

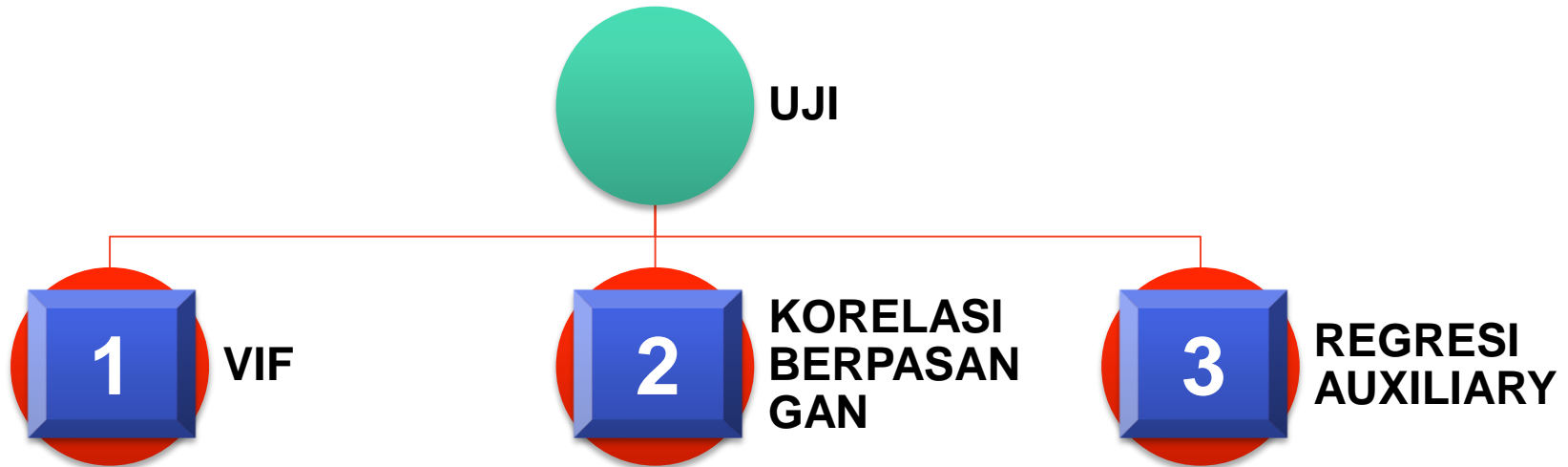
PRAKTIKUM ASUMSI KLASIK REGRESI OLS: SOFTWARE EVIEWS 8

AL MUIZZUDDIN F., SE., ME.

EKONOMETRIKA 1 GENAP 2014/15

UNIVERSITAS BRAWIJAYA

UJI MULTIKOLINEARITAS



DATA

- LIHAT GUJARATI (2008) HALAMAN 358

TABLE 10.13

**U.S. Imports, GDP,
and CPI, 1975–2005
(For all urban
consumers; 1982–84 =
100, except as noted)**

Source: Department of Labor,
Bureau of Labor Statistics.

Year	CPI	GDP	Imports	Year	CPI	GDP	Imports
1975	53.8	1,638.3	98185	1991	136.2	5,995.9	491020
1976	56.9	1,825.3	124228	1992	140.3	6,337.7	536528
1977	60.6	2,030.9	151907	1993	144.5	6,657.4	589394
1978	65.2	2,294.7	176002	1994	148.2	7,072.2	668690
1979	72.6	2,563.3	212007	1995	152.4	7,397.7	749374
1980	82.4	2,789.5	249750	1996	156.9	7,816.9	803113
1981	90.9	3,128.4	265067	1997	160.5	8,304.3	876470
1982	96.5	3,225.0	247642	1998	163.0	8,747.0	917103
1983	99.6	3,536.7	268901	1999	166.6	9,268.4	1029980
1984	103.9	3,933.2	332418	2000	172.2	9,817.0	1224408
1985	107.6	4,220.3	338088	2001	177.1	10,128.0	1145900
1986	109.6	4,462.8	368425	2002	179.9	10,469.6	1164720
1987	113.6	4,739.5	409765	2003	184.0	10,960.8	1260717
1988	118.3	5,103.8	447189	2004	188.9	11,712.5	1472926
1989	124.0	5,484.4	477665	2005	195.3	12,455.8	1677371
1990	130.7	5,803.1	498438				

MASUKKAN DATA KE EXCEL

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW

Clipboard: Paste, Cut, Copy, Format Painter

Font: Calibri, 11, Bold, Italic, Underline, Text Color, Background Color

Alignment: Left, Center, Right, Indent, Decrease Indent, Increase Indent, Merge & Center, Unmerge Cells

Formula Bar: J14

	A	B	C	D	E	F	G
1	MULTIKOLINEARITAS						
2	Year	CPI	GDP	Imports			
3	1975	53.80	1638.30	98185.00		TABLE 10.13 U.S. Imports, GDP, and CPI, 1975-2005 (For all urban consumers; 1982-84 = 100, except as noted)	
4	1976	56.90	1825.30	124228.00			
5	1977	60.60	2030.90	151907.00			
6	1978	65.20	2294.70	176002.00			
7	1979	72.60	2563.30	212007.00			
8	1980	82.40	2789.50	249750.00			
9	1981	90.90	3128.40	265067.00			
10	1982	96.50	3225.00	247642.00			
11	1983	99.60	3536.70	268901.00			
12	1984	103.90	3933.20	332418.00			
13	1985	107.60	4220.30	338088.00			
14	1986	109.60	4462.80	368425.00			
15	1987	113.60	4739.50	409765.00			

ESTIMASI MODEL REGRESI

- Regresikan model berikut di Eviews
- $\ln Importst = \beta_1 + \beta_2 \ln GDPt + \beta_3 \ln CPIt + ut$

