

# At a Glance



ANNUAL REPORT 2022/23

## ITLS (Africa)

INSTITUTE OF TRANSPORT  
AND LOGISTICS STUDIES  
(AFRICA)



UNIVERSITY  
OF  
JOHANNESBURG

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The Department of Transport and Supply Chain Management was established in 1968 and is widely recognized for its education, training and research in the fields of transport economics, logistics, and supply chain management.

The Institute of Transport and Logistics Studies (Africa) was created within the Department of Transport and Supply Chain Management at the University of Johannesburg in response to the industry's need for independent, unbiased, relevant, and up-to-date research.

In 2007 ITLS (Africa) partnered with the Institute of Transport and Logistics Studies at the University of Sydney, as part of a plan to enhance collaboration between the universities, advance information sharing and dissemination and build research ties. In 2018, the MOU with ITLS at the University of Sydney was extended for a further five years.

To maximise the impact of transport and supply chain research on the South African society and economy, ITLS (Africa) provides specialist high-level research services for both the private and public sectors, focusing on the most urgent research priorities in the country.

ITLS (Africa) has, at its core, the skills, experience and network as well as a long history of providing research excellence to both the public and private sectors, in topics ranging from policy and government strategy to various customised transport solutions in all modes of transport.









BOARD MEMBER	COMPANY / INSTITUTION	REPRESENTATIVE OF
<b>Mr Mervin Chetty</b>	Transnet SOC (Ltd)	Maritime sector
<b>Mr Abrie de Swardt</b>	Abrie de Swardt & Associates	Consultant, Supply Chain Management
<b>Prof Adri Drotskie</b>	University of Johannesburg	Director, School of Management, College of Business and Economics, UJ
<b>Prof David Hensher</b>	University of Sydney	Institute of Transport and Logistics Studies (ITLS), Sydney
<b>Mr Hans Ittmann</b>	Private	Research Associate ITLS (Africa)
<b>Dr Peter Kilbourn</b>	University of Johannesburg	Department of Transport and Supply Chain Management, UJ
<b>Prof Rose Luke</b>	University of Johannesburg	Department of Transport and Supply Chain Management, UJ
<b>Mr Francois Meyer</b>	Golden Arrow Bus Services	Public Transport Sector
<b>Ms Thandeka Mgoduso</b>	Jojobe Investments	Transport in general
<b>Dr Ndivhuwo Luruli</b>	University of Johannesburg	Executive Director (Research and Innovation), UJ
<b>Prof Noleen Pisa</b>	University of Johannesburg	Head of Department: Department of Transport and Supply Chain Management, UJ
<b>Mr Piet van Hoven</b>	Private	Aviation sector
<b>Dr Ismail Vadi</b>	Previous MEC, Department of Roads and Transport (Gauteng Provincial Government)	Public sector
<b>Vacant</b>		Rail Sector





# OBJECTIVES

The objectives of the Institute of Transport and Logistics Studies (Africa) are:

- To continuously study the transport, logistics and supply chain business environments in South and southern Africa.
- To establish a database on critical and key transport and supply chain trends in South and southern Africa.
- To secure commercial research projects by offering customized client-focused research solutions.
- To optimise, manage and market the dissemination of applied and new knowledge of Masters and Doctoral students.
- To develop a research culture and to increase academic output.
- To publicise research findings through public debates, symposia, briefing sessions and publications.
- To make a meaningful contribution to the southern African transport, logistics and supply chain body of knowledge, including the provision of specialized training programmes.

