Global Pricing Comparator Study 2020/21 Port Tariffs

Benchmarking South African port administered prices against a sample of international ports

Report No. 9

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1. Executive Summary

The Global Pricing Comparator Study (GPCS) is a benchmarking of port prices for a single, standardised vessel and includes marine charges, cargo dues (differentiated by cargo type), and terminal handling charges. The study includes four cargo types, namely; containers, automotives, iron ore, and coal.

This is the ninth iteration of the GPCS and reviews tariffs for the 2020 period (the first report was published in 2013 reflecting 2012 tariffs) as well as analyses trends that have become evident over the period. The impact of regulatory intervention in the port sector is becoming increasingly clear as the overall structure of the South African (SA) port pricing system has, on a relative level, changed significantly since the inception of regulation. This may be attributed to the development of the Tariff Strategy, the Tariff Methodology, and various other regulatory instruments.

> *"This target tariff is a cost reflective tariff of utilising the infrastructure and not only provides an indication of where tariffs are projected to change to in relation to the rest of the ports used in the sample, but also to enable a clearer view of future port prices facing cargo owners as well."*

The GPCS reflects the tariff trajectory envisaged by the Tariff Strategy by including a "target tariff" or "base rate" (the current value of a future tariff) in the comparisons. The GPCS serves as a useful barometer of SA port pricing competitiveness as well as to note annual improvements or setbacks. Further, it provides a measure of the impact of regulatory pricing decisions. It is worth noting that the exchange rate effect a devaluation of the ZAR by 37%) will distort some of the numbers. For this reason we are including an assessment of average exchange rates as well.

Some of the main findings of the report includes container cargo dues still 166% above the sample average, Marine charges for containers, and in general remaining below the sample average, and dry bulk cargo dues remaining relatively low, compared to the global sample.

Terminal handling and transhipment remains either very cheap, in the case of the latter, or very expensive in the case of THC's given the significant efficiency problems experienced in, especially the container handling terminals.

2. Background

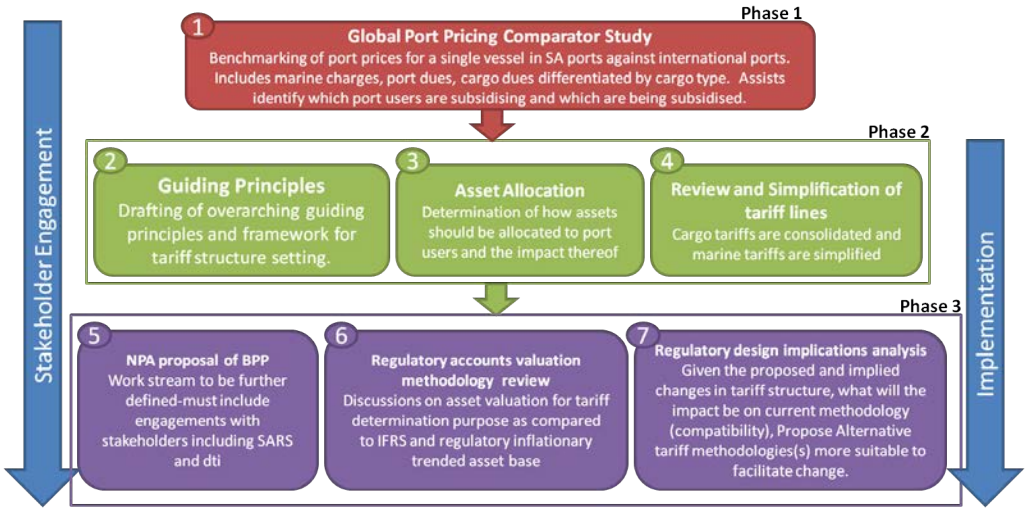
Sea transport is an essential vehicle of international trade[1]. Efficient ports are known to be catalysts for increased trade and provide a comparative advantage for international trade. Trade, distribution, transport, and logistics are nodal points which are considered as vital facets of the SA economy. Commercial ports, therefore, play a crucial role in the transport system and the economic development of the country.

The National Ports Act 12 of 2005 ("the Act") was established with the purpose of ensuring affordable, internationally competitive, efficient and safe port services based on a transparent and cost-effective nature[2] that is economically and environmentally sustainable.

The National Ports Authority of South Africa ("the Authority" or the "NPA") was established upon the introduction of the Act in 2006 and is presented the main function of owning, managing, controlling and administering South Africa's commercial maritime ports to ensure their efficient and economic functioning. The Act, through Section 29, has further given birth to an independent ports regulatory body vested with legal personality: The Ports Regulator ("the Regulator"/ "PRSA"). The Regulator is mandated to, amongst others, "exercise economic regulation of the ports system in line with government's strategic objectives."

As an integral part of the development of the regulatory environment, and in turn the ports sector of SA, the Regulator has developed and published a Tariff Strategy for the ports system which aims to correct the historic anomalies and imbalances present in the port tariff structure. The Tariff Strategy, published in July 2015 and updated in 2020, seeks to establish cost-reflective tariffs in the SA port system over a ten year period and progressively eliminate unfair cross-subsidies. The implementation of the Strategy is set out over three phases and full implementation is expected to span a period of ten years.

Figure 1: The Tariff Strategy Process



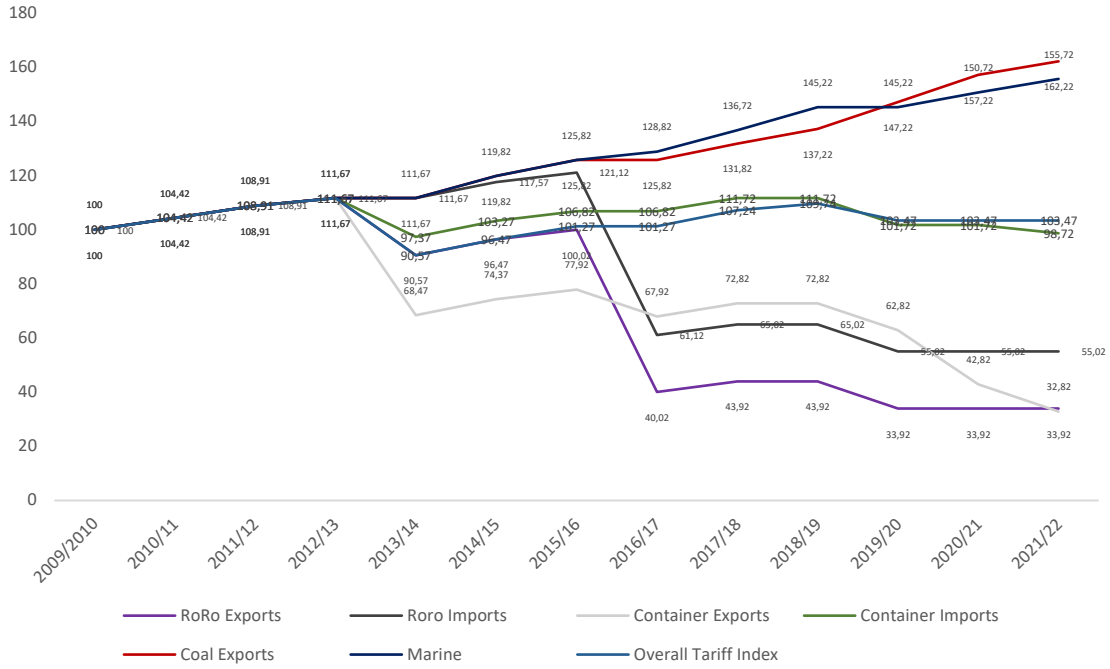
[1] CMF – Le Cluster Maritime François: *The Importance of the Sea.* The Maritime Voice (http://www.cluster-maritime.fr/article.php?lang=Uk&id=2, accessed on 15/02/2013)

[2] Government Gazette Vol. 446, No. 23715, 8 August 2002: *South African White Paper on Commercial Ports*

The GPCS, which the Regulator has undertaken since 2012/13, was the first Phase of the regulatory process and has played a vital role in guiding the direction of early economic regulation in SA and continues to play an important role of monitoring the impact of the regulatory interventions on the price competitiveness of SA's ports. The GPCS and the results thereof, subsequently formed the foundation for Phase Two of the regulatory process; the development of the guiding principles, the allocation of port assets, as well as the review and simplification of tariff lines. Phase Three of the Strategy includes the development of a beneficiation programme (Port Tariff Incentive Programme), and a valuation of the regulatory asset base of the Authority, both of which have since been completed.

The Regulator published the first multi-year tariff methodology in 2014 which was applicable for a period of three years and in 2017 the second methodology, applicable until the 2020/21 tariff period. The third multi-year tariff methodology was published in 2020, applicable to the 2021/22 – 2023/24 tariff period. The Revenue Requirement methodology in the form of a Revenue Cap has served the port system well over this period as can be seen in Figure 2, where revenue has far outstripped inflation and tariffs have seen real decreases consistently (using 2010/11 as the base year). This does not however tell the whole story and a more nuanced and detailed look is still essential to analysing the progress made in tariff rationalisation in the SA port system.

Figure 2: Impact of the Tariff Methodology



3. Research Methodology

Whilst the Tariff Strategy has allowed the Regulator to set out a transparent path towards efficient cost reflective tariffs over a period (included in this report as the 'target' or 'base rates'), a need to compare tariffs not only to a cost reflective "internal" rate, but also an external comparator remains. No single port charge can accurately be compared across the world purely by its tariff, its name, or its category. Port pricing structures differ in the various jurisdictions and may even differ within the same port or port system. Within each port jurisdiction, a particular tariff structure is used largely based on the history of that port system, the country's development, its transport policy, and its economic policy. Therefore, the only meaningful comparisons in such an environment is one which looks at the total costs that are faced by a particular activity which is unitary enough, comprehensive enough, and consistent enough, across all the jurisdictions at a specific time.

The most appropriate comparator base for port pricing comparisons, in our opinion, is a standardised vessel call. This vessel call has a standard vessel, a standard port stay duration, and a standard cargo profile. This method in itself contains inconsistencies such as the differences in port efficiency that would either lengthen or shorten a port stay; which in turn has ramifications for the time related port charges. To prevent too convoluted an approach that requires too many assumptions and adjustments that are in themselves tainted by uncertainty, the vessel calls have been standardised for the purposes of this analysis. This would render some foreign ports slightly more expensive than they would otherwise be.

"To prevent too convoluted an approach that requires too many assumptions and adjustments that are in themselves tainted by uncertainty, the vessel calls have been standardised for the purposes of this analysis."

*"…SA port tariffs are **not** included in the calculation of the global sample…"*

Certain contributions to the total port cost structure makeup have not been included. These include the charges between cargo owners and their service providers (e.g. document fees) and taxes on activity other than the specific port related activity, amongst others. This methodology was again followed in the 2020/21 iteration of the study to retain consistency in the results. The global sample prices used for the study are prices as at 01 April in each year and therefore do not reflect any in-year variations in prices in international ports. SA ports, being regulated, experience price changes once a year effective 01 April, in ZAR, and the USD rate is reflected in the study for this day, even though this may vary with the exchange rate throughout the year. To enable a comparison with a global sample, the SA port tariffs are **not** included in the calculation of the global sample as illustrated in the report.

While corrections to the data and improvements to the methodology have been applied retrospectively (as information became available), they did not have a significant impact on the results of the previous study and the broad outcomes still remain. Further, the magnitude of the deviation from a global sample average must be considered together with the relevant change experienced from year to year. In addition, currency fluctuations impact on the results and as such, using a standard USD in the methodology will capture any exchange rate benefit or loss on the side of the user. The GPCS for 01 April 2020 represents an assessment of the global pricing context for ports with respect to a defined list of commodities, and contextualises on port pricing in this global context, and compares it to the results of previous years.

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The study is based on publicly available information and only focuses on the level of charges that are faced by third party service users without "special" pricing arrangements. Annexure A outlines underlying assumptions in the study related to the unitary vessels used for the different cargo types.

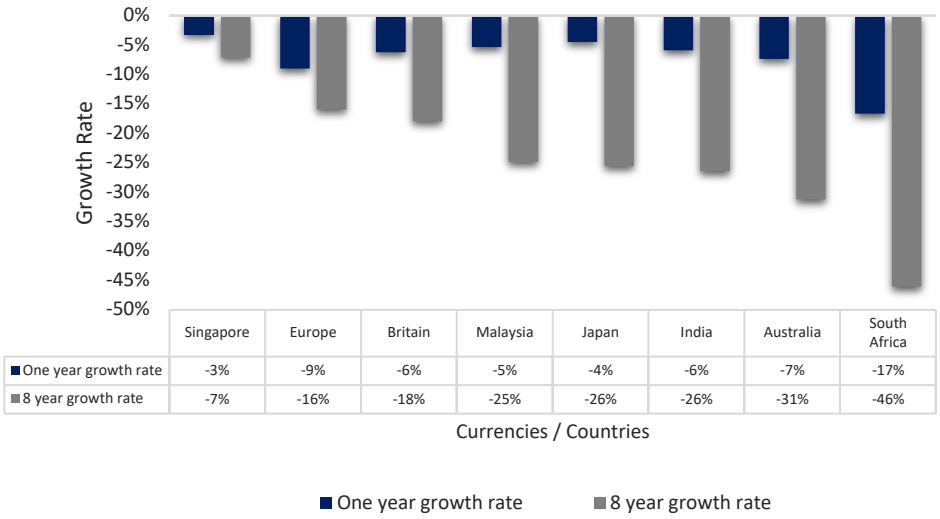
4. Overview

This report looks at the exchange rate comparisons used, as well as the possible outcomes should a different methodology be used. The report then analyses four cargo types in terms of cargo dues, and marine charges and analyses trends as well provides comaprisons within the global sample average. Comparisons and trends within coastwise shipping and trans-shipment are set out in sections 9 and 10. All assumptions made during the development of the research methodology are included in Annex A (Section 13).

