



Study on Impacts of Mass Rapid Transit Development in Developing Cities

- A case study of the subway of the extension blue line in Bangkok, Thailand -

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ABSTRACT:

To resolve urban traffic congestion and increase mobility, Asian mega cities like Bangkok has been developing mass rapid transit systems, i.e., subway, sky train, and BRT. With their constraints of budget and environment problems, it is crucial necessary to assess the impacts of such mass rapid transit projects prior to implementation. This paper discusses the impact assessment methodology and results of a 27-kilometer subway project development namely the Extension Blue line which is in the Bangkok mass transit master plan. The study employed a transport model namely the extended Bangkok Urban Model (eBUM) developed by the Office of Transport and Traffic Policy and Plan (OTP), Ministry of Transport, to forecast travel demand in order to analyze its impacts by comparing between without and with a project case in 2010 and 2020. The results found that the Extension Blue line has considerably impacts not only increase mobility but also generate several co-benefits such as air quality and energy saving. This paper also discusses the estimation of CO₂ emission reductions of the project to be considered as a Clean Development Mechanism (CDM) project under the Kyoto protocol.

Keywords: Mass rapid transit, Developing countries, Mobility, Co-benefits, Clean Development Mechanism