

Estimation of Price Elasticity for New Customers in Home Insurance

Customer Case Study - A large provider of home and car insurance in the US



Business Need

The increase in competition in the insurance market has led insurers to consider a more demand-based approach for pricing. Insurance companies need a better understanding about their consumers' behavior in order to increase the conversion rate and retain the current consumers. In particular, the premium amounts play the crucial role in decision making of insurance consumers. For this aim, estimating the elasticity of price during insurance purchase and renewal is very crucial for insurance companies. It is not practical to offer multiple prices to a consumer, and thus the best solution is to estimate the elasticity using data science methods based on quotes data.



Customer Challenges

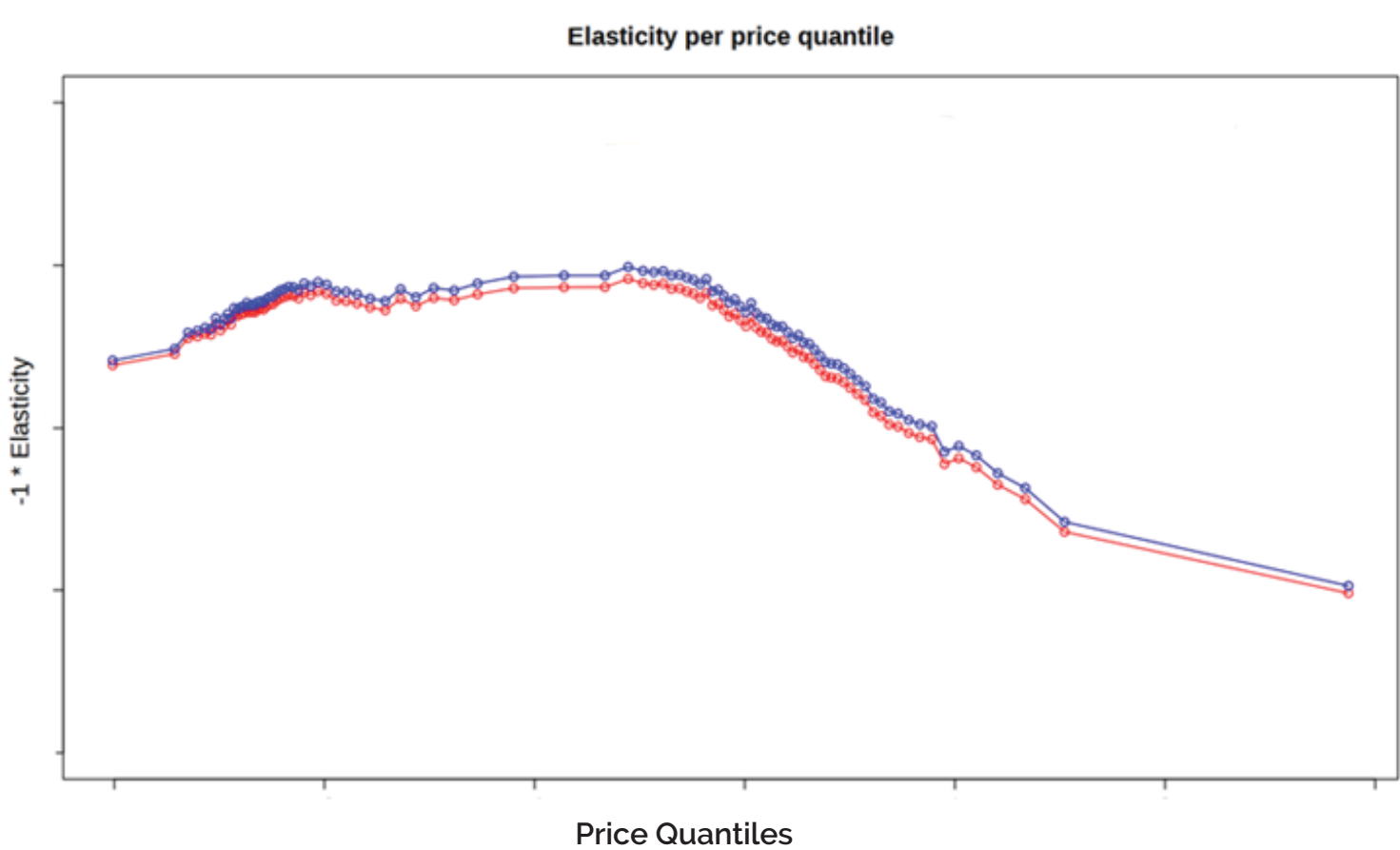
- A range of information about the consumer is recorded in a quote and it is necessary to rank them based on their importance for decision making of consumers to purchase/renew the insurance
- Using an open source analytic framework such that it is possible to automate and productionalize the modeling process with a high efficiency.



Solution Provided

Syntelli Solutions successfully built a predictive model to analyze the binary events of purchase/decline of a premium, issued based on the quotes. We built a model that represents the effect of each factor in the decision making of the customer. This model is implemented in an open source platform and is ready for automation.

- Using machine learning techniques to rank the list of consumer information based on their importance in the purchase of premium
- Estimate the elasticity of price in different ranges of premiums
- Provided appropriate visualizations to quantitatively represent the effect of factor on consumer decision making



Impact of Solution

- Providing quantitative information on effect of various predictors on consumer decision making
- Finding the sensitivity of consumers to prices, which helps to build a pricing algorithm



Technology Used

