Exploring Sustainable Urban Mobility through the lens of Theory of Planned Behaviour

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MSc by Research

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Thesis/Dissertation submitted in partial fulfillment of the requirements for the Master of Science (Major Component of Research)

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DECLARATION

I declare that this is my own work and this thesis/dissertation does not incorporate without acknowledgment 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 acknowledgment is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

Signature: Date: 05/11/2025

The above candidate has carried out research for the Master's thesis/dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Name of Supervisor: Prof. Udayangani Kulatunga

Signature of the Supervisor: Date: 05/11/2025

DEDICATION

I dedicate this piece of research,

Specially to

My parents

And

All the kind hearts and helping hands,

Together with me,

From the beginning to now,

Of the journey of life…

ACKNOWLEDGEMET

First and foremost, I am deeply indebted to my supervisor, Prof. (Ms.) Udayangani Kulatunga, for her interest, encouragement, gentle guidance, and invaluable support throughout this study.

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Finally, I offer my special thanks to nature itself for providing us with the space and peace to dwell, reflect, and grow.

Jayalath. J. A. C. D

05th November 2025

ABSTRACT

Urban areas worldwide face significant challenges in achieving sustainability, particularly within the urban transportation sector, which profoundly impacts economic, environmental, social, and mental well-being. In Sri Lanka, these challenges are exacerbated by unsustainable urban planning practices and mobility policies that inadequately reflect the context-specific factors influencing urban mobility behaviours. Therefore, the concept of sustainable urban mobility is critical for addressing these multifaceted issues, as it is fundamentally grounded in human-centred, economically viable, and environmentally responsible approaches.

When implementing the most effective sustainable urban mobility approaches, active mobility and public transport often encounter challenges arising from numerous influencing factors. In this context, the study extends the Theory of Planned Behaviour (TPB) as a framework to systematically explore and deepen the understanding of these factors shaping urban mobility practices. Accordingly, through a mixed-method approach involving a literature review and focus group interview, six key variable categories were identified as influencing commuters' transport mode choice. A single case study, centred on a documentary review, observations, and a questionnaire survey, was conducted to investigate the most influential variables within these categories, along with their magnitude of influence and the nature of their interrelationships in the Sri Lankan context. Subsequently, expert interviews were carried out to develop thirty strategic themes directly addressing the TPB variables that shape transport mode decisions.

The resulting strategies emphasise that, beyond physical infrastructure development, context-specific interventions including age- and gender-responsive policies as well as strategies sensitive to environmental, social, and cultural values, are essential for the optimal performance of sustainable urban mobility. Ultimately, this study proposes a new paradigm in urban transport planning, arguing that sustainable urban mobility is not merely about planning for people, but people for planning, through the deep integration of environmental, social, cultural, and economic realities.

Keywords: Active Mobility; Public transport; Sustainable Urban Mobility; Theory of Planned Behaviour

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LIST OF ABBREVIATIONS

Abbreviation	Description
GHG	Greenhouse Gas
PT	Public Transport
SDG	Sustainable Development Goals
SUM	Sustainable Urban Mobility
SWB	Subjective well-being
TPB	Theory of Planned Behaviour

LIST OF APPENDICES