

Host

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Durbin Watson Test

Durbin Watson Test
Import data

Durbin Watson regression

Durbin Watson regression
G3 model

Regression

[DurbinWatsonData] D:\DATA ANALYSIS\B Normality and Assumption Tests\Durbin Watson Test\SPSS_Output\sav\Durbin-Watson-Test-data.sav

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	absences, studytime, failures, G2, G1 ^b	.	Enter

a. Dependent Variable: G3

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922 ^a	.851	.849	1.254

a. Predictors: (Constant), absences, studytime, failures, G2, G1

b. Dependent Variable: G3

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5752.587	5	1150.517	731.966	.000 ^b
	Residual	1010.679	643	1.572		
	Total	6763.267	648			

a. Dependent Variable: G3

b. Predictors: (Constant), absences, studytime, failures, G2, G1

Durbin Watson regression
G3 model

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.155	.259		-.600	.549
	G1	.139	.036	.119	3.849	.000
	G2	.886	.034	.799	26.107	.000
	studytime	.097	.062	.025	1.564	.118
	failures	-.218	.091	-.040	-2.402	.017
	absences	.023	.011	.034	2.165	.031

a. Dependent Variable: G3

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.28	19.57	11.91	2.980	649
Residual	-9.072	5.807	.000	1.249	649
Std. Predicted Value	-3.902	2.572	.000	1.000	649
Std. Residual	-7.236	4.632	.000	.996	649

a. Dependent Variable: G3

>Error # 701 in column 15. Text: \$CASENUM

>An undefined variable name, or a scratch or system variable was specified in
a

>variable list which accepts only standard variables. Check spelling and

>verify the existence of this variable.

>Execution of this command stops.

Durbin Watson result

Durbin Watson result
Manual statistic

List

[DurbinWatsonData] D:\DATA ANALYSIS\B Normality and Assumption Tests\Durbin Watson Test\SPSS_Output\sav\Durbin-Watson-Test-with-residuals.sav

Durbin Watson result
Manual statistic

dw_n	sum_sq_resid	sum_sq_resid_diff	durbin_watson	approx_lag1_resid_corr
649	1010.68	1877.18	1.85735	.07133

Number of cases read: 1 Number of cases listed: 1

Residual descriptives

Residual descriptives
Regression residuals

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
pred_G3	649	.28105	19.57031	11.9060092	2.97950491
resid_G3	649	-9.07158	5.80683	.0000000	1.24887559
lag_resid_G3	648	-9.07158	5.80683	.0002660	1.24982195
resid_diff_G3	648	-9.80278	11.22586	-.0020029	1.70333795
Valid N (listwise)	648				

Residual diagnostics

Residual diagnostics
Histogram and plots

Explore

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
resid_G3	649	100.0%	0	0.0%	649	100.0%

Descriptives

		Statistic	Std. Error
resid_G3	Mean	.0000000	.04902266
	95% Confidence Interval for Mean	Lower Bound Upper Bound	
	5% Trimmed Mean	.0694870	
	Median	-.0796204	
	Variance	1.560	
	Std. Deviation	1.24887559	
	Minimum	-9.07158	
	Maximum	5.80683	
	Range	14.87841	
	Interquartile Range	1.09849	
	Skewness	-2.844	.096
	Kurtosis	18.545	.192