Dependent Variable: LOG(IMPORT)
 Method: Least Squares
 Date: 05/25/15 Time: 20:48
 Sample: 1975 2005
 Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.437566	0.269570	5.332801	0.0000
LOG(GDP)	1.830067	0.182182	10.04529	0.0000
LOG(CPI)	-0.843266	0.283793	-2.971415	0.0060

R-squared	0.991919	Mean dependent var	13.08472
Adjusted R-squared	0.991341	S.D. dependent var	0.762092
S.E. of regression	0.070914	Akaike info criterion	-2.362937
Sum squared resid	0.140806	Schwarz criterion	-2.224164
Log likelihood	39.62553	Hannan-Quinn criter.	-2.317701
F-statistic	1718.383	Durbin-Watson stat	0.635465
Prob(F-statistic)	0.000000		

Hasil Regresi

1

UJI VIF

- Dari hasil output Eviews klik menu 'view' → 'coefficient diagnostic' → variance inflation factors
- Setelah itu akan muncul hasil uji VIF

Representations
Estimation Output
Actual, Fitted, Residual ▶
ARMA Structure...
Gradients and Derivatives ▶
Covariance Matrix
Coefficient Diagnostics ▶
Residual Diagnostics ▶
Stability Diagnostics ▶
Label
Sum squared resid 0.140800
Log likelihood 39.62553
F-statistic 1718.383
Prob(F-statistic) 0.000000

	Std. Error	t-Statistic	Prob.
	0.269570	5.332801	0.0000
Scaled Coefficients			
Confidence Intervals...			
Confidence Ellipse...			
Variance Inflation Factors			
Coefficient Variance Decomposition			
Wald Test- Coefficient Restrictions...			
Omitted Variables Test - Likelihood Ratio			
Redundant Variables Test - Likelihood Ratio			
Factor Breakpoint Test...			

HASIL UJI VIF

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.072668	447.9655	NA
LOG(GDP)	0.033190	15093.02	68.08215
LOG(CPI)	0.080538	11438.08	68.08215

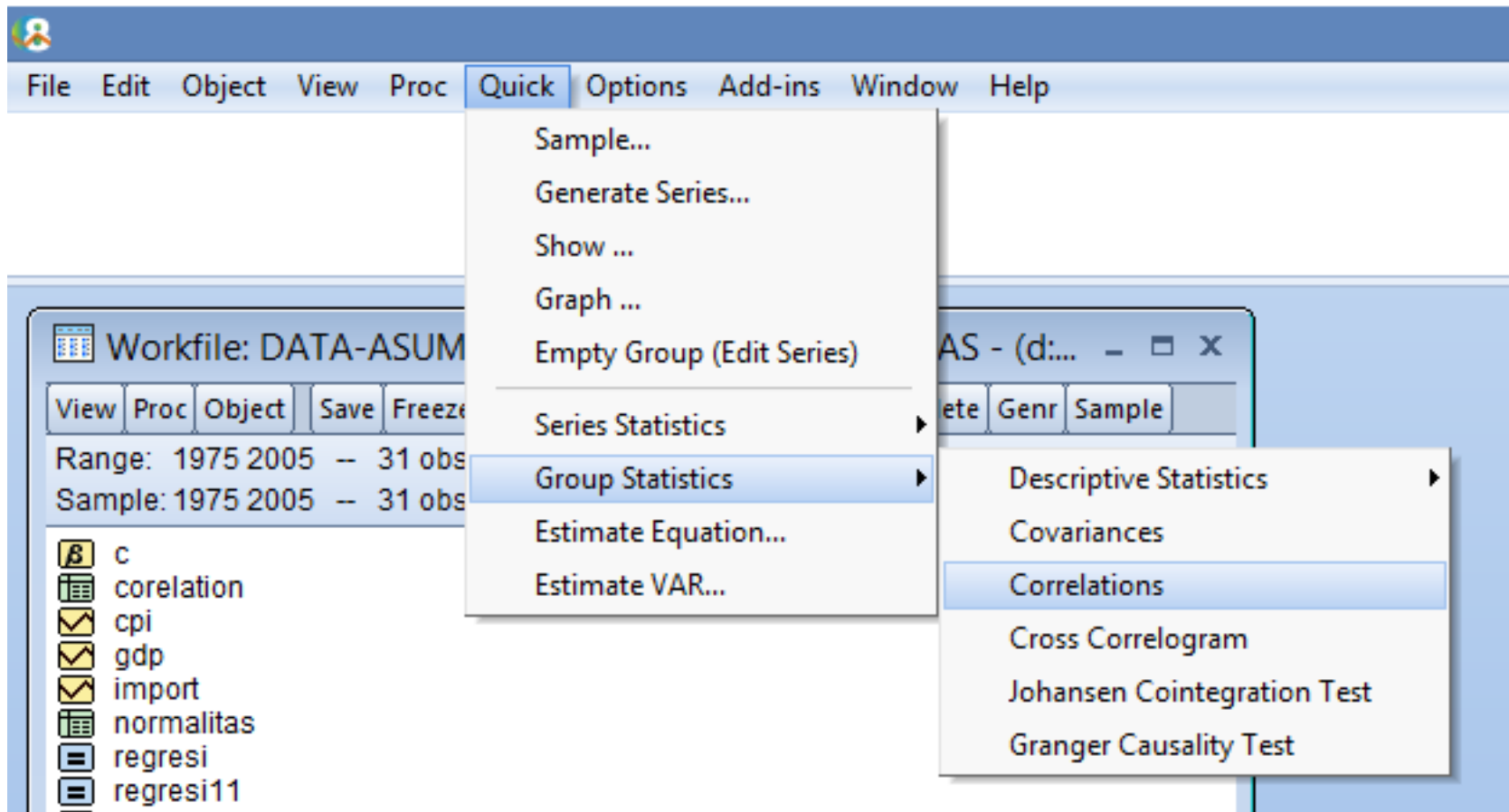
Intepretasi:

