Petroleum Industry Quarterly Review: 2024 Q1

Key Performance indicators for the South African petroleum industry

This quarterly review outlines the key performance metrics for the South African petroleum industry utilising publicly available information. This edition provides insights into three pivotal topics: (i) the importance of the industry to the South African economy; (ii) the growing reliance on imports for petroleum supply in South Africa; and (iii) rising fuel prices.

Introduction

South Africa has a well-developed petroleum industry involved in importing, producing and distributing petroleum products for its domestic market and abroad. Petroleum products play a critical role in the South African economy, supporting the smooth functioning of the South African economy and enabling people to go about their daily lives.

Petroleum can be used as a fuel and as a feedstock for products across many sectors in the economy: Petrol for transportation; Diesel for transportation and equipment, and electricity generation during peak periods; Kerosene jet fuel for powering jet engines of aircraft; Illuminating paraffin for lights and cooking; Liquid petroleum gas ("**LPG**") for heating, cooking, industrial processes and agriculture; Bitumen for paving and construction; Lubricants for vehicle and machinery lubrication; Fuel Oil for powering merchant ships and for industrial steam and hot water boilers.

South Africa consumes more than 25 million litres of petroleum products each year, facilitated by imports and its three operational refiners. The country boasts 3,800 kilometres of pipeline for transporting crude oil and petroleum products, as well as a network of over 4,000 petrol stations.

Petroleum industry economic contribution

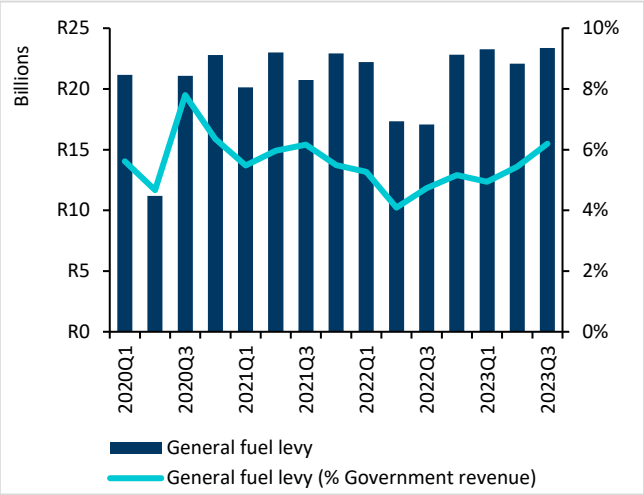
A report published by FTI Consulting, titled "*The Economic Contribution of the Downstream Oil Industry to South Africa in 2019*", found that the petroleum industry supported **R163 billion** (3.2%) in **GDP**, **247,772 jobs,** and **R94 billion in capital investment**.

The study found that:

- The industry directly contributed R139 billion in GDP, with SAPIA members contributing R103 billion.
- For every R1 contributed directly to GDP, a further R1.59 was supported elsewhere in the economy.
- The industry supported 1.5% of total employment.
- For every 1 job in the industry, a further 1.52 jobs were supported elsewhere in the economy.
- For every R1 of capital investment, the industry added another R1.5 to GDP.

Figure 1 illustrates the government revenue generated from the general fuel levy (taxes charged per litre of fuel sold), both in total and as a percentage of overall government revenue. In 2023Q3, the general fuel levy contributed 6.2% to total government revenue.

