

JSALT

Journal of South Asian Logistics and Transport

ISSN 2783-8897 eISSN 2783-8676

Volume 2 Issue 2
September 2022



Sri Lanka Society of
Transport and Logistics

International Journal of the
SRI LANKA SOCIETY OF TRANSPORT AND LOGISTICS

Moratuwa, Sri Lanka

JOURNAL OF SOUTH ASIAN LOGISTICS AND TRANSPORT

International Journal of the Sri Lanka Society of Transport and Logistics

Bi-annually published

ISSN 2783-8897 eISSN 2783-8676

All rights reserved.

© SRI LANKA SOCIETY OF TRANSPORT AND LOGISTICS

Volume 2 Issue 2, September 2022

Editor-in-Chief: T Lalithasiri Gunaruwan



This is an open-access journal distributed under the terms of the Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution and reproduction in any medium provided the original author and source are credited.

Facts and opinions published herein are solely personal statements made by the respective authors. Authors are responsible for the contents of their research papers including the accuracy of facts and statements and citations of resources. SLSTL and its editorial committee disclaim any liability for violations of other parties' rights, or any damages incurred as a consequence of the research published herein.

All inquiries to be directed to:

Editorial Office of JSALT



Sri Lanka Society of Transport and Logistics (SLSTL)

34, MJC Fernando Mawatha, Idama, Moratuwa 10400, Sri Lanka

Telephone: +94 11 264 6702 Email: editor-jsalt@slstl.lk

Printed by:



Cybergate Services (Private) Limited

57A, Soratha Mawatha, Gangodawila, Nugegoda 10250, Sri Lanka

Telephone: +94 78 378 3783 Email: info@cybergate.lk

BOARD OF EDITORS

Editor-in-Chief

T Lalithasiri Gunaruwan
University of Colombo, Sri Lanka

Editors

Pradeepa Jayaratne
RMIT University, Vietnam

Jagath Munasinghe
University of Moratuwa, Sri Lanka

Tiloka de Silva
University of Moratuwa, Sri Lanka

Assistant Editors

Ruwani Nisansala Liyanage
University of Moratuwa, Sri Lanka

Chathuni Uduwela
Singapore

Asith Hettiarachchi
OGO Transit (Pvt.) Ltd., Sri Lanka

EDITORIAL ADVISORY BOARD

T Lalithasiri Gunaruwan (Editor-in-Chief)

University of Colombo, Sri Lanka

Pradeepa Jayaratne (Editor)

RMIT University, Vietnam

Jagath Munasinghe (Editor)

University of Moratuwa, Sri Lanka

Tiloka de Silva (Editor)

University of Moratuwa, Sri Lanka

Tillmann Böhme

University of Wollongong, Australia

Dilum Dissanayake

University of Newcastle, United Kingdom

Asif Faiz

International Transport Consultant, United States of America

Shinya Hanaoka

Tokyo Institute of Technology, Japan

Bhargab Maitra

Indian Institute of Technology, India

Darshi Piyathilake

Coventry University, United Kingdom

Prem Samaranayake

Western Sydney University, Australia

Upali Vandebona

University of New South Wales, Australia



Journal of South Asian Logistics and Transport

International Journal of the Sri Lanka Society of Transport and Logistics

AIMS AND SCOPE

South Asia, and Sri Lanka in particular, are currently facing many transitional challenges; transport and logistics being among those most critical and important ones. Rapid economic growth and increasing income levels have radically changed the aspirations of people and thus, their demands, while expanding global markets and international competition have made meeting such demands highly complex and knowledge-intensive. Ever-expanding motorization increasingly generates negative externalities, pushing the transport industry to the limits of being unsustainable in the medium term. These factors make it imperative for transport and logistics professionals, including industrialists and academics, to focus on research and dissemination of results in view of addressing the challenges mankind is facing in meeting mobility needs. The Journal of South Asian Logistics and Transport (JSALT) seeks to fulfil this mandate.

The JSALT is a refereed bi-annual English language journal published by the Sri Lanka Society of Transport and Logistics (SLSTL). It creates a space where findings of original research can be disseminated, and thereby contributes to the knowledge base and thought process in the discipline of Transport and Logistics. Critical evaluation of policies, investment, expansion, service delivery, pricing, equity and social welfare, technological progress and challenges posed to such fundamentals, in regard to transportation and logistics, are the major areas of interest of the journal. Sub-sectoral issues, such as Public Transportation, Railways and Roads, Ports and Shipping, Aviation and Airports, Freight and Passenger Haulage, Logistics and Supply Chain related issues also are addressed through the dissemination of industry-related research, particularly focusing on the South Asian context.

Apart from the research articles the journal carries a special section titled 'Strategic Perspectives' which articulates alternative strategic thoughts and policy approaches.

All research articles in this journal are subject to a rigorous double-blind peer-review process and are then reviewed by the Board of Editors prior to final acceptance for publication.