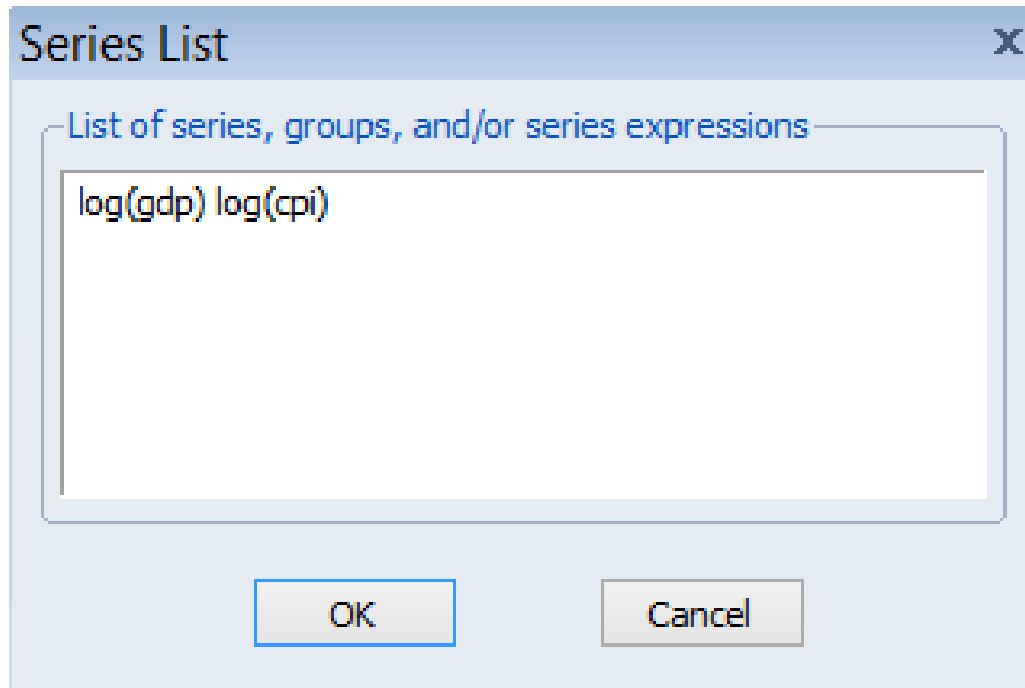
Karena nilai VIF lebih dari 10, maka model regresi tersebut terdapat masalah multikolinearitas.

2

PAIR-WISE CORRELATIONS

- Klik menu 'quick' → 'group statistics' → correlation
- Kemudian isikan dalam kotak series list dengan mengisi variable bebas yang akan dilihat korelasinya
- Variabel yang diisikan: $\log(\text{gdp})$ $\log(\text{cpi})$





HASIL KORELASI BERPASANGAN

	LOG(GDP)	LOG(CPI)			
LOG(GDP)	1.000000	0.992629			
LOG(CPI)	0.992629	1.000000			

Intepretasi:

Karena nilai korelasi dari masing-masing variable bebas menunjukkan angka 0,9 yang berarti korelasinya cukup tinggi maka model regresi tersebut terdapat masalah multikolinearitas.

3

AUXILIARY REGRESSIONS

- REGRESIKAN MODEL BERIKUT
- REGRESI 1 : $\ln \text{Import}_{st} = \beta_1 + \beta_2 \ln \text{GDP}_{st} + \beta_3 \ln \text{CPI}_{st} + u_t$
- REGRESI 2 : $\ln \text{GDP}_{st} = \beta_4 + \beta_5 \ln \text{CPI}_{st}$
- REGRESI 3 : $\ln \text{CPI}_{st} = \beta_4 + \beta_5 \ln \text{GDP}_{st}$

Petunjuk:

Jika nilai R^2 model Regresi 1 $>$ R^2 model Regresi 2 dan 3 \rightarrow maka model regresi tersebut tidak ada multikolinearitas

HASIL REGRESI 1

Equation: REGRESI Workfile: DATA-ASUMSI_KLASIK-... - □ x

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: LOG(IMPORT)
 Method: Least Squares
 Date: 05/25/15 Time: 20:48
 Sample: 1975 2005
 Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.437566	0.269570	5.332801	0.0000
LOG(GDP)	1.830067	0.182182	10.04529	0.0000
LOG(CPI)	-0.843266	0.283793	-2.971415	0.0060

R-squared	0.991919	Mean dependent var	13.08472
Adjusted R-squared	0.991341	S.D. dependent var	0.762092
S.E. of regression	0.070914	Akaike info criterion	-2.362937
Sum squared resid	0.140806	Schwarz criterion	-2.224164
Log likelihood	39.62553	Hannan-Quinn criter.	-2.317701
F-statistic	1718.383	Durbin-Watson stat	0.635465
Prob(F-statistic)	0.000000		

HASIL REGRESI 2

Equation: REGRESI11 Workfile: DATA-ASUMSI_KLASI... - □ ×

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: LOG(GDP)
 Method: Least Squares
 Date: 05/25/15 Time: 20:56
 Sample: 1975 2005
 Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.169754	0.168270	6.951653	0.0000
LOG(CPI)	1.546263	0.035057	44.10649	0.0000

R-squared	0.985312	Mean dependent var	8.569425
Adjusted R-squared	0.984805	S.D. dependent var	0.586384
S.E. of regression	0.072282	Akaike info criterion	-2.354156
Sum squared resid	0.151514	Schwarz criterion	-2.261641
Log likelihood	38.48942	Hannan-Quinn criter.	-2.323998
F-statistic	1945.382	Durbin-Watson stat	0.207558
Prob(F-statistic)	0.000000		