5. Exchange Rate Impact

As in the previous reports, the continued depreciation in the value of the South African Rand (ZAR) against the US Dollar (USD) has had a significant impact on port pricing in SA. In simple terms, the study reflects a comparison of port prices in USD, i.e. all prices are converted to USD before being compared to each other. Figure 3 shows that the Rand depreciated 28% against the USD from 1 April 2019 (used in the last GPCS report) to 1 April 2020 (used in this report) and depreciated 46% from the sample date in 2012 to April 2019, this implies a lower USD price as the SA tariff book is published in ZAR.

Figure 3: Growth Rates against USD over the period 2012-2020 for selected countries (on 01 April)



	Singapore	Europe	Britain	Malaysia	Japan	India	Australia	South Africa
One year growth rate	-3%	-9%	-6%	-5%	-4%	-6%	-7%	-17%
8 year growth rate	-7%	-16%	-18%	-25%	-26%	-26%	-31%	-46%

Figure 4 shows that all selected currencies depreciated against the USD with ZAR depreciating the most (37%) followed by the Australian Dollar and the Indian Rupee.

Figure 4: Percentage Change of Exchange Rates against the USD

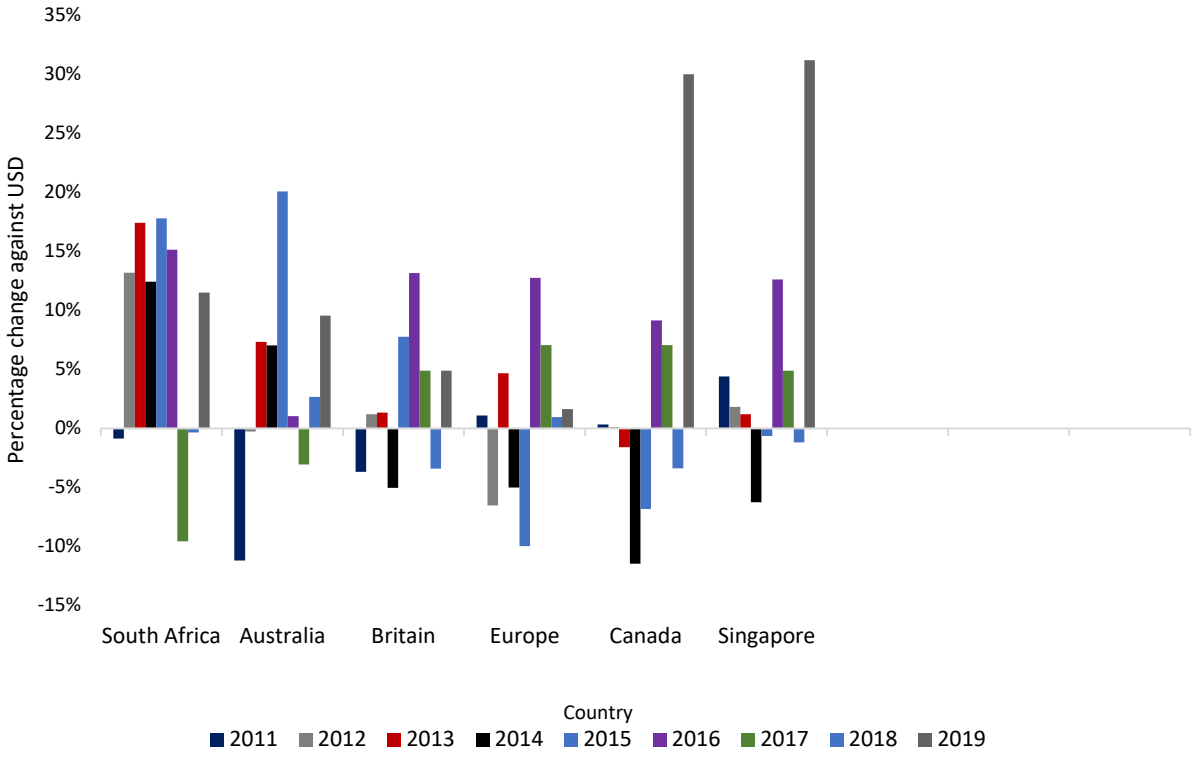
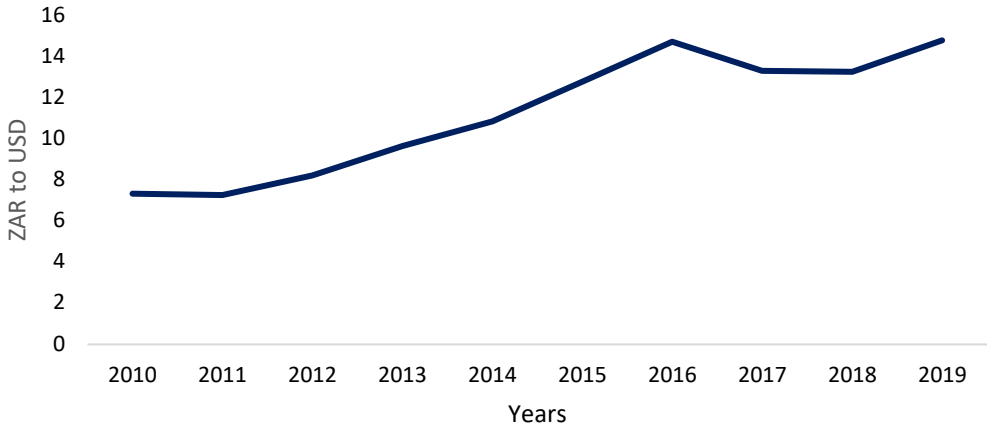


Figure 5 indicates the volatility of the ZAR when compared to its peers from 2012 to 2019 during which it was experiencing annual depreciation of between 12% and 18% against the USD. The ZAR gained 10% in 2017 and was among many currencies that appreciated against the USD in 2018, but has since then depreciated significantly.

Figure 5: South African Rand vs. US Dollar from 2010 to 2019



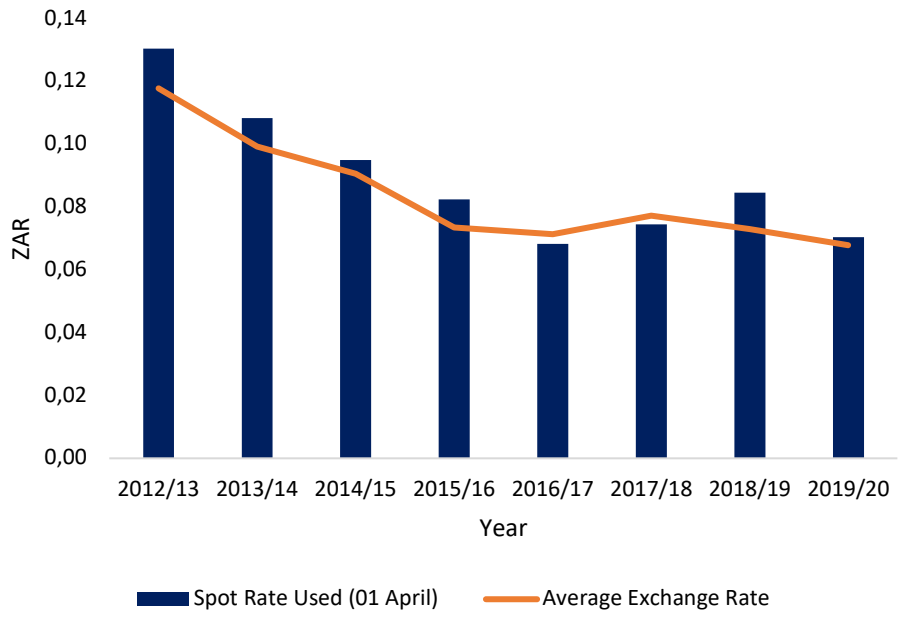
The continued depreciation of the ZAR, despite the recent gains, has obviously rendered the South African ports as “cheaper” in USD over the years for shipping lines and export buyers who pay in USD. However, South African importers are still required to pay in ZAR and as a result the depreciation of the ZAR may have adverse impact on domestic cargo importers.

Although the depreciation of the ZAR has slowed, and some of the losses recouped, the impact of the lower currency will continue to hide the real costs to foreign entities in SA ports. The buffer provided by the depreciated ZAR further provides some shielding to these ship owners as the published Tariff Strategy seeks to rebalance the tariff book that will necessarily see their tariff book line item be adjusted upwards as ‘cost and use’ reflected tariffs are implemented.

6. Exchange Rate Differences

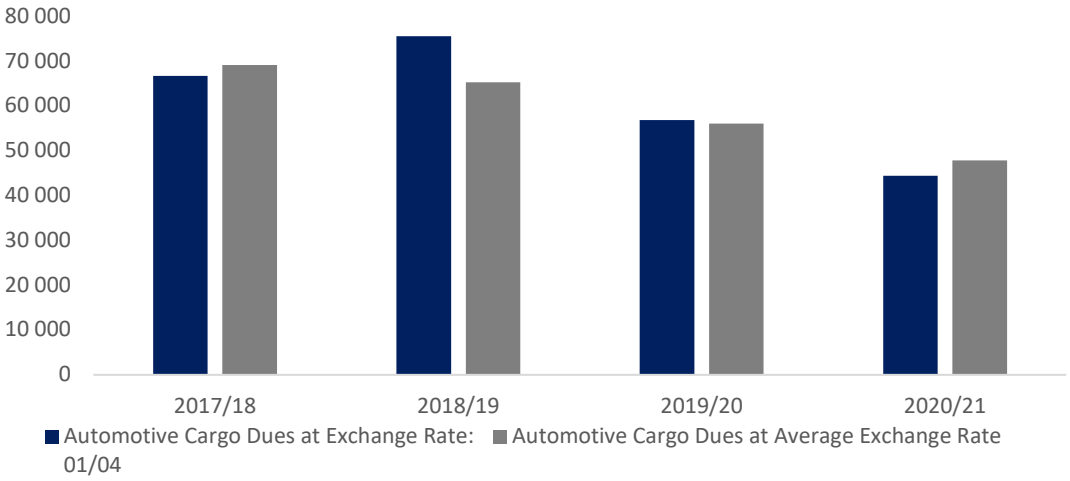
An inherent part of the study is the need to utilise the same Methodology in order to recognise trends over time. Thus, the exchange rate on the first day of April was used. However, in this section, the Regulator has included an additional comparison; the difference between using the exchange rate on the first day of the year versus using the average exchange rate for the year. The SA exchange rate is rather volatile and is dependent on numerous variables and often vary greatly in a short space of time.

Figure 6: Exchange Rate: Annual Average vs. 01 April



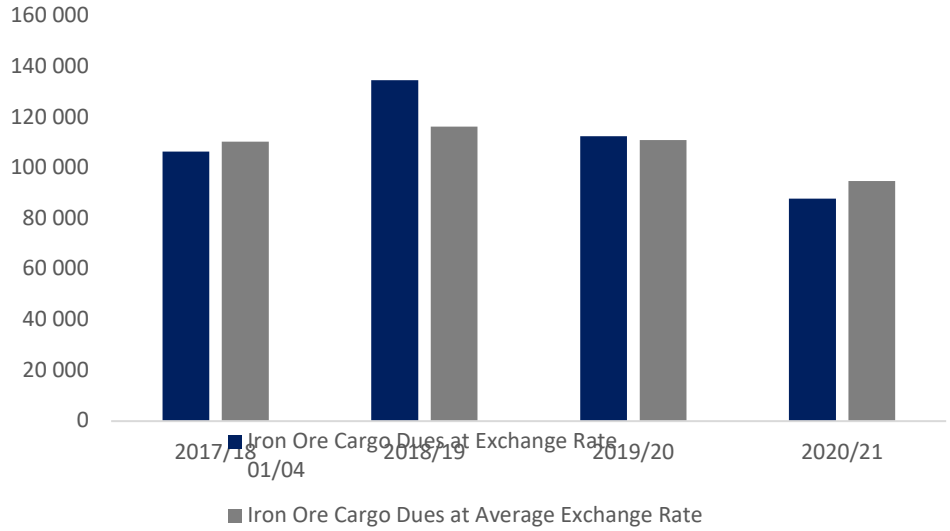
As evident from Figure 6, the exchange rate was relatively stable in the 2016/17 year, as well as the 2019/20 year; a 0,3% difference in 2016/17 and a 0,3% difference in 2019/20 between the 1 April rate and the average. The difference in the 2018/19 year however, is greater recording a 1,2% difference. The difference in the exchange rate over the course of the year affects marine charges paid by the shipping lines, as well as the cargo dues when compared.

Figure 7: Automotive Cargo Dues: Annual Average vs. 01 April



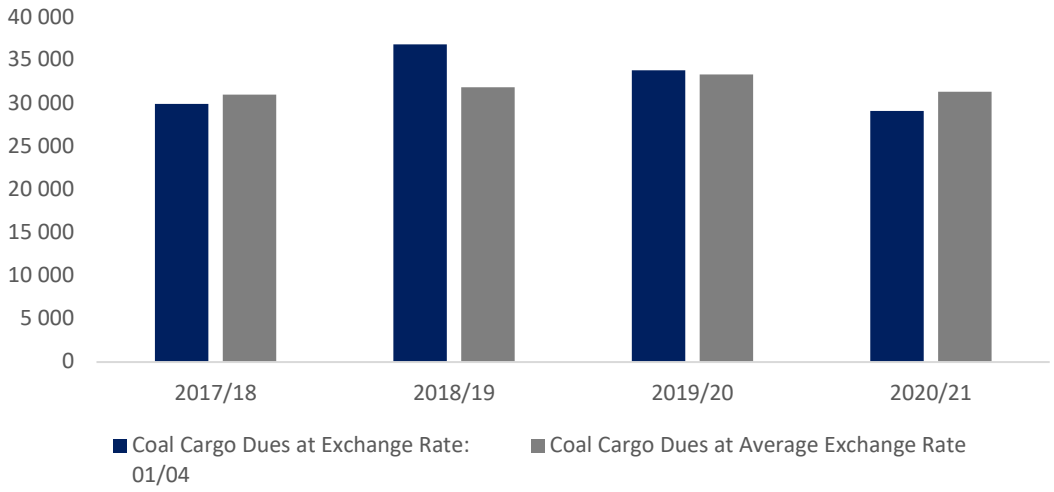
Automotive cargo dues in the 2020/21 GPCS was recorded at $44 514; this was calculated using a conversion of 0,0552 to the US Dollar. However, if an average exchange rate was to be used with a conversion rate of 0,0594 the resultant cargo dues totalled $47 921,41. This is not a significant difference to the total cargo dues for automotive. However, should the GPCS methodology be different, the results and resulting arguments would also be quite different.

