

Host

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Goldfeld Quandt Test

Goldfeld Quandt Test
Import data

Main regression

Main regression
Residual model

Regression

[GoldfeldQuandtData] D:\DATA ANALYSIS\B Normality and Assumption Tests\Goldfeld
d Quandt Test\SPSS_Output\sav\Goldfeld-Quandt-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

Main regression
Residual 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

Goldfeld Quandt split

Goldfeld Quandt split
Residual variance

Means

[GoldfeldQuandtData] D:\DATA ANALYSIS\B Normality and Assumption Tests\Goldfeld Quandt Test\SPSS_Output\sav\Goldfeld-Quandt-Test-with-residuals.sav

Case Processing Summary

	Included		Cases Excluded		Total	
	N	Percent	N	Percent	N	Percent
gq_resid * gq_group	649	100.0%	0	0.0%	649	100.0%
gq_sq_resid * gq_group	649	100.0%	0	0.0%	649	100.0%

Report

gq_group		gq_resid	gq_sq_resid
.00	N	131	131
	Mean	.0486743	.5699
	Std. Deviation	.75623908	.90517
	Variance	.572	.819
1.00	N	259	259
	Mean	-.0175677	2.8749
	Std. Deviation	1.69874509	10.91113
	Variance	2.886	119.053
2.00	N	259	259
	Mean	-.0070513	.7391
	Std. Deviation	.86133532	1.42576
	Variance	.742	2.033
Total	N	649	649
	Mean	.0000000	1.5573
	Std. Deviation	1.24887559	7.03797
	Variance	1.560	49.533

Goldfeld Quandt result

Goldfeld Quandt result
Sorted by G2

List

Goldfeld Quandt result
Sorted by G2

lower_n	upper_n	lower_mse	upper_mse	gq_f	gq_df_num	gq_df_den	gq_p_valu
e gq_reject_05							
259	259	2.94308	.75661	3.88982	253.00	253.00	.0000
0	1.00						

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

Residual diagnostics

Residual diagnostics
Main model

Explore

Case Processing Summary

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

Descriptives

		Statistic	Std. Error
gq_resid	Mean	.0000000	.04902266
	95% Confidence Interval for Mean	Lower Bound	-.0962624
		Upper Bound	.0962624
	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