HASIL REGRESI 3

Equation: REGRESI22 Workfile: DATA-ASUMSI_KLASI... - □ x

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: LOG(CPI)
 Method: Least Squares
 Date: 05/25/15 Time: 20:59
 Sample: 1975 2005
 Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.675102	0.124086	-5.440614	0.0000
LOG(GDP)	0.637221	0.014447	44.10649	0.0000

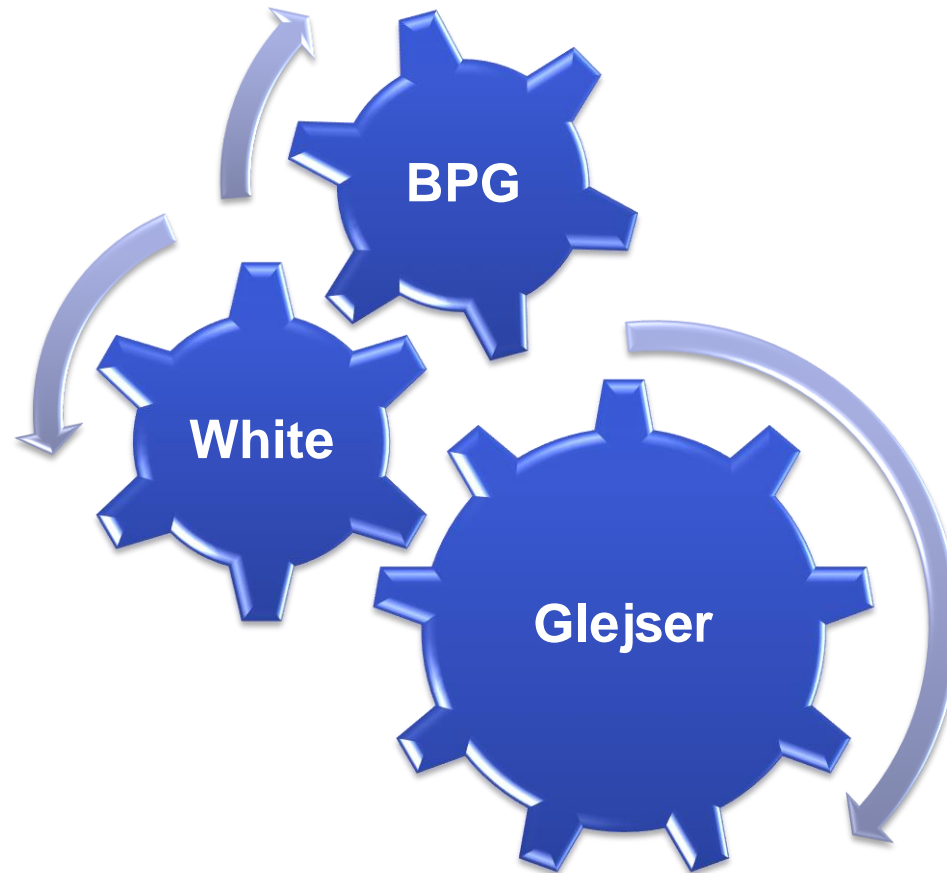
R-squared	0.985312	Mean dependent var	4.785519
Adjusted R-squared	0.984805	S.D. dependent var	0.376431
S.E. of regression	0.046401	Akaike info criterion	-3.240635
Sum squared resid	0.062439	Schwarz criterion	-3.148120
Log likelihood	52.22985	Hannan-Quinn criter.	-3.210478
F-statistic	1945.382	Durbin-Watson stat	0.210383
Prob(F-statistic)	0.000000		

INTEPRETASI HASIL

- R^2 pada model regresi 1 lebih besar dari pada R^2 model regresi 2 dan 3, maka model regresi ini tidak terjadi multikolinearitas.

STOP

UJI HETEROSKEDASTISITAS



DATA

- LIHAT GUJARATI (2008) HALAMAN 406

TABLE 11.7 Passenger Car Mileage Data

Observation	MPG	SP	HP	VOL	WT	Observation	MPG	SP	HP	VOL	WT
1	65.4	96	49	89	17.5	42	32.2	106	95	106	30.0
2	56.0	97	55	92	20.0	43	32.2	109	102	92	30.0
3	55.9	97	55	92	20.0	44	32.2	106	95	88	30.0
4	49.0	105	70	92	20.0	45	31.5	105	93	102	30.0
5	46.5	96	53	92	20.0	46	31.5	108	100	99	30.0
6	46.2	105	70	89	20.0	47	31.4	108	100	111	30.0
7	45.4	97	55	92	20.0	48	31.4	107	98	103	30.0
8	59.2	98	62	50	22.5	49	31.2	120	130	86	30.0
9	53.3	98	62	50	22.5	50	33.7	109	115	101	35.0
10	43.4	107	80	94	22.5	51	32.6	109	115	101	35.0
11	41.1	103	73	89	22.5	52	31.3	109	115	101	35.0
12	40.9	113	92	50	22.5	53	31.3	109	115	124	35.0
13	40.9	113	92	99	22.5	54	30.4	133	180	113	35.0

MASUKKAN DATA KE EXCEL

The screenshot shows the Microsoft Excel interface. The ribbon is set to 'HOME'. The 'Clipboard' group contains 'Paste', 'Cut', 'Copy', and 'Format Painter'. The 'Font' group shows 'Calibri' font, size '11', and various formatting options like bold, italic, underline, and text color. The 'Paragraph' group shows alignment options. The active cell is I13. Below the ribbon, a data table is displayed with columns A through G and rows 1 through 13.