Figure 8: Iron Ore Cargo Dues: Annual Average vs. 01 April



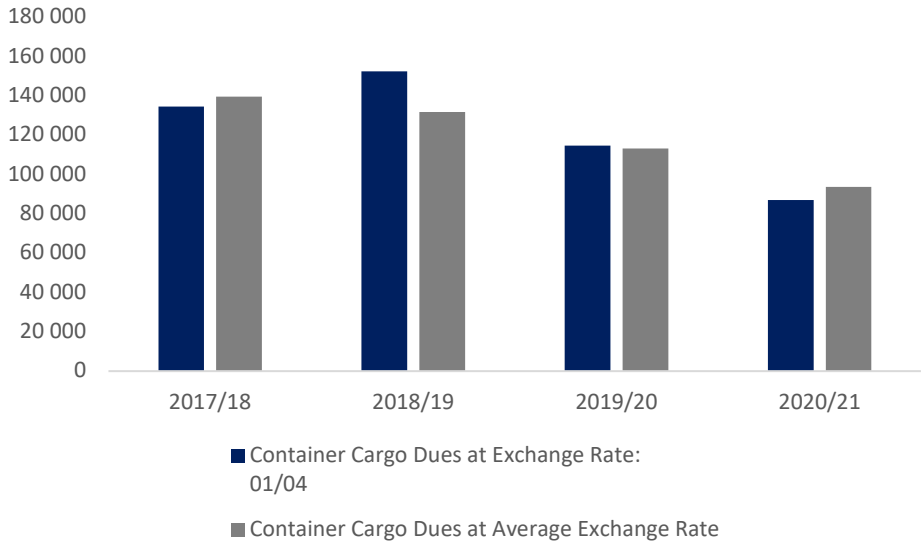
A $6 864 difference in iron ore cargo dues may be realised in the 2020/21 GPCS should the average annual rate be used as opposed to the rate on 01 April 2020.

Figure 9: Coal Cargo Dues: Annual Average vs. 01 April



The trend follows all four cargo dues as it is directly based off the exchange rate. A difference of only $2 228 was recorded for the 2020/21 financial year.

Figure 10: Container Cargo Dues: Annual Average vs. 01 April



7. Cargo Types

Chapter 6 of the GPCS presents the findings of the study for the various cargo types; containers, dry bulk, and automotives. The container component analyses the cost of transporting a single TEU through ports in the global sample in terms of cargo dues, marine service charges, and terminal handling charges. The dry bulk section includes both coal and iron-ore and benchmarks cargo dues and marine service charges. The automotive component of the study benchmarks SA's pricing position in terms of cargo dues and marine service charges. The study highlights trends that have been identified over the 9 year period since 2012/13.

The dimensions and assumptions of the standardised unitary vessel used for each cargo type is set out in Annexure A of this Report.

7.1. Containers

On average, five million containers are moved within the SA ports system on an annual basis, through a combination of import, export, trans-shipment, and coastwise shipping. The Port of Durban's container terminal is the largest and busiest container terminal in sub-Saharan Africa and is a key contributor to the country's economy.

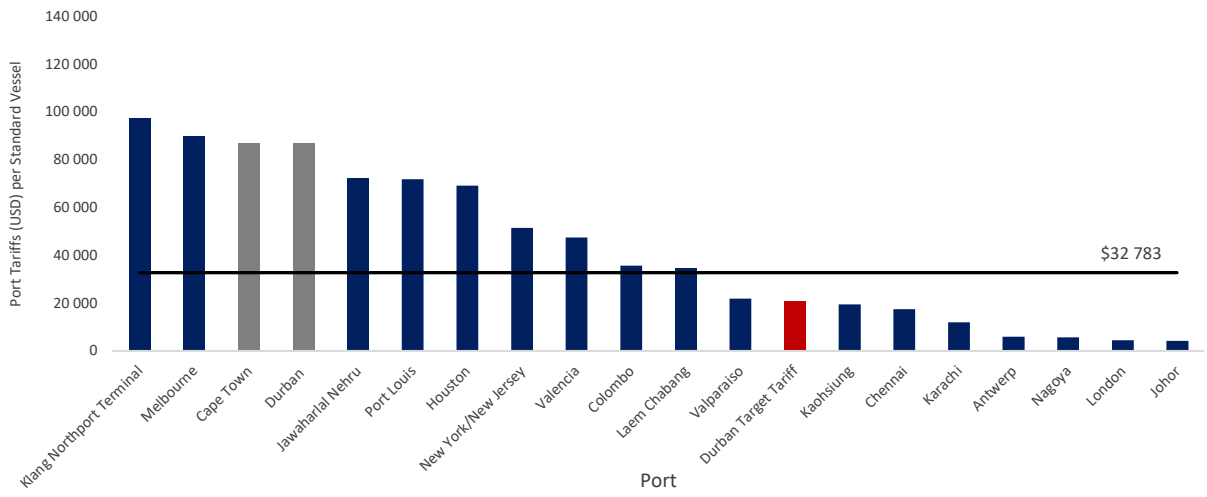
For quantitative comparison purposes, 25 container ports from various countries were chosen for benchmarking the following indicators: cargo dues; marine service charges; and terminal handling charges. Note: terminal handling charges is not a port authority tariff but a terminal operator tariff and a smaller sample was selected based on available information.

"At full implementation of the Tariff Strategy, the cost reflective tariff for containers (as denoted by DBN target tariff) will be 33% below the global sample average, in today's terms."

The container standard vessel used as a comparator to calculate vessel calling cost has a total parcel size of 1 853 TEUs (a combination of full and empty for deep sea, coastwise, and trans-shipment) and an average turn-around time of 32 hours.

7.1.1. Cargo Dues

Figure 11: Container Cargo Dues per Port per Standard Vessel (01 April 2020)



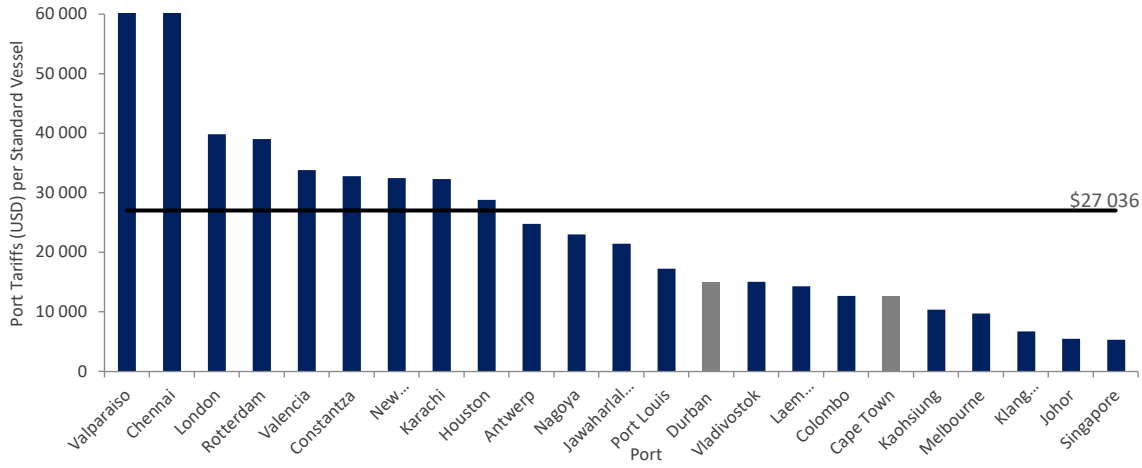
Similar to previous versions of this study, the 2020/21 results indicate that cargo dues for containers are still significantly more expensive than the global sample average. Compared to a global sample average tariff of $ 32 7835, SA ports rank as 166% more expensive than this average. However, this is an improvement to the 2019 deviation of 233% and a significant improvement to the 2012 tariff where cargo dues were 874% higher than the global sample average.

At full implementation of the Tariff Strategy, the cost reflective tariff for containers (as denoted by DBN target tariff) will be 36% below the global sample average, in today's terms. This cost reflective price may be above or below this average as various ports have different costs for providing a particular service. The global sample average is useful as a benchmark in monitoring the expected trajectory of tariffs for South African ports over time.

Foreign cargo owners transhipping through South African ports are faced with cargo dues at a discount of 85% to the sample average, on a per TEU basis, mainly due to changes in relative prices as well as the exchange rate impact. At full implementation of the Tariff Strategy, trans-shipped containers will record at a discount of 59% below the global sample average. However, current trans-shipment rates are 166% below the target tariff thus positioning SA as an attractive trans-shipment hub-port. This is reflective of the still highly subsidised nature of transhipment cargo dues (also applicable to coastal shipping cargo dues).

7.1.2. Marine Charges

Figure 12: Container Marine Charges per Port per Standardised Vessel (01 April 2020)

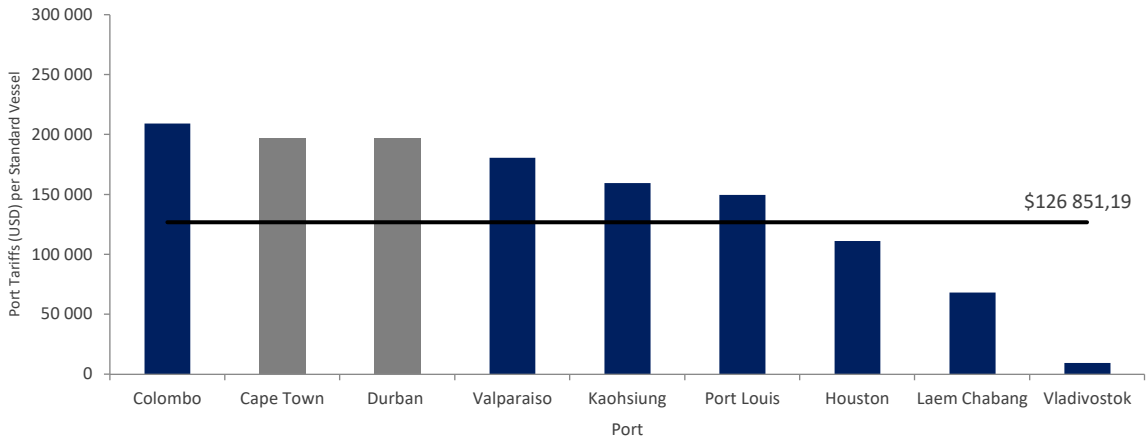


In contrast to persistently high container cargo dues to the SA importer vs. the exporter, container vessel costs (marine charges) to shipping lines is 44% below the global sample average as indicated in Figure 12. The relative strength of the USD vs. the ZAR has played a part in the reduced SA vessel costs compared to the global sample, in particular with the developed countries, resulting in an effective windfall for foreign owned ships paying in USD for services provided in SA ports.

Port authority pricing, which is a combination of cargo dues and marine charges, is 69% above the global sample average thus positioning SA ports as amongst the most expensive against the global sample.

7.1.3. Terminal Handling Charges

Figure 13: Container Terminal Handling Charges per Port per Standard Vessel (01 April 2020)

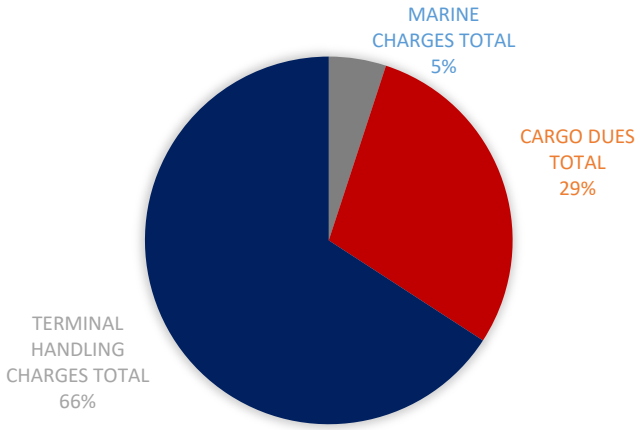


Terminal handling charges reflects additional costs for the handling of containers at the terminal before being loaded onboard a vessel. It is important to note that the Regulator does not regulate these charges in SA as the Regulator's scope is limited to regulating the NPA, the landlord of the port.

As depicted in Figure 13, SA ports rank as second against the global sample average for the terminal handling charges category recording a 55% deviation above the global sample average for 2020. Although these tariffs are not necessarily port authority tariffs, they contribute largely to the overall cost of doing business in a country. With the bulk of SA's manufactured goods arguably exported through containers, high costs are clearly contradictory to current industrial policy which aims to incentivise value addition, broadening of the manufacturing base, as well as increasing manufactured exports.

However, efficiency levels in the container handling sector remains a concern, but is an area of focus for the current implementation of the Weighted Efficiency Gains from Operations (WEGO). WEGO aims to address those inefficiencies and incentivises or penalises the Authority based on their operational efficiencies as well as the performance of service providers within the port. The initiative commenced in 2018/19 and WEGO KPI's were published towards the end of 2017/18, the baseline tariff year. It is expected that operational efficiency improvements should in part at least offset the expected "dollar losses" facing shipping lines due to the strengthened ZAR.

Of the total cost of moving a container through SA's ports, terminal handling charges contributes approximately 66% to this cost, cargo dues contribute 29%, and marine charges contribute the remaining 5%. This report suggests that marine charges are well below the global sample average, and that cargo dues, although much higher than the sample average are moving towards the desired target tariff, which records at below the average. Terminal handling charges are recorded at 55% above the global sample average.



The continued imbalances between container vessel costs, terminal handling charges, and cargo dues remains a concern, although regulatory intervention over recent tariff determinations has significantly reduced the imbalances in the tariff structure. Vessel owners, in addition to the already low costs, received an additional discount from the depreciation of the ZAR over the period, cargo owners have little to benefit in that sense. Whilst the Regulator has some ability to impact on cargo dues and marine charges and will over the implementation period of the Tariff Strategy continue to address all unfair cross-subsidies, terminal handling charges remains outside of the Regulator's mandate as these are not specific NPA charges.

