

Counting Your Customers: A Survival Analysis Approach

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Abstract

Latent attrition models such as the Pareto/NBD and BG/NBD are valuable tools for managing customers within a noncontractual context because they provide estimates of a customer's future transactions. Previous research, such as the Pareto/GGG (Platzer and Reutterer, 2016), indicates the transaction process distribution is an important factor towards providing more accurate estimates of future transactions, but the transaction process remains an underexplored area. This paper introduces the MBG/Gx framework which allows for a researcher's choice of distribution for the transaction process. Five different transaction distributions are compared in empirical and simulation studies. Both studies indicate the exponential power distribution (Smith and Bain, 1975) often though not exclusively provides the most accurate estimates. The simulation study further demonstrates the model which provides better estimates of future transactions is not necessarily the same as the data generating process.

Keywords: *customer lifetime value; Pareto/NBD; survival analysis*

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