	A	B	C	D	E	F	G
1	HETEROSKEDASTISITAS						
2	Observation	MPG	SP	HP	VOL	WT	
3	1	65.4	96.0	49.0	89.0	17.5	
4	2	56.0	97.0	55.0	92.0	20.0	
5	3	55.9	97.0	55.0	92.0	20.0	
6	4	49.0	105.0	70.0	92.0	20.0	
7	5	46.5	96.0	53.0	92.0	20.0	
8	6	46.2	105.0	70.0	89.0	20.0	
9	7	45.4	97.0	55.0	92.0	20.0	
10	8	59.2	98.0	62.0	50.0	22.5	
11	9	53.3	98.0	62.0	50.0	22.5	
12	10	43.4	107.0	80.0	94.0	22.5	
13	11	41.1	103.0	73.0	89.0	22.5	

ESTIMASI MODEL REGRESI

- Regresikan model berikut di Eviews
- **$MPGi = \beta_1 + \beta_2SP_i + \beta_3HP_i + \beta_4WT_i + u_i$**

HASIL ESTIMASI MODEL REGRESI

Equation: REGRESI Workfile: DATA-ASUMSI_KLASIK-... - □ ×

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: MPG
 Method: Least Squares
 Date: 05/26/15 Time: 05:42
 Sample: 1 81
 Included observations: 81

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	189.9597	22.52879	8.431865	0.0000
SP	-1.271697	0.233117	-5.455179	0.0000
HP	0.390433	0.076246	5.120719	0.0000
WT	-1.903273	0.185516	-10.25936	0.0000

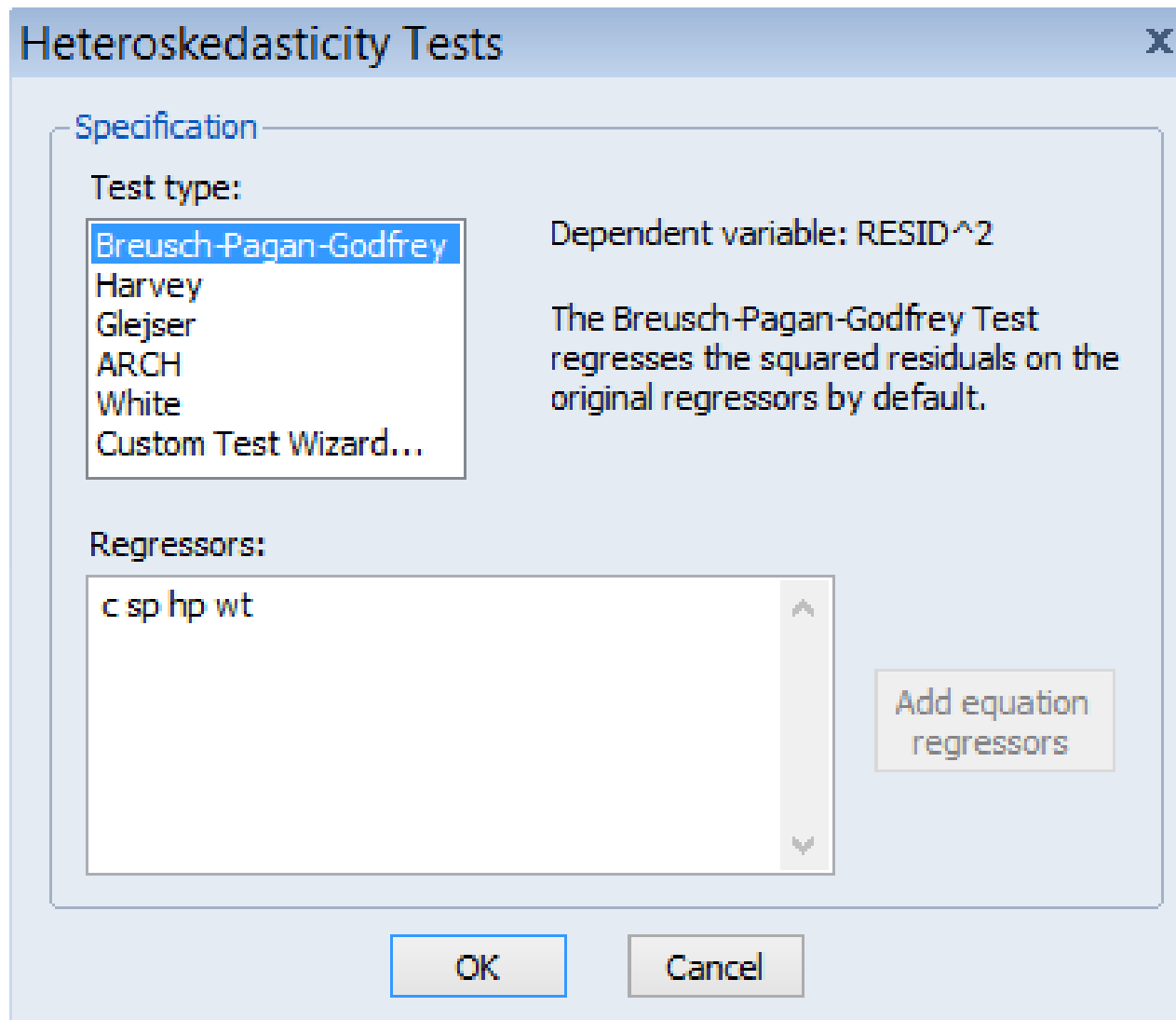
R-squared	0.882864	Mean dependent var	33.83457
Adjusted R-squared	0.878301	S.D. dependent var	10.05541
S.E. of regression	3.507873	Akaike info criterion	5.396019
Sum squared resid	947.4985	Schwarz criterion	5.514263
Log likelihood	-214.5388	Hannan-Quinn criter.	5.443460
F-statistic	193.4526	Durbin-Watson stat	1.023742
Prob(F-statistic)	0.000000		

UJI GLEJSER

- Regresikan model regresi di atas
- Dari hasil output regresi, klik menu 'view' → 'residual diagnostic' → 'heteroskedasticity test'
- Kemudian akan muncul menu uji hetero
- Pilih salah satu uji yang ingin dijalankan, misal: uji glejser
- Klik ok dan lihat hasilnya

