UNIVERSITI TEKNOLOGI MARA

RELATIONSHIP BETWEEN URBAN PYHSICAL DEVELOPMENT AND RIDERSHIP IN KELANA JAYA LIGHT RAIL TRANSIT STATIONS

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ABSTRACT

In urban planning, Transit-Oriented Development (TOD) is viewed as a set of strategies to increase the use of public transport, increase walking activity, contain urban sprawl, and create more liveable places. The TOD concept promote high-density and mixed-use development around transit centres which affects the success of mass rapid transit. The types and distribution of land use around the train station play a big role in determining the ridership number, however, the evidences in Malaysia are not well recorded. Therefore, the research question is to answer whether TOD generates higher numbers of public transport ridership or not based on the land use distribution at the station. This research aims to measure the relationship between urban physical development and ridership in TOD stations using the LRT Kelana Jaya Line in Klang Valley, Malaysia as a case study. The study area covered land use distribution within a 500-meter radius of selected Light Rail Transit (LRT) stations on the Kelana Jaya Line. Methods of execution in the development of the TOD model are divided into three (3) stage, namely: stage 1 study the theory of component consist physical development in TOD, public transportation and ridership. Stage 2 collecting of data which involves the collection of primary and secondary data throughout the selected Light Rail Transit (LRT) stations. Stage 3 descriptive analysis of physical using LUPTAI to measure of how land use mix and ridership are related to one another and measure the strength of the linear relationship. The land Use and Public Transport Accessibility Index (LUPTAI) was used as the main tool to determine accessibility based on degree of land use mix. The result shows that there was no conclusive relationship between Land use mix (LUPTAI) and ridership for the selected five LRT stations. The main reason is that the LUPTAI figures for all stations did not differ much since they were based on the distance of urban land uses (commercial, residential, and public facilities) from the LRT stations. Another reason is that some lands in the study area are still vacant and no urban land uses yet. Therefore, future study should consider a fully developed area as case study. Furthermore, a more comprehensive LUPTAI index should include other variables such as economic activities, intensity and accessibility to produce a better result. Finally, LUPTAI should also be looking at the impact of development rather than just land use zoning and urban intensity.

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