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ON A TWO-PARAMETER DISCRETE DISTRIBUTION AND ITS APPLICATIONS

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Here we introduce two-parameter compounded geometric distributions with monotone failure rates. These distributions are derived by compounding geometric distribution and zero-truncated Poisson distribution. Some statistical and reliability properties of the distributions are investigated. Parameters of the proposed distributions are estimated by the maximum likelihood method as well as through the minimum distance method of estimation. Performance of the estimates by both the methods of estimation are compared based on Monte-Carlo simulations. An illustration with Air Crash casualties demonstrates that the distributions can be considered as a suitable model under several real situations.

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