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Determining the Relationship between Land Use Characteristics and Passenger Ridership of Light Rail Transit Lines in Kuala Lumpur

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Abstract

This paper determines the relationship between land use characteristics and passenger ridership of Light Rail Transit lines in Kuala Lumpur, Malaysia. Two LRT lines, namely Kelana Jaya line and Ampang line were selected. Data on the type of land use, land use mix, size of land use and population size within one KM radius from each transit station along the two selected LRT lines were collected. Data on passenger ridership at each transit station was also collected. The relationship between land use characteristics and passenger ridership of each selected LRT line was determined. Additionally, the effects of the factors related to land use characteristics, pedestrian infrastructure design (PID) and LRT station characteristics on passenger ridership of the two selected LRT lines were examined by using multiple linear regression (MLR) model. The results of the relationship between land use density and passenger ridership, land use diversity and passenger ridership show that there is no clear association exists between these components. However, the high land use density and medium land use diversity at most of the transit stations along the Kelana Jaya LRT line attracted high passenger ridership but high land use density and medium land use diversity along Ampang LRT line

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