The effect of urban spatial structure on rapid bus transit services in Yogyakarta and Surakarta, Indonesia: A comparative study of the Trans Jogja and the Batik Solo Trans

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Abstract

Yogyakarta and Surakarta have a different spatial structure that affect the operation of rapid bus transit services – the Trans Jogja and the Batik Solo Trans in those two cities. This study investigates how differences in the spatial structure of the two cities shape the operational pattern of the two rapid bus transit services and explores the prospect of an alternative development. Descriptive quantitative and qualitative methods were used in examining the influence of the Yogyakarta concentric structure on the operation and performance of the Trans Jogja routes and that of the Surakarta grid on the operational spread of the Batik Solo Trans. It was found that the performance of Trans Jogja and Batik Solo Trans did reflect differences and disparities in terms of travel time, distance shelters, coverage area, number of passengers and operational time, with the net result that the Trans Jogja enjoyed high affordability in contrast to Batik Solo’s low affordability. It may thus be concluded that there are legitimate re-evaluation needs for enhancing both performance and coverage of the two rapid bus transit services.

Keywords: Bus Rapid Transit, Batik Solo Trans, Minimum of Standard Services, network analyst, Trans Jogja, urban spatial structure