

Logistics and port performance of South Africa: Do the numbers add up?

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hjoynt01@gmail.com**How to cite this article:**Joynt, H., 2024, 'Logistics and port performance of South Africa: Do the numbers add up?', *Journal of Transport and Supply Chain Management* 18(0), a1082. <https://doi.org/10.4102/jtscm.v18i0.1082>**Copyright:**© 2024. The Author.
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Introduction

Background

The purpose of this editorial is to reflect on the global and macroeconomic implications of the reported poor port and logistics performance of South Africa. This poor performance led to the establishment of the National Logistics Crisis Committee (NLCC) between government and business (The Presidency 2024). This failure was subsequently emphasised by a report of The World Bank (WB 2023b) stating that the South African container ports, especially the port of Cape Town, are ranked among the worst performing ports in the world.

This editorial does not measure or dispute the negative impact of delays at the ports on total logistic costs of the country. It also does not aim to argue the existence of major logistics problems in recent years. The establishment of the NLCC by the president of the country emphasises the magnitude of this problem (The Presidency 2024).

The editorial provides a global and macroeconomic reflection of various economic and/or logistics and/or trade indicators to assess, firstly, whether these performance measures are all aligned in terms of this perceived 'poor' performance and, secondly, the effect they may have on global trade with the country.

The following indicators will be analysed:

- International trade as measured by the Trade Openness Index (TOI).
- Global logistics performance as measured by the Logistics Performance Index (LPI).
- Global port performance as measured by global container port rankings.
- Growth Performance Index of Ports (GPIP) as measured by trade value for selected South African ports.
- Container market size of South Africa.

Table 1 provides more detail on the focus areas and data requirements of the performance indicators.

What do the numbers say?

This is a macroeconomic analysis of the performance of five indicators that also influence the economic performance of the country. It is intended to establish whether all the indicators reflect similar performance trends resulting in an adverse impact on the South African economy.

It is, however, required to provide a brief overview of the financial performance of Transnet, the state-owned company that is the custodian of ports, rail and pipelines with the objective of ensuring a globally competitive freight system (Transnet 2024). The financial position of Transnet has been poor, reporting a loss of R5.7 billion in the 2023 financial year, compared to the R5 billion profit of 2022 (Jacobs 2024). Jacobs (2024) ascribes these losses to operational challenges because Transnet has been unable to invest in much-needed infrastructure improvements.

The *first performance indicator* focuses on the TOI for South Africa. The TOI is determined by comparing the ratio of the sum of exports and imports relative to the GDP of the country (Fujii 2017:1). Figure 1 demonstrates the TOI for South Africa (SA) since the year 2000. It is evident that the highest index results were obtained in 2007 (59%). The figure also reflects that the 2022 TOI of 56% is higher than the pre-coronavirus disease 2019 (COVID-19) years of 2018–2019. The trendline also reflects an upward trend since 2020.

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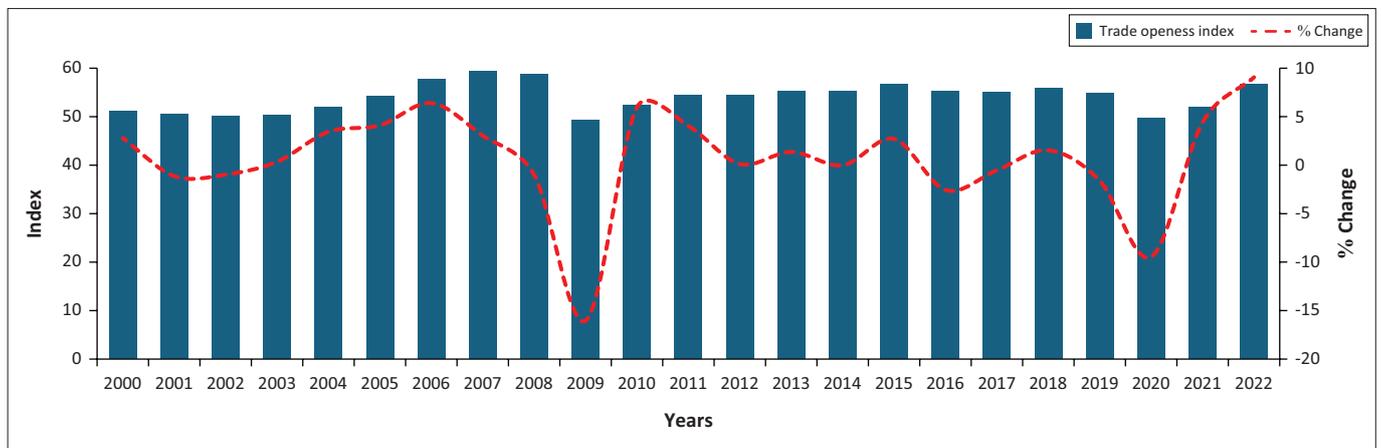
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TABLE 1: Performance indicators for South Africa.

Performance indicator	Focus area	Data requirements	Source
TOI	The sum of imports and exports relative to the GDP of the country. This index is important due to the impact it has on economic growth.	The total imports, exports and GDP of the country in constant prices.	<ul style="list-style-type: none"> Quantec 24a Quantec 24b.
LPI	LPI Reports. This index is important as it provides a comparison with other countries based on perceived logistics performance.	The LPI scores for South Africa including a specific focus on international shipments.	<ul style="list-style-type: none"> The World Bank (WB) (2023a) Arvis, Ulybina and Wiederer (2023a) Arvis, Ojala, Sheperd, Ulybina and Wiederer (2023b)
Global container port rankings	The Container Port Performance Index reports. This index ranks the container ports on a global scale.	Global rankings of containers ports of the three selected ports at Cape Town, Durban and Port Elizabeth.	<ul style="list-style-type: none"> The World Bank (WB) (2021) The World Bank (WB) (2022) The World Bank (WB) (2023b)
GPIIP	Growth Performance Index of global trade for selected South African ports. This index provides an indication of whether a port is a leading or lagging port when compared to other ports.	Individual port and total port trade volumes.	<ul style="list-style-type: none"> Quantec (2024a)
Container market size	Income from freight transportation by type of commodity including containers. The market size provides an indication of the relative importance in the freight transport system.	Freight transportation income at current and constant prices.	<ul style="list-style-type: none"> Statistics South Africa (Stats SA), (2024)

Note: Please see the full reference list of the article, Joynt, H., 2024, 'Logistics and port performance of South Africa: Do the numbers add up?', *Journal of Transport and Supply Chain Management* 18(0), a1082. <https://doi.org/10.4102/jtscm.v18i0.1082>, for more information.

GDP, gross domestic product; GPIIP, growth performance index of ports; LPI, logistics performance index; TOI, trade openness index.



Source: Adapted from Quantec, 2024a, *EASYDATA Data Set: TRD11-RSA Regional Trade HST 6-digit*, Quantec, Pretoria; Quantec, 2024b, *EASYDATA Data Set: RGDP-Quarterly Provincial GDP estimates*, Quantec, Pretoria

FIGURE 1: Trade Openness Index scores for South Africa (2000–2022).

The *second performance indicator* is the LPI. Arvis, Ulybina and Wiederer (2023a:1) state that the LPI is useful for comparing performance across countries. According to Arvis et al. (2023b:12), the LPI measures the logistics performance of a country based on six LPI components (Customs score; Infrastructure score; International shipments score; Logistics competence and quality score; Timeliness score; Tracking and tracing score). The overall score is the average score of the six components and reflects a score out of 5. The LPI scores of countries are grouped into one of the following four categories:

- poor logistics performers (scores below 2.5)
- partial performers (scores between 2.5 and 3.2)
- consistent performers (scores between 3.2 and 3.6)
- logistics-friendly (scores higher than 3.6).

From Table 2, it is evident that the LPI of SA varies between consistent logistics performance and high performance (above a score of 3.6). Since 2018, the score improved from 3.38 to 3.70 in 2023 (Arvis et al. 2023b).

The *third performance indicator* is the global container port rankings provided by the WB. For this article, only three container ports are analysed, namely:

TABLE 2: Logistics Performance Index Scores of South Africa.

South Africa	Overall LPI score	Overall LPI rank
2010	3.46	28
2012	3.67	23
2014	3.43	34
2016	3.78	20
2018	3.38	33
2023	3.70	19

Source: The World Bank (WB), 2023a, *International LPI data set from 2007 to 2023*, The World Bank, Washington DC, viewed 02 July 2024, from <https://databank.worldbank.org/metadataglossary/>

LPI, logistics performance index.