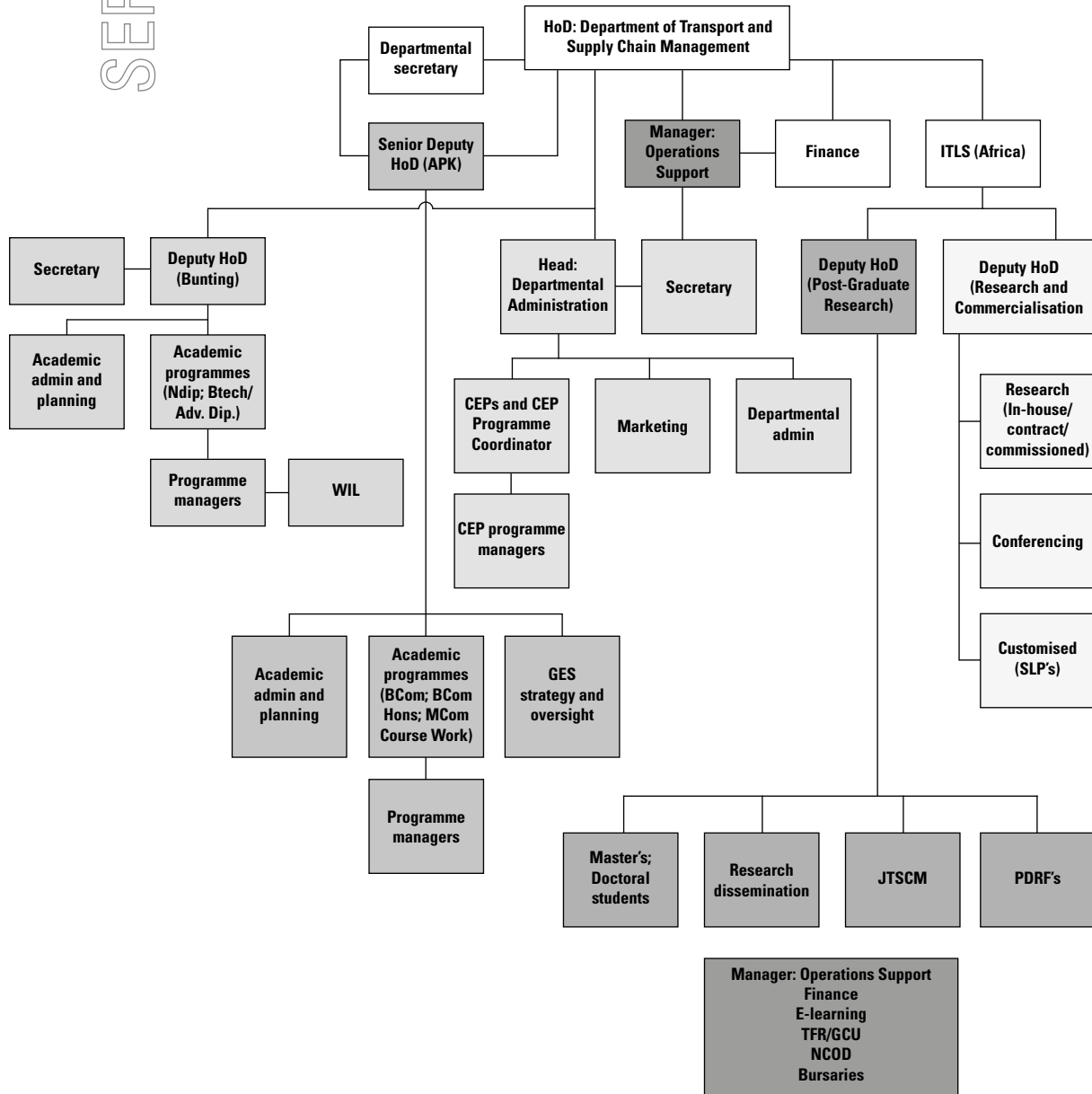






# SERVICES

The services provided by ITLS (Africa) were determined based on our objective to continuously study the transport, logistics and supply chain business environments in South and southern Africa. The structure of the services is therefore designed to enable maximum academic research, which is financed through revenue bearing research streams such as conferences, customised courses and commissioned research as shown in the figure below:







## OVERVIEW

ITLS (Africa) does research in a number of key areas. Internal research projects range from ongoing surveys to determine trends in the transport, logistics and supply chain management fields, to one-off specialist research projects aimed at addressing the most important current research requirements in transport and logistics in South and southern Africa. In addition to its internal research activities, ITLS (Africa) undertakes commissioned research on behalf of stakeholders in the transport, logistics and supply chain sectors.

### Travel behaviour of Gauteng residents

ITLS (Africa) in collaboration with ITLS Sydney conducted a survey to determine the travel patterns of Gauteng residents. The aim of the survey was to understand the nature of residents' daily trips (travel patterns) as well as the factors that would be taken into account in future trips including which mode of transport to use. Data was collected in July 2022 at shopping centers, small convenience centers and large community centers in Soweto. In addition, data was collected at taxi ranks and the Gautrain station in Johannesburg.

The findings from the survey show that South Africa like the rest of the world had three weeks of a total lockdown in March 2020, and following this a period of three months until it was a gradual re-opening. During this period some workers had their days cut short, while those in essential services continued to work, and students were subjected to remote learning. Companies and Universities provided either mobile data or WIFI at home to make this last segment possible. For shopping purposes, many used public transport but workers also shopped close to their place of work, instead of traveling specifically to do shopping. As of July 2022, the rising cost of transport had resulted in car sharing, continued hybrid working, and studying and while some would prefer non-remote working many are quite happy with this arrangement.

To conclude the project, Prof Chinh Ho (ITLS Sydney) visited ITLS (Africa) between 11 to 21 April 2023 and conducted discrete choice modeling analysis workshops. The team are currently finalising two journal articles based on the study.

### Urban Mobility in Emerging Markets Research Group

The Urban Mobility in Emerging Markets Research Group was established in the department in 2022. It comprises staff, postgraduate students, and post-doctoral research fellows. The research group focuses on urban transportation and travel behavior and their connections to a wide range of disciplines such as urban planning, environmental research, applied psychology, public health, etc. The research group addresses the need for scientific work on the above topic, as existing empirical evidence originating from high-income countries is vast, while developing countries have a smaller share. This need becomes more apparent, when the problems and challenges of the Global South in connection with rapid urbanization, urban sprawl, lack of transport infrastructure, and the neglected preferences of end-users are depicted by a limited number of existing studies



and projects on emerging markets. To date the research group has successfully recruited a Master's student, two PhD students, and a post-doctoral research fellow. The research group members have published two articles on related topics.

The team has published the following articles:

- Musau, E.G., Pisa, N.M. & Masoumi, H.E. (2023). Association between transport-related physical activity and wellness in sub-Saharan Africa: A systematic literature review. *Transportation Research Interdisciplinary Perspectives*, 22, p.100928.
- Mwale, M., Luke, R. & Pisa, N. (2022). Factors that affect travel behaviour in developing cities: A methodological review. *Transportation Research Interdisciplinary Perspectives*, 16, p.100683.

The research team includes:

- Prof Noleen Pisa
- Prof Houshmand Masoumi (Visiting Associate Professor in the Department from the Department of Transport and Supply Chain Management; and
- Dr Chengete Chakamera
- Dr Enock Musau

### Smart Mobility Research Group

The University of Johannesburg (UJ) Smart Mobility Research Group is a multidisciplinary team of researchers from the Department of Transport and Supply Chain Management (DTSCM) and the Centre for Applied Data Science (CADS). The team focuses on integrating public transport modes using advanced technologies to build resilient transport systems that can overcome mobility disruptions caused by congestion, accidents, protests, and other related traffic incidents in emerging cities. The research team is driven by the need to develop mobility solutions that enhance the quality of life and well-being of communities in emerging cities. To meet its research goals, the team has recruited two doctoral students who are funded by both the DTSCM and CADS. Both students are focusing on smart mobility research to offer optimal mobility solutions from a social-technical perspective.