Equation: REGRES1 Workfile: DATA-ASUMSI_KLASIK-... - □ ×

View	Proc	Object	Print	Name	Freeze	Estimate	Forecast	Stats	Resids	
<ul style="list-style-type: none"> Representations Estimation Output Actual, Fitted, Residual ▶ ARMA Structure... Gradients and Derivatives ▶ Covariance Matrix Coefficient Diagnostics ▶ Residual Diagnostics ▶ <ul style="list-style-type: none"> Correlogram - Q-statistics... Correlogram Squared Residuals... Histogram - Normality Test Serial Correlation LM Test... Heteroskedasticity Tests... Stability Diagnostics ▶ Label 										
						Std. Error	t-Statistic	Prob.		
						22.52879	8.431865	0.0000		
						0.233117	-5.455179	0.0000		
S.E. of regression				3.507872						
Sum squared resid				947.4985						
Log likelihood				-214.5388						
F-statistic				193.4526		Durbin-Watson stat		1.023742		
Prob(F-statistic)				0.000000						



EViews - [E]

File Edit Object View Proc Quick Options Add-ins Window H

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Heteroskedasticity Test: Glejser

F-statistic	20.14196	Prob. F(3,77)	0.0000
Obs*R-squared	35.61553	Prob. Chi-Square(3)	0.0000
Scaled explained SS	40.66166	Prob. Chi-Square(3)	0.0000

Test Equation:

Dependent Variable: ARESID

Method: Least Squares

Date: 05/26/15 Time: 05:47

Sample: 1 81

Included observations: 81

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	77.85361	11.14037	6.988424	0.0000
SP	-0.747305	0.115275	-6.482780	0.0000
HP	0.243250	0.037703	6.451703	0.0000
WT	-0.639637	0.091737	-6.972537	0.0000

R-squared	0.439698	Mean dependent var	2.567591
Adjusted R-squared	0.417868	S.D. dependent var	2.273500
S.E. of regression	1.734625	Akaike info criterion	3.987581
Sum squared resid	231.6872	Schwarz criterion	4.105826
Log likelihood	-157.4970	Hannan-Quinn criter.	4.035023
F-statistic	20.14196	Durbin-Watson stat	1.435883
Prob(F-statistic)	0.000000		

HASIL UJI GLEJSER

INTEPRETASI HASIL

- Variabel SP, HP, dan WT signifikan pada $\alpha = 1\%$
- Maka model regresi tersebut terdapat masalah heteroskedastisitas

UJI WHITE

- Regresikan model regresi di atas
- Dari hasil output regresi, klik menu 'view' → 'residual diagnostic' → 'heteroskedasticity test'
- Kemudian akan muncul menu uji hetero
- Pilih salah satu uji yang ingin dijalankan, misal: uji white
- Klik ok dan lihat hasilnya

HASIL Uji WHITE

EViews - [

File Edit Object View Proc Quick Options Add-ins Window

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Heteroskedasticity Test: White

F-statistic	6.853698	Prob. F(9,71)	0.0000
Obs*R-squared	37.65618	Prob. Chi-Square(9)	0.0000
Scaled explained SS	69.31090	Prob. Chi-Square(9)	0.0000

Test Equation:
 Dependent Variable: RESID^2
 Method: Least Squares
 Date: 05/26/15 Time: 06:01
 Sample: 1 81
 Included observations: 81

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	14917.07	6792.797	2.196012	0.0314
SP^2	1.355940	0.725408	1.869211	0.0657
SP*HP	-0.893405	0.480181	-1.860557	0.0669
SP*WT	2.475437	1.111518	2.227077	0.0291
SP	-284.8800	140.5334	-2.027134	0.0464
HP^2	0.147255	0.079756	1.846318	0.0690

INTEPRETASI HASIL

- Nilai probabilitas dari nilai Obs*R-squared menunjukkan hasil yang signifikan ($< \alpha = 1\%$)
- Maka model regresi tersebut terdapat masalah heteroskedastisitas

UJI BREUSCH-PAGAN-GODFREY (BPG)

- Regresikan model regresi di atas
- Dari hasil output regresi, klik menu 'view' → 'residual diagnostic' → 'heteroskedasticity test'
- Kemudian akan muncul menu uji hetero
- Pilih salah satu uji yang ingin dijalankan, misal: BPG
- Klik ok dan lihat hasilnya

EViews - [

File Edit Object View Proc Quick Options Add-ins Window

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	11.78700	Prob. F(3,77)	0.0000
Obs*R-squared	25.49141	Prob. Chi-Square(3)	0.0000
Scaled explained SS	46.92012	Prob. Chi-Square(3)	0.0000

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/26/15 Time: 06:08

Sample: 1 81

Included observations: 81

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	659.1228	128.7402	5.119792	0.0000
SP	-6.401873	1.332143	-4.805694	0.0000
HP	2.078909	0.435705	4.771372	0.0000
WT	-5.540877	1.060125	-5.226625	0.0000

R-squared	0.314709	Mean dependent var	11.69751
Adjusted R-squared	0.288009	S.D. dependent var	23.75653
S.E. of regression	20.04565	Akaike info criterion	8.882023
Sum squared resid	30940.76	Schwarz criterion	9.000267
Log likelihood	-355.7219	Hannan-Quinn criter.	8.929464
F-statistic	11.78700	Durbin-Watson stat	1.647225
Prob(F-statistic)	0.000002		

