

```
329 0 OUTPUT ACTIVATE ChowTestOutput.  
329 0 M> OUTPUT ACTIVATE ChowTestOutput.  
330 0 TITLE 'Chow Test'.  
330 0 M> TITLE 'Chow Test'.
```

Chow Test

```
331 0 GET DATA /TYPE=TXT /FILE='D:\DATA ANALYSIS\N Time Series Tests and Fo
recasting\Chow Test\dataset.csv' /ENCODING='UTF8' /DEL
CASE=LINE /DELIMITERS=', ' /QUALIFIER='"' /ARRANGEMENT=DELIMITED /F
IRSTCASE=2
331 0 M> GET DATA /TYPE=TXT /FILE='D:\DATA ANALYSIS\N Time Series Tests and
Forecasting\Chow Test\dataset.csv' /ENCODING='UTF8' /
DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='"' /ARRANGEMENT=DELIMI
TED /FIRSTCASE=2
332 0 /VARIABLES=school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A
8 Medu F8.0 Fedu F8.0 Mjob A16 Fjob A16 reason A16 gua
rdian A16 traveltime F8.0 studytime F8.0 failures F8.0 schoolsup A
8 famsup A8 paid A8 activities A8 nursery A8 higher A8
internet A8 romantic A8 famrel F8.0 freetime F8.0 goout F8.0 Dalc
F8.0 Walc F8.0 health F8.0 absences F8.0 G1 F8.0 G2 F
8.0 G3 F8.0.
332 0 M> /VARIABLES=school A8 sex A8 age F8.0 address A8 famsize A8 Pstatu
s A8 Medu F8.0 Fedu F8.0 Mjob A16 Fjob A16 reason A16
guardian A16 traveltime F8.0 studytime F8.0 failures F8.0 schoo
lsup A8 famsup A8 paid A8 activities A8 nursery A8 hig
her A8 internet A8 romantic A8 famrel F8.0 freetime F8.0 goout
F8.0 Dalc F8.0 Walc F8.0 health F8.0 absences F8.0 G1
F8.0 G2 F8.0 G3 F8.0.
333 0 DATASET NAME ChowTestData.
333 0 M> DATASET NAME ChowTestData.
334 0 COMPUTE time_index=$CASENUM.
334 0 M> COMPUTE time_index=$CASENUM.
335 0 EXECUTE.
335 0 M> EXECUTE.
336 0 * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
336 0 M> * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
337 0 COMPUTE post_break=(time_index>324).
337 0 M> COMPUTE post_break=(time_index>324).
338 0 COMPUTE trend_after=post_break*time_index.
338 0 M> COMPUTE trend_after=post_break*time_index.
339 0 REGRESSION /STATISTICS=COEFF OUTS R ANOVA CI(95) /DEPENDENT G3 /METHO
D=ENTER time_index post_break trend_after.
339 0 M> REGRESSION /STATISTICS=COEFF OUTS R ANOVA CI(95) /DEPENDENT G3 /ME
THOD=ENTER time_index post_break trend_after.
```

Regression

Chow Test

Notes

Output Created		18-JUL-2026 15:51:16
Comments		
Input	Data	D:\DATA ANALYSIS\N Time Series Tests and Forecasting\Chow Test\dataset.csv
	Active Dataset	ChowTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /STATISTICS=COEFF OUTS R ANOVA CI(95) /DEPENDENT G3 /METHOD=ENTER time_index post_break trend_after.
Resources	Processor Time	00:00:00.08
	Elapsed Time	00:00:01.36
	Memory Required	4896 bytes
	Additional Memory Required for Residual Plots	0 bytes

[ChowTestData]

Chow Test

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	trend_after, time_index, post_break ^b	.	Enter

a. Dependent Variable: G3

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.305 ^a	.093	.089	3.084

a. Predictors: (Constant), trend_after, time_index, post_break

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	628.318	3	209.439	22.019	.000 ^b
	Residual	6134.949	645	9.512		
	Total	6763.267	648			

a. Dependent Variable: G3

b. Predictors: (Constant), trend_after, time_index, post_break

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.333	.343		35.908	.000
	time_index	-.001	.002	-.067	-.632	.527
	post_break	6.314	.967	.978	6.527	.000
	trend_after	-.013	.003	-1.030	-5.097	.000