In 2023, the smart mobility research team received funding from the University Research Council (URC) to collect data in Johannesburg, Cape Town, and Nairobi.

The team has published the following articles:

- Mitieka, D., Luke, R., Twinomurinzi, H., & Mageto, J. (2023). Smart Mobility in Urban Areas: A Bibliometric Review and Research Agenda. *Sustainability*, 15(8), 6754.
- Mageto, J., Twinomurinzi, H., Luke, R., Mhlono, S., Bwalya, K., & Bvuma, S. (2022). Building resilience into smart mobility for urban cities: An emerging economy perspective. *International Journal of Production Research*, 1-18.
- The research team includes:
- Dr Joash Mageto and Prof Rose Luke from the Department of Transport and Supply Chain Management; and
- Prof Hossana Twinomurinzi, Mr Siya Mhlono, and Dr Tebogo Bokaba from the Centre for Applied Data Science.



### Transport Education Training Authority (TETA) Research Chair

In 2022 Prof Noleen Pisa secured the Transport Education Training Authority (TETA, <https://www.teta.org.za>) 4IR Research Chair, valued at R5m. The scope of activities for the research chair is aimed to enhance the TETA's mandate namely to facilitate skills development and training in the transport sector. To this end, two short learning programmes have been developed namely the Green Transport SLP and the Drone Applications in 4IR SLP. The Green Transport SLP was presented to 100 participants in July 2023. The Drone SLP will be presented in November 2023. The research chair funding also includes Master's and Ph.D. bursaries for full-time students. To this end, two Master's and two PhD students have been selected on merit as recipients of the bursaries. Lastly, the research chair is conducting an impact assessment study of the TETA-funded industry programmes. In South Africa, transport sector skills are supported and developed (amongst other) by the TETA. TETA is a public entity that was established in terms of the Skills Development Act 97 of 1998 (SDA). The eight subsectors or chambers of transport in South Africa supported by TETA are road passenger, rail, maritime, aerospace, freight handling, forwarding and clearing, taxi and road freight. One of the primary functions of TETA is to update the Sector Skills Plan (SSP). It is, therefore, important for TETA to continuously assess transport sector skills needs and assess the effectiveness of training programmes. The impact assessment study includes two phases namely:

- Phase 1 of the study focuses on a gap analysis survey evaluating the effectiveness of TETA-funded training programmes in South Africa. This survey targets employers who have hired beneficiaries of these programmes. The survey seeks to uncover any deficiencies, redundancies, or misalignments in the existing training programs.
- Phase 2 comprises two parts: an impact assessment survey targeting employees or beneficiaries to assess the impact of the TETA funded programmes on their employability and the barriers to programmes access. In addition, this phase involves stakeholder engagement workshops with TETA staff, chamber representatives, training providers and employers, to gain in-depth insights into the impact and adequacy of TETA training programs.

The data collection is currently underway and the study will be finalized in November 2023.







ITLS's research capacity is expanded by means of the inclusion of master's and doctoral students into the ITLS (Africa) structure. This ensures that research at this level remains focused and aligned with national research imperatives, thereby adding relevance and value to South and southern Africa's local body of knowledge. The proceeding tables show the current registered masters' and doctoral students as well as the graduates.

#### REGISTERED MASTER'S STUDENTS

Name of student	Field of research	Dissertation Based	Course Work
L Bashele	The impact of Durban harbour inefficiencies on the automotive industry in Gauteng		✓
T Esau	The challenges faced by Company Y as a forecourt convenience store distributor		✓
K Gouwe	Green Logistics on Supply Chain Performance: a case study of South African Food retailers		✓
N Kambule	An Analysis of the Gautrain Strategic Objectives	✓	
M Khumalo	Optimising food supply chain continuity through the integration of demand forecasting and risk management strategies.		✓
N Lawrence	Maximising customer value: Lean six sigma within the supply chain	✓	
L Lerefolo	The challenges faced by procurement practitioners at a South African public enterprise		✓
P Legodi	Online book store's challenges in effectively and efficiently supplying customers with ordered books		✓
R Luthuli	Challenges and determinants of Blockchain adoption in the supply chain for South African SMMEs		✓
I Magadla	An Assessment of the effectiveness of the tendering process in the public sector, the case study of the Johannesburg Social Housing Company (JOSHCO).		✓



H Magopa	An assessment of value for money in public procurement of road infrastructure in Limpopo Province ( <i>submitted for examination in October 2023</i> )		✓
S Makuwa	Implementation of SCM best practices within government Entity A		✓
R Mammburu	Enhancing the effectiveness of a procurement process in a South African public entity		✓
R Miller	Transformational technologies as a competitiveness edge: Investigating the improvement of logistics and supply chain management of the FMCG industry in South Africa	✓	
L Mogale	The effect of supply chain management practices on the performance of fast-food micro-enterprises in Alexandra township		✓
K Molale	Warehousing trends and challenges in omni-channel logistics: Johannesburg North clothing retail industry		✓
M Mothobela	Demand planning and its impact on, on-time delivery		✓
P Musariri	Implementation of green logistics in the road freight industry in Gauteng	✓	
T Mutekwe	Service quality attributes of e-hailing services in Johannesburg	✓	
T Nxumalo	Successful Alignment Between Supply Chain Strategy and Corporate Strategy: A Systematic Review		✓
O Pitso	Exploring the potential of South African Minibus Taxi Industry as a Crowd-shipping Service.	✓	
E Ramafamba	The impact of road infrastructure on agricultural productivity: A case study of the Vhembe district municipality in the Limpopo Province	✓	
S Ross	An examination of factors influencing port competitiveness: the port of Durban and the Durban Container Terminal case	✓	





