

**LAMPIRAN**



DATA SEBELUM LOG

Obs	Y	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>
1983	7500	1760	1780	994
1984	12300	1640	1930	1076
1985	7900	1650	1970	1131
1986	12400	1250	1990	1655
1987	7700	1310	1880	1652
1988	4600	1350	1850	1729
1989	9000	1420	1750	1805
1990	6700	1630	1440	1901
1991	6800	1680	1790	1992
1992	10800	1760	1680	2062
1993	12000	1320	1868	2110
1994	9200	1530	2360	2200
1995	7100	1740	2030	2308
1996	10500	1770	1690	2383
1997	7900	1680	1680	4650
1998	4300	1690	1700	8025
1999	11700	1840	1370	7100
2000	15800	1360	1280	9595
2001	12400	1000	1130	10400
2002	13700	1030	1080	8940
2003	12100	1085	974	8465
2004	5800	1130	1020	9290

Keterangan

Y = Volume Ekspor Teh Indonesia ke Inggris ( Ribu Ton )

X<sub>1</sub> = Harga Teh Internasional ( US\$ / Kg )

X<sub>2</sub> = Harga Kopi Internasional ( US\$ / Kg )

X<sub>3</sub> = Nilai Tukar Rupiah terhadap Dollar Amerika / Kurs ( Rp / US\$ )

DATA SETELAH LOG

Obs	LY	LX1	LX2	LX3
1983	8.922658	7.473069	7.484369	6.901737
1984	9.417355	7.402452	7.565275	6.981006
1985	8.974618	7.408531	7.585789	7.030857
1986	9.425452	7.130899	7.59589	7.411556
1987	8.948976	7.177782	7.539027	7.409742
1988	8.433812	7.20786	7.522941	7.455298
1989	9.10498	7.258412	7.467371	7.498316
1990	8.809863	7.396335	7.272398	7.550135
1991	8.824678	7.426549	7.489971	7.596894
1992	9.287301	7.473069	7.426549	7.631432
1993	9.392662	7.185387	7.532624	7.654443
1994	9.126959	7.333023	7.766417	7.696213
1995	8.86785	7.46164	7.615791	7.744137
1996	9.259131	7.478735	7.432484	7.776115
1997	8.974618	7.426549	7.426549	8.444622
1998	8.36637	7.432484	7.438384	8.990317
1999	9.367344	7.517521	7.222566	8.86785
2000	9.667765	7.21524	7.154615	9.168997
2001	9.425452	6.907755	7.029973	9.249561
2002	9.525151	6.937314	6.984716	9.098291
2003	9.400961	6.989335	6.881411	9.043695
2004	8.665613	7.029973	6.927558	9.136694

Keterangan

LY = Volume Ekspor Teh Indonesia ke Inggris ( Ribu Ton )

LX<sub>1</sub> = Harga Teh Internasional ( US\$ / Kg )

LX<sub>2</sub> = Harga Kopi Internasional ( US\$ / Kg )

LX<sub>3</sub> = Nilai Tukar Rupiah terhadap Dollar Amerika / Kurs (Rp / US\$)

### UJI ROOT D(LY)

ADF Test Statistic	-3.198444	1% Critical Value*	-3.80667	
		5% Critical Value	-3.0199	
		10% Critical Value	-2.6502	
*MacKinnon critical values for rejection of hypothesis of a unit root.				
Augmented Dickey-Fuller Test Equation Dependent Variable: D(LY) Method: Least Squares Date: 08/14/06 Time: 14:41 Sample(adjusted): 1985 2004 Included observations: 20 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LY(-1)	-1.00412	0.3139401	-3.1984436	0.005265
D(LY(-1))	0.1955481	0.2470355	0.7915787	0.439512
C	9.1254146	2.8636931	3.1865896	0.005401
R-squared	0.4323186	Mean dependent var	-0.03759	
Adjusted R-squared	0.3655325	S.D. dependent var	0.463687	
S.E. of regression	0.3693425	Akaike info criterion	0.983296	
Sum squared resid	2.319036	Schwarz criterion	1.132656	
Log likelihood	-6.832963	F-statistic	6.473187	
Durbin-Watson stat	1.8051701	Prob(F-statistic)	0.008126	

