

## EXPANSIONS FOR MOMENTS OF LOGARITHMIC SKEW-NORMAL EXTREMES

BY

XIN LIAO (SHANGHAI), ZUOXIANG PENG (CHONGQING), AND  
SARALEES NADARAJAH (MANCHESTER)

**Abstract.** Liao, Peng and Nadarajah [*J. Appl. Probab.* 50 (2013), 900–907] derived asymptotic expansions for the partial maximum of a random sample from the logarithmic skew-normal distribution. Here, we derive asymptotic expansions for moments of the partial maximum using optimal norming constants. These expansions can be used to deduce convergence rates of moments of the normalized maxima to the moments of the corresponding extreme value distribution. A numerical study is made to compare the actual values of moments with their asymptotics, which shows that the convergence is exceedingly slow, and adjustment is needed whenever we use the limits to replace moments of the partial maximum.

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