

A New Kumaraswamy Transmuted Exponential Distribution with Applications to Lifetime Data

MAHMOUD M. MANSOUR

Department of Statistics, Mathematics and Insurance, Benha University, Egypt
Email: mahmoud.mansour@fcom.bu.edu.eg

ENAYAT M. ABD ELRAZIK

Department of Statistics, Mathematics and Insurance, Benha University, Egypt
Email: anayat.khalil@fcom.bu.edu.eg

MOHAMED S. HAMED

Department of Statistics, Mathematics and Insurance, Benha University, Egypt
Email: moswilem@gmail.com

SUMMARY

This paper introduces a new generalization of the Kumaraswamy transmuted exponentiated exponential distribution, based on a new family of life time distribution by Mansour et al.(2015) .We refer to the new distribution as Kumaraswamy new transmuted exponential ($Kw - NTE$) distribution. The new model contains some of lifetime distributions as special cases such as exponentiated exponential, transmuted exponential and exponential distributions. The properties of the new model are discussed and the maximum likelihood estimation is used to evaluate the parameters. Explicit expressions are derived for the moments and examine the order statistics. This model is capable of modeling various shapes of aging and failure criteria.

Keywords and phrases: transmutation; survival function; exponentiated exponential; order statistics; maximum likelihood estimation

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