ABSTRACT

Stroke is one of the main causes of disability and death throughout the world. According to data from the World Health Organization (WHO), every year around 15 million people experience a stroke, with almost 5 million of them dying and another 5 million experiencing significant permanent disability. Telkom University Surabaya is one of the campuses that produces Post-Stroke Rehabilitation Robots, however there is no investment feasibility yet so investment feasibility needs to be established for the new products that have been created. This research examines whether the post-stroke rehabilitation robot innovation product is feasible both technically, marketingly and economically based on indicators of Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period and Sensitivity Analysis. The aim of this research is to measure the feasibility of Post-Stroke Rehabilitation Robot products, and to determine the ideal price for Post-Stroke Rehabilitation Robot products and describe the feasibility results for Post-Stroke Rehabilitation Robots. The results of this research are that in order for the Post-Stroke Rehabilitation Robot to be feasible to be developed for mass production, to achieve the technical specifications the cost of production is required at Rp. 41,601,393 and a minimum production quantity of 60 units. The results of marketing studies on similar products show that the ideal price for this product is IDR 52,001,741 so that it does not exceed the price of similar competing products. Based on economic indicators, the cost of production and selling prices have reached economic indicators, the cost of production and selling prices have reached economic indicators, namely NPV=0, IRR=MARR and Payback Period of 2 years.

Keywords*: Post-Stroke Rehabilitation Robot, Investment Feasibility, Net Present Value (NPV), Internal Rate Of Return (IRR), Internal Rate Of Return (PP) Payback Period*