Journal of South Asian Logistics and Transport

International Journal of the Sri Lanka Society of Transport and Logistics

PANEL OF REVIEWERS

Prof. Waqar Ahmed

Iqra University,
Pakistan

Prof. Nishantha Bandara

Lawrence Technological University,
United States of America

Prof. Steven Chien

New Jersey Institute of Technology,
United States of America

Dr. Suboda Darmapriya

University of Peradeniya,
Sri Lanka

Dr. Samal Dharmarathna

University of Peradeniya,
Sri Lanka

Prof. Sunanda Dissanayake

Kennesaw State University,
United States of America

Dr. Jayalath Edirisinghe

University of Peradeniya,
Sri Lanka

Dr. Asif Faiz

International Transport Consultant,
United States of America

Prof. Shinya Hanaoka

Tokyo Inst. of Technology,
Japan

Dr. Amila Jayasinghe

University of Moratuwa,
Sri Lanka

Dr. Mahinda Bandara

Edinburgh Napier University,
United Kingdom

Dr. Tilmann Böhme

University of Wollongong,
Australia

Dr. Charith Chitraranjan

University of Moratuwa,
Sri Lanka

Dr. Chathura De Silva

University of Moratuwa,
Sri Lanka

Dr. Dilum Dissanayake

Newcastle University,
United Kingdom

Dr Priyanga Dunusinghe

University of Colombo,
Sri Lanka

Prof. Lalith Edirisinghe

CINEC Campus,
Sri Lanka

Dr. N Udayanga Galabada Kankanamge

University of Southern California,
United States of America

Dr. Cheng-Hsien Hsieh

Singapore University of Social Sciences,
Singapore

Dr. Shan Jayasinghe

University of Kelaniya,
Sri Lanka

PANEL OF REVIEWERS (Contd.)

Prof. Ruwan Jayathilaka

Sri Lanka Inst. of Information Technology,
Sri Lanka

Prof. Amal S. Kumarage

University of Moratuwa,
Sri Lanka

Dr. Tissa Liyanage

Master Hellie's Engineering Consultants,
Sri Lanka

Dr. Carol McGowan

University of Wollongong,
Australia

Dr. Niles Perera

University of Moratuwa,
Sri Lanka

Dr. Upali Vandebona

University of New South Wales,
Australia

Dr. Ganga Samarasekera

University of Sri Jayawardhanapura,
Sri Lanka

Dr. Shehan Perera

University of Moratuwa,
Sri Lanka

Dr. T Sivakumar

University of Moratuwa,
Sri Lanka

Prof. Shivananda Swamy

CEPT University,
India

Prof. Hiroshi Tsukaguchi

Ritsumeikan University,
Japan

Prof. Zhihong Jin

Dalian Maritime University,
China

Prof. Hussein S Lidasan

University of the Philippines,
Philippines

Prof. Paramet Luathep

Prince of Songkla University,
Thailand

Prof. Nelson Perera

University of Wollongong,
Australia

Dr. Terence Rangarasu

University of Ruhuna,
Sri Lanka

Dr. Aamir Rashid

Iqra University,
Pakistan

Eng. Nishal Samarasekera

University of Warwick,
United Kingdom

Dr. Tilak Siyambalapitiya

Resource Management Associates,
Sri Lanka

Dr. Lee Styger

University of Wollongong,
Australia

Dr. Ravin Thilakaratne

University of Calgary,
Canada

Prof. Daisuke Watanabe

Tokyo University of Marine Science and
Technology, Japan



TABLE OF CONTENTS

	Page
RESEARCH ARTICLES	
MODELLING GAMMA COEFFICIENT IN THE GOMPERTZ CURVE TO DETERMINE VARIABILITY OF VEHICLE OWNERSHIP SATURATION	1
<i>M Mavin De Silva, A S Kumarage, D Kariyawasam and T Amalan</i>	
THE ROLE OF SUPPLIER SWITCHING COSTS AND SUPPLY CHAIN RESPONSIVENESS	19
<i>G C I Gunarathne, K V Weerasinghe, A Thibbotuwawa and H N Perera</i>	
TERMINAL PRICING DECISIONS OF THE PORT AUTHORITY AND THE GLOBAL TERMINAL OPERATOR OF THE COMPETING PORTS IN SRI LANKA	43
<i>C A Kavirathna, S Hanaoka and T Kawasaki</i>	
REPORTING BEHAVIOUR OF PEDESTRIAN INVOLVED ACCIDENTS IN SRI LANKA	79
<i>A G H J Edirisinghe, E M P Ekanayake and B D S Madushani</i>	
STRATEGIC PERSPECTIVE	
GUIDELINES FOR IMPROVING TRANSPORT POLICY EFFECTIVENESS IN DEVELOPING COUNTRIES: A CASE STUDY OF SRI LANKA	99
<i>A S Kumarage</i>	
INFORMATION FOR AUTHORS	
GUIDELINES FOR MANUSCRIPT SUBMISSION	121

RESEARCH ARTICLES

STRATEGIC PERSPECTIVE

INFORMATION FOR AUTHORS