

ABSTRACT

Since 2010, the government has launched a cashless transaction program. Communities are invited to use electronic transactions to reduce the government burden of printing and controlling cash circulation. TCash is an electronic money service from Telkomsel. Unlike pulses, TCash serves as an electronic money storage medium and can be used for a variety of transactions including: payment, purchase and money transfer. Compared to the number of Telkomsel subscribers, TCash customers have the potential to continue to grow considering Telkomsel is the market leader with the largest number of customers in the Telecommunications industry in Indonesia. In December 2017, TCash ranks third in digital cash or electronic money holdings under “Go-Pay” from Go-Jek and “e-money” from Mandiri. Efforts to increase TCash customers have been done but have not been able to increase TCash customers in accordance with the expected target. The number of TCash subscribers is also very small compared to Telkomsel's 190 million subscribers. Currently, TCash marketing conducted through community activities and the use of Location Based Advertising (LBA) merchants has not proven to significantly increase the number of active TCash subscribers. Based on these problems, it is necessary to identify potential customers who have the potential to become active TCash customers so that campaign activities can be done effectively and directed. For that we need a model that can be used to predict potential customers into active TCash customers.

This study makes predictive models that can be used to predict potential customers will become active TCash customers using Telkomsel customer transaction behavior. The analysis used telecom transaction data of all TCash subscribers in Telkomsel with 32 variables. These variables are formed from variables such as voice, SMS and internet usage transactions, as well as other transaction-forming variables such as the dominant location of the customer, the device operating system and the device type used by the customer.

The modeling method uses decision trees by calculating accuracy (ACC), positive predictive value (PPV), negative predictive value (NPV), true positive rate (TPR) and true negative rate (TNR). Based on the evaluation, this model is able to predict the prospect will become an active TCash customer by 54.09%.

Keywords: decision tree; electronic money; prediction;