

# Scientific contributions in the field of transport and supply chain management

## Authors:

Stephen Kruger<sup>1</sup>  
Hans W. Ittmann<sup>1,2</sup>

## Affiliations:

<sup>1</sup>Department of Transport and Supply Chain Management, University of Johannesburg, South Africa

<sup>2</sup>Institute for Logistics and Transport Systems Africa, University of Johannesburg, South Africa

## Correspondence to:

Stephen Kruger

## Email:

stephenk@uj.ac.za

## Postal address:

Department of Transport and Supply Chain Management,  
D Ring 7, Corner of Kingsway and University Road, Auckland Park 2006, Johannesburg, South Africa

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The Department of Transport and Supply Chain Management at the University of Johannesburg proudly presents to you volume 8, 2014, of the *Journal of Transport and Supply Chain Management* (JTSCM), an accredited publication which is unique to South Africa.

## Background and field of study

All academics in the field of transport management, transport economics, logistics, supply chain management and other related fields, such as general management, change management and strategic management, are invited to participate – with a strong flavour of transport management or supply chain management. Academics from the engineering field, such as those in transport engineering, are also contributing to this journal.

The *Journal of Transport and Supply Chain Management* (JTSCM) continues to serve as an independent publication for scientific contributions in the field of transportation and supply chain management; that is, logistics, operations management, purchasing management, distribution management, warehousing management, transportation (all modes), production planning and related fields.

The journal continues to seek to align academic and practical aspects of transportation, logistics and supply chain management and to disseminate information on important issues and recent developments in these fields. JTSCM also seeks to provide practical insight and guidance to the members of these industry sectors as they seek to implement processes and systems that will provide them with strategic and competitive advantages in their respective markets.

This year the total contribution of high-quality articles is 15. Although much less than in 2013, the emphasis is on quality. Since 2007 we have published a total of 106 high-quality articles. The global impact factor of this journal is 0.58.

## Some reflections on supply chain management in South Africa by Hans W. Ittmann, a member of the Editorial Board

### Introduction

The historical roots of 'logistics' is associated with the Greek word *logistikos*, but it was the French general Antoine-Henri Jomini who, in his classic work *The Art of War*, first gave meaning to the term as 'the lodging of soldiers' (Klaus & Müller 2012:6). Elaborating further, it referred to 'the preparation of all material necessary for setting the army in motion', possibly the first documented use of the term.

Fast-forwarding to the early 1960s, the activity of physical distribution typified the industrial use of the term, which formally became logistics during the mid-1980s. Logistics then referred mainly to the transportation of goods and associated activities.

At more or less the same time a stronger awareness grew within businesses of the importance of logistics in tandem with other business activities and processes to satisfy customer needs and serve customers. This collective of activities, which have expanded substantially over the years, became known as supply chain management (SCM). Today SCM is defined by the Council for Supply Chain Management Professionals (2014) as follows:

... the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration

with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies. (n.p.)

Given this brief introduction, where does SCM feature within the South African context today?

### Private sector uptake of supply chain management

In general the private sector, although possibly lagging behind international developments and trends, has embraced the concept of SCM. In terms of SCM practice, one needs to distinguish between companies performing SCM in-house, and those outsourcing these services to third-party logistics companies (3PLs), while different industrial sectors should be considered separately. In the latter case some sectors are much more advanced in implementing the principles of SCM than others, the automotive industry arguably being the most advanced.

The larger companies who have kept the SCM practice under their own control can be compared to the best internationally, especially those competing in the global market. The same holds true for the 5–10 larger 3PLs in the country; these not only provide excellent services locally, but many are also operating internationally. These players together with the rest of the SCM industry perform excellently in serving more than 100 000 outlets countrywide. Much of this is reflected by the projects which are rewarded for outstanding achievements at the annual Logistics Achievers Awards function. The latest SCM tools, techniques and methodologies typically feature strongly in these award-winning projects.

### Public sector and supply chain management

Government introduced SCM in 2003, and it is defined (Treasury 2003) as follows:

SCM in the public sector can be defined as an integral part of Financial Management which intends to introduce internationally accepted best practice. It seeks to bridge the gap between traditional methods of procuring goods and services and the balance of the supply chain and at the same time addressing procurement related matters that are of strategic importance. (n.p.)

The function includes demand management, acquisition management, logistics and disposal. Although the perceived focus is still on the procurement function, the principle of what was introduced is laudable. However, the implementation of SCM is permeated with corruption and fraud in many of the government institutions. Lack of SCM skills is also a serious concern, while use of the latest methods and methodologies is lacking. Many SCM implementations in the public sector leave a lot to be desired, while the uptake of new developments is very slow.

In terms of providing strategic direction through policies and regulatory frameworks, implementation is sadly lacking. The National Freight Logistics Strategy (Department of Transport 2005) did not achieve what was envisaged.