T Sirenya	An evaluation of the effect of consumer electronics of consumer applications returns on warehouse functionality in Johannesburg	✓	
N Shabangu	An investigation of female truck drivers in the Fast-Moving Consumer Goods (FMCG) industry		✓
M Tlholwe	The potential use of internet of things in South African healthcare supply chains		✓
P Tshenye	Effects of covid-19 to supply chain risk management in South African oil and gas companies	✓	
R Tshifhumulo	The projected impact of supply chain risks on the South African manufacturing industry		✓
M Tukuta	Logistical Constraints and Performance of A1 Tobacco Farmers in the Mashonaland West Province of Zimbabwe	✓	
N Zubaida	The effect of on-demand logistics platforms on logistics efficiency in South Africa: A Case of Load Africa	✓	

#### Master's graduates for 2022/2023

Name of Student	Title of Study	Dissertation based	Course Work	Date of graduation
DT Diane	Environmental sustainability as a factor for selecting a third party logistics service provider		✓	May 2022
C Erens	Benefits and challenges of implementing Industry 4.0 technologies in mining logistics		✓	March 2023
G Joorst	Procurement capabilities and vulnerabilities among petrochemical companies in SA		✓	March 2022



K Khitsane	The adoption of blockchain technology by a South African railway operator on the container corridor		✓	October 2023
M Mlambo	Investigating environmental sustainable practices and operational performance of trucking companies in the Western Cape	✓		March 2023
M Muranganwa	Supply-side determinants of medicine stock-outs in South African public hospitals		✓	October 2022
C Uriesi	Passenger perceptions of Metrorail services in Johannesburg	✓		March 2023

#### REGISTERED DOCTORAL STUDENTS

L Basson	African humanitarian supply chain network development
P Chikandiwa	Urban mobility in emerging markets: an empirical investigation of the characteristics and barriers of active transportation in Johannesburg, South Africa
E Jesaya	Supply chain disruptions in the fast-moving consumer goods (FMCG) retail industry in Namibia
A Kashanku	Road transport infrastructure and household welfare in Rural Uganda
M Khosa	Third-Party Access to enhance rail operational efficiency on the Johannesburg – Durban corridor, South Africa
M Mapfurira	Understanding the willingness to transition to e-mobility in Southern Africa: The case of Zimbabwe and South Africa
D Mitieka	Smart mobility, sustainability and quality of life: Aligning the Paradigms
E Moyo	Conceptualising a sustainable food cold chain model for a developing country (submitting for examination end of November 2023)
MK Mwale	Forecasting road-based public transportation needs for developing cities: A case of Lusaka city
H Nuuyandja	An evaluation of urban transport policies in developing cities: A case study of Windhoek, Namibia and Harare, Zimbabwe
N Omido	Big data analytics capability to improve operational excellence and performance of airlines



N Rankeng	Managing the impact of returns for an e-commerce retail business in South Africa.
O Sebitlo	Association between ride-sourcing and sustainable travel - Evidence from Johannesburg
M Steenkamp	Transport infrastructure, logistics capability and foreign direct investment in Sub-Saharan Africa
C Tsikada	Zimbabwean smallholder paprika growers from field to fork – Sustainable value network analysis (will be submitting for examination in November 2023)
J van der Walt	The development of an Android-based short food supply chain application for urban agriculture.

#### Pre-registered doctoral students

Name of student	Field of research
H Makan	Supply chain modern slavery in South Africa: context, conceptualization and assessment

#### Doctoral graduates for 2022/2023

Name of Student	Title of Study	Date of graduation
O Atiga	A comparative analysis of the public and private medical commodity supply chains in Ghana, the case of the last mile delivery in the Upper East Region	October 2022
B Duri	Transportation needs of people with disabilities: a means to inclusive transportation in the City of Tshwane	October 2022
E Mogire	Last mile delivery and customer satisfaction of online retailers in Kenya	May 2023
N Tshetu	The impact of the Yamoussoukro declaration on airlines	June 2023

#### MASTERS AND DOCTORAL RESEARCH GROWTH STRATEGY

As part of its ongoing strategy to increase the number of masters' students, improve research publications and raise the intake of doctoral students, a coursework master's degree (MCom Business Management) with a specialisation in supply chain management was introduced in January 2011. This programme has recently been changed by the host department (Business Management) to minimize specialization areas but students are still able to specialize in supply chain management.



# MASTERS AND DOCTORAL RESEARCH

The following table sets out the number of graduates on all qualifications between 2013 and 2023 for the respective qualifications:

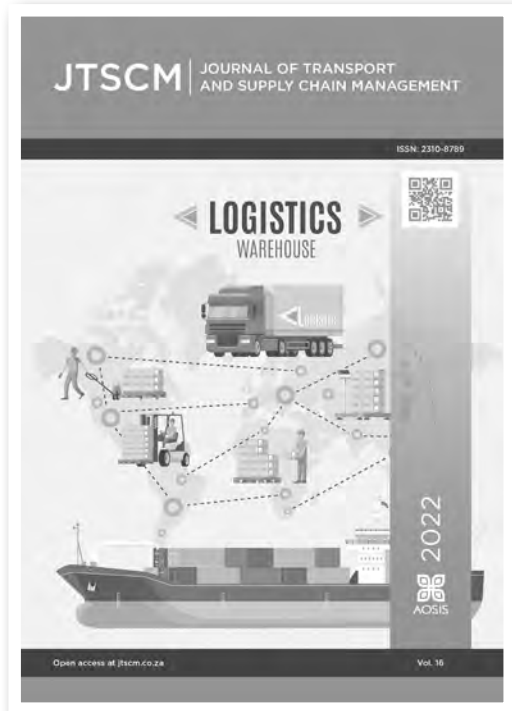
YEAR	Dissertation-based Master's	Course work Master's MCom	Doctorate
	Graduates	Graduates	Graduates
2013	2	3	0
2014	2	6	1
2015	0	3	1
2016	2	3	1
2017	2	8	0
2018	0	2	1
2019	1	4	0
2020	0	10	0
2021	1	2	0
2022	0	3	2
2023	2	2	2
TOTAL	12	46	8







