



Communications in Statistics - Simulation and Computation >

Volume 45, 2016 - Issue 7

483 | 12

Views | CrossRef citations to date | Altmetric

Original Articles

Estimating the Parameters of the Generalized Lambda Distribution: Which Method Performs Best?

Canan G. Corlu & Melike Meterelliyo^z

Pages 2276-2296 | Received 10 Jul 2013, Accepted 14 Feb 2014, Accepted author version posted online: 27 Jan 2015,

Published online: 27 Jan 2015

Cite this article

<https://doi.org/10.1080/03610918.2014.901355>

Sample our Computer Science Journals
 >> [Sign in here](#) to start your access to the latest two volumes for 14 days

Full Article

Figures & data

References

Citations

Metrics

Reprints & Permissions

Read this article

Share

Abstract

Generalized lambda distribution (GLD) is a flexible distribution that can represent a wide variety of distributional shapes. This property of the GLD has made it very popular in simulation input modeling in recent years, and several fitting methods for estimating the parameters of the GLD have been proposed. Nevertheless, there appears to be a lack of insights about the performances of these fitting methods in estimating the parameters of the GLD for a variety of distributional shapes and input data. Our primary goal in this article is to compare the goodness-of-fits of the popular fitting methods in estimating the parameters of the GLD introduced in Freimer et al. (1988), i.e., Freimer-Mudholkar-Kollia-Lin (FMKL) GLD, and provide guidelines to the simulation practitioner about when to use each method. We further describe the use of the genetic

algorithm for the FMKL GLD, and investigate the performances of the suggested methods in modeling the daily exchange rates of eight currencies.

Keywords:

Generalized lambda distribution

Genetic algorithm

Least-squares

Method of matching percentiles

Parameter estimation

Mathematics Subject Classification:

Primary 62

Secondary 62H10; 62F10; 62P05; 6207



Related research i

People also read

Recommended articles

Cited by
12

Information for

Authors

R&D professionals

Editors

Librarians

Societies

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Open access

Overview

Open journals

Open Select

Dove Medical Press

F1000Research

Help and information

Help and contact

Newsroom

All journals

Books

Keep up to date

Register to receive personalised research and resources
by email

 Sign me up

  

  

Copyright © 2026 Informa UK Limited Privacy policy Cookies Terms & conditions

Accessibility



Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG