

**A Predictive Model of Customer Monetary Spending
Based on Geometric Purchase Time
and Lognormal Monetary Model**

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Abstract

The monetary amount of customers' purchases and interpurchase time are two related and important variables in the realm of business marketing. Yet most research has formulated them independently in prediction models. This paper proposes a prediction model of customer monetary spending using information on interpurchase time. Unlike previous research, we consider interpurchase time according to geometric distribution. Moreover, our monetary prediction model combines interpurchase time and an underlying (basic unit) monetary amount which is assumed as log normal distribution. This study collects empirical data to validate the proposed model and estimate its parameters. We also compare our results with those of interpurchase time following exponential distribution. The results show that our proposed model performances better at monetary forecasting than the exponential model does.

Keyword: interpurchase time, monetary, geometric distribution