"Of the total cost of moving a container through SA's ports, terminal handling charges contributes 65% to this cost, cargo dues contribute 30%, and marine charges contribute the remaining 5%."

7.1.4. Trends

Figure 14: Deviation Trends Identified within the Container Category (2012/13 – 2020/21)

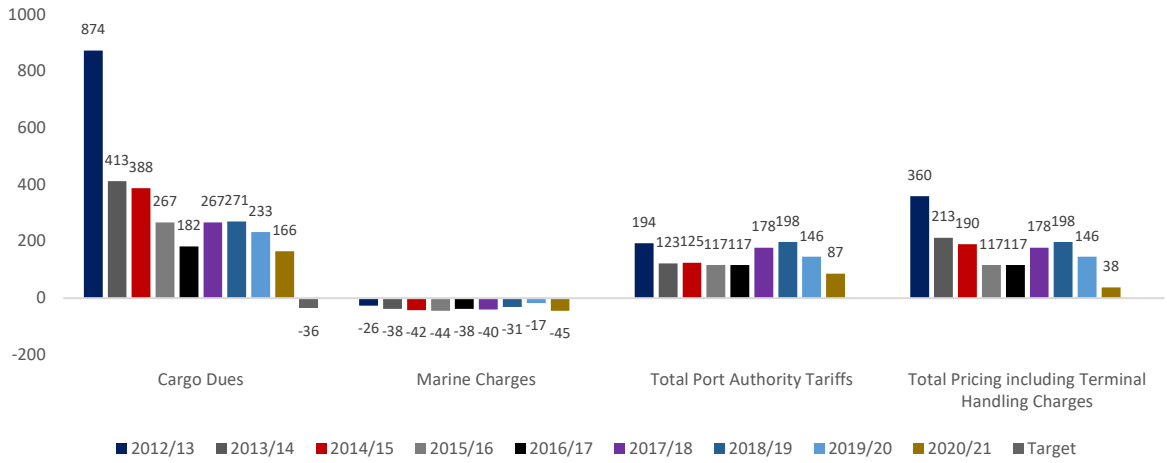


Figure 14 shows the fluctuation of tariff categories against the global sample average over the period under review (2012/13 – 2020/21). Although SA container cargo owners are still faced with higher tariffs than their peers, the trend is sharply moving downwards towards the global sample average. The results reflect that cargo dues payable by cargo owners have been reduced by 642% over the period to a premium of 232% in 2012/13 compared to a premium of 874% to the global sample average in 2019/20. Vessel owners, through marine charges payable, are still faced with costs below the global sample average (-26% in 2012/13, -38% in 2013/14, -42% in 2014/15, -44% in 2015/16, -38% in 2016/17, -40% in 2017/18, -31% 2018/19 and -17% in 2019/20, and -22% this year). Although the total NPA costs in container terminals has been marginally reduced, they are still considered high at 268% above the global sample average.

The overall vessel calling cost (including terminal handling charges for container owners) went down from 360% above the global sample average in 2012/13 to 213% in 2013/14, 190% in 2014/15, 116% in 2015/16, 88% in 2016/17, 166% in 2017/18, 221% in 2018/19, 117% in 2019/20 and finally 65% this year. Whilst these costs has been lowered drastically, they remain higher than the global sample average. The potential cross-subsidisation between manufactured goods (containers and automotives) and bulk commodity exports remains evident as confirmed by Tariff Strategy and the deviations that exist, as per the base rates published in the Regulator's last three Record of Decisions. The impact of the reduction of 43.3% and 14% in export and import container cargo dues in 2013/14 has moved the South African tariff towards to the global sample average with no real (inflation adjusted) increase (0%) in cargo dues (nominal of 5.9% in 2014/15). In addition, further significant reductions, notably a 20% decrease in 2020/21 on full container exports, has contributed to the continuation of this tariff trajectory.

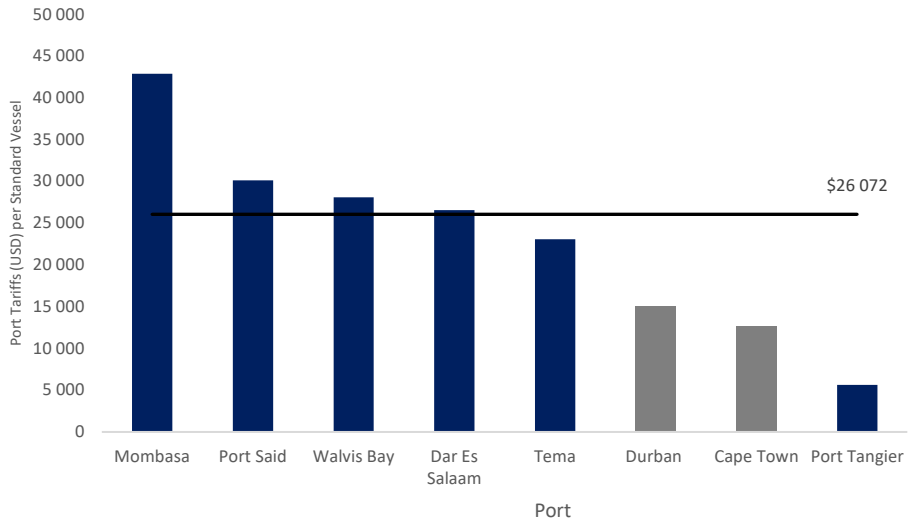
However, these costs still remain excessive as shown in Figure 14 indicating that the South African container ports (Durban and Cape Town) remain amongst the most expensive against the sample despite the sizable reduction in container cargo dues in recent years.

7.2. The African Comparison

A new component of the GPCS in the 2020/21 iteration is the inclusion of an African ports comparator. A sample of ports which include Durban, Cape Town, Walvis Bay, Dar es Salaam, Mombassa, Tema, Port Said, and Tangier has been used to compare marine charges and cargo dues for the container sector; where terminal handling charges information was available, this has been included as well.

7.2.1. Marine Charges

Figure 15: African Ports Comparator - Marine Charges

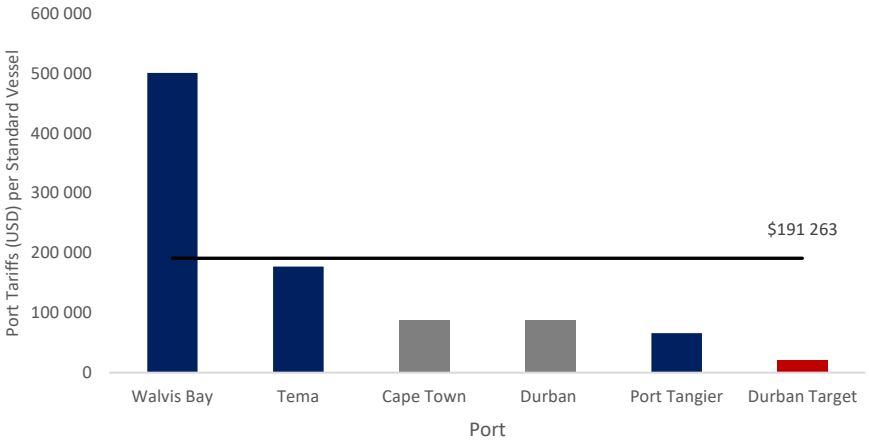


As evident in **Error! Reference source not found.**, South African ports rank amongst the lowest within t he sample of African ports in terms of marine charges. These charges include light dues, port dues, pilotage etc. Of the 8 ports within the sample, Durban and Cape Town rank 6th and 7th which positions SA as an attractive destination on the African continent for its more affordable charges for these services.

With an average tariff of $26 072, the Port of Durban is 42% below the African average and the Port of Cape Town is 52% below this average. The Port of Mombassa in Kenya ranks as the most expensive in the sample with marine charges reflecting at 65% above the African ports average.

7.2.2. Cargo Dues

Figure 16: African Ports Comparator - Cargo Dues

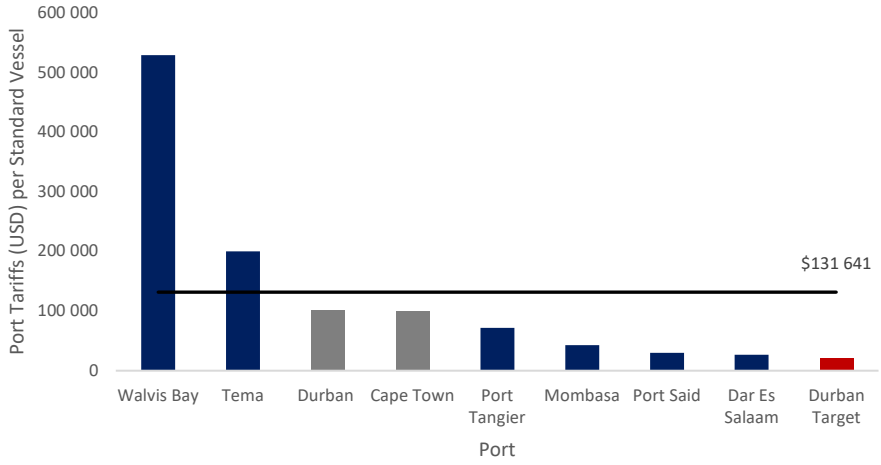


When utilising the standard parcel of containers on the standard vessel used in the study, the South African ports once again rank below the African sample average by 54%. The Port of Walvis Bay in Namibia ranks as the most expensive in terms of cargo dues with a tariff that is 162% above the African ports average.

At full implementation of the Tariff Strategy, the cargo dues for South Africa will be 89% below the African average of ports.

7.2.3. Total Port Authority Pricing

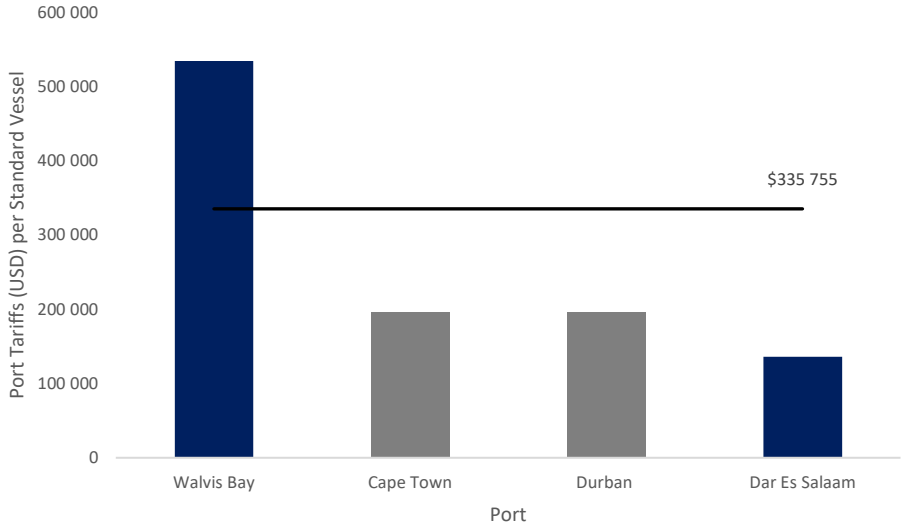
Figure 17: African Ports Comparator - Port Authority Pricing



Port Authority pricing is a combination of both marine charges and cargo dues. With an average of $ 131 641 for the sample of African ports, South African ports rank 3rd and 4th amongst the 8 ports in the sample with only the Port of Walvis Bay and the Port of Tema proving to be more expensive (22% and 24% below the average respectively).

7.2.4. Terminal Handling Charges

Figure 18: African Ports Comparator - Terminal Handling Charges



Only four ports were used in the comparison for terminal handling charges on the African continent. In most cases, this is not a Port Authority charge and information related to these charges is more difficult to obtain.

In African standards, the ports of Cape Town and Durban rank in the middle of the sample with terminal handling charges 41% below the African average of $335 755.

7.3. Dry Bulk: Iron Ore and Coal

The two dry bulk cargo categories contained within the study are coal and iron ore, both major exports of South Africa. This section highlights the placement of SA against the global sample for cargo dues as well as marine services and goes on to review the trends since 2012/13, the year the first iteration of the GPCS was completed.

IRON ORE

The product is mainly used in the manufacturing of steel however there are many uses for it in various other fields including cosmetics, technology, and construction. In SA, iron ore is handled at the Port of Saldanha Bay which is located on the west coast of the country. The cargo is transported by rail from the Northern Cape where it is mined.

The iron ore component of the GPCS is completed with a sample size of 10 ports and is made up of both marine charges and cargo dues; both of which fall under the blanket of 'port authority' charges. Further, all marine charges and cargo dues are calculated based on a standardised vessel transporting 170 000 tons of cargo, with an average turn-around time of 47 hours. Additional assumptions are contained in Annexure A.

COAL

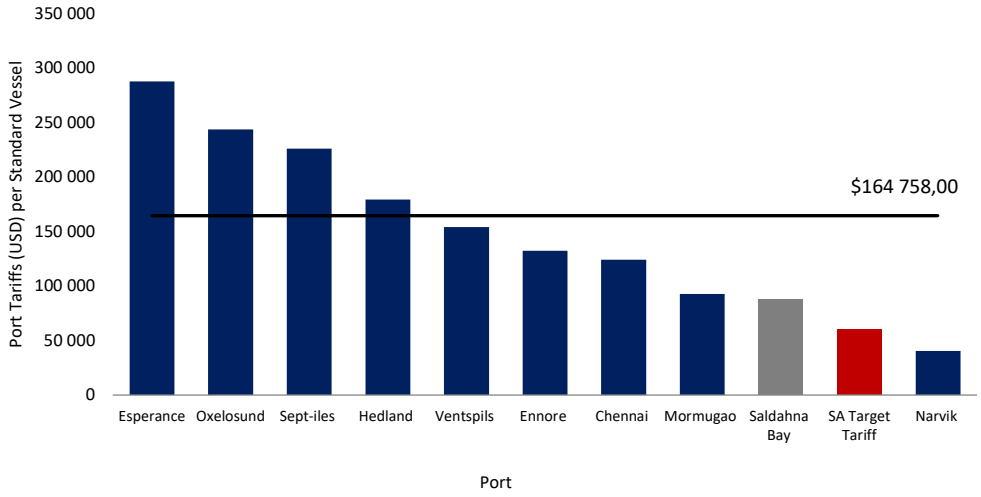
Approximately 82 million tons of coal was exported from SA in the 2019/20 financial year with the majority of it going through the Port of Richards Bay. The port is located on the eastern seaboard of the country and has dedicated rail links to Mpumalanga and Gauteng specifically for the transportation of thermal coal from the mines to the port.