ITLS (Africa) has started its own publication, the Journal of Transport and Supply Chain Management, and is the first of its kind in South Africa. The journal, which is an electronic or e-journal, was first published in November 2007 following a process of approval for publication. The journal contains peer-reviewed articles by local and international transport and supply chain specialists. As from January 2010, the journal has been fully accredited by the Department of Higher Education. The seventeenth edition of the journal was published in November 2023. The Editor of the Journal is Prof S. Kruger and the day-to-day administration is outsourced to African Online Scientific Information Systems (Pty) Ltd (AOSIS), a professional publishing company that manages (amongst others) academic journals. The format of the journal was amended in 2012 from being an annual journal to an ongoing open access publication. This has enabled authors to have their work published at any stage during the year rather than waiting for end-of-year publication, resulting in a fast turn-around time for authors.



A total of 283 (including the special covid edition) articles has been published since the inception of the Journal in 2007. It is evident that the Journal is fulfilling a major gap in the dissemination of transport and supply chain research in the country.

The Journal was accepted for inclusion in the Scopus Index on 02 October 2019.

The current version (2023) can be viewed in full at: <http://jtscm.co.za/index.php/jtscm>



The following table contains an overview of the articles published for 2022 and 2023 (the 2023 edition has not yet been closed)

Year	Article	Authors
2023	Identifying temperature deviations in the hake cold chain from Namibia to Spain	C Neethling LL Goedhals-Gerber
	Managing omni-channel reverse logistics risk during supply chain disruption recovery in the South African fashion industry	T Ermes W Niemann
	It joins all – Synchronicity: How technology is reshaping our understanding of collaboration	P Stone P Thomas G Goldman
	Trends in weather-related marine cargo insurance claims: A South African perspective	F du Plessis LL Goedhals-Gerber J van Eeden
	Readiness factors affecting e-procurement in South African government departments	DN Maepa MF Mpwanya TB Phume
	An assessment of the capacity and the performance of marine services in South Africa's ports	SE Mthembu MG Chasomeris
	Policy enforcement, corruption and stakeholder interference in South African universities	BS Ngcamu
		E Mantzaris
	Impact of COVID-19 restrictions on South African air transport and tourism indicators	J Vermooten
	Bullwhip effect: Modelling and simulation of a sinusoidal stimulus considering food waste	D Rottenegger M Öfele HM Braun S Braunreuther
	Customer satisfaction with last-mile delivery in Kenya: An online customer perspective	E Mogire PJ Kilbourn R Luke
	Enhancing supply chain agility through e-procurement in a volatile frontier market	F Makudza DC Jaravaza T Govha P Mukucha F Saruchera



2022	Detecting temperature breaks in the initial stages of the citrus export cold chain: A case study	CA Conradie LL Goedhals-Gerber FE van Wyk
	The geography of logistics facilities relative to airports: Taxonomy of literature and research agenda	M Mokhele
	The state of South Africa's public-private partnership practices in transport projects: Problems and potential	OK Sebitlo T Mbara R Luke
	Roles of trade logistics to the development of international trade: A perspective of Nigeria	YO Salawu SM Ghadiri
	Drivers of and barriers to the adoption of green fleet management practices in Zimbabwe: A case study of the funeral assurance sector	T Kachilala S Dumba
	Factors affecting the adoption of contactless technologies in supply chain and logistics	S Bangani O Jokonya
	Third-party logistics providers' strategic development in Sweden: Learning from a crisis	B Borgstrom S Hertz L-M Jensen E Kaneberg
	Transport barriers encountered by people with disability in Africa: An overview	B Duri R Luke
	Moulding information systems components and agitations for the adoption of enterprise application architecture for supply chain management	KXT Lamola
	Supply chain management as a competitive advantage for grocery small and medium-sized enterprises in Mahikeng, South Africa	K F Monnagaaratwe K Mathu
	Using fuzzy expectation-based programming for inventory management	W Widowati S Sutrisno RH Tjahjana
	Employees' aptitudes and trepidations for the adoption of enterprise application architecture for supply chain management in small and medium enterprises: A case of Capricorn District Municipality	KX Lamola
	Exploring the factors affecting the adoption of blockchain technology in the supply chain and logistic industry	A Mthimkhulu O Jokonya
	Supply chain challenges in public schools in the uMzinyathi district, KwaZulu-Natal	N Langa MJ Naude
	Humanitarian logistics challenges in disaster relief operations: A humanitarian organisations' perspective	S Negi



Distribution chain diagrams for fresh fruit supply chains: A baseline for emission assessment	MJ du Plessis J van Eeden LL Goedhals-Gerber
The deployment of theory in logistics research: A systematic literature review	B Fisher-Holloway M Mokhele
The impact of green supply-chain management on logistics performance in the construction sector in South Africa	EC Chinomona MB Bikissa-Macongue
Motivations and barriers to using high-speed rail: An application of conjoint analysis – Insights from Vietnam	PTK Ngoc AM Ngoc
Towards a framework to implement a digital agriculture value chain in South Africa for small-scale farmers	HJ Smidt O Jokonya
The effect of planning horizon and information sharing on the optimisation of the distribution network of a fast-moving consumer goods supply chain	KS Abdallah MM El-Beheiry
Supply chain performance and preferential procurement in Gauteng government department	B Sibanda N Tshikovhi
Sustainable supplier selection factors and supply chain performance in the Nigerian healthcare industry	J Nsikan EA Affiah I Briggs N Koko
Remediating sub-Saharan Airline challenges and limitations	GD Leitch J Chigada
Urban freight characteristics and externalities: A comparative study of Gothenburg (Sweden) and Delhi (India)	S Dixit KR Rao G Tiwari S von Wieding
Managing reputational risk during supply chain disruption recovery: A triadic logistics outsourcing perspective	T Blom W Niemann
The role of seaports in regional development in the East Coast on Peninsular Malaysia: An evaluation through an exploratory factor analysis	R Somu J Jeevan NHM Salleh MR Othman K Mokhtar AH Ngah
Factors hindering the implementation of the procurement plan in a selected national research utility	TF Mothupi RM Mukonza T Khalo
The determinant of a five-stage downstream oil stream supply chain: A empirical study of Ghana	SK Owulaku T Tetteh



