

## ABSTRACT

Santos Celestino, Nicolau. "Analyzes the Impact of Competition System to the Business Sustainability of Mobile Operator in Timor-Leste." Thesis, Magister, Telecommunication Technic of Bandung Institute Technology Telkom, 2012, v + 125 pages.

This paper analyzes the impact of competition system to the business sustainability of mobile operator in Timor-Leste as an investor in the mobile communications network. The main purpose of this analysis is to determine what the optimum number of operators required by Timor-Leste for the market sharing to offer the service to the total population of 1,066,409 people to considering the balance of income and the number of markets due to the GDP (Gross Domestic Product) to ensure for the capital investing in building telecommunications networks and provide adequate network quality and affordable price.

The process of analyzing the optimum number of operators in Timor-Leste is through the assessment, analysis and optimization based on the data required in the planning of the network by determine population growth and customers growth per year, demand forecasting, traffic forecasting to provide answers that the number of operators needed to operate in Timor-Leste is the number of mobile operators which is balance with the population and purchasing power of the society through the GDP and per capita of Timor-Leste.

3G technologies is used as the technology in the analysis of network planning to deal with the challenges that the internet problem is still far from the reach of society as it is quite expensive and confined to the government, private companies and only the number of subscribers using broadband services. Technical and economical approach to underlying the analysis of the 3G network planning with the technical parameters such as the Link Budget, Mobile Station requirement and other technical requirements are necessary. Economic calculation is the basis for economic sensitivity analysis to obtain the value of NPV, IRR, Cash Balance and Payload Period by considering that the rate of inflation and interest rates and the purchasing power.

Sensitivity analysis in this paper concludes that the 3 mobile operators is the most optimum operator in Timor-Leste.