

ABSTRACT

UMKM Sandal Bandol Calvin faces challenges in achieving its monthly sales targets, leading to increased storage costs and suboptimal production capacity. This study aims to design a more effective marketing strategy by identifying consumer characteristics using the clustering method with the K-Means algorithm. A total of 102 respondent data were collected through questionnaires covering 18 attributes related to demographics and purchasing behavior. Data analysis was carried out through stages of pre-processing, calculation of Entropy and Euclidean distances, and dimensionality reduction using Principal Coordinate Analysis. The optimal number of clusters was determined using the Silhouette Coefficient, resulting in three consumer clusters. Each cluster was analyzed to understand preferences regarding product, price, place of purchase, promotion, and service, which then served as the basis for formulating marketing strategies based on the 5P marketing mix (Product, Price, Place, Promotion, and People). The results show that integrating clustering techniques with the marketing mix approach can provide more targeted strategic recommendations and has the potential to increase UMKM sales. This study contributes to the utilization of consumer data for adaptive and data-driven marketing strategy planning.

Keywords: MSMEs, Clustering, K-Means, 5P Marketing Mix, Marketing Strategy, Consumer Characteristics.