EVALUATION OF COMMERCIAL LAND PRICE CHANGE IN RESPONSE TO THE TRANSPORT INFRASTRUCTURE IMPROVEMENT: A CASE STUDY ON THE PROPOSED LRT LINE IN SRI LANKA

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March 2024

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Thesis/Dissertation submitted in partial fulfillment of the requirements for the degree of Master of Engineering in Highway and Traffic Engineering

M. Eng in Highway and Traffic Engineering

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March 2024

DECLARATION

I hereby declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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ABSTRACT

Transport infrastructure typically changes the land use patterns in an area. The main aim of this research is to capture the impact of transport infrastructure on commercial property prices. The case study selected to obtain the sensitivity of the commercial property prices is the Colombo Light Rail Transit (CLRT-JICA) project. Unfortunately, the project was terminated, so the analysis was carried out for two periods: Before termination (2016 – June 2020) and After termination (June 2020 – March 2022). March of 2022 was selected as the end of the second period due to the Rupee devaluation in March and to avoid its subsequent impact on the property prices in the analysis.

The commercial property price data was obtained from one of the most well-known online web advertising agents in Sri Lanka, "Lanka Property Web". A Multiple linear regression analysis using SPSS was carried out to find the possible relationship by taking commercial property price per unit area as the dependent variable, explained by several independent variables, namely distance to the station, distance to the main junction, distance to the main road and features of the property such as the availability of parking facilities. An equality test was carried out to find the difference in distance coefficients to the station-independent variable in the regression equation for both periods.

The results showed no significant difference between the distance coefficients and the station-independent variables for the two time periods. Thus, this leads to the conclusion that the LRT did not significantly affect commercial property prices, albeit with certain limitations with data and room for further research.

Keywords: Commercial, LRT, Stations, Distance, Coefficients

ACKNOWLEDGEMENT

Heartfelt gratitude is given to the Department of Civil Engineering, University of Moratuwa, for giving me this valuable opportunity to pursue this Postgraduate course, as this has enhanced my knowledge immensely and provided me with Library and other facilities to carry out this research successfully.

Further, I am indebted to my supervisor, Dr. Dimantha De Silva, for offering me advice, technical expertise, and continuous guidance to make my research successful. Also, I would like to thank Prof. J.M.S.J Bandara, Prof. W.K. Mampearachchi, and Dr. Loshaka Perera for their valuable advice in my progress throughout this research period. I would like to thank Dr. Namali Sirisoma and Dr. H.R. Pasindu for their valuable inputs during my thesis defense. I wish to remember Mrs. Melani, the Course coordinator, who was readily available whenever I needed guidance in procedures.
I would like to remember the help given by Mr Tharindu, Mr Roshan and Mr Cletus of "Lanka Property Web" to obtain the required data.

Finally, I would like to thank my mother, my late father and my colleagues for always encouraging me and helping me in many ways to make this a success.

M.I. Sulaimaan

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