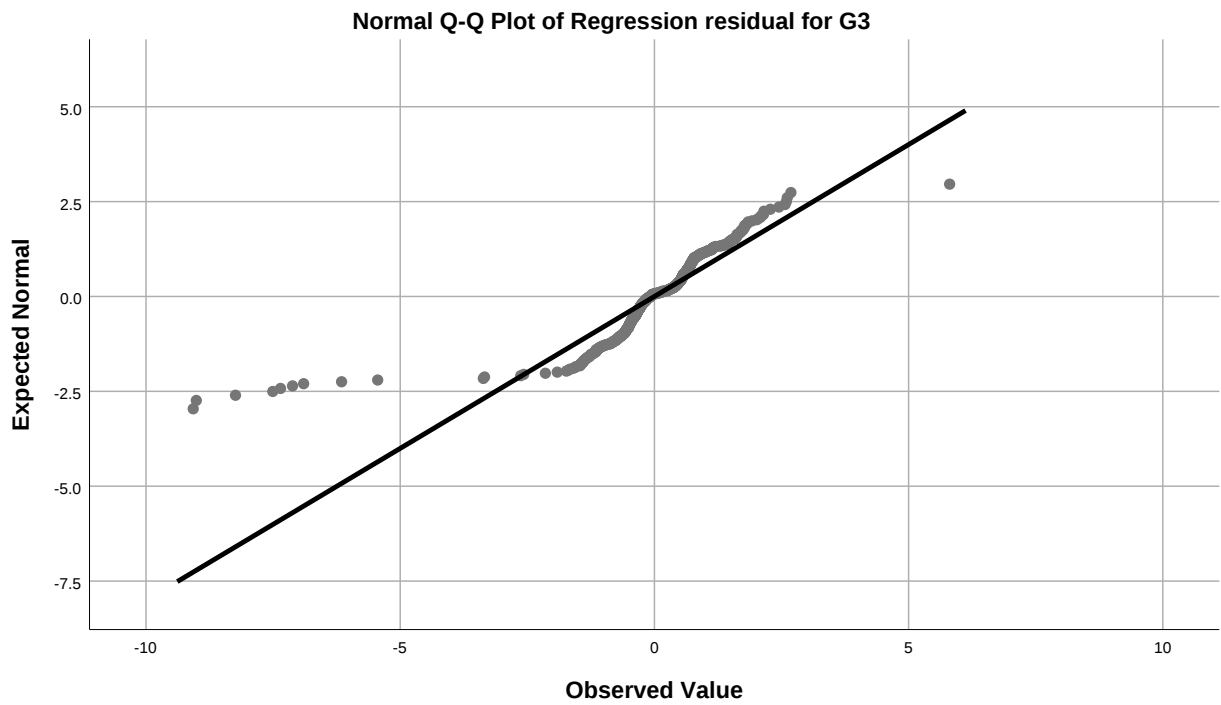
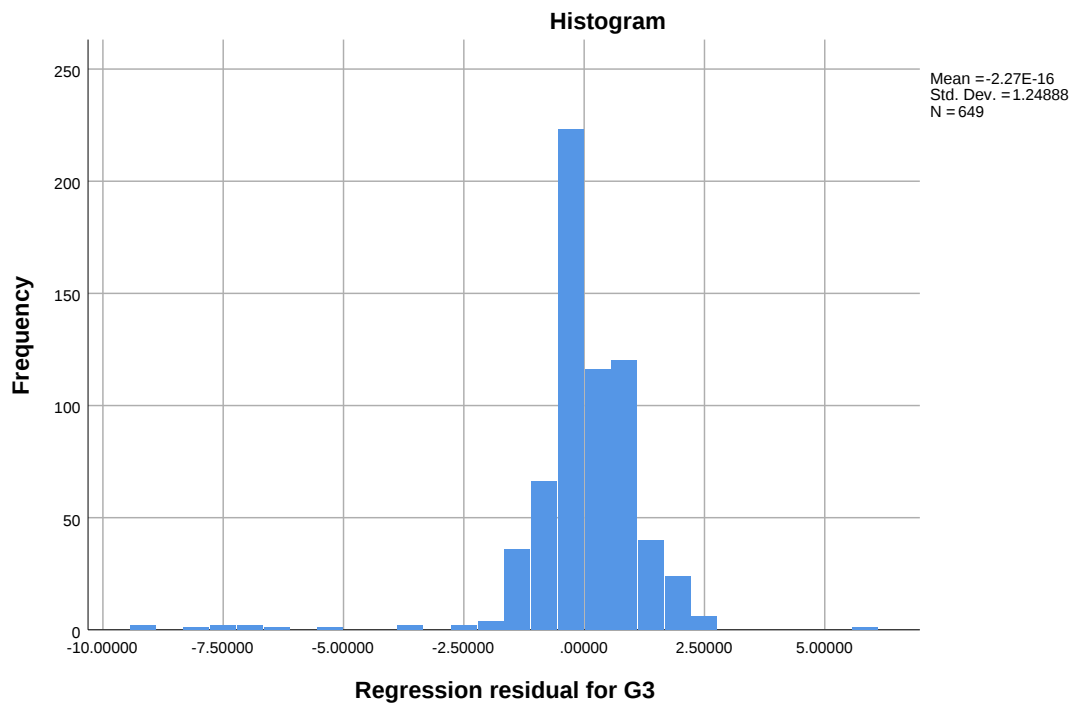
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
resid_G3	.154	649	.000	.757	649	.000