- Durban Port
- Cape Town Port
- Port of Port Elizabeth.

Table 3 illustrates the global container port ranking for the selected South African ports. The poor ranking obtained by all three ports during 2022 reflects poor performance. The port of Cape Town was ranked the worst container port in the world with a rank of 405.

The poor performance is further underlined by the actual number of containers handled by the respective ports since 2016. Both Cape Town and Durban ports handled fewer

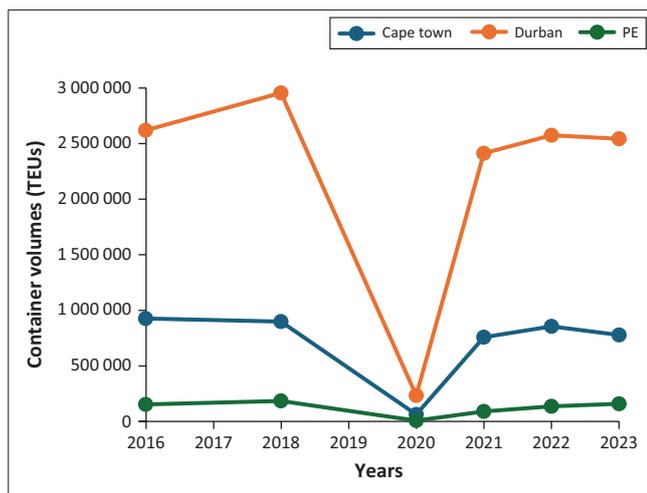
containers (TEUs) in 2023 than compared to 2016 (refer to Figure 2).

The *fourth performance indicator* is the growth performance index of the selected ports (GPIP). The Development Bank of South Africa (DBSA 2001:34) states that a growth performance index provides an indication of the growth in a certain sector of the economy relative to the growth attained in the same sector in the aggregate economy. In this instance, the growth in value of trade volumes handled at the selected ports is compared to the growth of the total trade value of all ports in the country. The scores lower than 100 reflect a lagging

TABLE 3: Global container port rankings for selected ports in South Africa (2020–2022).

Port	2020	2021	2022	Difference (2022–2021)
Durban	349	341	398	57
Cape Town	347	344	405	61
Port Elizabeth	348	291	391	100

Source: The World Bank (WB), 2021, *The Container Port Performance Index 2020: A comparable assessment of Container Port Performance*, World Bank, Washington, DC.; The World Bank (WB), 2022, *The Container Port Performance Index 2021: A comparable assessment of Container Port Performance*, World Bank, Washington, DC.; The World Bank (WB), 2023b, *The Container Port Performance Index 2022: A comparable assessment of Container Port Performance*, World Bank, Washington, DC



Source: Adapted from Transnet National Ports Authority (TNPA), 2024, *Port statistics*, viewed 02 July 2024, from <https://www.transnetnationalportsauthority.net/Commercial%20and%20Marketing/Pages/Port-Statistics.aspx/>

FIGURE 2: Container volumes (TEUs) for selected ports in South Africa.

port and those with scores higher than 100 reflect a leading port or leading performance. From Table 4 it is evident that the Port of Port Elizabeth is a lagging port (GPIP below 100) and Durban a leading port (GPIP above 100). Cape Town had mixed results for the respective periods.

The *fifth performance indicator* measures the size of the container market as a percentage of the total freight market. Figure 3 depicts the market size of containers measured as a percentage of the total income of land transport in the country. Statistics South Africa (Stats SA) conducts surveys of the land transportation industry, covering passenger and freight transportation by rail and road and these results are used to compile estimates of the GDP for the transport sector (Statistics South 2023). The results reflect that the container market fluctuates between 4.6% and 6.6% of the total freight market. Current levels are at their lowest share of the freight market.

Comparisons

This section summarises the outcome of the performance indicators analysed.

First performance indicator

The TOI – The figure reflected that the 2022 TOI of 56% was higher than the pre-COVID-19 years of 2018–2019. The trendline also reflected an upward growth since 2020 (good performance).