## SPECIAL COVID EDITION 2022

Article	Authors
Developing resilient supply chains in the Southern African Development Community: Lessons from the impact of COVID-19	OR Pretorius JE Drewes WH Engelbrecht GC Malan
Strategic supply chain alignment: The role of third-party logistics service providers during disruption recovery	C van der Westhuizen W Niemann
Revealed and future travel impacts of COVID-19 in sub-Saharan Africa: Results of big data analysis and a Delphi panel survey	R Behrens A Newlands
Tougher than the rest? The impact of COVID-19 on South African exporters	M Matthee A Saville W Flowerday C Bezuidenhout
Insights into the impacts of and responses to COVID-19 pandemic: The South African food retail supply chains perspective	O Omoruyi EA Dakora OO Oluwagbemi
A toolkit to aid in the education and training of supply chain members for the efficient distribution of the COVID-19 vaccine: A South African case	S Stofberg-Müller LL Goedhals-Gerber J van Eeden
Analysing the impact of COVID-19 trade disruptions on port authority pricing and container shipping in South Africa	S Grater MG Chasomeris
Online shopping behaviour and service quality perceptions of young people in South Africa: A COVID-19 perspective	GJ Heyns PJ Kilbourn
The impact of COVID-19 on informal humanitarian supply chains – The case study of Zimbabwe	HW Ittmann
Small and medium enterprises' adoption of 4IR technologies for supply chain resilience during the COVID-19 pandemic	S Munongo D Poee
Measuring customer satisfaction with the Gautrain during the COVID-19 pandemic using the service quality model	DN Raza T Koele MG Makhafola MM Monyemangene







1. Bag, S., Srivastava, G., Bashir, M.M.A., Kumari, S., Giannakis, M., and Chowdhury, A.H., (2022). "Journey of customers in this digital era: Understanding the role of artificial intelligence technologies in user engagement and conversion." **Benchmarking: An International Journal**. Vol. 29(7) <https://doi.org/10.1108/BIJ-07-2021-0415>
2. Srivastava, G., and Bag S., (2022). "Antecedents of Buying Behavior Patterns of E-Consumers: Lessons Learnt From the COVID-19 Pandemic." **Journal of Electronic Commerce in Organizations**. Vol. 20(2) <https://doi.org/10.4018/JECO.300300>
3. Mageto, J., Twinomurinzi, H., Luke, R., Mhlongo S., Bwalya, K., & Bvuma, S. (2022). "Building resilience into smart mobility for urban cities: an emerging economy perspective." **International journal of production research**. <https://doi.org/10.1080/00207543.2022.2139866>
4. Mukherjee, A., Singh, R.K., Mishra, R. Bag, S., (2022). "Application of blockchain technology for sustainability development in agricultural supply chain: justification framework." **Operations Management Research**. Vol. 15 (1) <https://doi.org/10.1007/s12063-021-00180-5>
5. Priyadarshini, J., Singh, R.K., Mishra, R., Bag, S (2022). "Investigating the interaction of factors for implementing additive manufacturing to build an antifragile supply chain: TISM-MICMAC approach." **Operations Management Research**. Vol. 15(1) <https://doi.org/10.1007/s12063-022-00259-7>
6. Ranjbarnia, B., Kamelifar, M. J., & Masoumi, H. (2022). "The Association between Active Mobility and Subjective Wellbeing during COVID-19 in MENA Countries." **Healthcare**, Vol. 10 <https://doi.org/10.3390/healthcare10091603>
7. Bag, S., Srivastava, G., Bashir, M.M.A., Kumari, S., Giannakis, M. and Chowdhury, A.H., (2022). "Journey of customers in this digital era: Understanding the role of artificial intelligence technologies in user engagement and conversion." **Benchmarking an International Journal**. Vol 27 (7) <https://doi.org/10.1108/BIJ-07-2021-0415>
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ITLS (Africa) hosted several TransportSIG events during the course of 2022/2023 in order to provide appropriate forums for transport, logistics and supply chain information exchange and debate. These events have been very well attended with an average attendance of between 120 and 180 delegates per session. Due to the COVID-19, the 2022/2023 sessions were all held virtually. In addition, the sessions being streamed on the Zoom platform, delegates can watch proceedings on YouTube.

The first event for 2023 was held in March and the theme was **“Advanced Technology in Freight Movement”**. Speakers included Dr Joash Mageto (Deputy Head: Department of Transport and Supply Chain Management, University of Johannesburg); Mr Jaco le Roux, (Chief Technology Officer, C-track Africa); Matteo Genovese (R&D Axcent System Engineer, Italy); Andrea Gatti, (R&D Axcent System Engineer, Italy); Mr Franz Struwig (Chief Executive Officer, HisWay Labs); Ms Louise Wiggett (Chief Executive Officer, Global Trade Solution) and Dr Karien Venter (Senior Researcher, CSIR and The Impact Catalyst).

