

NOTE 5: LINEAR REGRESSION THROUGH THE ORIGIN, EXCEL 2000

This is a one-parameter regression. Excel allows for this type of linear regression, and calculates the correct slope and standard error. However it incorrectly computes the correlations and F test values. The internal coding is in error.

Do not center the data, use as is.

To obtain the correct F values and R values, do the following:

Step	Select*	Enter
1	{Total SS}	=SUMSQ(range of Y values)
2	{Regression SS}	= {Total SS} - {Residual SS}
3	{Regression MS}	= {Regression SS} / {Regression df}
4	{Regression F}	= {Regression MS} / {Residual MS}
5	{Regression Significance F}	=FDIST({Regression F},{Regression df},{Residual df})
6	{R Squared ...a number..}	= {Regression SS} / {Total SS}
7	{Multiple Ra number..}	=SQRT({R Squared .a number..})
8	{Adjusted R Square ..a number..}	= {Residual MS} * {Total df} / {Total SS}

* You have to enter the cell identified by the Excel column letter-row number, which will be different depending on where the regression output is located