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**Distribution free testing of goodness of fit in a one dimensional parameter space.** (English)

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Summary: We propose two versions of asymptotically distribution free empirical processes. When a composite null hypothesis contains a family of distributions indexed by a one dimensional parameter space, and when that single parameter is estimated by maximum likelihood, the resulting distribution free goodness of fit tests are simpler than tests applying the Khmaladze transformation. For the Pareto distribution, the process we advocate is especially simple. The theory is illustrated by fitting the Pareto distribution to threshold exceedances of stock returns, and the Weibull distribution to fibre strength data.

**MSC:**

**62G30** Order statistics; empirical distribution functions

**62G10** Nonparametric hypothesis testing

**62P05** Applications of statistics to actuarial sciences and financial mathematics

Cited in **2** Documents

**Keywords:**

Brownian bridge;  $q$ -projected Brownian motion; distribution free; goodness of fit testing; Pareto; Weibull

**Full Text:** [DOI](#)

**References:**

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