Case Study of Retail Businesses in Indonesia summarization

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Indonesia’s competition of retail industry is getting more higher and higher. Therefore, good marketing strategy is needed for retailer and one of that strategy is Association Rule-Market Basket Analysis. This time, we are focusing on one retailer Retail Z which adapt association rule in its marketing business.

In implementation, there is Data Collection method that includes direct interviews and a survey to obtain data on purchase transactions.

And there is Association Rule method which is about how premises are associated with conclusion. For example, {A, B} -> {C} in association rule means that how often data in transaction database that contains item A, B and also C. There are also three standards which are support, confidence and lift. Support(X -> Y) means what is the ratio that include X and Y in database. Confidence(X -> Y) means what is the ratio that include X and Y in database that include X. thus, confidence has more big ratio than support. Finally, Lift(X -> Y) means validity ratio to X and Y correlation. In its ratio value, if value > 1, then we can say X and Y correlation is valid.

There is also Market Basket Analysis method that is analysis technique of customer habits which can provide an understanding of merchandise.

In result processing, there are 5 departments of products based on the interview with the owner of retailer Z. In data pre-processing, researchers have made 58 data transactions that are clean of noise and missing data. And those transactions can be represented to Boolean data of Department 1 to Department 5, if one transaction include specific Department’s product, than, it will be 1, else 0.

In the result of the Output of RapidMiner, there are six potential association. But 5 of them is invalid due to their lift ratios are less than 1. One valid association is Premises Department 5(Memory & Games) to Conclusion Department 2(HP Support Accessories) which has Support ratio 0.397, and Confidence ratio 0.853. Therefore, we can consider some bundling combination such as hard disk (department 5) and charger products (department 2) and discount of that bundle will be expected to increase much more sales at Retail Z.