Figure 1: General fuel levy fiscus contribution



Source: National Treasury

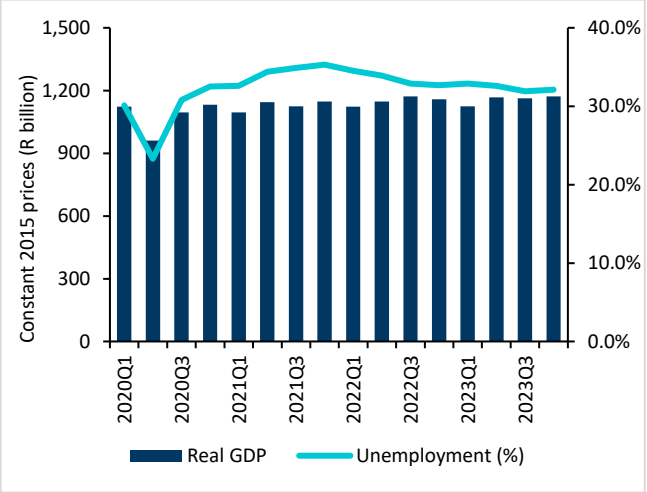
Macroeconomic indicators

From the above, it is clear that the petroleum industry plays a vital role within the South African economy. In what follows, we first provide an overview of the macroeconomic conditions in South Africa and subsequently discuss specific trends in the petroleum industry, focusing on aspects such as demand, supply, and pricing.

Figure 2 depicts quarterly GDP trends in constant 2015 prices (i.e. adjusted for inflation), alongside the quarterly unemployment rate. Economic activity contracted by 6.34% in 2020 relative to 2019 – a downturn that eclipsed the 2007-09 global financial crisis. Subsequent recovery has been slow. For instance, GDP in 2023 Q1 was a mere 0.2% higher than GDP in 2020 Q1. Unemployment in South Africa also remains persistently high and reached an all-time high in 2021 Q4 (35.3%).

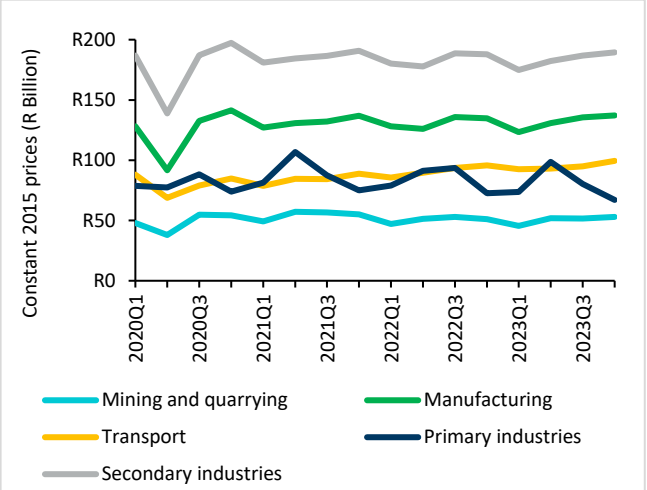
Figures 3 and 4 present real GDP and employment for selected industries related to petroleum. For instance, local refineries are crucial in the petroleum manufacturing process, while coal serves as a key input at the Secunda refinery. The transport sector relies heavily on petroleum products for fuel, and end consumers purchase petrol and diesel.