### UJI ROOT D(LY,2)

ADF Test Statistic	-4.948799	1% Critical Value*	-3.83036
		5% Critical Value	-3.02936
		10% Critical Value	-2.65519
*MacKinnon critical values for rejection of hypothesis of a unit root.			
<p>Augmented Dickey-Fuller Test Equation</p> <p>Dependent Variable: D(LY,2)</p> <p>Method: Least Squares</p> <p>Date: 08/14/06 Time: 14:42</p> <p>Sample(adjusted): 1986 2004</p> <p>Included observations: 19 after adjusting endpoints</p>			
Variable	Coefficient	Std. Error	t-Statistic
D(LY(-1))	-1.926727	0.3893322	-4.9487986
D(LY(-1),2)	0.4773246	0.2333154	2.0458341
C	-0.001515	0.0976936	-0.0155091
R-squared	0.6949754	Mean dependent var	-0.0154
Adjusted R-squared	0.6568473	S.D. dependent var	0.724893
S.E. of regression	0.4246368	Akaike info criterion	1.268774
Sum squared resid	2.885063	Schwarz criterion	1.417896
Log likelihood	-9.053355	F-statistic	18.22739
Durbin-Watson stat	1.5132336	Prob(F-statistic)	7.49E-05

### UJI ROOT D(LX1)

ADF Test Statistic	-1.897299	1% Critical Value*	-3.80667	
		5% Critical Value	-3.0199	
		10% Critical Value	-2.6502	
*MacKinnon critical values for rejection of hypothesis of a unit root.				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(LX1)				
Method: Least Squares				
Date: 08/14/06 Time: 14:43				
Sample(adjusted): 1985 2004				
Included observations: 20 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LX1(-1)	-0.372036	0.1960869	-1.897299	0.074908
D(LX1(-1))	0.2581643	0.2480098	1.0405662	0.312651
C	2.6991428	1.4322648	1.8845278	0.076709
R-squared	0.1762264	Mean dependent var		-0.01862
Adjusted R-squared	0.0793119	S.D. dependent var		0.148762
S.E. of regression	0.1427406	Akaike info criterion		-0.91809
Sum squared resid	0.346373	Schwarz criterion		-0.76873
Log likelihood	12.180943	F-statistic		1.818369
Durbin-Watson stat	2.0007373	Prob(F-statistic)		0.192472

### UJI ROOT D(LX1,2)

ADF Test Statistic	-3.363749	1% Critical Value*	-3.83036	
		5% Critical Value	-3.02936	
		10% Critical Value	-2.65519	
<p>*MacKinnon critical values for rejection of hypothesis of a unit root.</p> <p>Augmented Dickey-Fuller Test Equation                  Dependent Variable: D(LX1,2)                  Method: Least Squares                  Date: 08/14/06 Time: 14:44                  Sample(adjusted): 1986 2004                  Included observations: 19 after adjusting endpoints</p>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LX1(-1))	-1.152394	0.3425923	-3.3637488	0.003951
D(LX1(-1),2)	0.2043169	0.2467118	0.82816	0.419762
C	-0.024556	0.0373644	-0.6572136	0.520386
R-squared	0.4969675	Mean dependent var		0.001819
Adjusted R-squared	0.4340885	S.D. dependent var		0.21064
S.E. of regression	0.1584581	Akaike info criterion		-0.70271
Sum squared resid	0.4017435	Schwarz criterion		-0.55359
Log likelihood	9.6757829	F-statistic		7.903546
Durbin-Watson stat	1.82927	Prob(F-statistic)		0.0041