The coal component of the GPCS is completed with a sample size of 21 ports and is made up of both marine charges and cargo dues; both of which fall under the blanket of 'port authority' charges. Further, all marine charges and cargo dues are calculated based on a standardised vessel transporting 112 586 tons of cargo, with an average turn-around time of 32 hours. Additional assumptions are contained in Annexure A.

7.3.1. Cargo Dues

Although bulk commodities are faced with lower than global sample average total port costs, it must be noted that the average is not the end-state goal for South Africa and merely serves as a benchmark. The actual goal is the target tariff as set out in the Tariff Strategy, with base rates updated on an annual basis in the tariff Record of Decision. The volatility experienced by the ZAR in relation to the USD has not significantly affected the outcome, neither may any changes be attributed to it as the values marked for 01 April for both years have not been very different.

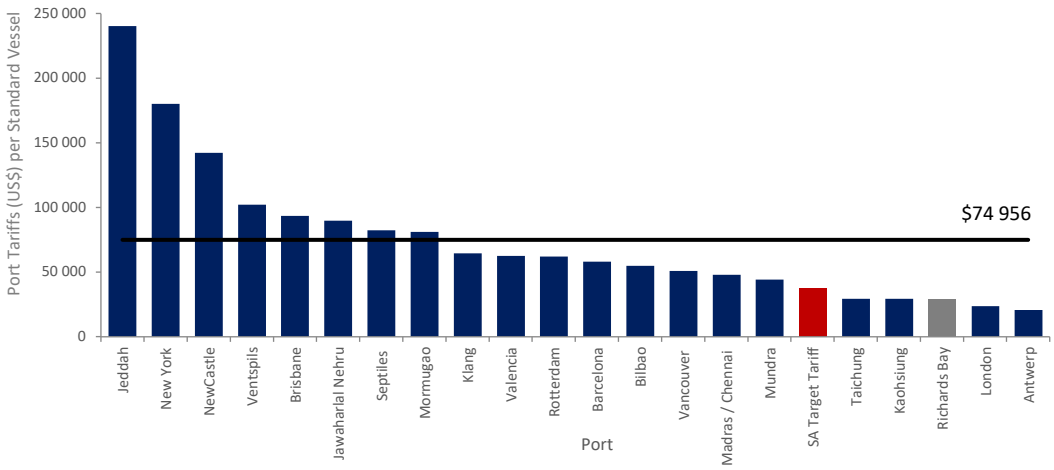
Figure 19: Iron Ore Cargo Dues per Port per Standard Vessel (01 April 2020)



With an average tariff of $164 758, SA is positioned at 47% below the global sample average of cargo dues for iron ore within the dry-bulk category. This has decreased from the -36% recorded in 2019/20 and is a significant decrease from the -5% recorded in the first iteration of this report in 2012/13.

At full implementation of the Tariff Strategy, cargo dues for iron ore should record at 59% below the global sample average. The target tariff indicates the cost-reflective rate for utilising infrastructure through SA ports and incorporates the principles contained within the Tariff Strategy. As per the tariff Record of Decision for the 2019/20 period, the base cargo dues rate for dry-bulk was R6,10 per ton (both import and export) whereas iron ore cargo dues (export) remained at R9,39 per ton for the same year.

Figure 20: Coal Cargo Dues per Port per Standard Vessel (01 April 2020)



SA cargo dues for coal have been recorded at 61% below the global sample average for the 2020/21 financial period, this is 11% below the target tariff for dry bulk as per the Tariff Strategy. Although cargo dues in SA have been steadily increasing since the implementation of the Tariff Strategy in 2015,

coal cargo owners are still enjoying a significant discount in tariffs which, over the long term, will be eliminated.

Historic ad-valorem charges and various other influences have resulted in several imbalances in the determination of tariffs. This has in turn contributed to the below cost-reflective pricing effected in the coal sector. Further, it is understood that the move towards the target tariff should be gradual rather than steep, hence the 10 year implementation period of the Tariff Strategy which should see coal cargo dues at 50% below the global sample average (end state).

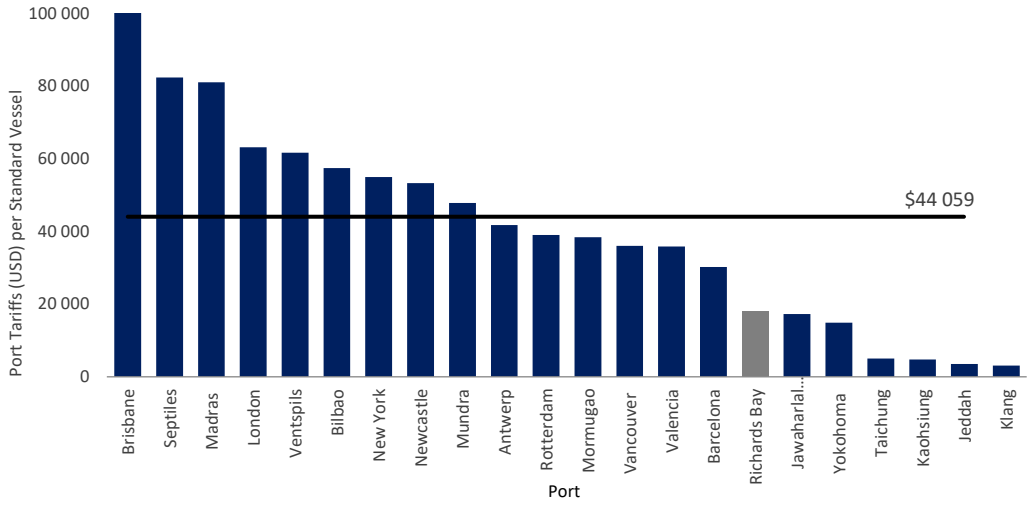
7.3.2. Marine Charges

The significant discount to the global sample average for marine charges, which include pilotage, towage, berthing charges etc, supported by the weak ZAR does not adequately reflect the cost structure of the marine component for the SA ports system. It does however indicate significant support for the mining sector for both coal and iron ore. The system, as it stands, provides a windfall to the shipping industry through the 'saving' provided from the ZAR to USD difference.

A more rebalanced, cost-reflective tariff structure will result in increases to marine charges but also decreases to cargo dues. Although SA is currently favourably placed in terms of global competitiveness because of these lower than average shipping charges, there is room to increase tariffs. The increase is being incrementally addressed through the long-term implementation of the Tariff Strategy while providing minimal impact on the domestic sectors.

"The significant discount to the global sample average for marine charges, which include pilotage, towage, berthing charges etc, supported by the weak ZAR does not adequately reflect the cost structure of the marine component for the SA ports system."

Figure 21: Coal Marine Charges per Port per Standard Vessel (01 April 2020)

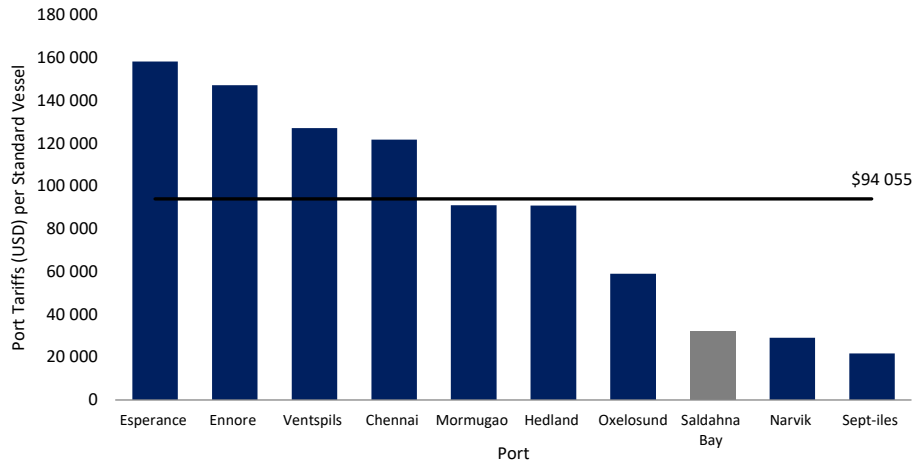


The Port of Richards Bay ranks 16th from a total of 21 ports when comparing costs faced by vessel owners and records a discount of 59% to the global sample average. Although marine charges (in ZAR) increased by 5.5% as of 01 April 2020, the effect of the exchange rate resulted in an

effective decrease of 18% in USD terms. This again highlights the savings to the shipping industry for marine charges in South African ports.

The Port of Saldanha Bay ranks 8th of a total of 10 ports for marine charges in the iron ore category and records a discount of 66% to the global sample average. Although this is a marginal increase from last year's figure of 64,4%, this move may be attributed to the increase in the marine charges as per the Regulator's Record of Decision for 2019/20.

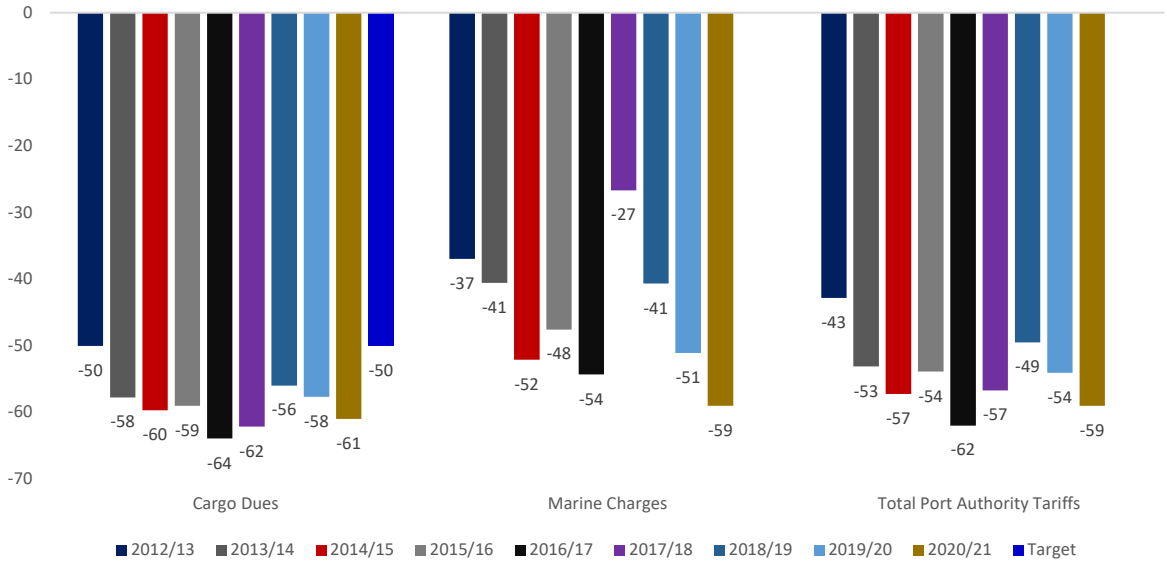
Figure 22: Iron Ore Marine Charges per Port per Standard Vessel (01 April 2020)



7.3.3. Trends

This section sets out the movement in marine charges, cargo dues, and total port authority pricing, for both coal and iron ore since 2012/13 as a deviation from the global sample average.

Figure 23: Deviation Trends Identified within the Coal Category (2012/13 – 2020/21)



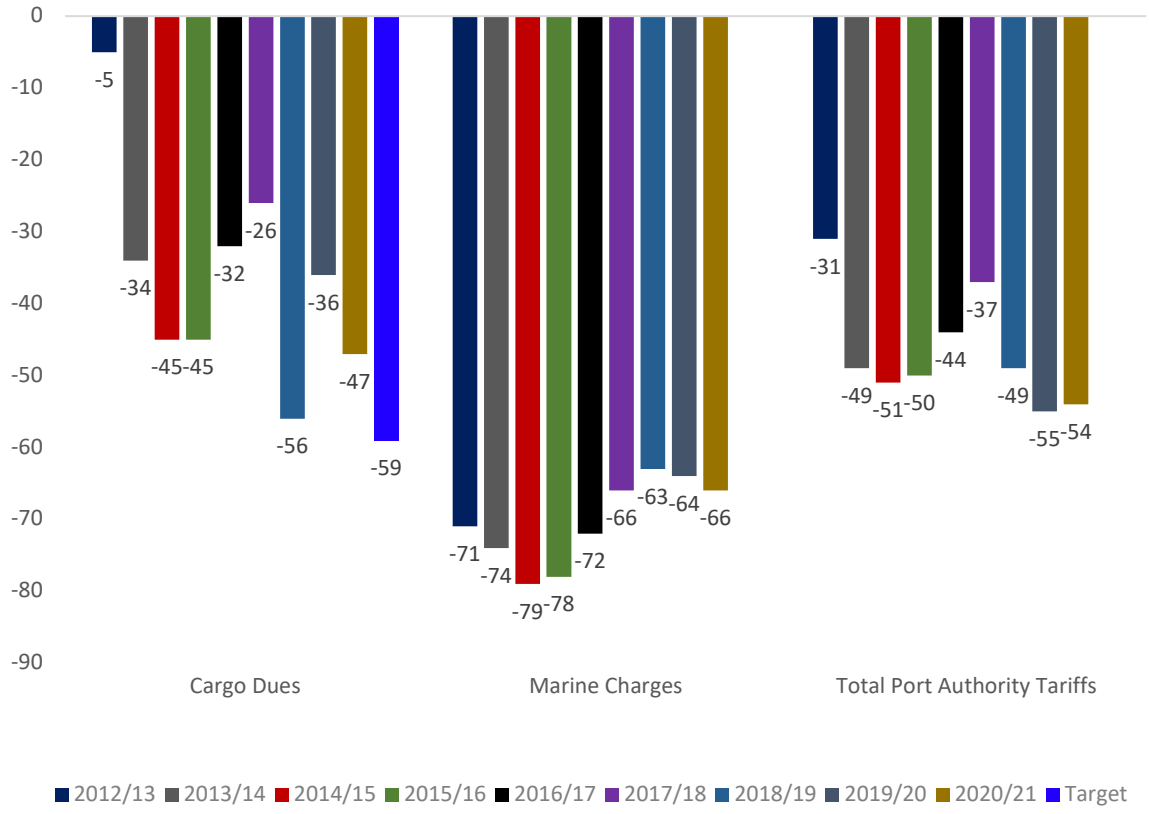
As mentioned above, dry bulk commodities are faced with lower than global sample average total port costs however, they have moved slightly closer to the global sample average for two

reasons. Firstly, as a result of lower port prices in some of the commodity exporting countries, and secondly due to commodity exporters experiencing currency depreciations in general over the last year. In part, due to the global pressure on commodity prices, the dollar prices have moved lower. For example, the Australian dollar has depreciated 20% over the last year, following the trend for commodity exporting currencies. Coal (Richards Bay) and iron ore (Saldanha Bay) were found to have faced total port costs 49% and 31% below the global sample average respectively. The cargo dues faced by cargo owners are 55% and 53% below the global norm for coal and iron ore respectively.

