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The gamma-exponentiated exponential distribution

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Pages 1191-1206 | Received 24 Dec 2010, Accepted 21 Mar 2011, Published online: 30 Jun 2011

Cite this article <https://doi.org/10.1080/00949655.2011.574633>

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Abstract

In this paper, we introduce a new distribution generated by gamma random variables. We show that this distribution includes as a special case the distribution of the lower record value from a sequence of i.i.d. random variables from a population with the exponentiated (generalized) exponential distribution. The properties of this distribution are derived and the estimation of the model parameters is discussed. Some applications to real data sets are finally presented for illustration.

Keywords:

generalized exponential distribution

exponentiated exponential distribution

lower record values

gamma-generated distribution

62E99

Acknowledgements

The authors are very grateful to the referee for the suggestions and comments which significantly improved the quality of the manuscript. Also, the first author acknowledges the grant of MNTR 174013 for carrying out this research, and the second author thanks the Natural Sciences and Engineering Research Council of Canada for funding this research.

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