Figure 2: Real GDP and unemployment



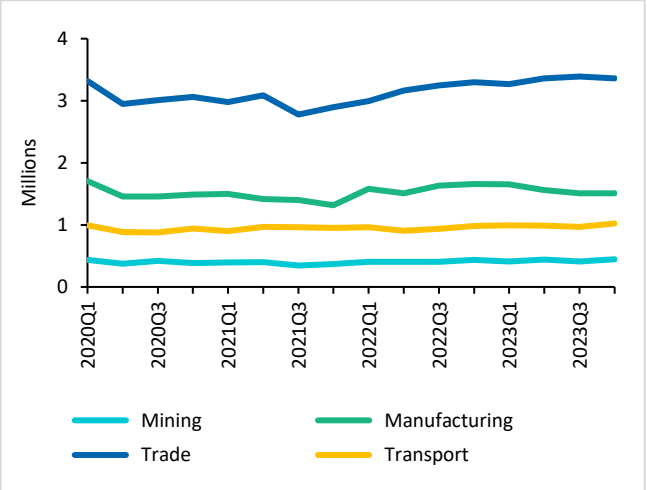
Source: StatsSA

Figure 3: Real GDP, by industry



Source: StatsSA

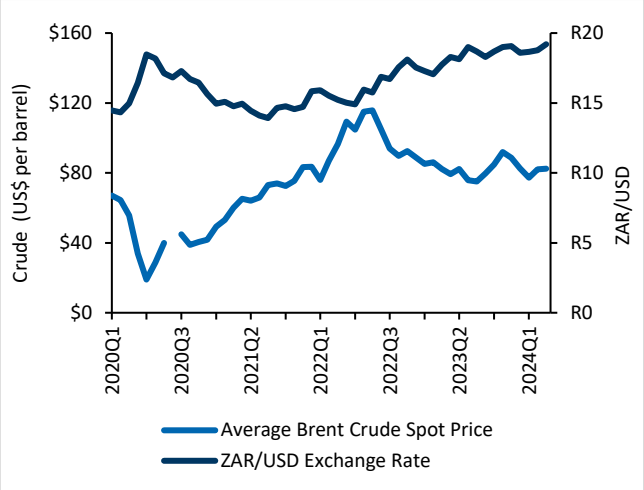
Figure 4: Employment, by industry



Source: StatsSA

The recent poor performance of the South African economy is linked to significant supply chain pressures, such as the Covid pandemic, escalating loadshedding, the 2021 civil unrest, and the Russia-Ukraine and Israel-Palestine conflicts. Figure 5 illustrates Brent crude oil spot price trends, in US dollar terms. One of the primary economic impacts of the Russian-Ukraine conflict has been a significant increase in the global price of crude oil.

Figure 5: Brent crude price and ZAR/USD exchange rate



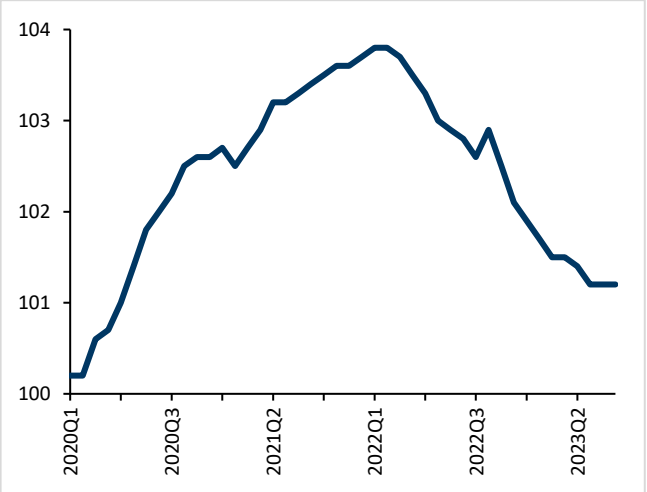
Source: DMRE

Figure 5 also illustrates the ZAR/USD exchange rate over time. It shows that the Rand has slowly depreciated over time to R19.20 at the beginning of March 2024, exacerbating the impact of the international rise in crude oil prices on South Africa. Indeed, the weaker Rand amplifies the impact of higher commodity prices on import costs due to supply chain pressures.

Figure 6 illustrates the composite supply chain pressure index ("**CSPI**") for South Africa. The CSPI is compiled from 10 indicators, where a high reading signals increased pressure. The figure illustrates that supply chain pressures remain high relative to pre-Covid levels.

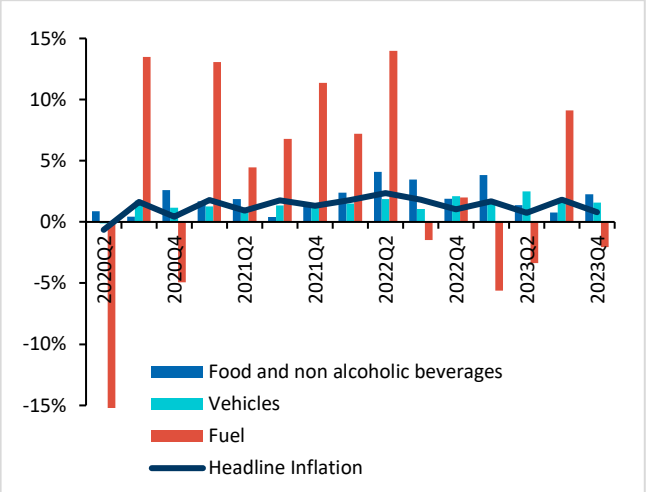
Figure 7 illustrates headline inflation trends in South Africa relative to domestic food prices, vehicle prices and petrol prices. It is clear that since 2020 Q1, petrol price inflation has consistently, and significantly, exceeded both headline and food price inflation. This trend is linked to the increase in the global oil price.