### UJI ROOT D(LX2)

ADF Test Statistic	-0.27303	1% Critical Value*	-3.80667	
		5% Critical Value	-3.0199	
		10% Critical Value	-2.6502	
*MacKinnon critical values for rejection of hypothesis of a unit root.				
Augmented Dickey-Fuller Test Equation Dependent Variable: D(LX2) Method: Least Squares Date: 08/14/06 Time: 14:45 Sample(adjusted): 1985 2004 Included observations: 20 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LX2(-1)	-0.04000	0.1465195	-0.2730316	0.788118
D(LX2(-1))	-0.04402	0.2785113	-0.1580621	0.87627
C	0.26272	1.0886243	0.2413335	0.812183
R-squared	0.011446	Mean dependent var	-0.03189	
Adjusted R-squared	-0.10485	S.D. dependent var	0.121417	
S.E. of regression	0.127624	Akaike info criterion	-1.14198	
Sum squared resid	0.276893	Schwarz criterion	-0.99262	
Log likelihood	14.41978	F-statistic	0.098415	
Durbin-Watson stat	2.032788	Prob(F-statistic)	0.906785	



### UJI ROOT D(LX2,2)

ADF Test Statistic	-3.31657	1% Critical Value*	-3.83036	
		5% Critical Value	-3.02936	
		10% Critical Value	-2.65519	
<p>*MacKinnon critical values for rejection of hypothesis of a unit root.</p> <p>Augmented Dickey-Fuller Test Equation                  Dependent Variable: D(LX2,2)                  Method: Least Squares                  Date: 08/14/06 Time: 14:46                  Sample(adjusted): 1986 2004                  Included observations: 19 after adjusting endpoints</p>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LX2(-1))	-1.2004	0.3619406	-3.316567	0.004364
D(LX2(-1),2)	0.085147	0.246409	0.3455534	0.73418
C	-0.04103	0.0320099	-1.2818256	0.218168
R-squared	0.554969	Mean dependent var		0.001349
Adjusted R-squared	0.49934	S.D. dependent var		0.184231
S.E. of regression	0.130357	Akaike info criterion		-1.09314
Sum squared resid	0.271887	Schwarz criterion		-0.94402
Log likelihood	13.38484	F-statistic		9.976282
Durbin-Watson stat	1.966145	Prob(F-statistic)		0.001539

### UJI ROOT D(LX3)

ADF Test Statistic	-0.682984	1% Critical Value*	-3.80667	
		5% Critical Value	-3.0199	
		10% Critical Value	-2.6502	
*MacKinnon critical values for rejection of hypothesis of a unit root.				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(LX3)				
Method: Least Squares				
Date: 08/14/06 Time: 14:47				
Sample(adjusted): 1985 2004				
Included observations: 20 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LX3(-1)	-0.044389	0.0649922	-0.6829841	0.503819
D(LX3(-1))	0.1481372	0.2398047	0.617741	0.544933
C	0.4476932	0.5200821	0.8608124	0.40132
R-squared	0.0418369	Mean dependent var	0.107784	
Adjusted R-squared	-0.070888	S.D. dependent var	0.208002	
S.E. of regression	0.2152479	Akaike info criterion	-0.09657	
Sum squared resid	0.7876378	Schwarz criterion	0.052788	
Log likelihood	3.9657217	F-statistic	0.371141	
Durbin-Watson stat	1.962163	Prob(F-statistic)	0.695401	

