

ProblemSet 8

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March 26 2018

The result of beta in question 9 is very similar to the true value of beta that we created in question 1.

For question 5, the result of beta by using closed-form method is also similar to the true value of beta.

For question 7, there is no different between the result of L-BFGS algorithm and Nelder-Mead algorithm.

Table 1:

<i>Dependent variable:</i>	
	Y
X1	1.501*** (0.002)
X2	-0.991*** (0.003)
X3	-0.247*** (0.003)
X4	0.744*** (0.003)
X5	3.504*** (0.003)
X6	-1.999*** (0.003)
X7	0.502*** (0.003)
X8	0.997*** (0.003)
X9	1.256*** (0.003)
X10	1.999*** (0.003)
Observations	100,000
R ²	0.971
Adjusted R ²	0.971
Residual Std. Error	0.500 (df = 99990)
F Statistic	338,240.000*** (df = 10; 99990)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01