

Executive Summary

Since fiscal year (FY) 2012, research undertaken by the Economic Research Institute for ASEAN and East Asia (ERIA) on the energy efficiency of urban transport in East Asia countries has achieved some success in identifying investment options to reduce traffic congestion, and thus demand for oil. However, it has become clear that the proposed investment and reactive policy measures are likely to be of limited impact and fundamental change is required to achieve a better future for megacities such as Jakarta. This paper focuses on mid- to small-sized cities in their early stage of development, taking Da Nang City in Viet Nam as a case study, and analyses policy and infrastructure measures to prevent future traffic problems and thus avoid excessive energy use in the future.

Possible Improvement in Infrastructure

Da Nang City in Viet Nam plans to develop a bus rapid transit (BRT) system in the near future. However, it does not have a blueprint for a feeder bus system, which is necessary to enable BRT users to access the BRT stations more easily. Establishing a feeder bus system would help increase the number of BRT users and reduce the demand for oil products by private vehicles as a result. This study therefore tackles the design issues of the feeder bus system especially the method for specifying the optimal route of the feeder bus network, assuming transport demand scenarios for Da Nang City in 2017, 2020, 2025, and 2030. The findings are as follows:

- The addition of a feeder bus network increases the rate of public transport use. However, the rate plateaus after reaching a certain investment level.
- The number of BRT users might exceed the planned BRT capacity. Enhancement of public transport capacity should be considered according to projected growth in transport demand in the city.
- The public transport selection rate near the BRT stations is higher than that near the feeder bus network stations (28.5 percent near the BRT station compared with 8.0 percent near the feeder bus network stations).

A public transport preference survey was launched in November 2015 as part of the research and the result indicates that there may be more potential BRT users than anticipated. Insufficient trunk line capacity will have a negative impact on the modal shift, thus the optimal trunk line and feeder line capacity that reflects future situations should be researched in-depth as the next step.

Policy Recommendations

This study also analyses how urban transport efficiency could be improved with more effective policy measures. Drawing on the literature of transport economics, various precedents, cases, and policies throughout the world have been investigated.

The findings indicate that without a strong transport policy, it will be extremely difficult to avoid traffic congestion in a pre-emptive way. This study summarises the key points of transport economics, clarifies the mechanisms that generate urban traffic problems, and reviews a comprehensive methodological framework for dealing with traffic problems. If appropriate preventive measures are taken, then the vicious cycle of economic loss and traffic problems could be avoided. However, pre-emptive measures entail some challenges.

Transport improvement could be addressed through a variety of measures. This study analyses what aspects should be considered and how the combination of the measures could be optimised to improve transport efficiency. The findings indicate that ideal public transport system requires the following fundamental factors:

- A public transport design that balances speed, safety, and comfort considerations
- An excellent operation and management policy that secures the financial stability and competitiveness of the public transport business
- Institutional and political support by government in terms of preferential taxation, regulation, subsidy, and city planning