Subject: Re: CURVEFIT.PRO standard deviations?
Posted by Andrew Noymer on Mon, 13 May 2002 06:13:06 GMT
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> You can see the discrepancy in the one-sigma lines: can someone tell
> me what's up with the sigma returned from CURVEFIT, and how I can
> make them conform?

I'm not sure exactly what's going on, but I take an interest in this because
I use these sorts of procedures.

I fed your code into IDL and modified it so the data were also written-out.
I then fed the points into Stata (www.stata.com).

Here is what I found:

LINFIT parameters, sigma, and chi-square :
     -13.7844   2.91336
      1.32243   0.0944590
      266.783
CURVEFIT parameters, sigma, and chi-square :
     -13.7839   2.91333
      0.388221   0.0277362
       11.5993

So I cfm. that the parameters are the same (for all intents and
purposes) between the two procedures, but the ch-sq and sigma
is different. Here's what Stata gives me:

Source	SS	df	MS		Number of obs =	25
					$F(1, 23)$ =	951.27
Model	11034.0003	1	11034.0003		Prob > F =	0.0000
Residual	266.782989	23	11.5992604		R-squared =	0.9764
					Adj R-squared =	0.9754
Total	11300.7833	24	470.86597		Root MSE =	3.4058

v1	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
var2	2.913364	.094459	30.84	0.000	2.717961	3.108768
_cons	-13.78436	1.322426	-10.42	0.000	-16.52	-11.04871

Stata's coefficient's are (of course) the same. What CURVEFIT calls
chi-sq, Stata calls Residual MSE (mean sq. error). And it looks like
LINFIT gives the Std. Errors of the coefficients that I would use if

I were you. The LINFIT ch-sq is what Stata calls the Residual SSE (sum sq. error).

I'm not sure how the CURVEFIT sigma values are calculated but I would not use them if I were you, without knowing exactly where they come from.

HTH.

Andrew