Journal of Applied Probability and Statistics 2022, Vol. 17, No. 1, pp. 1-13 Copyright ISOSS Publications

QUASI LINDLEY POWER SERIES DISTRIBUTION WITH ITS APPLICATIONS

Showkat Ahmad Dar, Nazima Akhtar and Sameer Ahmad Wani

Department of Statistics

University of Kashmir, Srinagar, India.

Email: darshowkat2429@gmail.com, nazimastat@gmail.com,

wanisameer199@gmail.com

SUMMARY

This paper proposes a new distribution, called as Quasi Lindley power series distribution. Various statistical properties like moments, quantile function and maximum likelihood estimation are extinguished. Finally, a real data set is analyzed to investigate the suitability of the proposed distribution in modeling lifetime data set representing lifetime of fatigue fracture of Kevlar 373/epoxy.

Keywords and phrases: Quasi Lindly distribution, power series distribution, compound distribution, maximum likelihood estimation.

2020 Mathematics Subject Classification: Primary 62H10, secondary 62J12.