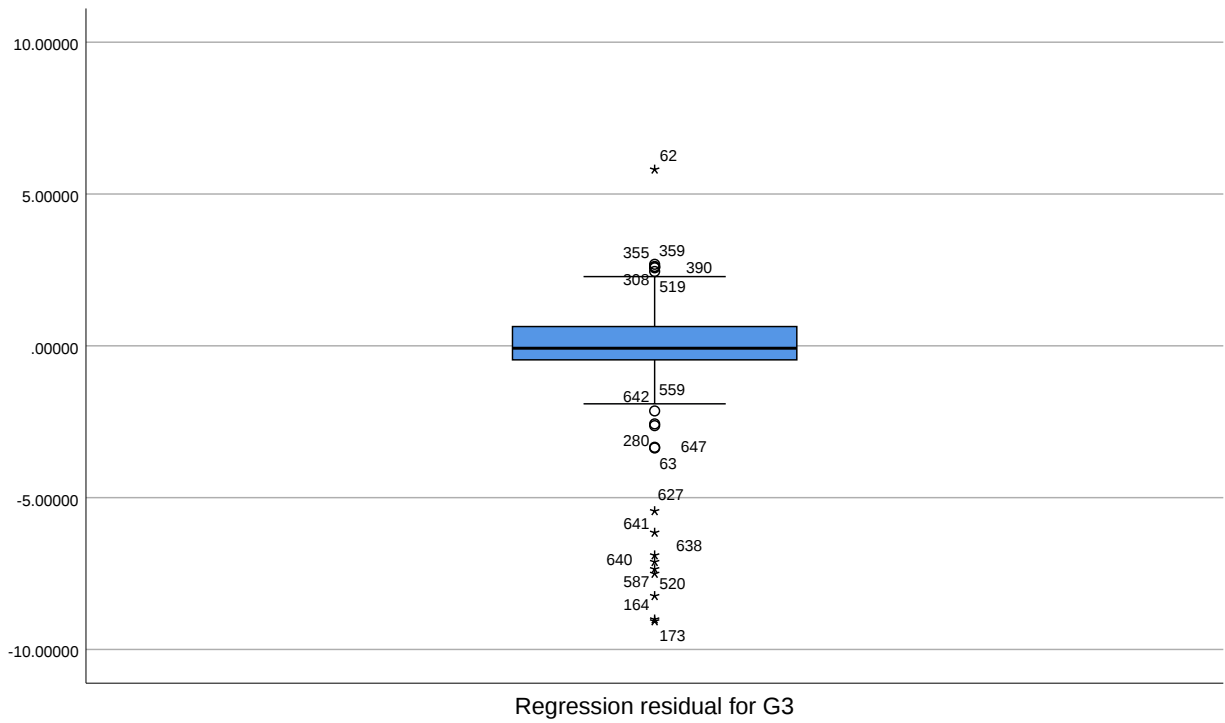
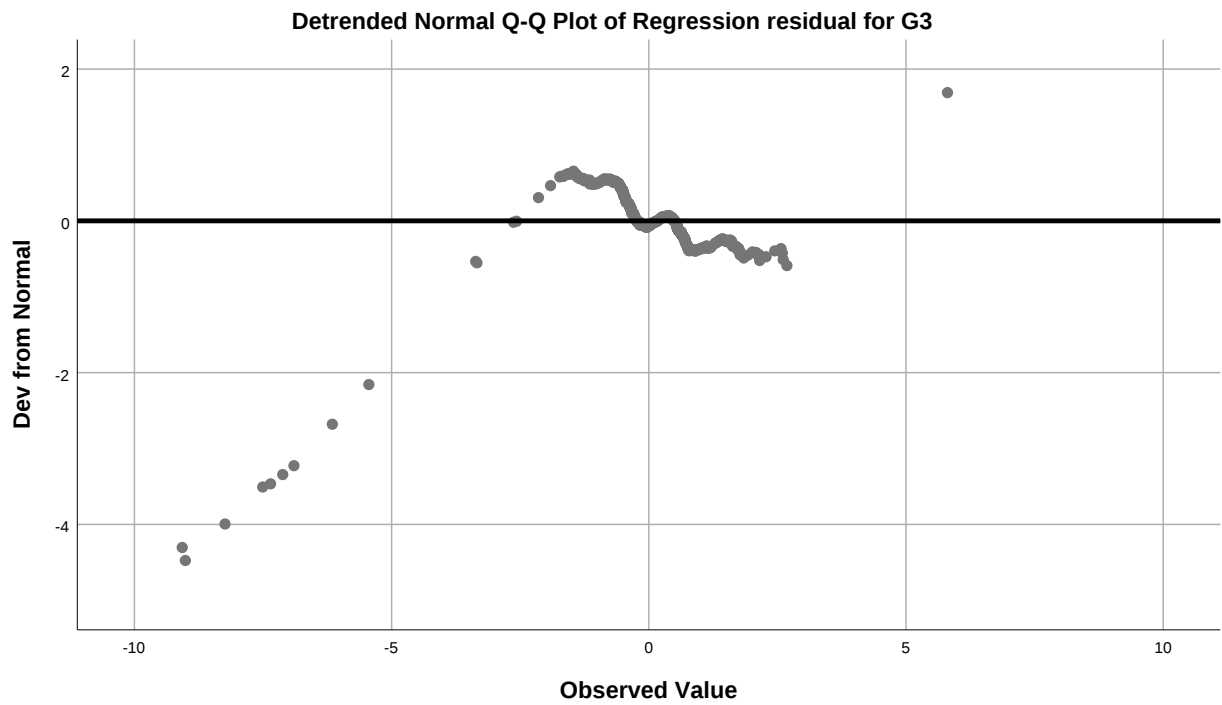
a. Lilliefors Significance Correction

Regression residual for G3

Residual diagnostics Histogram and plots



Residual diagnostics Histogram and plots



Lag residual relation

Lag residual relation
Correlation

Correlations

Correlations

		resid_G3	lag_resid_G3
resid_G3	Pearson Correlation	1	.071
	Sig. (2-tailed)		.072
	N	649	648
lag_resid_G3	Pearson Correlation	.071	1
	Sig. (2-tailed)	.072	
	N	648	648