The second event took place in April where the theme was **“Green Transport”**. Speakers included Mr Tatenda Mbara (Lecturer: Department of Transport and Supply Chain Management, University of Johannesburg); Mr Charl Harding, (Manager, Impact Catalyst: CSIR); Ms Louise Naudé (Presidential Climate Commissioner, WWF South Africa); Mr Gideon Neethling (Company Engineer, Golden Arrow Bus Services (Pty)Ltd); Ms Liesl de Wet (Head: Accelerated Organisational Sustainability, Unitrans); Mr Tshepo Kgobe (Chief Operating Officer, Gautrain Management Agency); and Mr Jack van der Merwe (Chief Executive Officer, Gauteng Transport Authority).

The third event was held in September and the theme was **“Rail Roundtable”**. Some of the speakers included Prof Noleen Pisa (Head, Department of Transport and Supply Chain Management, University of Johannesburg); Mr Ngwako Makaepea (DDG: Rail Transport, Department of Transport, Gauteng); Dr Andrew Shaw (Chief Strategy and Planning Officer, Transnet SOC South Africa); Ms Deirdre Strydom (Executive Manager: Group Strategy and Planning, Transnet SOC South Africa); Ms Anna-Marie Lubbe (GM: Strategy, Passenger Rail Agency of South Africa); Prof Jan Havenga (Director: GAIN Group (Pty)Ltd) and Emeritus Professor Stellenbosch University); and Mr Jaap van der Merwe (Rail & Port Project Promoter & Developer).

The final transport forum for the year took place on 13 October 2023 during Transport Month. The theme for the event was **“Public Transport: Quo Vadis”**. Speakers included Prof Noleen Pisa (Head: Department of Transport and Supply Chain Management, University of Johannesburg); Prof Jackie Walters (Department of Transport and Supply Chain Management, University of Johannesburg); Mr Lesiba Manamela (Chief Director, Department of Transport, Gauteng); Mr Keith Smith (Consultant to SANRAL and Project Manager of the ABT System); Ms Dorothy Mabuza (Executive Director: Transport, City of Johannesburg); Mr William Dachs (Chief Executive Officer, Gautrain Management Agency); Ms Thandeka Buthelezi (Executive Customer Services, Passenger Rail Agency of South Africa); and Ms Fusi Makhasane (Taxi Owner and Deputy Chairlady, Gauteng SANWIT Office).

Since the inception of TransportSIG in 2007, approximately 1 034 papers have been read that are freely available on the TransportSIG website [www.transportsig.com](http://www.transportsig.com) and is a useful resource on the latest trends and developments in the transport and supply chain industries in South Africa.



### Other Conference Presentations – 2022/2023

1. Walters, J., and Pisa, N., (September 2022). Review of South Africa's public transport system's sub-optimal performance. Paper presented at the 17th Biennial Conference on Competition and Ownership Issues in Public Transport (Thredbo) held in Sydney, Australia.
2. Chakamera, C., and Pisa, N., (September 2022). Transport Infrastructure, Environmental Degradation and Socioeconomic Development in 33 African countries. Paper presented at the 15th International Business Conference. 25 – 28 September 2022. Western Cape, Winelands.
3. Luke, R., and Heyns, G.J., (September 2022). Young people's perceptions of the road safety aspects in developing countries: A South African perspective. Paper presented at the 15th International Business Conference. 25 – 28 September 2022. Western Cape, Winelands.
4. Erens, C.W., Kilbourn, P.J., and Makan, H., (September 2022). Exploring the impact of industry 4.0 technologies on the mining logistics. Paper presented at the 15th International Business Conference. 25 – 28 September 2022. Western Cape, Winelands.
5. Sirenya, T.L., Mkhabela, S.M., Du Toit, J.J., Robertson, B.I. Malan, N., and van der Walt, J., (September 2022). Social media and urban agriculture: An emerging field of study. Paper presented at the 15th International Business Conference, 25 -28 September 2022. Western Cape, Winelands.
6. Mvubu, M., and Kilbourn, P.J., (September 2022). The implementation of AI driven solutions in warehousing: a semi- systematic literature review. Paper presented at the 15th International Business Conference, 25 -28 September 2022. Western Cape, Winelands.
7. Robson, L.L., Sirenya, T.L., Robertson, B.I., O'Connell, J.T.T., and, Van der Walt, J., (October 2022). Availability of alternative modes of transportation for Gauteng urban farmers delivering goods to customers. Proceedings of Social Sciences International Research Conference, 19 - 21 October 2022.
8. Mageto, JM, Luke, R, Twinomurinzi, HT & Mhlongo, S., (2022). Building Resilience into Smart Mobility for Urban Cities: An Emerging Economy Perspective. Research Seminar: RMIT, 22 November 2022, Online
9. Rossouw, R., Pisa, N.M., and Chakamera, C., (July 2023). The role of the transport sector in the linkages between Northern Cape and the rest of South Africa: An economic base and network analysis approach. Paper presented at the 16th World Conference on Transport Research. Montreal. Canada.
10. Pisa, N.M., Masoumi, H., Mapamba, L., and Chakamera, C., (July 2023). Associations of Public Transport Ridership with Subjective Safety and Security in Johannesburg, South Africa. Paper presented at the 16th World Conference on Transport Research. Montreal. Canada."



