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Commuter Preferences and Willingness to Pay for Light Rail Transit System: A Study along the Proposed Green Line

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Abstract

Colombo city receives about 1.96 million daily passengers and large proportion of private vehicles. This has led to high road traffic congestion and declining peak hour traffic flow speed. The Light Rail Transit (LRT) system is proposed as a solution both to improve the public transportation and to ease the traffic issues in the urbanised core area of the Western Region of Sri Lanka. However, commuter preferences and aspirations towards such an LRT system remains unknown. The main objective of the study is therefore to investigate commuter preferences along the proposed Green Line which connects Kelaniya railway station and Moratuwa railway station with a length of 28.7 km and eighteen LRT stations. The study was based on primary data collected in 2019 using a pretested structured questionnaire. A total of 327 commuters were intercepted close to the proposed stations located between Moratuwa and Kirulapone. Data were collected on their socioeconomic characteristics and willingness to pay for the proposed LRT system. Results indicate that age of respondents range from 19-63 years with a mean of 37 years. Around 90% of the respondents have educational qualifications above ordinary level and 37% are graduates. More than 80% are employed and 59.63% are government employees. Public transport is popular among the respondents and 47.7% used buses. Majority had expressed concerns on the comfort issues of the public transport. Mean willingness to pay is LKR 79.18 and the participants who are using cars have the highest willingness to pay of LKR 155.33. Males are more willing pay compare to females and education contributes positively to the willingness to pay. Respondents who are working in private sector have higher willingness to pay compared to government employees. Private vehicle users have higher willingness to pay compared to users of public transport. Holding the other variables constant, willingness to pay will decrease with increase of travel distance. The results of the study will provide better guide to policy on desirability of the proposed project which could contribute to the economic and social development of the Western Region and improvement of urban environment

Key words: Light rail transit, Willingness to pay, Commuter preferences