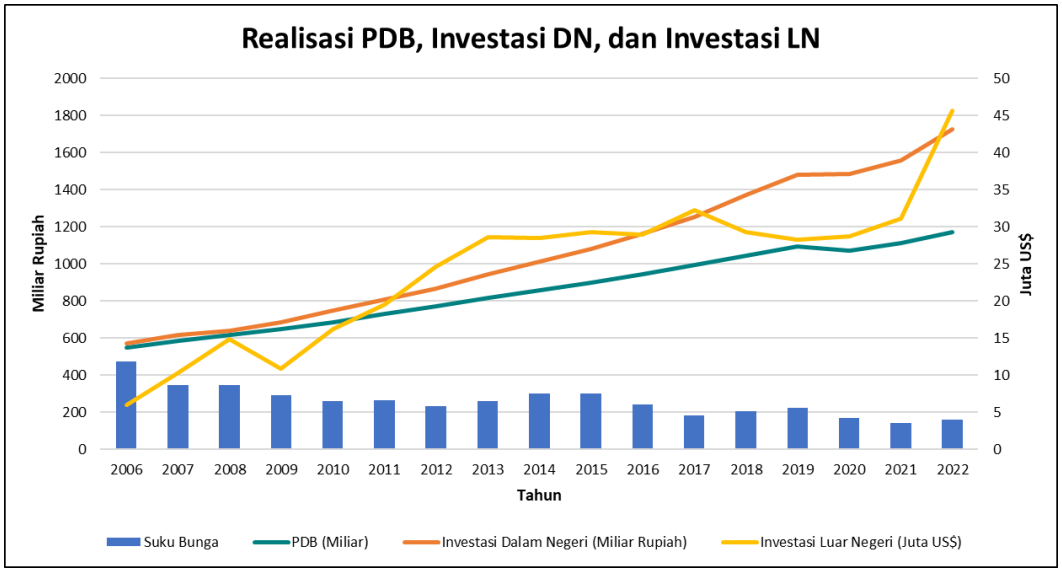
Apendiks

Apendiks 1



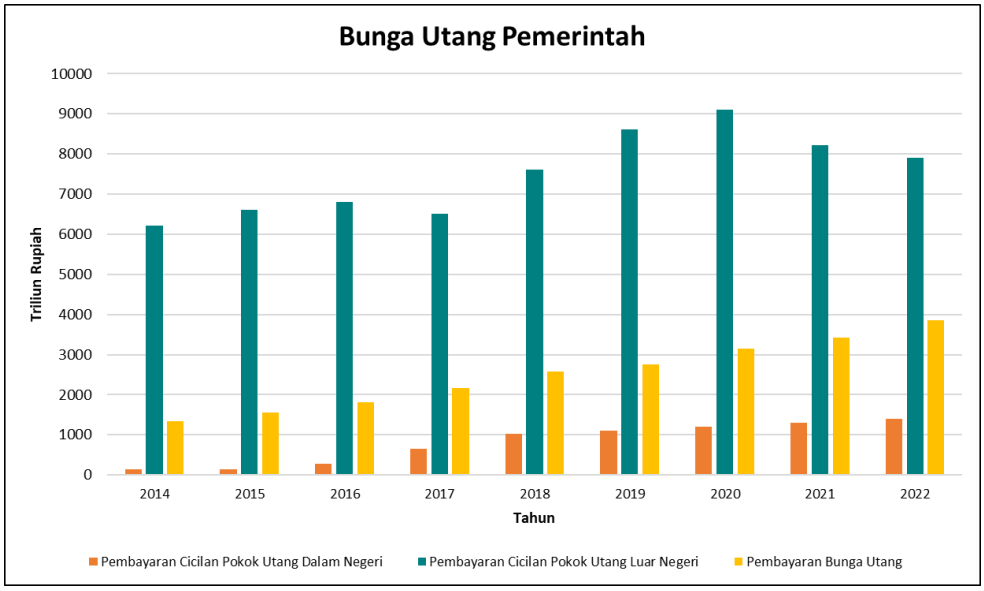
Sumber: Badan Pusat Statistik, diolah, 2023

Apendiks 2



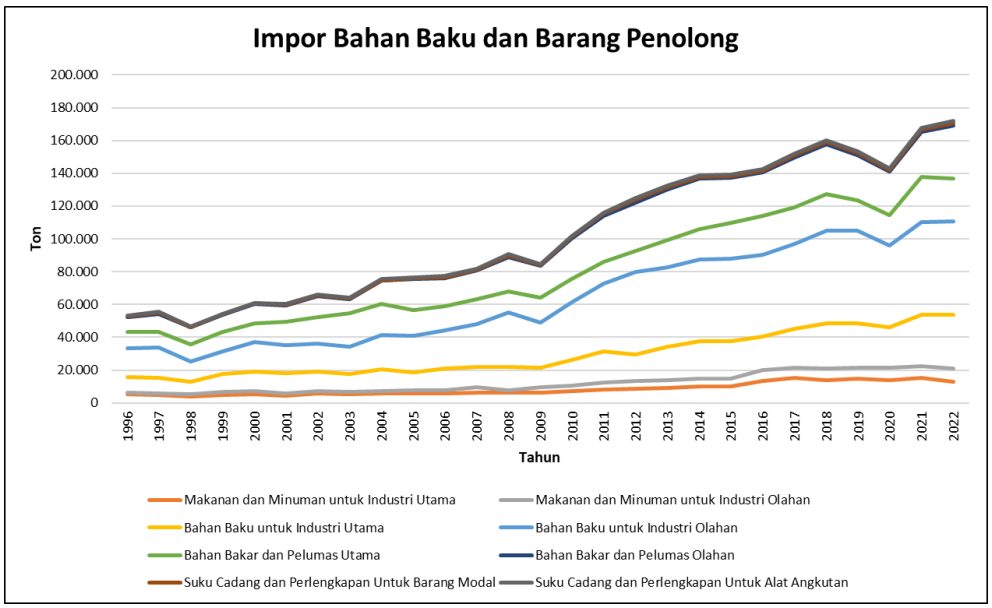
Sumber: Badan Pusat Statistik, diolah, 2023

Apendiks 3



Sumber: Databoks, diolah, 2023

Apendiks 4



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