



Regularity and Model Selection in Time-Series Econometrics for Traffic Flow Optimization in Tanzania

Samuels Kachimba¹, Simani Ndege^{2,3}, Kamali Mwakwere³, Munyua Ombiri⁴

¹ Mkwawa University College of Education

² Department of Interdisciplinary Studies, Mkwawa University College of Education

³ Department of Advanced Studies, Tanzania Commission for Science and Technology (COSTECH)

⁴ Department of Research, University of Dar es Salaam

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Correspondence: skachimba@outlook.com

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Author notes

Samuels Kachimba is affiliated with Mkwawa University College of Education and focuses on Mathematics research in Africa.

Simani Ndege is affiliated with Department of Interdisciplinary Studies, Mkwawa University College of Education and focuses on Mathematics research in Africa.

Kamali Mwakwere is affiliated with Department of Advanced Studies, Tanzania Commission for Science and Technology (COSTECH) and focuses on Mathematics research in Africa.

Munyua Ombiri is affiliated with Department of Research, University of Dar es Salaam and focuses on Mathematics research in Africa.

Abstract

Traffic flow optimization in Tanzania is critical for improving road safety and reducing congestion. Regularization will be applied using LASSO (Least Absolute Shrinkage and Selection Operator) method to select the most relevant variables affecting traffic flow. Cross-validation procedures will be used to ensure optimal model performance. This theoretical framework provides a robust method for optimising traffic flow in Tanzania by identifying key influencing factors using econometric models. Policy makers should consider implementing these model selection methods to enhance traffic management systems and reduce congestion. Model selection is formalised as $\hat{\theta} = \operatorname{argmin}_{\theta \in \Theta} L(\theta) + \lambda \omega(\theta)$ with consistency under mild identifiability assumptions.

Keywords: Tanzania, Time-Series Econometrics, Regularization, LASSO, Model Selection, Autoregression, Forecasting

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