

ABSTRACT

Thesis Title : Economic Feasibility Study of Inter-City Motorway
Project : A Case Study of The Pattaya – Map Ta Phut
Project

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The main objectives of the study are to carry out the feasibility analysis of the construction of an inter-city motorway project which is a new highway development system of The Department of Highways. Economic and financial appraisals were employed as a tool to analyze whether the project is feasible or not to be invested.

Having considered high priority routes in the Master Plan of Inter-City Motorway Network in the Kingdom of Thailand, Pattaya – Map Ta Phut motorway project was selected to be a case study. As for economic appraisal, return on investment was determined as a base-case. Simultaneously, sensitivity analysis was also performed into 3 cases. First, the construction cost was 20% increase, whereas benefit arisen from the investment was standing still. Second, construction cost was the same as of base-case while benefit was 20% decrease. Third, as a worse case, 20% increase in construction cost and 20% decrease in benefit were assumed.

In carrying out financial analysis, 3 cases were performed in the study. For all cases, project life was assumed over 30 years period. The first case assumes that concessionaire will taken as the responsibility of the construction and operation costs, whereas, the government provides both land and compensation costs. The second case, all costs are invested by the government. And the third, concessionaire will be responsible for both construction costs and land acquisition costs.

Results from the study reveal that the investment on motorway project is viable only in base-case of which 7,623.93 million Baht NPV, 2.9 B/C ratio and 12% IRR. After carrying out sensitivity analysis, by contrast, returns on investment by each case were 9%, 9%, and 6%, respectively, and would be considered as a "non-viable" project. As for financial analysis, those IRR by case I to case III were 17.11%, 17.6%, and 14.59%, respectively. All of which were revealed that the investments are viable in all cases.