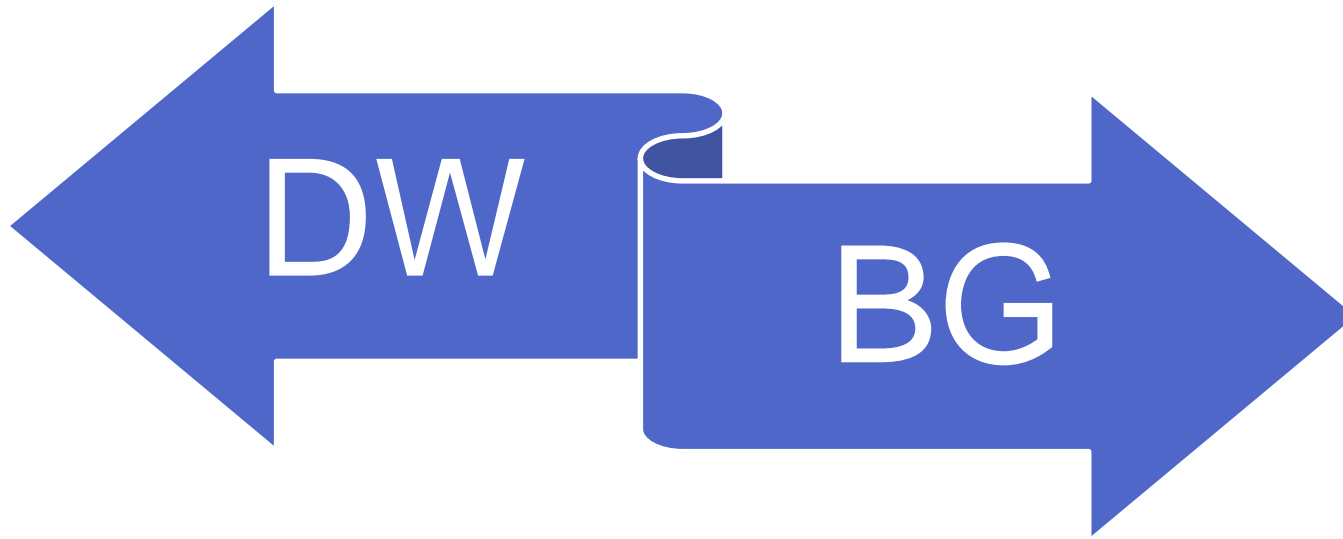
HASIL UJI BPG

INTEPRETASI HASIL

- Nilai probabilitas dari nilai Obs*R-squared menunjukkan hasil yang signifikan ($< \alpha = 1\%$)
- Maka model regresi tersebut terdapat masalah heteroskedastisitas

STOP

UJI AUTOKORELASI



Durbin Watson (DW)-test

- Regresikan model regresi di atas
- Dari hasil output regresi, lihat nilai DW
- Kemudian lihat table DW, cari nilai DL dan DU
- Lihat apakah nilai DW masuk dalam daerah aman atau tidak ada autokorelasi

BREUSCH-GODFREY (BG) TEST

- Regresikan model di atas
- Kemudian klik menu 'view' → 'residual diagnostic' → 'serial correlation LM test'
- Isikan lag = 2

EViews - [Equati

File Edit Object View Proc Quick Options Add-ins Window Help

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Representations
 Estimation Output
 Actual, Fitted, Residual
 ARMA Structure...
 Gradients and Derivatives
 Covariance Matrix

Coefficient Diagnostics
 Residual Diagnostics
 Stability Diagnostics

Label

gan-Godfrey

Prob. F(3,77)	0.0000
Prob. Chi-Square(3)	0.0000
Prob. Chi-Square(3)	0.0000

Correlogram - Q-statistics...
 Correlogram Squared Residuals...
 Histogram - Normality Test
 Serial Correlation LM Test...
 Heteroskedasticity Tests...

C	659.1228			
SP	-6.401873			
HP	2.078909	0.435705	4.771372	0.0000
WT	-5.540877	1.060125	-5.226625	0.0000

EViews - [Equi

File Edit Object View Proc Quick Options Add-ins Window Help

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	8.048232	Prob. F(2,75)	0.0007
Obs*R-squared	14.31245	Prob. Chi-Square(2)	0.0008

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 05/26/15 Time: 06:22

Sample: 1 81

Included observations: 81

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.14523	21.04956	-0.576983	0.5657
SP	0.125340	0.217741	0.575638	0.5666
HP	-0.039346	0.071227	-0.552409	0.5823
WT	0.086388	0.173113	0.499029	0.6192
RESID(-1)	0.415931	0.116182	3.580001	0.0006
RESID(-2)	0.021368	0.117165	0.182378	0.8558

HASIL UJI BG

INTEPRETASI HASIL

- Nilai probabilitas dari nilai Obs*R-squared menunjukkan hasil yang signifikan ($\alpha = 1\%$)
- Maka model regresi tersebut terdapat masalah autokorelasi