The 0% tariff change in 2013/14 for both cargo dues and marine services resulted in a real decline in dry bulk port prices. However, recent years' slightly above-inflation increase for both iron ore and coal cargo dues, as well as for marine charges (7.9% increase in 2017/18 and most recently a 5% increase for 2021/22), and a lower relative USD based tariff change in the global sample, were not fully offset by the weakened rand with the resultant deviation moving closer to the global sample average. This in turn indicates slightly higher relative price levels in the SA port system.

Figure 23 indicates that coal cargo owners and shipping lines are still faced with lower tariffs than the global sample average. However, despite the Regulator's decision to increase coal dry bulk export cargo dues by 10%, cargo dues have moved marginally further relative to the global sample average from a discount of -50% in 2012/13 to -58% in 2019/20. The increase in global sample average continues to push SA coal cargo owners further away from the global sample average and weakens the impact of the tariff increase. Further, the 2013/14 Regulator's decision to increase tariffs by 0% for both cargo dues and marine services resulted in a real decline in dry bulk port prices.

Figure 24: Deviation Trends Identified within the Iron Ore Category (2012/13 – 2020/21)



A similar pattern has emerged in the iron ore sector with cargo dues further decreasing from -5% in 2012/13 to -47% in 2020/21 below the global sample average and total port costs for iron ore from –31% in 2012/13 to -54% in 2020/21.

The continued low marine charges faced by bulk cargo owners exacerbate the already low cargo dues on these products. With significant discounts to the global sample averages for pilotage, towage and other port charges, the marine component, supported by the weaker ZAR, remains low and does not reflect the underlying cost structure of the SA ports system, but does indicate significant support through port tariffs for the iron ore mining sector. A more balanced tariff structure will see a marginal decrease in cargo dues, but significant increases in marine services, and will see shipping costs reflect a more cost reflective level over the longer term. Currently however, the weak ZAR does provide a windfall to the shipping industry when visiting SA ports for this sector.

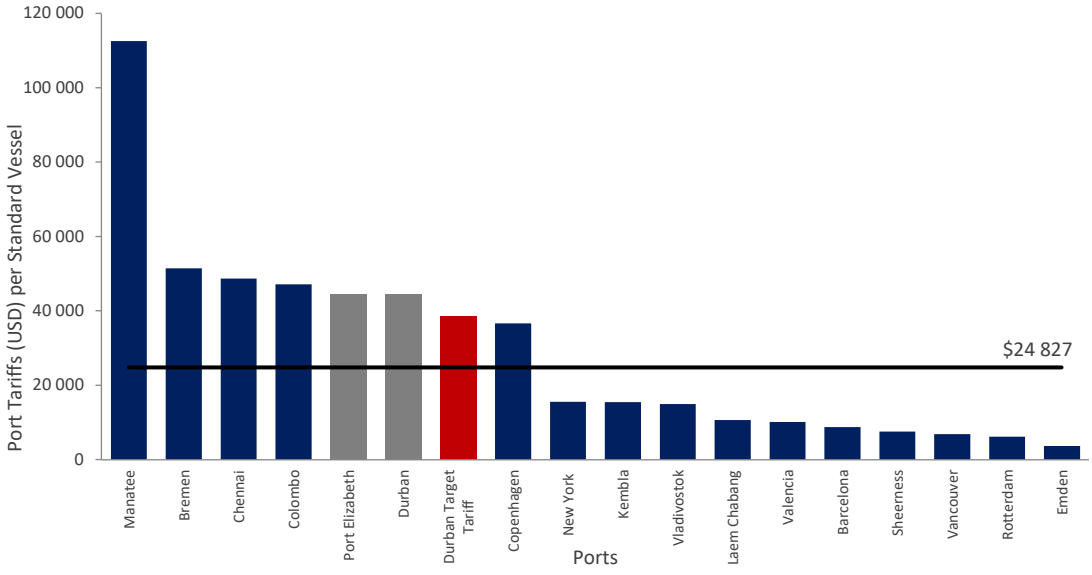
7.4. Automotives

A total of 20 ports are contained within the sample for the automotive component of the GPCS. This section looks at cargo dues, marine charges, as well as the trend and SA's position to the global sample average since 2012/13. The automotive industry previously experienced tariffs which were significantly higher than the global sample average, as well as the cost reflective Tariff Strategy rate indicating high levels of cross-subsidisation from the sector. It is important to note that a volume discount was previously offered and the removal thereof has resulted in a better equalisation of rates previously enjoyed only by the very large manufacturers.

Automotive traffic is concentrated in SA to the ports of Durban and Port Elizabeth, and in total approximately 77 000 vehicles are moved through the ports on an annual basis. This study looks at the cost of exporting 409 vehicles and importing 890 vehicles on a standard vessel with an average turn-around time of 32 hours.

7.4.1. Cargo Dues

Figure 25: Automotive Cargo Dues per Port per Standard Vessel (01 April 2020)



Cargo dues faced by the automotive sector are significantly higher than the global sample average with a deviation of 79%. However this is an improvement on the 124% above average deviation experienced in 2019/20 and the 744% above average deviation experienced in 2012/13. This is mainly attributed to the re-design of the tariff in recent years as well as the implementation of the Tariff Strategy.

The target tariff for automotive cargo dues depicted in Figure 25 is higher than the global sample average, however there has been an increase in the average since 2018/19 where it was recorded at $19 114,76. At today's exchange rate and at full implementation of the Tariff Strategy,

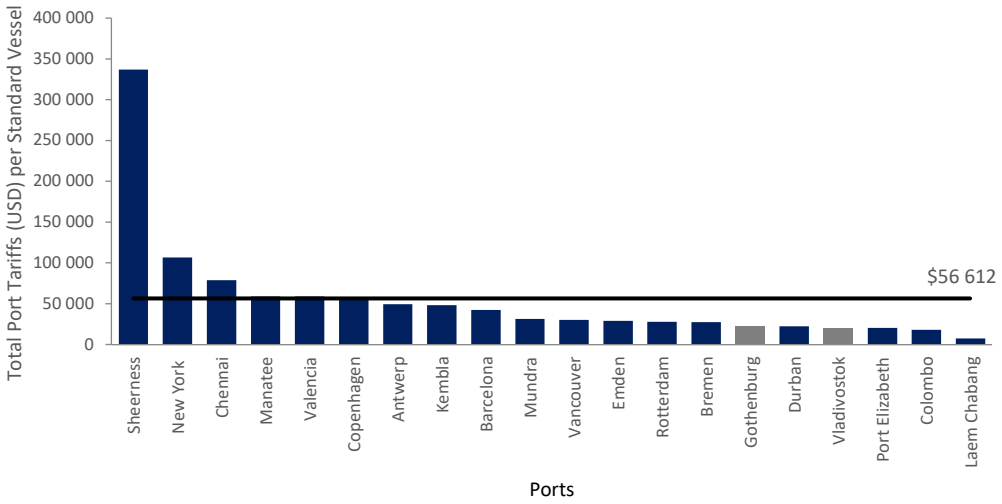
automotive cargo dues will be approximately 56% above this average, assuming constant sample tariffs are used.

Although automotive cargo dues have been reduced over the recent past, the effect of the weakened rand conceals the full impact of the high cargo dues tariff. SA manufacturers and importers pay port tariffs in ZAR and receive little benefit from the effect of the USD. The exporter however receives a higher ZAR value per USD denominate exports. Importers therefore do not only pay more for USD denominated imports, but also receive no benefit related to port charges from the currency.

"Automotive traffic is concentrated in SA to the ports of Durban and Port Elizabeth, and in total approximately 377 000 vehicles are handled by the ports on an annual basis."

7.4.2. Marine Charges

Figure 26: Automotive Marine Charges per Port per Standard Vessel (01 April 2020)

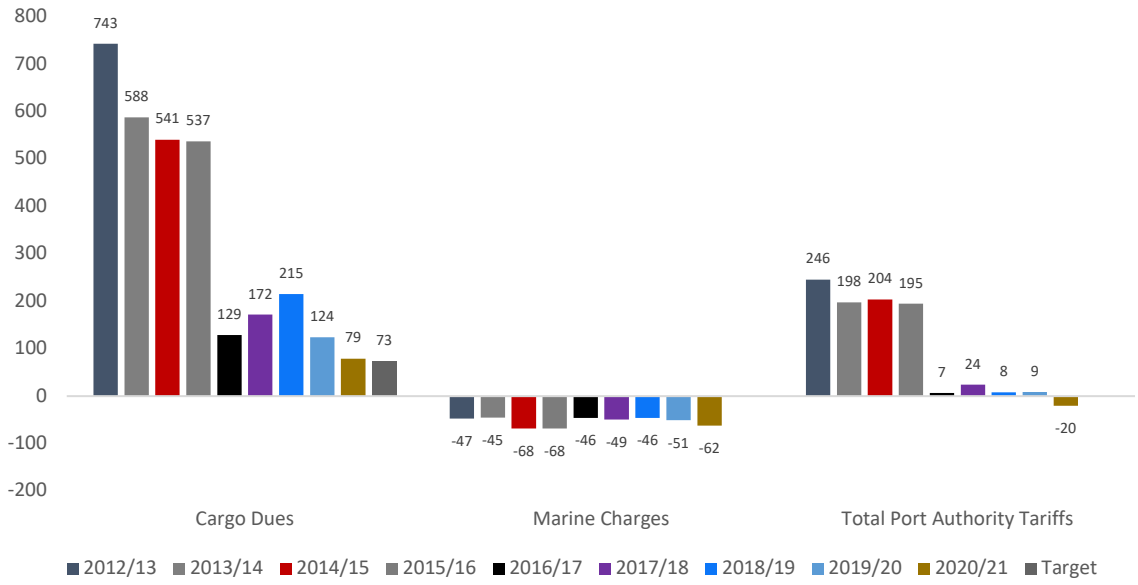


Automotive cargo owners in the Port of Port Elizabeth are faced with marine charges that are 64% less than the global sample average while cargo owners using the Port of Durban are paying 61% less this average. This is mainly due to the difference in pilotage and tug services between the ports. However, it must be noted that the global sample average is not the end-state goal for SA port tariffs neither is it a true reflection or benchmark of the cost-reflective tariffs contained within the Tariff Strategy.

7.4.3. Trends

The trend evident in the automotive sector is the most significant with sharp decreases in cargo dues since the 2016/17 tariff decision.

Figure 27: Trends Identified in the Automotive Sector (2012/13 – 2020/21)



Again, similar to containers, cargo dues on automotives remain higher than the global sample average with total cargo dues on vehicles currently at a 79% above the global sample average. This is significantly lower than the 124% experienced in the 2019/20 year. However, in line with the Tariff Strategy, the premium for automotive cargo dues has declined over the eight-year period under review from 743% in 2012/13 to 79% in 2020/21.

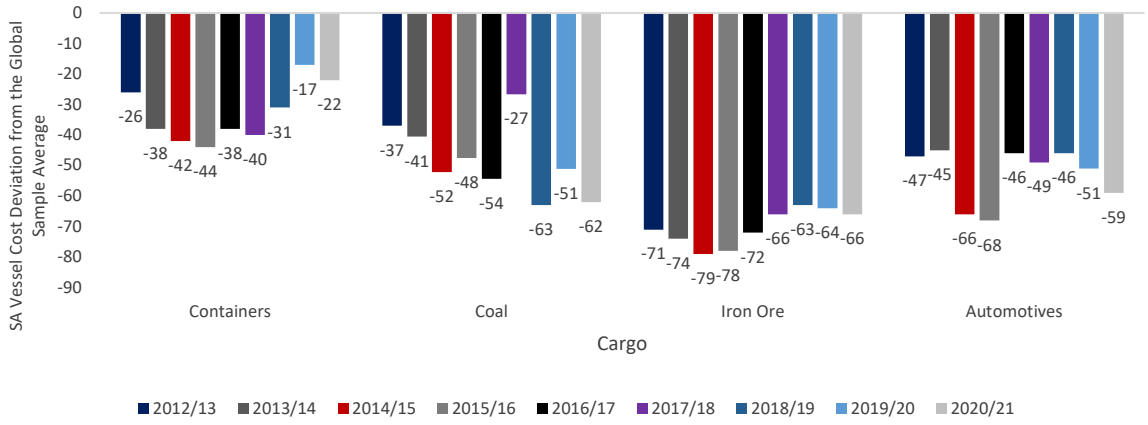
Continued tariff differentiation, including a 0% tariff increase allowed in the 2019/20 Record of Decision, moves the tariff continuously closer to the cost reflective rate (which is dependent on numerous factors and is updated on an annual basis).

