Identifying Retail Sales Tactics through Association Rule Mining

Roaida Yanti[1,a,*], Prita Nurkhalisa Maradjabessy[2,a]

[a]Department of Industrial Engineering, Universitas Islam Indonesia, Yogyakarta, Indonesia

[*]roaida.yanti@uii.ac.id

Abstract. In fiercely competitive retail industry, maintaining a competitive is necessary for continuous improvement and the formulation of precise strategies. Retail store ABC experiences a lower daily footfall, resulting in reduced store revenue due to fewer products being sold. Thus, this study aims to devise an effective business strategy for revenue growth by harnessing insights from customer shopping behaviors extracted from transaction data. The employed methodology involves Association Rule Mining, utilizing the FP-Growth algorithm to discern consumer purchasing patterns. The outcome of this data processing yields four valid rules that adhere to predefined criteria for association relationships. These rules are leveraged to shape retail sales strategies, encompassing recommendations for optimizing store layouts, implementing product discounts, and employing bundling strategies to attract and engage customers.

Keywords: **association rule, competitive, market analysis, retail, strategies**