Chow Test

Coefficients^a

Model		95.0% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	11.659	13.008
	time_index	-.005	.002
	post_break	4.414	8.213
	trend_after	-.018	-.008

a. Dependent Variable: G3

```
340 0 ECHO 'Joint post-break level and slope terms implement the declared midpoint stability comparison'.
```

```
340 0 M> ECHO 'Joint post-break level and slope terms implement the declared midpoint stability comparison'.
```

```
Joint post-break level and slope terms implement the declared midpoint stability comparison
```

```
341 0 * END METHOD-SPECIFIC SPSS WORKFLOW.
```

```
341 0 M> * END METHOD-SPECIFIC SPSS WORKFLOW.
```

```
342 0 SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecasting\Chow Test\SPSS_Output\sav\chow-test_spss_ready_data.sav'
/COMPRESSED.
```

```
342 0 M> SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecasting\Chow Test\SPSS_Output\sav\chow-test_spss_ready_data.sav' /COMPRESSED.
```

```
343 0 ECHO 'Chow Test'.
```

```
343 0 M> ECHO 'Chow Test'.
```

```
Chow Test
```

```
344 0 ECHO 'Method type: hypothesis_test'.
```

```
344 0 M> ECHO 'Method type: hypothesis_test'.
```

```
Method type: hypothesis_test
```

```
345 0 ECHO 'Design: Chow parameter-stability test at the midpoint of a linear G3 trend.'.
```

```
345 0 M> ECHO 'Design: Chow parameter-stability test at the midpoint of a linear G3 trend.'.
```

```
Design: Chow parameter-stability test at the midpoint of a linear G3 trend.
```

```
346 0 ECHO 'Formula: F=((SSE_pooled-SSE_1-SSE_2)/k)/((SSE_1+SSE_2)/(n_1+n_2-2k))'.
```

Chow Test

```
346  0 M> ECHO 'Formula: F=((SSE_pooled-SSE_1-SSE_2)/k)/((SSE_1+SSE_2)/(n_1+
n_2-2k))'.
Formula: F=((SSE_pooled-SSE_1-SSE_2)/k)/((SSE_1+SSE_2)/(n_1+n_2-2k))
347  0 ECHO 'Series order: source-row order'.
347  0 M> ECHO 'Series order: source-row order'.
Series order: source-row order
348  0 ECHO 'chow_f = 21.91065278504306'.
348  0 M> ECHO 'chow_f = 21.91065278504306'.
chow_f = 21.91065278504306
349  0 ECHO 'df_numerator = 2'.
349  0 M> ECHO 'df_numerator = 2'.
df_numerator = 2
350  0 ECHO 'df_denominator = 645'.
350  0 M> ECHO 'df_denominator = 645'.
df_denominator = 645
351  0 ECHO 'p_value = 6.2178269766849e-10'.
351  0 M> ECHO 'p_value = 6.2178269766849e-10'.
p_value = 6.2178269766849e-10
352  0 ECHO 'break_index = 324'.
352  0 M> ECHO 'break_index = 324'.
break_index = 324
353  0 ECHO 'pooled_sse = 6551.757094236586'.
353  0 M> ECHO 'pooled_sse = 6551.757094236586'.
pooled_sse = 6551.757094236586
354  0 ECHO 'Cross-check status: pass'.
354  0 M> ECHO 'Cross-check status: pass'.
Cross-check status: pass
355  0 OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecas
ting\Chow Test\SPSS_Output\spv\chow-test_spss_output.s
pv'.
355  0 M> OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Fore
casting\Chow Test\SPSS_Output\spv\chow-test_spss_outpu
t.spv'.
356  0 OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRI
NTSETTING /PDF DOCUMENTFILE='D:\DATA ANALYSIS\N Time S
eries Tests and Forecasting\Chow Test\SPSS_Output\pdf\chow-test_sp
ss_output.pdf'.
356  0 M> OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=
PRINTSETTING /PDF DOCUMENTFILE='D:\DATA ANALYSIS\N Tim
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Chow Test

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