8. Overall Trends

This section aims to analyse overall trends identified within the SA system whereby SA tariffs (in USD) are compared to the global sample average for marine charges, cargo dues, and total port authority pricing (marine charges & cargo dues).

8.1. Marine Charges

Figure 28: Vessel Cost Deviation Trend Identified for all Cargo Types (2012/13 – 2020/21)



The 2020/21 iteration confirms that all vessels face much lower overall vessel costs in SA ports than the global sample average in the study ranging from 22% below the global norm in the case of containers and 66% for iron ore vessels. The Regulator's 2020/21 tariff Record of Decision has not significantly changed the continued below global sample average position recorded for vessel costs in SA ports. This has been more than fully offset by the depreciation of the ZAR as vessel costs are normally paid for in USD.

Figure 28 indicates that foreign vessels, calling at SA ports, are not subject to as high tariffs (in SA rates) as they do in the sample global sample average. These vessels continue to receive an exchange rate windfall and are being cross-subsidized by cargo dues, and have been cross-subsidised over the years.

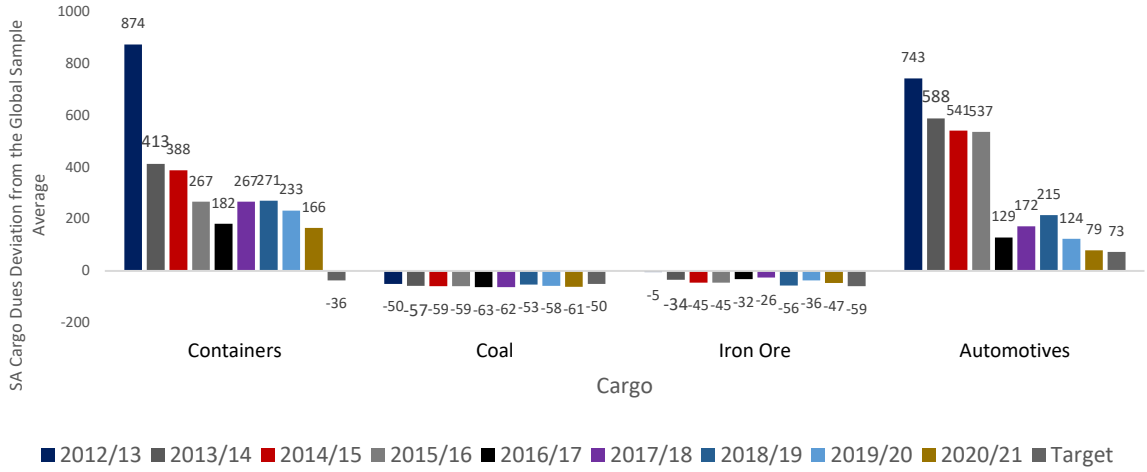
Overall, vessel costs faced by cargo owners recorded discounts of 22% in the case of containers, 59% for automotives, 62% for coal and 66% for iron ore to the global sample average, all of which are greater than the 2019/20 discounts received by the shipping lines.

Not considered in this research (is part of other research completed by the Regulator) is the incidence of various other costs. This includes vessel delays (faced by vessel owners and operators), cost of ocean legs of transport (faced by cargo owners or logistics integrators), costs of delays into and out of ports (inventory, temporary local cargo storage and truck standing time costs etc.) faced by cargo owners and logistics providers, and other such costs that are occasioned by specific issues such as the market structure of marine transport providers and the port system, as well as operational and infrastructure issues in certain ports. WEGO has been

introduced into the SA tariff system in order to combat the inefficiencies that result in increasing the overall cost of doing business in SA.

8.2. Tariff Rebalancing (Cargo Dues)

Figure 29: Cargo Dues Deviation Trend Identified for all Cargo Types (2012/13 – 2020/21)



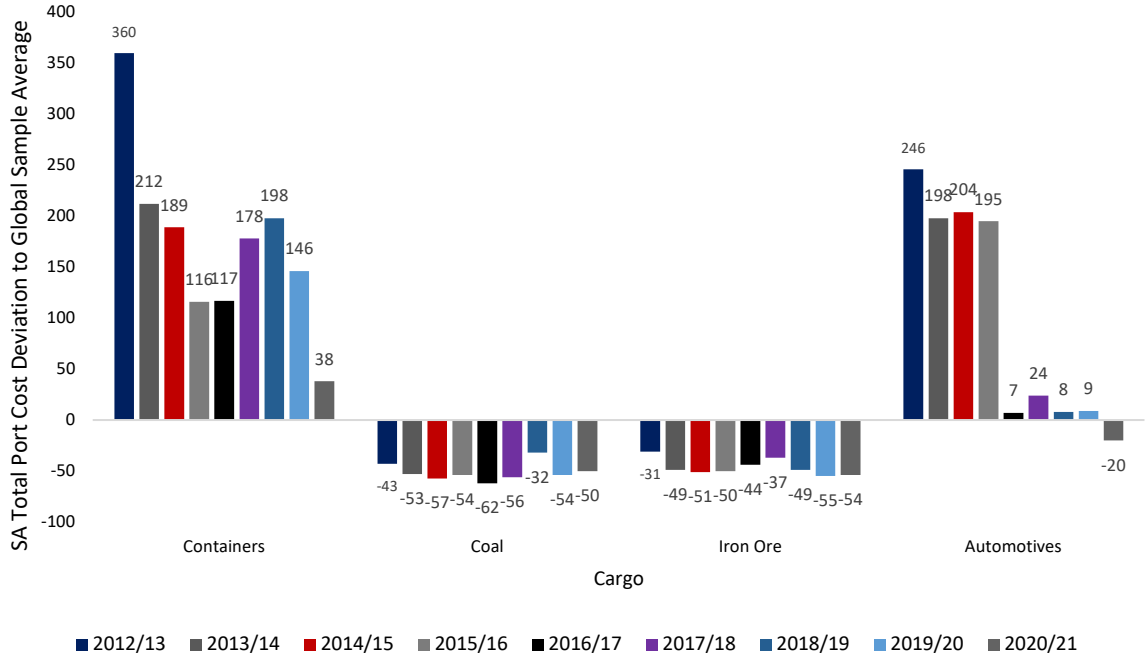
It may be argued that as bulk commodities are charged rates lower than the norm and containers and automotives are charged rates higher than the norm, containers (export and import) and automotives are potentially cross-subsidising bulk exports tariffs. This case is stronger if only cargo dues are taken into account with container and automotive cargo owners facing costs at premiums of between 166% and 73% of the global norm respectively and the bulk cargo types remain below the global sample average.

"The introduction of cost reflective cargo dues in the Regulator's tariff Decisions allows the quantification of the magnitude of cross subsidies within the system."

The introduction of cost reflective cargo dues in the Regulator's tariff Record of Decisions allows the quantification of the magnitude of cross subsidies within the system. In particular, taking into account the differentials between the tariff book rates and the cost reflective "base" rates, other port users are being subsidised by container owners. It must be noted that the full impact is shielded by the depreciated currency as USD prices are compared, and that the tariff base rate published by the Regulator indicates the magnitude of the cross subsidy is larger for coal than it is for iron ore. The rebalancing in the port tariff structure however will require significant changes in rental revenue and marine charges in order to retain the zero-sum effect on the revenue requirement as set by the Regulator. The inclusion of the target tariffs for cargo dues (as published in the tariff Record of Decision of 01 December 2019) provides a clear indication of the direction in which cargo dues in SA are heading, as well as the magnitude of the difference between the current position and the desired position.

8.3. Overall Port Authority Tariffs

Figure 30: Total Port Authority Deviation Trend Identified for all Cargo Types (2012/13 – 2020/21)



It is evident that cargo dues for containers contribute to the high total port authority costs faced by this sector. Marine charges for all vessel owners are below the global sample average, as depicted in Figure 28 whilst cargo dues for dry-bulk are below the global sample average but closer to the target, cost-reflective tariff. The removal of the volume discount scheme in the automotive sector has significantly reduced the total port authority costs from 246% above the global sample average in 2012/13 to 20% below in 2020/21.

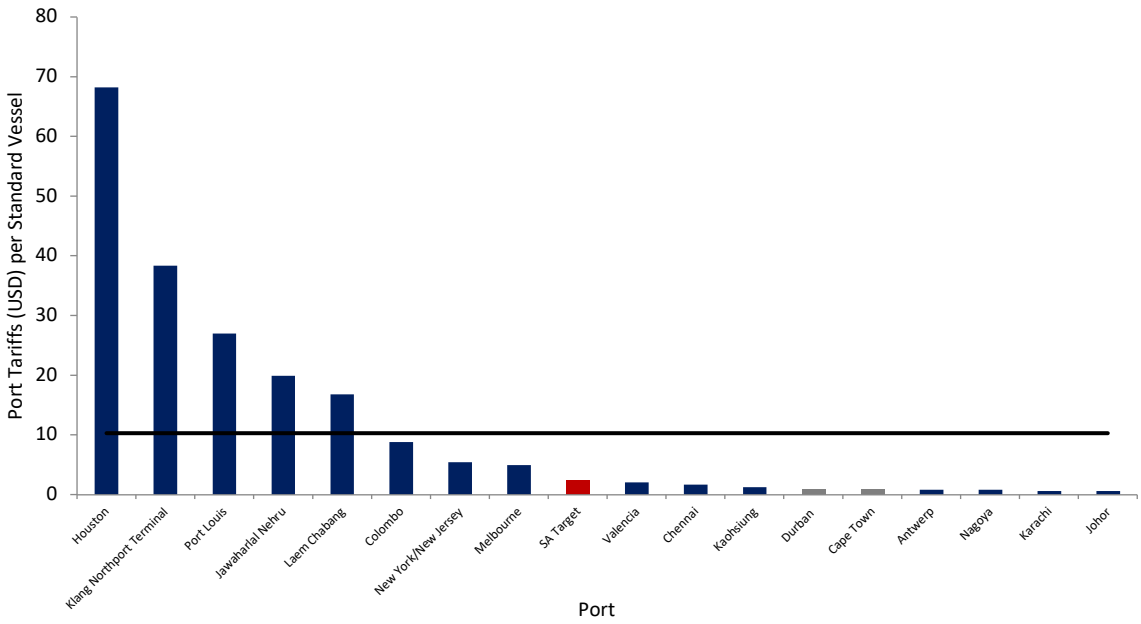
9. Trans-shipment

The SA port system continues to incentivise liners transhipping through our ports with marine services dues faced by a full transhipped container below the global sample average. The cargo dues recorded for transhipped containers were recorded as 89% below the global sample average as of 01 April 2020, whereas this was recorded as 71% in the 2019/20 report; a change mainly due to the volatile exchange rate as well as the effects of the COVID-19 pandemic.

The Regulator, in 2013, stated that "Little statistical evidence could be found of a relationship between the tariff level and the recent transhipment volumes in the South African ports system". This analysis indicated that global growth and subsequent trade volumes and the cost of freight only explain a portion of the change in the transhipment volumes in the Port of Durban between 2005 and 2012 with the bulk of the decision depending on the inherent market and infrastructural advantages of one port over another." (Record of Decision, 2013).

Whilst the economic rationale for a transhipment friendly port tariff structure is still required, it is evident that not only are cargo dues on transhipment cargo very much below global norms, vessel costs are also below the global sample average and only terminal handling charges can, under the current regime, materially influence the transhipment pricing structure.

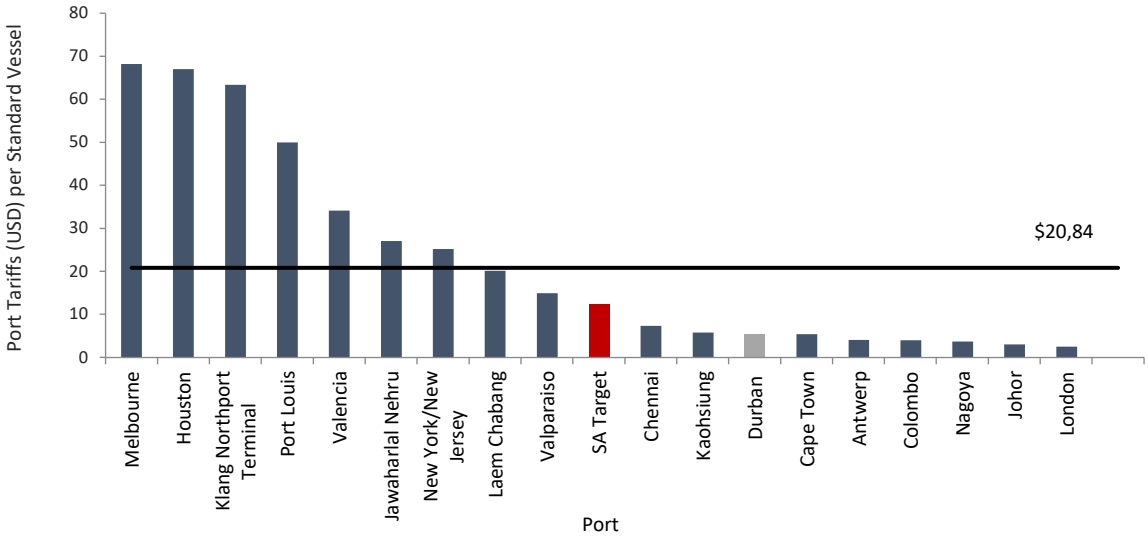
Figure 31: Transhipment Export Cargo Dues per TEU (01 April 2020)



10. Coastwise

It is interesting to note the discount afforded to coastwise shipping in the SA sector. Coastwise shipping falls within the scope of government's mandate in a bid to boost the ocean economy, it therefore falls within the subsidised sectors of the tariff structure. The average cost per TEU for coastwise cargo has changed from $20,84 on 01 April 2019, to $12,35 on the same day in 2020. The cargo dues recorded for coastwise containers were 99% below the global sample average as of 01 April 2020, and 166% below the target tariff for container cargo dues.

