

Abstract

ASEAN is a regional organization in Southeast Asia that has a dense population of around 8.5% of the world's population. The quality of health is an important factor in the components of human development. Based on health status as measured by Life Expectancy, Maternal Mortality Rate and Child Mortality Rate under 5 years old, the health quality of the ASEAN population is still quite low and requires improvement. This study aims to analyze the technical efficiency of the health sector in 10 ASEAN member countries during the 2010-2017 period.

The Data Envelopment Analysis (DEA) analysis method is used in this study to measure the relative value of technical efficiency. In analyzing technical efficiency, this research uses the assumption of Return to Scale variable with output-oriented. Countries that have an inefficient health sector will be analyzed for improvement targets and benchmarking. This study uses two input approaches, namely health care input and non-healthcare input. In the health care input approach, the variables of health expenditure per capita and the ratio of doctors per 10,000 population are used. Meanwhile, in the non-healthcare input approach, the variables of smoking prevalence and fruit consumption per capita are used. The output variable used to measure the degree of public health in both approaches is life expectancy.

The results of the study found that the ASEAN member countries already have a health sector that is efficient in the healthcare input approach, but inefficient in the non-healthcare input approach. In the healthcare input approach, four countries have perfect efficiency with an average efficiency value of 100%. They are Laos, Singapore, Thailand and Vietnam. While in the non-healthcare input approach, two countries have a perfect efficiency with an average efficiency value of 100%. They are, Cambodia and Singapore. Singapore is a country with an efficient health sector on both input approaches. Based on the results, ASEAN countries must improve their health systems by increasing the competence of procurement and affordability of health facilities as well as paying more attention to people's lifestyles to live healthier lives.

Keywords: Technical efficiency, Health Sector, ASEAN, Data Envelopment Analysis.