### UJI ROOT D(LX3,2)

ADF Test Statistic	-3.151331	1% Critical Value*	-3.8304	
		5% Critical Value	-3.0294	
		10% Critical Value	-2.6552	
*MacKinnon critical values for rejection of hypothesis of a unit root.				
<b>Augmented Dickey-Fuller Test Equation</b> Dependent Variable: D(LX3,2) Method: Least Squares Date: 08/14/06 Time: 14:48 Sample(adjusted): 1986 2004 Included observations: 19 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LX3(-1))	-1.033446	0.32794	-3.151331	0.0062
D(LX3(-1),2)	0.177778	0.249754	0.711813	0.4868
C	0.115717	0.062648	1.847107	0.0833
R-squared	0.456859	Mean dependent var		0.002271
Adjusted R-squared	0.388966	S.D. dependent var		0.282708
S.E. of regression	0.220989	Akaike info criterion		-0.03747
Sum squared resid	0.78138	Schwarz criterion		0.111656
Log likelihood	3.355926	F-statistic		6.729132
Durbin-Watson stat	1.803529	Prob(F-statistic)		0.007574

## ECM TEST

Dependent Variable: DLY				
Method: Least Squares Date: 08/14/06 Time: 13:49 Sample(adjusted): 1984 2004 Included observations: 21 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.484588	7.411617	0.739999	0.4725
DLX1	-1.387498	0.658157	-2.108156	0.055
DLX2	-0.322974	0.751829	-0.429584	0.6745
DLX3	-0.930826	0.412787	-2.25498	0.042
LX1(-1)	0.489967	0.662688	0.739364	0.4728
LX2(-1)	-0.106106	0.6701	-0.158344	0.8766
LX3(-1)	0.055018	0.179315	0.306825	0.7638
ECT(-1)	-0.949942	0.265964	-3.571691	0.0034
R-squared	0.708348	Mean dependent var	-0.01224	
Adjusted R-squared	0.551304	S.D. dependent var	0.466633	
S.E. of regression	0.312573	Akaike info criterion	0.794376	
Sum squared resid	1.270127	Schwarz criterion	1.19229	
Log likelihood	-0.340952	F-statistic	4.510516	
Durbin-Watson stat	2.645197	Prob(F-statistic)	0.009398	

## Uji Autokorelasi

ARCH Test:

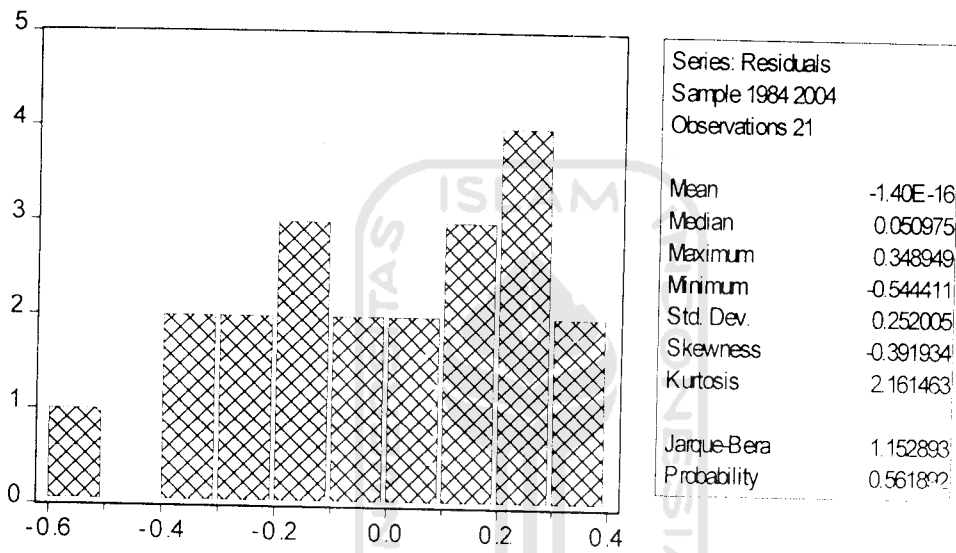
F-statistic	1.15705	Probability	0.296285
Obs*R-squared	1.207963	Probability	0.271736