Figure 6: Composite supply chain pressure index



Source: SARB

Figure 7: Inflation in South Africa



Source: StatsSA

This poses a significant challenge for businesses, particularly given the crucial role of fuel in logistics, and increased loadshedding necessitating many businesses to rely heavily on diesel generators to maintain productivity.

Having set out the importance of the South African petroleum industry, particularly in the context of the challenging local and international macroeconomic environment, the following section sets out key performance indicators pertaining to the demand for petroleum products in South Africa.

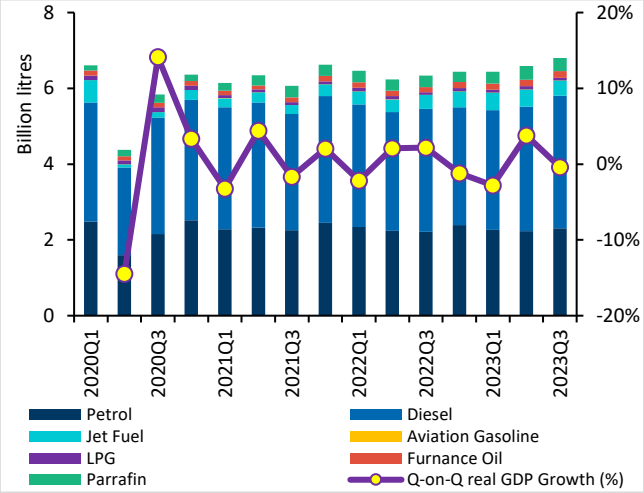
Demand for petroleum products in South Africa

The demand for petroleum products is influenced by a wide range of factors, including but not limited to:

- **Economic factors:** Economic growth, income levels, fuel prices, and government policies.
- **Population factors:** Population growth, population density, and urbanisation.
- **Transportation factors:** The number of vehicles, fuel efficiency, and public transport infrastructure.
- **Other factors:** Weather, technology, environmental considerations, and geopolitical events.

Figure 8 illustrates the consumption of different petroleum products in South Africa over time, and economic growth for comparison. Petrol and diesel are the most important petroleum products, accounting for more than 85% of consumption. The figure illustrates that fuel demand has mirrored real GDP growth to some extent. Local demand for petroleum products has returned to pre-Covid levels but has not yet increased beyond those levels.

Figure 8: Consumption of petroleum products in SA

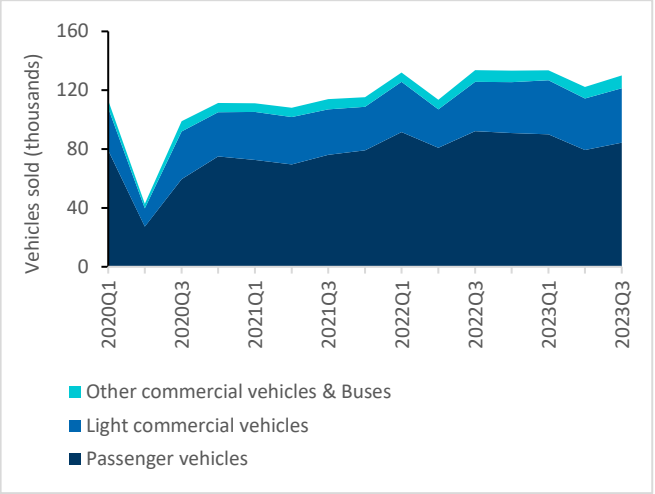


Source: DMRE & StatsSA

Demand for petroleum products is concentrated in the inland region and especially Gauteng. For instance, in 2022, the inland provinces, dominated by Gauteng, accounted for 52% of local petrol, diesel and kerosene consumption, KZN for 19%, and the other coastal provinces for 29%.