11. Kotze, A.C, and Kilbourn, P.J., (September 2023). Examining Financial Performance and Supply Chain Process Strategy for a Pharmaceutical Company. Paper presented at the 16th International Business Conference. 24-27 September 2023. Swakopmund, Namibia.
12. Adenigbo, A. J., Mageto, J. and Luke, R. (2023). Factors influencing air cargo Policy Decisions and Implementation in Nigeria: A Stakeholders' Perspective. Paper Presented at the 2023 Transport Problems XV International Scientific Conference, 21 – 23 June 2023. Silesia University of Technology, Poland.
13. Adenigbo, A. J., Mageto, J. and Luke, R. (2023). Effect of the Adoption of Technology Innovations in the Air Cargo Logistics Industry in South Africa. Paper presented at 41st Southern African Transport Conference, 10 – 13 July 2023, CSIR, Pretoria, South Africa.
14. Adenigbo, A. J., Mageto, J. and R. Luke (2023). Factors affecting cargo logistics operations at Lagos International Airport, Nigeria. Paper Presented at the 16th World Conference on Transport Research Society (WCTRS), 17 – 21 July 2023, CIRRELT, Montreal, Canada.
15. Chakamera, C., and Pisa, N.M., (September 2022). Transport Infrastructure, Environmental Degradation and Socioeconomic Development in 33 African countries. Paper presented at the 15th International Business Conference (IBC), 25-28 September 2022, Lord Charles Hotel (Somerset West), Cape Town."
16. Rossouw, R., Pisa, N.M., and Chakamera, C., (July 2023). The role of the transport sector in the linkages between Northern Cape and the rest of South Africa: An economic base and network analysis approach. Paper presented at the 16th World Conference on Transport Research. Montreal. Canada.
17. Pisa, N.M., Masoumi, H., Mapamba, L., and Chakamera, C., (July 2023). Associations of Public Transport Ridership with Subjective Safety and Security in Johannesburg, South Africa. Paper presented at the 16th World Conference on Transport Research. Montreal. Canada.
18. Mageto, J. & Luke, R. (2023). Impact of the belt and road initiative on logistics management: a bibliometric analysis. In Proceedings of the 7th Global Research Network-BRI Conference, University of Nairobi, Nairobi, Kenya, February 7–9, 2023.
19. Mageto, J. (2023) Smart Mobility Presentation to RMIT, 24 July 2023.
20. Mageto, J. (2023) Introduction to Cohort Supervision. Presentation to Postgraduate school, UJ, 22 September 2023.
21. Kotze, A.C, and Kilbourn, P.J., (September 2023). Examining Financial Performance and Supply Chain Process Strategy for a Pharmaceutical Company. Paper presented at the 16th International Business Conference. 24-27 September 2023. Swakopmund, Namibia.
22. Luke, R. (2023). The risk management relationship between compliance, sustainability and the cost of corruption. Presentation to the Road Freight SME Summit. 30 June 2023. Online
23. Luke, R. (2023). Patterns of transport-related social exclusion scholarship in Africa: a research agenda. Paper Presented at the 16th World Conference on Transport Research Society (WCTRS), 17 – 21 July 2023, CIRRELT, Montreal, Canada.





In addition to research-based activities, ITLS (Africa) also offers customised training courses to sector role players. To date, the Institute has created and offered customised training courses for several key South African role players including Transnet, the South African Post Office, the University of Liège/Transport SETA and the Gauteng Portfolio Committee on Transport.

#### **Transnet Freight Rail (TFR)/ Glasgow Caledonian University**

TFR identified a major training gap in rail operations in the organization. In an alliance between TFR, the Glasgow Caledonian University, ITLS (Africa) and the Institute of Rail Operators in Britain, a course was identified to address these needs through certificate, diploma and degree programmes. ITLS (Africa) has been involved in this course from a development, managerial and presentation perspective. The first intake of students (TFR employees) started in April 2012. The success of this venture developed into an extension of the contract between UJ and Transnet with intakes of students in 2013, 2014 and 2015. A further extension was agreed upon in August 2017, resulting in an additional five cohorts of students registering in 2017, 2018, 2019, 2020 and 2021. This extension also incorporated the offering of a Honour's and Master's Degree. The total number of students to be trained is estimated at 1228.







There is currently three full-time Post-Doctoral Research Fellow appointed within ITLS (Africa).

Below is a summary of each PDRF.

#### **Dr Adedotun Joseph Adenigbo**

Adedotun holds a Ph.D. in Transport Management Technology with the option in Air Transport Management at the Federal University of Technology, Akure, Nigeria, in 2019. His thesis focused on Air Cargo Traffic at Lagos and Accra airports. TETFund Nigeria sponsored his research in Ghana while serving as a Research Affiliate student at the Department of Geography and Resource Development, University of Ghana, in 2017. He is a Lecturer at the Department of Logistics and Transport Technology, Federal University of Technology, Akure, Nigeria. Currently, Adedotun is a Postdoctoral Research Fellow in the Department of Transport and Supply Chain Management at the University of Johannesburg, South Africa. He is presently working towards research publications in air cargo logistics to achieve the objective of his Postdoctoral Fellowship.

#### **Dr Eric Mogire**

Eric holds a Ph.D. in Logistics Management from the University of Johannesburg, South Africa, in 2023. His thesis focused on last-mile delivery and customer satisfaction created by online retailers in Nairobi. Currently, Dr. Mogire is a Postdoctoral Research Fellow in the Department of Transport and Supply Chain Management at the University of Johannesburg, South Africa. He is presently working towards research publications in e-mobility and delivery technologies in the last mile to achieve the objective of his Postdoctoral Fellowship.

#### **Dr. Enock Giddy Musau**

Enock holds a Ph.D. in Supply Chain Management at the Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya, in 2018. His thesis focused on analyzing supply chain determinants of performance and the moderating role of background characteristics in the context of textile manufacturing firms in Kenya. He is a senior Lecturer at the Department of Management Science, Kisii University, Kenya. Currently, He is a Postdoctoral Research Fellow in the Department of Transport and Supply Chain Management at the University of Johannesburg, South Africa. He is presently working towards research publications in mobility (motorized and non-motorized) to achieve the objective of his Postdoctoral Fellowship.



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