

Feasibility analysis of trans-sumatera toll road using value engineering method

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Abstrak

The Trans-Sumatera Toll Road (TSTR) Infrastructure Project is planned to stretch from Bakauheni to Banda Aceh (2527 kilometers), with an estimated investment about IDR 290 trillion. The value engineering method is applied to the TSTR project by creating six additional functions for a toll road: motorcycle lane integration, rest area development, dry port integration, median railways integration, tourism park development, and fiberoptic networking. The feasibility analysis is constructed using a system dynamic approach to three toll tariff scenarios. The result reveals that the additional functions have improved the financial feasibility of TSTR project, with the internal rate of return for the three proposed scenarios ranging from 8.28% to 13.77%