Figure 9 illustrates new vehicle sales over time by type of vehicle. New vehicle sales decreased markedly during Covid and subsequently recovered to previous levels. The recovery of vehicle sales notably coincides with the recovery of petroleum demand.

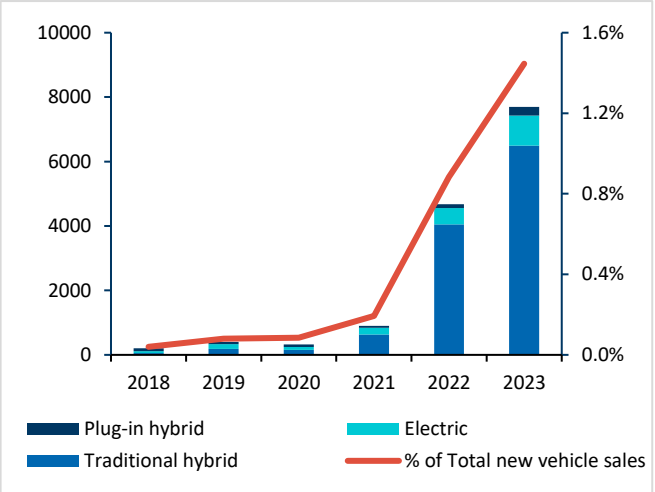
Figure 9: New vehicle sales in South Africa, by type



Source: NAAMSA

Figure 10 reports the new energy vehicle sales, with traditional hybrid models dominating the category. While the category is growing rapidly, it only accounted for 1.5% of total new vehicle sales in 2023. This underscores the continued significance of petroleum products in the South African automotive landscape.

Figure 10: New energy vehicle sales



Source: NAAMSA

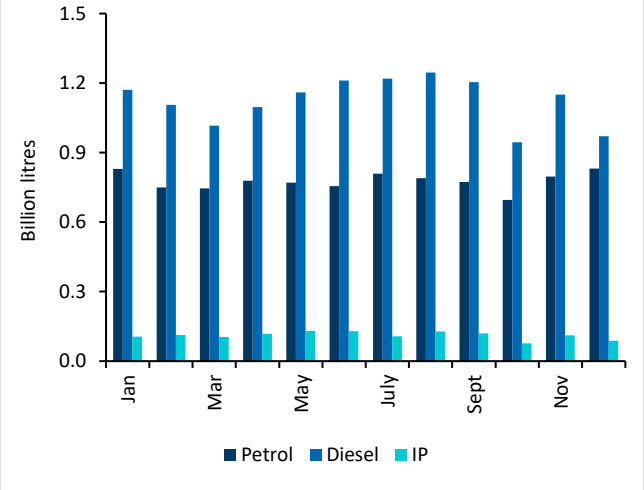
The total vehicle population in South Africa is estimated at around 11,850,000 vehicles as of June 2023, with motor cars representing the largest category. Gauteng accounts for over 5 million (38%) of the total, followed by the Western Cape (over 2 million) and KZN (1.75 million).

Supply of petroleum products in South Africa

To meet demand, petroleum products are supplied either locally through refineries, which import crude to manufacture the products, or through imports of refined products themselves.

Figure 11 reflects the reported 2023 slate volumes of the large oil companies in South Africa, who account for the bulk of volumes (c.95%).

