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The harmonic moment tail index estimator: asymptotic distribution and robustness

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Abstract Asymptotic properties of the harmonic moment tail index Estimator are derived for distributions with regularly varying tails. The estimator shows good robustness properties and stands out for its simplicity. A tuning parameter allows for regulating the trade-off between robustness and efficiency. Small sample properties are illustrated by a simulation study.

Keywords Tail index estimation · Regularly varying tail · Hill estimator · Robustness · Asymptotic distribution