

Mathematical statistics - work 5th.

Mironov Yegor

April 2023

1 MoME 3 variant

Let a sample of size n be given from a continuous distribution with a density function:

$$f(x|x_0, \theta) = \theta * x_0^\theta * x^{-\theta-1}, x \geq x_0 \quad (1)$$

where $x_0 > 0$, $\theta > 2$ are the distribution parameters.

Find the Method of moments score for x_0 and θ .

Solution:

We equate the theoretical and sample moments to find an estimate of two parameters