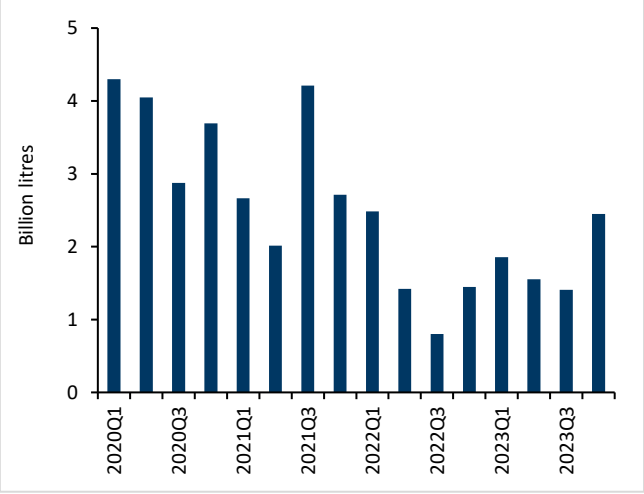
Figure 11: Slate volumes, 2023



Source: SAPIA

Figure 12 illustrates the decline in crude oil imports over time, as the local refineries have ceased or mothballed their refinery operations. The main reason for the change in the supply model is that South Africa has lost approximately 50% of its refining capacity and is currently limited to a single coastal refinery and two inland refineries.

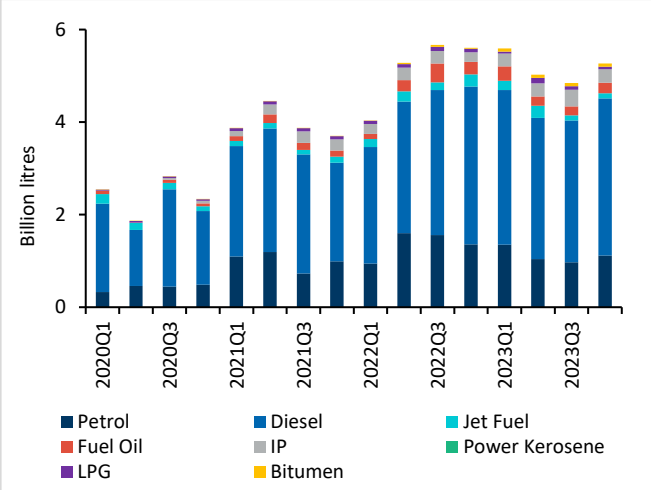
Figure 12: Crude oil imports into South Africa



Source: SARS

Figure 13 illustrates that imports of refined product into South Africa have increased over time, notably in respect of petrol and diesel.

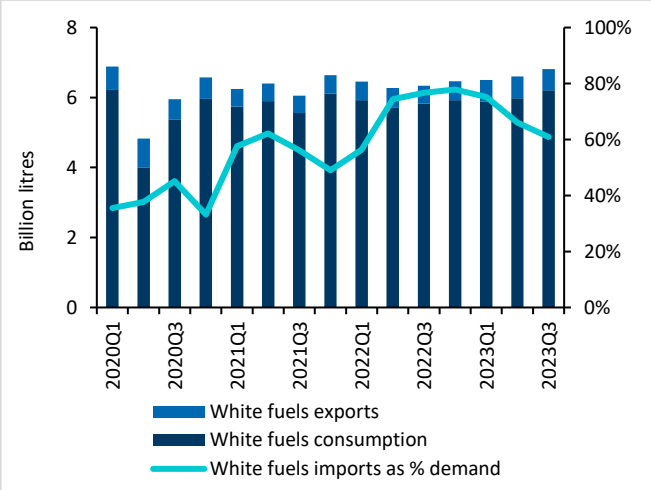
Figure 13: Imports of refined product into South Africa



Source: SARS

Figure 14 illustrates local demand and exports of white fuels (defined here as petrol, diesel, and kerosene), as well as white fuel imports as a percentage of this demand. It shows that imports have increased from 35% in 2020 Q1 to 61% in 2023 Q3. South Africa has therefore shifted from a refiner and exporter of petroleum products to a net importer.