### Supply chain management education, training and research in South Africa

SCM and logistics are covered in graduate and postgraduate courses in most universities in South Africa. These are largely on par with similar courses offered internationally. However, concerns around the shortage of SCM skills are constantly raised and also expressed by employees. It is not clear exactly what the reasons are for this. SCM and logistics is still possibly not considered as a long-term career, since school children are not well exposed to the field, while many see it as just a stepping stone to move into other directions. Various training courses are offered and most of these are well attended; however the standard and quality of many are questionable.

South Africa is one of the few countries outside the United States of America that publishes two excellent annual publications dedicated to SCM and logistics. The 10th State of Logistics<sup>®</sup> survey was published early this year by the Council for Scientific and Industrial Research (CSIR) in collaboration with Stellenbosch University and Imperial Logistics (CSIR2014). The focus is on quantifying many logistics elements, and after 10 years decision-makers in this environment now have access to various trend graphs, which is vital for proper and informed decision making. The other publication, in its 11th year, is the annual supplychainforesight survey published by Barloworld Logistics (Barloworld Logistics 2014). The aim of this survey is 'to help countries, companies and individuals to determine strategies and tactics to adapt and respond effectively to changing market dynamics'. Through questionnaires those in industry respond by indicating *inter alia* what the major issues are that concern them in this very dynamic environment. Both publications are of an exceptionally high standard.

Research at universities is performed by graduate students and educators. Many of these research papers are now published in the *Journal of Transport and Supply Chain Management* established by the University of Johannesburg some 8 years ago. The research in South Africa is typically of a diverse nature, while individual researchers at the various universities do research in their specific areas of interest only. In general the research produced in South Africa is limited and does not span the entire field.

### Professional communities associated with supply chain management

The SCM and logistics profession is well represented through more than 10 different professional societies. This is possibly not optimal or ideal, while there is a tendency for societies to work independently of each other. The annual SAPICS conference dedicated to SCM is the largest and best attended conference in the country. Many international speakers are invited to present their work. In general quality papers are presented at this conference.

### Future challenges

Where are the major challenges in the area of SCM and logistics in South Africa? I list some below:

- A national long-term logistics strategy is required, with the associated political will to ensure its implementation.
- Sufficient and well-maintained infrastructure is critical for efficient and effective logistics services.
- Focused areas of SCM and logistics research relevant to the country's needs and requirements.
- Public sector participation is becoming a necessity.
- Businesses need to keep up with new technological developments and improvements such as the utilisation of 'big data' through analytics, the use of social media, wireless systems, smart phones, etc.
- Managing extended supply chains effectively in the global marketplace to remain, and become, competitive.
- Skills developments remains an imperative for the future.
- The shift of freight from road to rail, which is critical for the country. Dedicated research in how this can be achieved is required. This could also contribute to lowering the high logistics costs in South Africa.

## Summary

The SCM community in South Africa can be proud of what it has achieved. In terms of the latest Logistics Performance Index produced by the World Bank, South Africa is rated 34th out of a total of 155 countries, which is very good (World

Bank 2014). While there are areas of improvement, the use and application of SCM is of a high quality and standard throughout the country. This is, however, a very dynamic and fast-moving area, with continuous new thinking, new methodologies and methods. It is crucial to stay abreast of these to ensure that South Africa retains its position amongst the foremost logistics countries in the world.

## References

- Barloworld Logistics, 2014, *2014 supplychainforesight – the rise and fall of customers and companies*, viewed 02 October 2014, from <http://www.barloworld-logistics.com/wp-content/uploads/2014/03/Supplychainforesight-Report-2014.pdf>
- Council for Scientific and Industrial Research (CSIR), 2014, *10th State of Logistics Survey for South Africa 2013*, Council for Scientific and Industrial Research, Pretoria.
- Council for Supply Chain Management Professionals, 2014, *Definition of Supply Chain Management*, viewed 02 October 2014, from [http://www.cscmp.org/sites/default/files/user\\_uploads/resources/downloads/glossary-2013.pdf](http://www.cscmp.org/sites/default/files/user_uploads/resources/downloads/glossary-2013.pdf)
- Department of Transport, 2005, *National Freight Logistics Strategy*, viewed 02 October 2014, from [http://books.google.co.za/books/about/National\\_freight\\_logistics\\_strategy.html?id=G8YIAAACAAJ&redir\\_esc=y](http://books.google.co.za/books/about/National_freight_logistics_strategy.html?id=G8YIAAACAAJ&redir_esc=y)
- Klaus, P. & Müller, S. (eds.), 2012, *The Roots of Logistics*, Springer, Heidelberg. <http://dx.doi.org/10.1007/978-3-642-27922-5>
- Treasury, 2003, *Policy strategy to guide uniformity in procurement reform processes in Government*, viewed 28 October 2014, from <http://www.treasury.gov.za/divisions/ocpo/sc/Guidelines/policy.pdf>
- World Bank, 2014, *Connecting to Compete 2014, Trade Logistics in the Global Economy, The Logistics Performance Index and Its Indicators*, World Bank, Washington DC.