PS8$_T$homasson

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1 PS8

How does your OLS estimate compare with the true value of in (1)?

The true value of β = 1.5, -1, -0.25, 0.75, 3.5, -2, 0.5, 1, 1.25, 2. I get $\hat{\beta}_O LS$ = 1.5007654, -1.0003575, -0.2483209, 0.7492180, 3.4994275, -1.9976231, 0.4992949, 1.0018450, 1.248056, 1.9991716

Very very close in value.

Comparing L-BFGS and NM:

I get $\hat{\beta}_O LSLBFGS$ = 1.500765, -1.000358, -0.2483209, 0.749218, 3.499427, -1.997623, 0.4992949, 1.001845, 1.248056, 1.999172

I get $\hat{\beta}_O LSNM$ = 1.801041, -0.8215647, 0.2255767, 0.7388727, 3.419135, -2.112528, 0.6907103, 1.226031, 1.896854, 1.602342

My Nelder Mead estimate is obviously much different from my other estimates, so if I have done something wrong, please let me know where you think I may have gone wrong in my code.

See the table below for modelsummary() table generated for linear regression estimate.

All beta estimates I generated are fairly close to the original, except for the Nelder Mead estimate, which admittedly may just be user error on my part.

	(1)
X1	1.501
	(0.002)
X2	−1.000
	(0.002)
X3	−0.248
	(0.002)
X4	0.749
	(0.002)
X5	3.499
	(0.002)
X6	−1.998
	(0.002)
X7	0.499
	(0.002)
X8	1.002
	(0.002)
X9	1.248
	(0.002)
X10	1.999
	(0.002)
Num.Obs.	100 000
R2	0.991
R2 Adj.	0.991
AIC	144 997.8
BIC	145 102.4
Log.Lik.	−72 487.893
RMSE	0.50