STOP

UJI NORMALITAS



JARQUE-BERA TEST



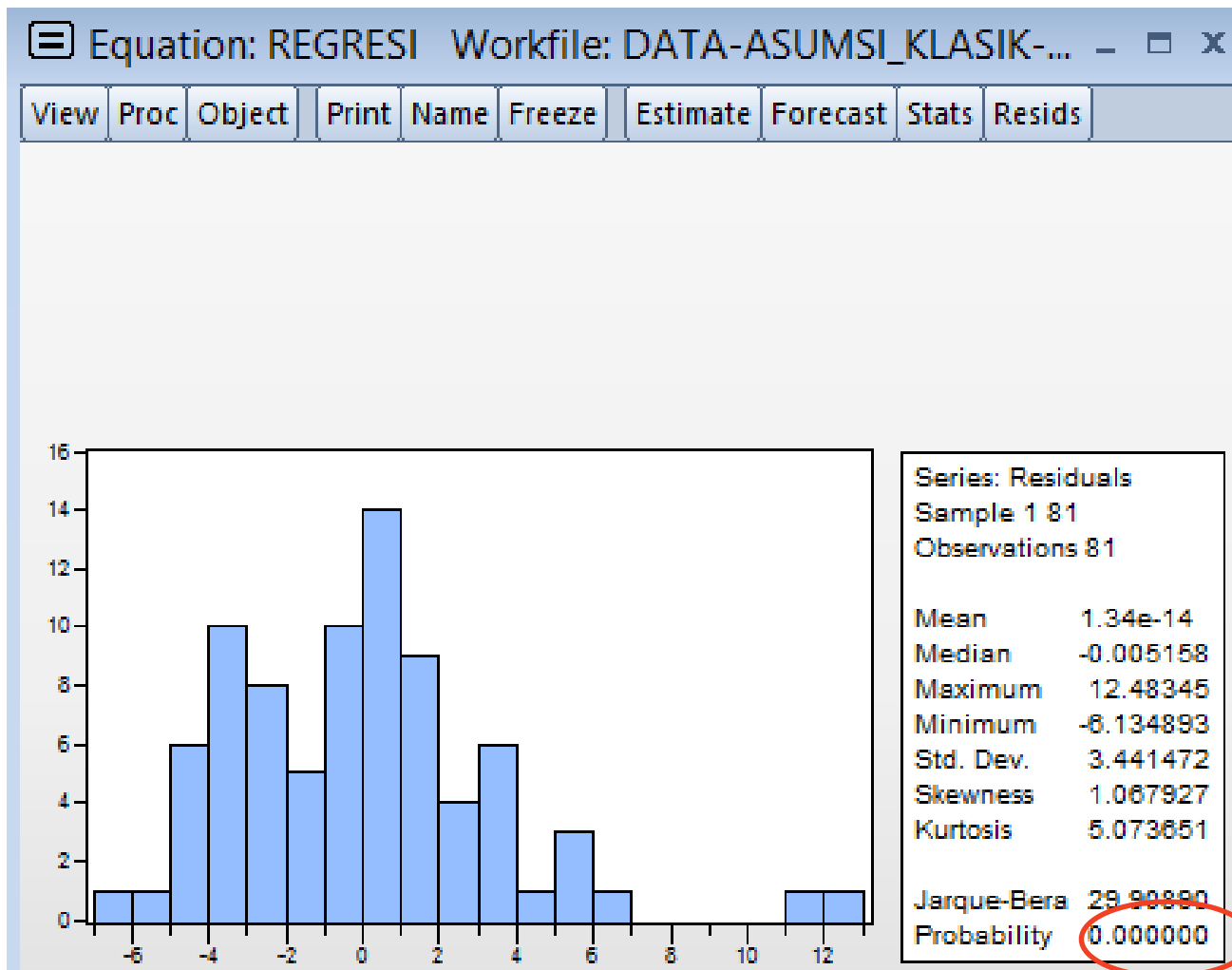
JB TEST

- Regresikan model regresi di atas
- Dari hasil output regresi, klik menu 'view' → 'residual diagnostic' → 'histogram' → 'normality test'
- Klik ok dan lihat hasilnya

Equation: REGRESI Workfile: DATA-ASUMSI_KLASIK-... - □ ×

View	Proc	Object	Print	Name	Freeze	Estimate	Forecast	Stats	Resids
<ul style="list-style-type: none"> Representations Estimation Output Actual,Fitted,Residual ▶ ARMA Structure... Gradients and Derivatives ▶ Covariance Matrix Coefficient Diagnostics ▶ Residual Diagnostics ▶ <ul style="list-style-type: none"> Correlogram - Q-statistics... Correlogram Squared Residuals... Histogram - Normality Test Serial Correlation LM Test... Heteroskedasticity Tests... Stability Diagnostics ▶ Label 									
S.E. of regression					3.507673				
Sum squared resid					947.4985				
Log likelihood					-214.5388				
F-statistic					193.4526	Durbin-Watson stat		1.023742	
Prob(F-statistic)					0.000000				

HASIL JB TEST



INTEPRETASI HASIL

- Lihat nilai probabilitas JB yang sebesar 0,000 ($< \alpha = 1\%$)
- Maka dapat disimpulkan bahwa model regresi tersebut memiliki distribusi error/residual/disturbance yang tidak normal

STOP

MATERI UAS

1. **MODEL LOG LINEAR**
2. **MODEL DUMMY**
3. **UJI ASUMSI KLASIK**
 - a. **MULTIKOL**
 - b. **HETERO**
 - c. **AUTOKORELASI**
 - d. **NORMALITAS**

TIPS DAN TRIK UAS

- PAHAMI TEORI REGRESI TERLEBIH DAHULU
- PELAJARI CARA MEMBACA HASIL REGRESI DARI EIEWS MULAI DARI AWAL
- PELAJARI MATERI SETELAH UTS-AKHIR

MODEL UAS

1. **TULIS (70%)**
2. **TAKE HOME (30%)**

KISI-KISI UAS TULIS

- SOAL BERJUMLAH 5-10 BUAH
- SOAL TEORI (30%)
- SOAL PRAKTIK (70%)
- WAKTU 60 MENIT
- TUTUP BUKU

UAS TAKE HOME

- BUATLAH SEBUAH MODEL REGRESI DAN LAKUKAN UJI ASUMSI KLASIK
- LANGKAH PEMBUATAN TUGAS:
 - BUAT MODEL REGRESINYA, MINIMAL 5 VARIABEL
 - Misal: $\text{GDP-growth} = f(\text{Labor, Inflation, Schooling, Infrastructure, Domestic Investment})$
 - CARILAH DATA YANG AKAN DIGUNAKAN PADA WEB BERIKUT:
<http://databank.worldbank.org/>

FORMAT PENULISAN PAPER

- LIHAT SEPERTI PADA TUGAS UTS KEMARIN

SELAMAT BELAJAR!!

SEMOGA SUKSES UAS
EKONOMETRIKA 1 DAN
UAS-UAS LAINNYA