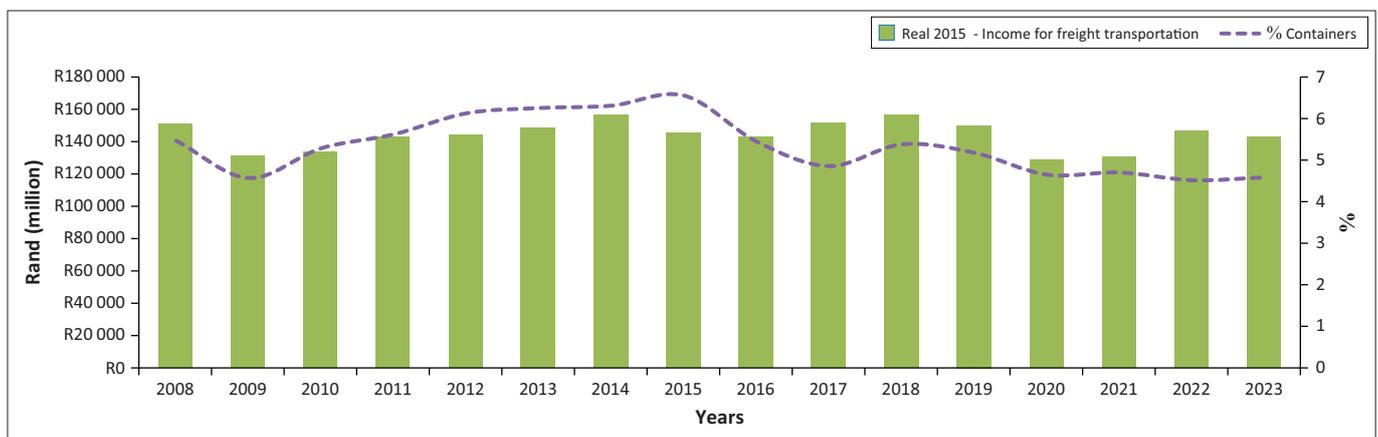
Second performance indicator

The LPI – Since 2018, the LPI score improved from 3.38 to 3.70 in 2023. This implies that SA is rated as a logistics-friendly

TABLE 4: Growth Performance Index for selected ports.

Port	10 Year GPIP	2 Year GPIP	1 Year GPIP
Cape Town	109.7	93.8	103.0
Durban	101.0	112.1	112.8
Port Elizabeth	95.2	93.8	80.2

Source: Author's own, based on Quantec, 2024a, *EASYDATA Data Set: TRD11-RSA Regional Trade HST 6-digit*, Quantec, Pretoria
GPIP, growth performance index of ports.



Source: Adapted from Statistics South Africa (StatsSA), 2024, *Land transport*, Statistical release P7162, Statistics South Africa, Pretoria

FIGURE 3: Income for freight transport services in South Africa (constant 2015 prices).

destination that is ranked 18th best out of 139 countries (good performance).

Third performance indicator

The Global Container Port Rankings – The poor ranking obtained by all three ports during 2022 reflects poor performance. Cape Town port was ranked the worst container port with its rank at 405. All three ports fell between 57 and 100 places compared to the previous assessment (poor performance).

Fourth performance indicator

Growth Performance Index of Ports – The Port of Port Elizabeth is a lagging port and Durban is a leading port. Cape Town had mixed results. Good performance for Durban and poor performance for the Port of Port Elizabeth.

Fifth performance indicator

Container Market Size – Current levels are at their lowest share of the freight market. Poor performance is underlined by the fact that the container market is at its lowest level (4.6%) of the total market share.

Conclusion

Firstly, the purpose of this article was to determine whether the performance measures were aligned to the reported 'poor' performance and, secondly, whether it had manifested itself in an adverse effect on global trade. The analysis reflected that the different performance results did not necessarily correlate with or support the negative sentiment of reported publications. Results showed that two of the indicators were aligned to the poor performance, two reflected good performance, while one had mixed results. For example, one of the indices indicated that South Africa is a logistics-friendly destination with high logistics performance, while another report rated the container ports among the worst in the world. From a trade perspective, it was found that the TOI had an upward growth trend in recent years and the index was

higher than pre-COVID-19 years. On the other hand, the total containers handled at the respective ports were lower than pre-COVID-19 years, thus impacting on trade volumes. These results thus imply that the numbers do not always add up. It is argued that, although useful, these reports and indices must be treated with due consideration of their limitations, data used and specific focus areas.

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