NEW BRANCH LOCATION SELECTION OF LABORATORY CLINIC X USING ANALYTIC NETWORK PROCESS (ANP) METHOD AND INVESTMENT FEASIBILITY

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Abstract

The higher level of public awareness towards health, the higher the competition among health service providers. Laboratory Clinic X, one of the health service providers, is a Laboratory Clinic that is developing rapidly and participating in the competition among other service providers. In a highly competitive environment, the selection of a new branch location that has high competitiveness is a top priority. It is important to obtain a location that can provide maximum benefits and high competitiveness in accordance with company objectives.

Five alternative districts are determined by identifying target market of Laboratory Clinic X, including population density, potential age population, and high-wealthy level population. Each of the criteria weights is determined using the pair-wise comparison method. The weight multiplied by the rank held each district, furthermore the five alternative districts are determined; Wonokromo, Semampir, Sawahan, Simokerto, and Tambaksari District. The selection criteria and sub criteria are identified based on Porter’s Diamond Model. One of the significant sub criteria is the investment feasibility of each district using NPV, IRR, and payback period. The investment feasibility calculations indicate that Wonokromo District the largest weight; NPV IDR 60,646,579,867, 29% IRR, 5 years and 4 months of payback period. Furthermore, P-Median Method is used to find sub optimal from each location.
The ANP assessment was conducted using expert judgments. Furthermore, weighted gained by each district shows Wonokromo District get first priority, with a weight of 0.2038, District Tambaksari the second priority with a weight of 0.0942, Simokerto District get 0.0782 of weight, District Semampir get 0.0726 of weight, and Sawahan District 0.0502. As the district with the highest weight, District Wonokromo is chosen as the best location of new branches Laboratory Clinic X.

*Keywords*: Location Analysis, Laboratory Clinic, Porter’s Diamond Model, P-Median Method, Investment Feasibility, NPV, IRR, Payback Period, ANP.