

```
892 0 OUTPUT ACTIVATE MovingAverageOutput.  
892 0 M> OUTPUT ACTIVATE MovingAverageOutput.  
893 0 TITLE 'Moving Average'.  
893 0 M> TITLE 'Moving Average'.
```

Moving Average

```
894 0 GET DATA /TYPE=TXT /FILE='D:\DATA ANALYSIS\N Time Series Tests and Fo
recasting\Moving Average\dataset.csv' /ENCODING='UTF8'
      /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='"' /ARRANGEMENT=DELIMIT
ED /FIRSTCASE=2
894 0 M> GET DATA /TYPE=TXT /FILE='D:\DATA ANALYSIS\N Time Series Tests and
Forecasting\Moving Average\dataset.csv' /ENCODING='UT
      F8' /DELCASE=LINE /DELIMITERS=', ' /QUALIFIER='"' /ARRANGEMENT=D
ELIMITED /FIRSTCASE=2
895 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.
895 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.
896 0 DATASET NAME MovingAverageData.
896 0 M> DATASET NAME MovingAverageData.
897 0 COMPUTE time_index=$CASENUM.
897 0 M> COMPUTE time_index=$CASENUM.
898 0 EXECUTE.
898 0 M> EXECUTE.
899 0 * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
899 0 M> * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
900 0 COMPUTE moving_average_5=(G3+LAG(G3)+LAG(G3,2)+LAG(G3,3)+LAG(G3,4))/5
.
900 0 M> COMPUTE moving_average_5=(G3+LAG(G3)+LAG(G3,2)+LAG(G3,3)+LAG(G3,4)
)/5.
901 0 COMPUTE smoothing_error=G3-moving_average_5.
901 0 M> COMPUTE smoothing_error=G3-moving_average_5.
902 0 DESCRIPTIVES VARIABLES=moving_average_5 smoothing_error /STATISTICS=M
EAN STDDEV MIN MAX.
```

Moving Average

```
902  0 M>  DESCRIPTIVES VARIABLES=moving_average_5 smoothing_error /STATISTIC
S=MEAN STDDEV MIN MAX.
```

Descriptives

Notes

Output Created		18-JUL-2026 15:53:21
Comments		
Input	Data	D:\DATA ANALYSIS\N Time Series Tests and Forecasting\Moving Average\dataset.csv
	Active Dataset	MovingAverageData
	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	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=moving_aver age_5 smoothing_error /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.06

[MovingAverageData]

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
moving_average_5	645	5.20	17.00	11.9107	1.94408
smoothing_error	645	-13.40	9.80	-.0053	2.61793
Valid N (listwise)	645				

```
903  0 * END METHOD-SPECIFIC SPSS WORKFLOW.
```

Moving Average

```
903 0 M> * END METHOD-SPECIFIC SPSS WORKFLOW.
904 0 SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecasting\Moving Average\SPSS_Output\sav\moving-average_spss_ready_data.sav' /COMPRESSED.
904 0 M> SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecasting\Moving Average\SPSS_Output\sav\moving-average_spss_ready_data.sav' /COMPRESSED.
905 0 ECHO 'Moving Average'.
905 0 M> ECHO 'Moving Average'.
Moving Average
906 0 ECHO 'Method type: smoothing_method'.
906 0 M> ECHO 'Method type: smoothing_method'.
Method type: smoothing_method
907 0 ECHO 'Design: Five-observation trailing arithmetic moving average for G3.'.
907 0 M> ECHO 'Design: Five-observation trailing arithmetic moving average for G3.'.
Design: Five-observation trailing arithmetic moving average for G3.
908 0 ECHO 'Formula: MA_t=(y_t+y_(t-1)+...+y_(t-4))/5'.
908 0 M> ECHO 'Formula: MA_t=(y_t+y_(t-1)+...+y_(t-4))/5'.
Formula: MA_t=(y_t+y_(t-1)+...+y_(t-4))/5
909 0 ECHO 'Series order: source-row order'.
909 0 M> ECHO 'Series order: source-row order'.
Series order: source-row order
910 0 ECHO 'window = 5'.
910 0 M> ECHO 'window = 5'.
window = 5
911 0 ECHO 'smoothed_points = 645'.
911 0 M> ECHO 'smoothed_points = 645'.
smoothed_points = 645
912 0 ECHO 'first_smoothed_value = 12.2'.
912 0 M> ECHO 'first_smoothed_value = 12.2'.
first_smoothed_value = 12.2
913 0 ECHO 'last_smoothed_value = 11.2'.
913 0 M> ECHO 'last_smoothed_value = 11.2'.
last_smoothed_value = 11.2
914 0 ECHO 'smoothing_mae = 1.8973643410852712'.
914 0 M> ECHO 'smoothing_mae = 1.8973643410852712'.
smoothing_mae = 1.8973643410852712
```

Moving Average

```
915 0 ECHO 'smoothing_rmse = 2.6159083975143407'.
915 0 M> ECHO 'smoothing_rmse = 2.6159083975143407'.
smoothing_rmse = 2.6159083975143407
916 0 ECHO 'Cross-check status: pass'.
916 0 M> ECHO 'Cross-check status: pass'.
Cross-check status: pass
917 0 OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecas
ting\Moving Average\SPSS_Output\spv\moving-average_sps
s_output.spv'.
917 0 M> OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Fore
casting\Moving Average\SPSS_Output\spv\moving-average_
spss_output.spv'.
918 0 OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRI
NTSETTING /PDF DOCUMENTFILE='D:\DATA ANALYSIS\N Time S
eries Tests and Forecasting\Moving Average\SPSS_Output\pdf\moving-
average_spss_output.pdf'.
918 0 M> OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=
PRINTSETTING /PDF DOCUMENTFILE='D:\DATA ANALYSIS\N Tim
e Series Tests and Forecasting\Moving Average\SPSS_Output\pdf\m
oving-average_spss_output.pdf'.
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