Figure 14: Imports as a percentage of domestic demand



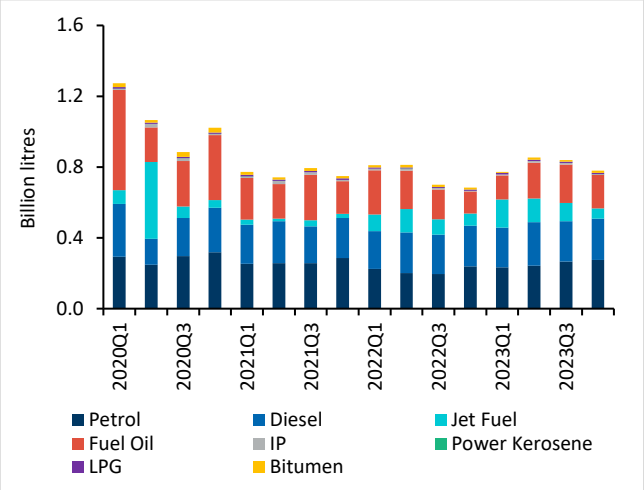
Source: SARS, DMRE

Supply of petroleum products abroad

Figure 15 illustrates the exports of refined product from South Africa over time. The bulk of these exports are to SADC countries. From 2020Q1 - 2023Q4, exports

of refined product declined by over 39%, with the largest declines in diesel and fuel oil.

Figure 15: Exports of refined products



Source: SARS

Having set out supply and demand dynamics for the industry, the following section provides a breakdown of the components influencing petroleum prices and explores their trends over time.

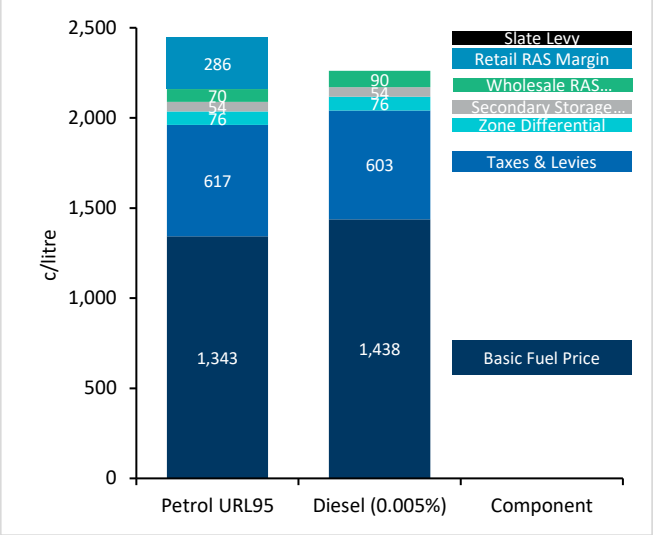
Price trends

The DMRE regulates the maximum wholesale price of diesel and the retail (pump) price of petrol, by grade and location. The regulated prices are composed of several international and domestic price components:

- **Basic Fuel Price** ("**BFP**"): Market-related cost to import products and to transport them to SA.
- **Taxes and Levies:** Fuel Tax, Road Accidents Fund, Petroleum Pipelines, Customs and Excise tax, IP Tracer Dye (diesel), Equalisation Fund (petrol).
- **Zone Differential:** Recovery mechanism for the transport costs incurred to get the product to a specific zone.
- **Secondary Storage and Distribution Charges:** Secondary supply chain cost incurred.
- **Wholesale RAS Margin:** Fixed maximum monetary margin earned for conducting wholesale activities.
- **Retail RAS Margin (Petrol only):** Fixed retail profit margin based on the actual costs incurred.
- **Slate Levy:** Adjustment for daily variations in the BFP.

Figure 16 provides a decomposition of petrol and diesel prices as of March 2024, illustrating these components for the Gauteng zone. Most of the regulated petrol price is comprised of the BFP (55%), taxes and levies (25%), and retail and wholesale margins (15%).