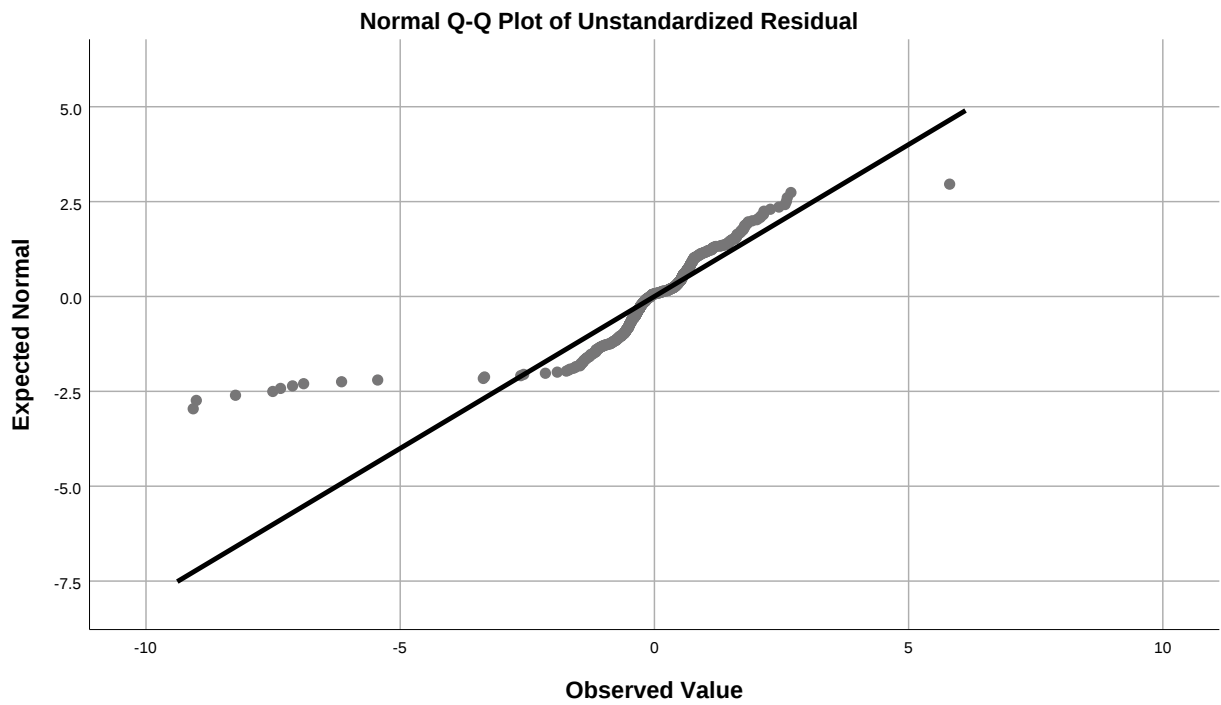
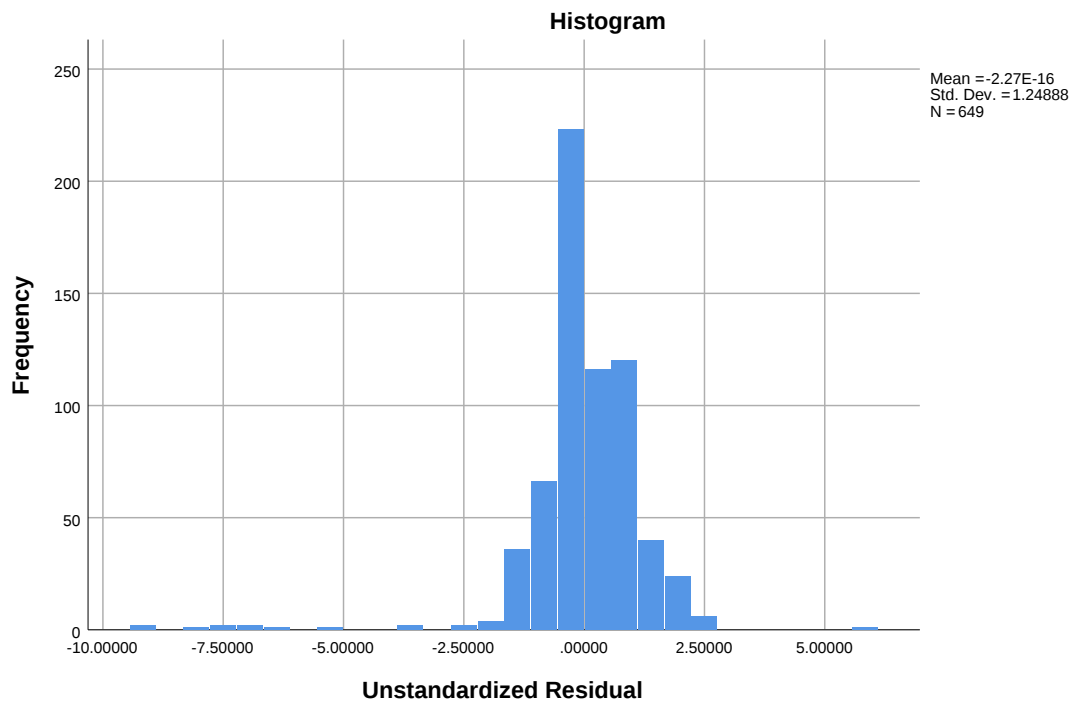
Tests of Normality

