Journal of Applied Probability & Statistics Vol. **2**, No. 2, 179–187
©2007 Dixie W Publishing Corporation, U. S. A.

On Characterization of Distributions

Haseeb Athar*, H. M. Islam and R. U. Khan
Department of Statistics and Operations Research, Aligarh Muslim University, Aligarh-202002, India

Abstract

Continuous distributions of the form $F(x) = 1-[a\xi(x)+b]^c$ and $F(x) = [a\xi(x)+b]^c$ are characterized through $E[\xi(X)|X_{r:n} = x]$, where $X_{r:n}$ is the r-th order statistic in a sample of size n from a continuous population.

Keywords: Order statistics, characterization of distributions, power function, Pareto, Weibull, beta of the first kind and Cauchy distributions.

2000 Mathematics Subject Classification: 62E15, 62E10, 62G30.

*Corresponding author e-mail address: haseebathar@hotmail.com