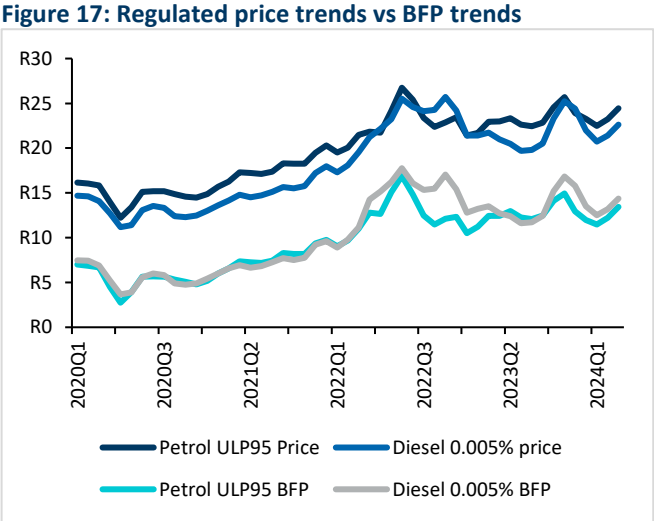
Figure 16: Petrol and diesel price composition, Mar-24



Source: DMRE

Figure 17 illustrates the trends in the petrol (ULP95) and diesel (0.005%) prices (all components), as well as the BFP trends for these products. Diesel and petrol prices have increased significantly in recent times, driven primarily by higher import costs, reflected in the higher BFP prices.

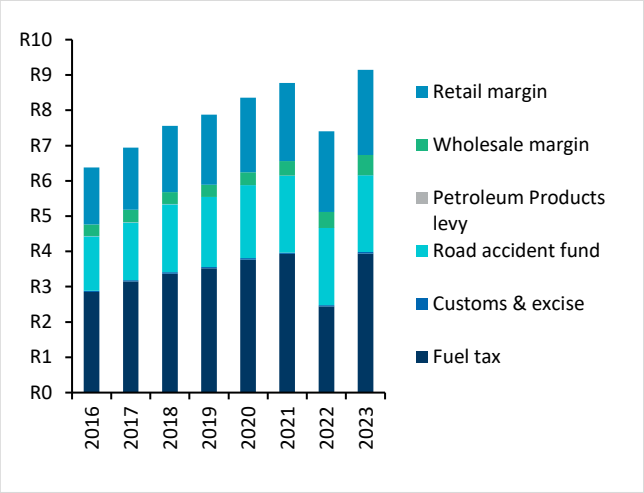
Figure 17: Regulated price trends vs BFP trends



Source: StatsSA; SAPIA; DMRE

Figures 18 and 19 illustrate the evolution of the taxes and levies, as well as retail and wholesale margins for petrol (ULP95) and diesel (0.005%) over time. Margins are adjusted in December, and taxes and levies are adjusted in April of each year.

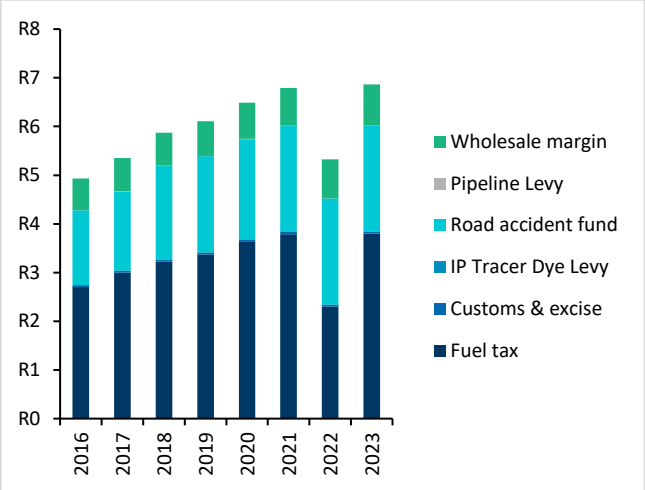
Figure 18: Petrol (ULP95) taxes, levies & margins (Dec)



Source: StatsSA; SAPIA; DMRE

The fuel tax and the road accident fund make up most of the taxes and levies on these products. Except for 2022, with the reprieve offered at the onset of the Russian-Ukraine conflict, taxes and levies have been increasing over time, while margins have remained relatively stable.

Figure 19: Diesel (0.005%) taxes, levies & margins (Dec)



Source: StatsSA; SAPIA; DMRE

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