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

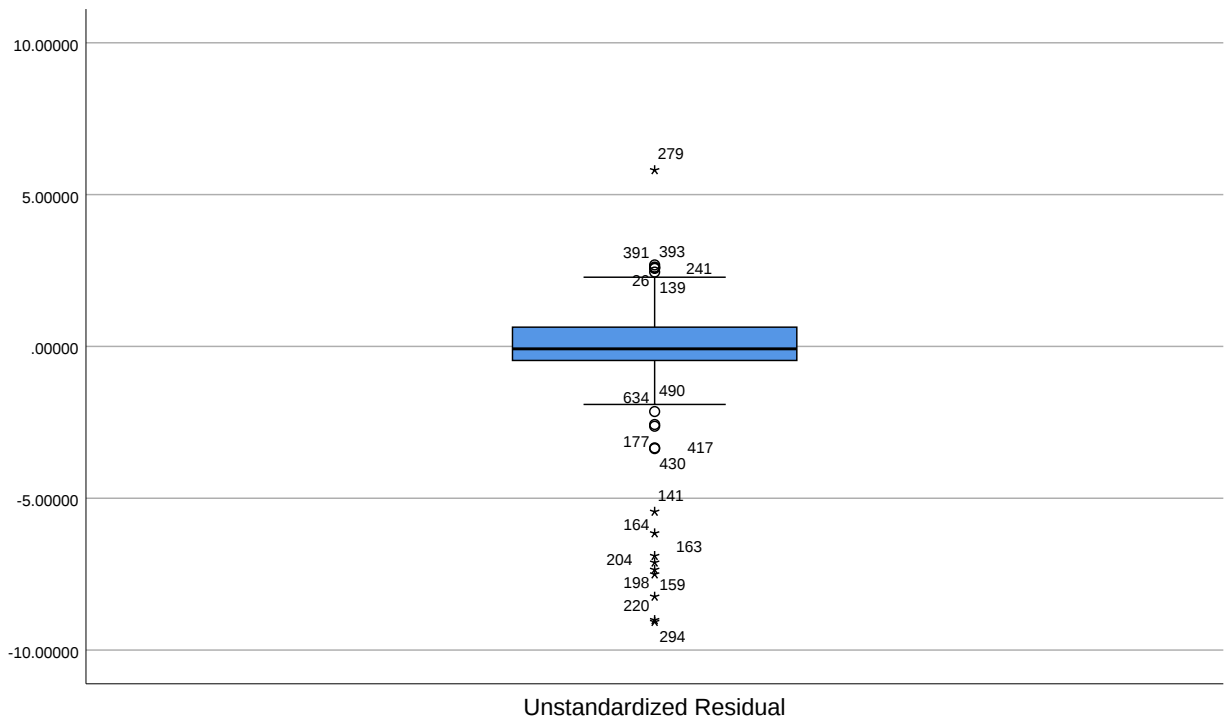
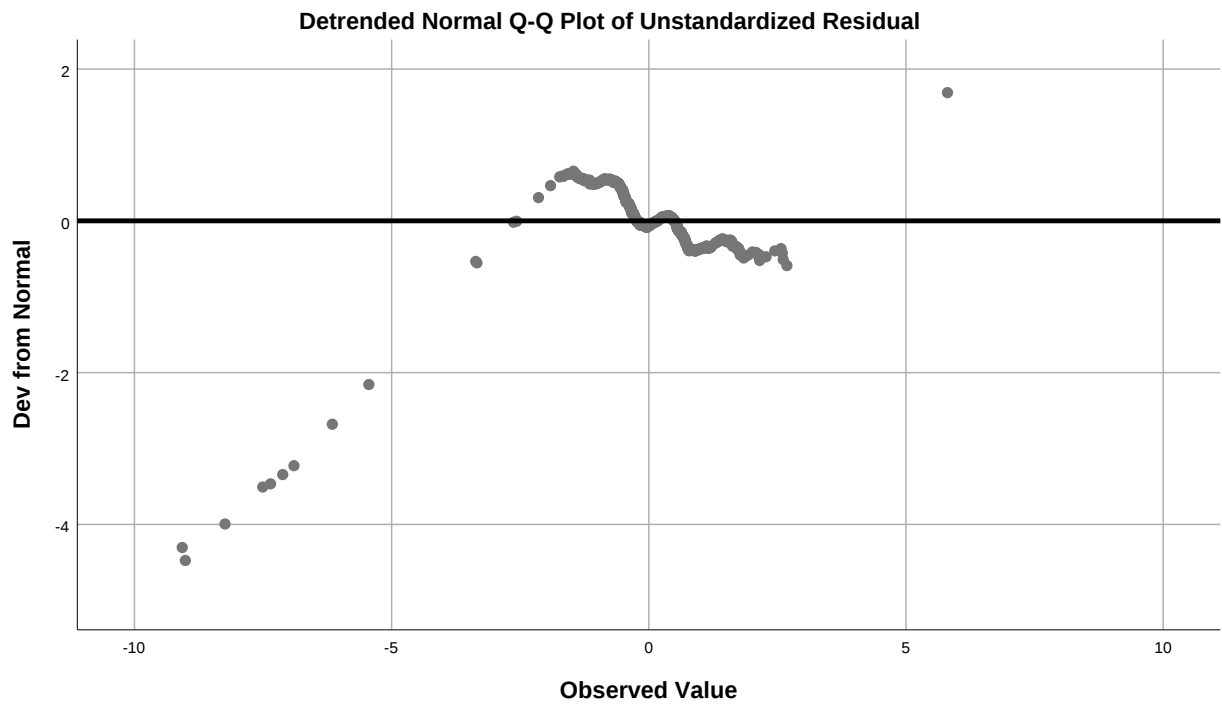
a. Lilliefors Significance Correction

Unstandardized Residual

Residual diagnostics
Main model



Residual diagnostics
Main model



Residual diagnostics
Main model

Correlations

		Correlations				
		gq_resid	gq_sq_resid	gq_pred	G2	absences
gq_resid	Pearson Correlation	1	-.628**	.000	.000	.000
	Sig. (2-tailed)		.000	1.000	1.000	1.000
	N	649	649	649	649	649
gq_sq_resid	Pearson Correlation	-.628**	1	-.172**	-.164**	-.086*
	Sig. (2-tailed)	.000		.000	.000	.028
	N	649	649	649	649	649
gq_pred	Pearson Correlation	.000	-.172**	1	.996**	-.099*
	Sig. (2-tailed)	1.000	.000		.000	.012
	N	649	649	649	649	649
G2	Pearson Correlation	.000	-.164**	.996**	1	-.125**
	Sig. (2-tailed)	1.000	.000	.000		.001
	N	649	649	649	649	649
absences	Pearson Correlation	.000	-.086*	-.099*	-.125**	1
	Sig. (2-tailed)	1.000	.028	.012	.001	
	N	649	649	649	649	649

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).