

## Critical Value Tables for “Linear Regression with Many Controls of Limited Explanatory Power”

The 1%, 5% and 10% critical values of the LR statistic are obtained by linear interpolation from the tables `cvmat_1.txt`, `cvmat_5.txt` and `cvmat_10.txt` in this folder. Specifically, the  $i, j$ th element,  $i, j = 1, \dots, 40$  of the tables are equal to the critical value for

$$\chi_1 = 200^{i/20-1} \cos(j\pi/80), \chi_2 = 200^{i/20-1} \sin(j\pi/80).$$

Thus, the critical values for given values of  $(\chi_1, \chi_2)$  can be extracted by linear interpolation via

$$x_1 = \frac{\log(200\sqrt{\chi_1^2 + \chi_2^2})}{\log(40000)}, x_2 = \frac{2}{\pi} \arctan(\chi_2/\chi_1)$$

where  $x_1, x_2 \in [0, 1]$ , and the values for  $x_1, x_2 \in \{j/40\}_{j=1}^{40}$  are given in the tables. See the excel file for an implementation.