Figure 32: Coastwise Cargo Dues per TEU (01 April 2020)



11. Conclusion

Although relative port costs have improved over the period that the study was been conducted, container cargo owners still face a 166% premium in 2019/20, down from the initial premium of 874% to the global sample average in 2012/13. While container vessel owners face costs below the global sample average (-26% in 2012/13, -32% in 2013/14, -42% in 2014/15, -44% in 2015/16, -38% in 2016/17, -40% in 2017/18, -31% in 2018/19, and -17% in 2019/20), the total NPA costs to users in container ports is at a still high premium of 146% above the global sample average (similar results for the automotive sector applies) whilst the report shows that bulk commodities are charged total port costs that are much lower than the global sample averages.

However, despite large decreases in container cargo dues and export automotive prices (as announced in the Regulator's tariff Record of Decisions over the last 8 years as well as relative changes in marine services and dry bulk commodities prices over the period, imbalances in the system still remain. The largest change is arguably reflected in the lower total port costs facing automotive importers and exporters with only a 9% premium over the global sample, down from 246% in 2012; mostly as a result of the equalisation of RoRo volume discounts. The results indicate that the price imbalances between SA Ro-Ro prices and the global sample average are gradually changing thus increasing SA's competitive advantage. Taking into account the impact of sample sizes, coupled with the limitations and assumptions incorporated in the methodology, a premium of 9% may easily be considered well within acceptable norms (if measured against the sample average). In this specific instance, the premium calculated for RoRo vehicle cargo dues actually reflect a partially subsidised export tariff, i.e. below the cost reflective rate published in the Tariff Book, moving into subsidised territory in 2019/20. Although improvements to the tariff structure in the years preceding the implementation of the Tariff Strategy have been noted (since the first version of this report was completed), automotive cargo owners still face a 123% premium in 2019/20.

The report further confirms that bulk commodities are charged total port costs that are much lower than the global sample averages but closer in line to the target tariff as set out in the Tariff Strategy. The depreciation of the ZAR has had a significant impact on the average tariff levels being paid in the SA port sector. However, this impact does not equally benefit port users. USD paying users receive a direct discount in ZAR values, while domestic users do not receive the same benefit.

The high levels of potential cross-subsidisation due to the imbalances in the tariff structure in the port system remain a concern. The Regulator has commenced a tariff book adjustment process, within the parameters of the Revenue Required Methodology applied in the tariff setting process, and will continue the process of targeted differentiated pricing as set out in the Tariff Strategy published in 2015. It is positive to see the impact of the incremental pricing changes the Regulator has implemented resulting in an ever more price competitive port system. This report remains crucial in monitoring the impact thereof.

Whilst relative changes in other ports and relevant currencies will impact the results of an analysis, the need to keep the methodology constant makes the results extremely useful as a monitoring tool, whilst at the same time serves as a warning system of changes in the international competitiveness of our ports (from a price perspective).

Finaly, it is worthwile to note that preliminary analysis does seem to indicate that South Africa is well positioned, from a pricing perspective at least, to compete with port developments elsewhere on the continent. Focus should however shift to efficiencies and the cost thereof, as delays and other inefficiencies in the South African port system may more than off-set any price advantage it may have.

12. Interpreting the Results

The process and outcomes of benchmarking port pricing is not an exact science. The global sample averages that we have defined in our studies do not represent what we should be charging in South African ports, rather it provides a form of indication of the direction that our pricing should be moving in, rather than the exact absolute level of pricing. A comprehensive Tariff Strategy based on a set of guidelines and the user-pay principle sets out the appropriate cost reflective rates for services in the port system, which are referred to as 'base-rate tariffs' or the 'target tariff'. Cost reflective rates in SA can still be higher or lower than other countries depending on the cost of labour, infrastructure, age of ports, etc. and therefore average global port prices are not used to set prices. It does however provide us with a reasonable indication that would allow assessment of the alignment between port policy, port pricing, and economic policy and more importantly, the Strategy serves as a measuring tool to assess the impact of regulatory intervention in the regulatory framework through pricing changes.

It is thus important to keep in mind that the identification of pricing differentials that exist does not automatically suggest that certain industries should be charged at a globally comparable rate. It does not suggest that certain cargoes may not be charged lower or higher rates than the global sample averages. It arguably does identify the size of the divergence between what is the stated overarching economic and development policy of the country and what port pricing reflects. It provides a reason to assess and shift port pricing in a direction that better reflects the global reality and actually aligns with SA economic structure, economic policy, industrial policy and economic development policy. Furthermore, it requires that any differentials that we allow to exist in the future must result from an open engagement that includes all affected parties and is justifiable in the public interest. These and other pricing effects and structural imbalances are addressed comprehensively in the Tariff Strategy which was published by the Regulator in July 2015, and updated in 2020.

"It is thus important to keep in mind that the identification of pricing differentials that exist does not automatically suggest that certain industries should be charged at a globally comparable rate."

That a change in indices such as either the weighted dollar price over the year (rather than fixing it at the date of the study) or some other selection of ports as a population would no doubt

influence the findings to a greater or lesser extent, the continuation of the use of a consistent methodology allows the intertemporal comparisons that renders an assessment like this invaluable.

Amending an index or changing a sample will not remove the internal difference between the significant premiums on cargo owners of manufactured goods and the significant discounts to un-beneficiated bulk commodities as these have been confirmed to exist and are quantified in the tariff setting process in line with the Tariff Strategy. The amendment of parameters of the research will not change the fact that SA cargo owners carry the majority of the burden of infrastructure costs while foreign cargo owners and vessels receive globally competitive rates or implicit discounts. In addition, carefully selecting ports that support a particular argument in response to these numbers does not remove the reality, and an equally careful selection can make the numbers even worse. In some cases, our pricing is seen to be comparatively low, and in other cases comparatively high. What they also show is that different stakeholders in the logistics system inappropriately bear the incidence of tariffs, in comparison to global practice.

An example: The trend in port pricing in SA, from an internal coherence (using global sample averages) perspective, appears to subsidise the industries that have lower levels of job creation and value addition in SA. The higher job creation industries tend to be penalised. An example is the differential of cargo dues that existed between stainless steel and mild steel prior to the Regulator's decision (although this element was one of the issues considered in that matter, it was not the basis of the decision). An industry that stopped at one level in the value addition process and then exported its product to have further value added in another country, paid roughly one quarter of the price paid by the producer that took that product and added further value inside of the country, for the same use of infrastructure. This is clearly not in line with SA's economic development policies, and the need for stronger alignment between various policies and regulatory regimes is critical in advancing a coherent and sustainable industrial policy. As such the current tariff structure, in which bulk trades tended to be less than or close to the global sample averages, while the value added trades were significantly above the global sample averages, unless you were a foreign cargo owner merely transhipping your cargo through SA ports, is clearly not aligned with the country's industrial objectives.

This research was thus not intended to automatically define the levels of pricing that are appropriate and the targets that needed to be set for pricing incidence. It was however designed to add to the debate in reviewing and setting appropriate pricing and price incidence in the port system and contributed to the need for a comprehensive Tariff Strategy, which has been published and is currently being used in the process of determining prices, along with the Tariff Methodology.

Sample selection

The researchers involved in this project compiled the port samples based on a number of criteria, with tariffs not considered until the very end, and played no role in the sample construction

process. The criteria included throughput, capacity, commodity and cargo handling characteristics, availability of public tariff information (in English as far as possible), and the ability of the port to handle the unitary vessel size.

Comment

The research is therefore published and any correction, criticism, and comment is welcomed. We do however request that where parties wish to make submission. Kindly provide the following:

- An explanation as to why the information in the study is incorrect or inappropriately used;
- The correct information, if the information in the study is claimed to be incorrect, or a more appropriate use or exposition of information if the appropriateness or exposition of the information is questioned;
- The original public documents and or information that the "corrected" information is based on; and
- The reason why an alternate view, if it is opinion-based such as the selection of different populations or indices, is more appropriate.

13. Annex A: Methodology Assumptions

Container Study

Vessel Dimensions:		
Length	221	meters
Breadth	32	meters
Height	25,91	meters
Draft	12,2	meters
DWT	41 800	tons
GT	35 800	tons
NT	14 444	tons
Power Output	26 270	KW

Standardised Ship Call:				
	Landed		Shipped	
	Deepsea		*Deepsea*	
	Full	686	Full	427
	Empty	71	Empty	288
Total TEU Parcel Size = 1,853	*Coastwise*		*Coastwise*	
	Full	2	Full	9
	Empty	4	Empty	8
	Transhipped		*Transhipped*	
	Full	148	Full	148
	Empty	30	Empty	32

Additional Assumptions

- The vessel utilises the port services within normal working hours of the port, and abides by all rules and regulations of the port;
- Assume the vessel enters the berth on weekdays, except on public holidays, at 08h00 and exits the berth at 08h00. (i.e. number of hours in berth= 48hours);
- No additional surcharges, waiting fees, penalties or cancellation fees are applicable within the vessel call;
- There is no use of miscellaneous services, such as fire & emergency services, fire protection, etc.;
- Port charges such as security service fees, fresh water fees, electricity and removal of refuse, etc. where a minimum fee is not stipulated, will be excluded from the port charges;
- Assume the vessel is a liner trade which operates on a scheduled basis;
- Assume there are no reductions (based on the number of calls) in the port charges offered to vessels;

- Assume the following weights of TEUs: Full = 21 Tons Empty = 2.5 Tons;
- Unless otherwise specified, assume a vessel of this size will always require the assistance of two tugs for one hour;
- Unless otherwise specified, assume a vessel of this size will always require the assistance of a pilot for one hour. Shifting tariffs are excluded;
- Where no tariffs are allocated to Coastwise & Trans-shipped Cargoes, the “deep-sea” rates will be used;
- Assume one vessel call per port per month;
- Assume vessel call at non-concessionary terminals and berths;
- Where there is more than one service provider, an average of the tariffs was taken;
- Assume all information about the vessel & cargo is provided in advance in accordance with requirements of each port prior to the arrival/departure of the vessel & cargo to/from the port;
- Assume vessel needs to use the port's mooring or unmooring ropes;
- Vessel always makes use of the port's equipment;
- Assume all imported transhipment containers are trans-shipped within 14 days of arrival at the port;
- Assume all transhipment containers landed/shipped are foreign-going transhipment containers;
- Assume all transhipment containers are shipped from the same port terminal it landed in;
- Assume one container move to load or off load containers for terminal handling charges;
- Klang Northport and Jawaharlal Nehru cargo dues and terminal handling charges are consolidated into a single charge;
- Container loading and unloading operations begins within two hours after the vessel enters the berth and ends two hours before the vessel exits the berth. i.e. cargo operations are completed in the 44 hours the vessel is at berth;
- No amendments have been made to reduce total handling and port authority charges of non-South African ports for efficiency differentials; and
- Terminal handling charges includes vessel to stack, vessel to truck, vessel to rail wagon, rail wagon to vessel, truck to vessel, stack to vessel, as appropriate.

Automotive Study

Standardised Ship Call:	
Commodity Moved	Cars
Parcel Size (tons)	3715.64+8085.32
Import (tons)	8085,32
Export (tons)	3715,64
Parcel Size (Units)	890+409
Import (Units)	890
Export (Units)	409

Vessel Dimensions:	
LOA	198m
Breadth	32m
Draft	8.6m
DWT	19 893
GT	56 439
NT	17959

Additional Assumptions:

- Number of days in port: 1 Day & 8 hours (32hours);
- Assume that there are no penalties, additional surcharges, or waiting fees applicable within the vessel call;
- Assume the vessel utilises the port within the normal working hours of that port, and abides by all rules and regulations of the port;
- Assume the vessel will use two tugs;
- Assume the vessel will always need pilotage assistance in the port;
- This study is based on new automotive vehicles imported/exported at the selected ports;
- Assume all vehicles imported/exported are for one vehicle manufacturing company; and
- The average length of a vehicle is 4.5m
- The vessel is a car carrier vessel.

Iron Ore Study

Vessel Dimensions:	
Length	280m
Breadth	44m
Draft	12m
DWT	180,000t
GT	95,000t
NT	n/a
Cubic dimension	147.840cu.m
Iron Ore Parcel Size	170,000tons

Additional Assumptions

- Iron ore parcel size: 170,000 tons;
- Number of days in port: 1 day & 23 hours (47hrs);
- The vessel utilises the port within the normal working hours of the port, and abides by all rules and regulations of the port;
- No additional surcharges, waiting fees, penalties or cancellation fees are applicable within the vessel call;
- There is no use of miscellaneous services, such as fire & emergency services, fire protection, etc.;
- Port charges such as security service fees, fresh water fees, electricity, and removal of refuse, etc. where a minimum fee is not stipulated, will be excluded from the port charges;
- Assume there are no reductions (based on the number of calls) in the port charges offered to vessels;
- Assume a vessel of this size will always require the assistance of two tugs for one hour;
- Pilotage is always required. Shifting tariffs are excluded;
- Assume one vessel call per port per month;
- Assume vessel call at non-concessionary terminals and berths;
- Where there is more than one service provider, an average of the tariffs was taken;
- Assume all information about the vessel & cargo is provided in advance in accordance with requirements of each port prior to the arrival/departure of the vessel & cargo to/from the port;
- Assume vessel needs to use the port's mooring or unmooring ropes, two mooring ropes are used;
- Vessel always makes use of the port's equipment;
- Assume the vessel enters the berth at 10h00 and leaves at 09h00 (47hours later); and
- Assume cargo operations commence within one hour of entering the berth and stops one hour prior to vessel exit from berth.

Coal Study

Standardised Ship Call:	
Commodity Moved	Coal
Parcel Size (tons)	112 586

Vessel Dimensions:	
LOA	225m
Breadth	32m
Draft	13.54m
DWT	75 122
GT	39 763
NT	25 329

Additional Assumptions

- Number of days in port: 1 Day & 8 hours (32hours);
- Assume that there are no penalties, additional surcharges, or waiting fees applicable within the vessel call;
- Assume the vessel utilises the port within the normal working hours of that port, and abides by all rules and regulations of the port;
- Assume the vessel will use two tugs; and
- Assume the vessel will always need pilotage assistance in the port.

Disclaimer:

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication. The Regulator welcomes any input to assist in updating or correcting the information contained herein. Any comments and/or suggestions may be forwarded to comments@portsregulator.org