

## **ABSTRACT**

*The growth of revenue and segment result for Home Segment in Telkom Indonesia tend to be less satisfying. It is also reflected in Telkom Witel Makassar which in 2016 ago has not reached the sales targets set for Indihome as a Home Segment product, and brought Telkom Witel Makassar was in the last position in achieving the target than the other Witels of Telkom Regional Division (Divre) VII. Defining more specific customer needs for an area of Makassar city to make products that are marketed more easily sell. therefore, it is necessary to do the analysis and identification of segments, especially in the Home Segment in of Telkom Witel Makassar. Through picture of the income customers, the company can offer a product more effectively to potential customers. However, Telkom Witel Makassar not currently have customer's income data to be utilized. On the other side, the large amount of customer data owned by the company indicates the potential for Big Data at of Telkom Witel Makassar.*

*The objectives of this research are to analyze descriptive model by address, payment, and bundling product attributes from payment collection data of Telkom Witel Makassar. Moreover, to generate data or variable customer's income, simulations performed with the Monte Carlo method which refers to the value of the average (mean) income per capita and standard deviation for each district in Makassar. Furthermore, the data grouping will be performed by using clustering method for attributes that customer income simulation results against customer payment data Witel Home Segment Makassar. The exact pattern on the perform clustering of the data will show the groups which can be used to identifying the segments of the company needed.*

*Based on the result of this research, hence to support the marketing strategy of Telkom Witel Makassar can review the results of the descriptive analysis by the attributes of the address, payment, and bundling product of the payment collection data. Further, simulation results can provide a customer's income picture of the customer earnings in a district. Hereafter, from the clustering pattern, formed can yield insight that is a grouping for payment collection data of Home Segment generally divided into 3 main clusters which tend grouping customers based on their income as low income, middle income, and high income, and establish a pattern that describes the customer's payments made as light usage, middle usage, and heavy usage. Similarity level and density in the cluster formed by the validation test indicate the medium level.*

**Keywords:** *Data Mining, Monte Carlo Simulation, Clustering, K-Means, Customer Segmentation*