

SURVEY DATA AND BAYESIAN ANALYSIS: A COST-EFFICIENT WAY TO ESTIMATE CUSTOMER EQUITY

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We present a Bayesian framework for estimating the customer lifetime value (CLV) and the customer equity (CE) based on the purchasing behavior deducible from the market surveys on customer purchasing behavior. The proposed framework systematically addresses the challenges faced when the future value of customers is estimated based on survey data. The scarcity of the survey data and the sampling variance are countered by utilizing the prior information and quantifying the uncertainty of the CE and CLV estimates by posterior distributions. Furthermore, information on the purchase behavior of the customers of competitors available in the survey data is integrated to the framework. The introduced approach is directly applicable in the domains where a customer relationship can be thought to be monogamous. As an example on the use of the framework, we analyze a consumer survey on mobile phones carried out in Finland in February 2013. The survey data contains consumer given information on the current and previous brand of the phone and the times of the last two purchases.

References

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