Test Equation: Dependent Variable: RESID^2 Method: Least Squares Date: 09/14/06 Time: 12:21 Sample(adjusted): 1985 2004 Included observations: 20 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.075092	0.020353	3.689413	0.0017
RESID^2(-1)	-0.24864	0.231147	-1.075663	0.2963
R-squared	0.060398	Mean dependent var		0.060604
Adjusted R-squared	0.008198	S.D. dependent var		0.068525
S.E. of regression	0.068243	Akaike info criterion		-2.43683
Sum squared resid	0.083829	Schwarz criterion		-2.33726
Log likelihood	26.36832	F-statistic		1.15705
Durbin-Watson stat	2.068687	Prob(F-statistic)		0.296285

### UJI LINIERITAS

Ramsey RESET Test:				
F-statistic	1.739685	Probability	0.211795	
Log likelihood ratio	2.843016	Probability	0.091772	
Test Equation: Dependent Variable: DLY Method: Least Squares Date: 03/19/06 Time: 10:55 Sample: 1984 2004 Included observations: 21				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.624011	7.389572	1.031726	0.3225
DLX1	-1.601816	0.660495	-2.425176	0.032
DLX2	-0.565167	0.754012	-0.749546	0.468
DLX3	-0.868126	0.404326	-2.147095	0.0529
LX1(-1)	0.390003	0.649043	0.600889	0.5591
LX2(-1)	-0.337708	0.67505	-0.500271	0.6259
LX3(-1)	-0.070428	0.198667	-0.354502	0.7291
ECT(-1)	-0.818551	0.277222	-2.952689	0.0121
FITTED^2	0.592634	0.449315	1.318971	0.2118
R-squared	0.745276	Mean dependent var	-0.01224	
Adjusted R-squared	0.57546	S.D. dependent var	0.466633	
S.E. of regression	0.304043	Akaike info criterion	0.754233	
Sum squared resid	1.109307	Schwarz criterion	1.201885	
Log likelihood	1.080556	F-statistic	4.388724	
Durbin-Watson stat	2.476883	Prob(F-statistic)	0.011013	

## Uji Normalitas



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### UJI HETEROSKEDASTISITAS

White Heteroskedasticity Test:				
F-statistic	0.807648	Probability	0.65495	
Obs*R-squared	13.71974	Probability	0.470793	
Test Equation:				
Dependent Variable: RESID^2				
Method: Least Squares				
Date: 08/19/06 Time: 10:54				
Sample: 1984 2004				
Included observations: 21				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-113.4724	69.38256	-1.635461	0.1531
DLX1	-0.277374	0.466503	-0.594582	0.5738
DLX1^2	-1.036658	1.767837	-0.586399	0.579
DLX2	0.265675	0.190335	1.39583	0.2122
DLX2^2	-0.649278	1.73392	-0.374457	0.7209
DLX3	-0.009911	0.428316	-0.023138	0.9823
DLX3^2	0.03213	0.682821	0.047055	0.964
LX1(-1)	16.81744	17.13935	0.981218	0.3644
LX1(-1)^2	-1.181572	1.176555	-1.004264	0.354
LX2(-1)	5.885706	6.7894	0.866896	0.4193
LX2(-1)^2	-0.389773	0.457291	-0.852353	0.4267
LX3(-1)	-0.424843	0.838543	-0.506645	0.6301
LX3(-1)^2	0.03227	0.052861	0.61048	0.5639
ECT(-1)	7.362223	3.920713	1.877777	0.1095
ECT(-1)^2	-0.410805	0.217867	-1.885573	0.1083
R-squared	0.653321	Mean dependent var	0.060482	
Adjusted R-squared	-0.155597	S.D. dependent var	0.066792	
S.E. of regression	0.071801	Akaike info criterion	-2.25404	
Sum squared resid	0.030932	Schwarz criterion	-1.50795	
Log likelihood	38.66739	F-statistic	0.807648	
Durbin-Watson stat	2.717064	Prob(F-statistic)	0.65495	