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Special OBEN/23/01

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Table of Contents

Contents

1. Review of administered prices in South Africa: Basic education
Fouche Venter
2. Review of administered prices in South Africa: The electricity tariff
Zaakirah Ismail and Christopher Wood
3. Review of administered prices in South Africa: Municipal rates and taxes
Kim Walsh
4. Review of administered prices in South Africa: Water tariffs
Kim Walsh
5. Review of administered prices in South Africa: The petrol price
Zaakirah Ismail and Christopher Wood

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Special OBEN 2301* – July 2023

Review of administered prices in South Africa: The petrol price

Zaakirah Ismail and Christopher Wood

Abstract

Fuels costs are a key driver of inflation, both directly through transport costs and indirectly through their role in producing essential goods. Over the past decade, administered elements have accounted for between 40% and 60% of the final retail petrol price. The most important drivers of fuel price inflation have been the fuel levy, retail price margins and the Road Accident Fund (RAF) levy. The methodology for calculating retail price margins can be substantially improved, particularly by reducing excessive owner margins. The RAF levy is much more complex to solve, requiring a reform of the national approach to third-party insurance – but this reform is increasingly justified. Meaningful reductions in the fuel levy seem unlikely, given severe constraints on the fiscus and rising road maintenance costs.

1. Introduction

The cost of fuel is an important driver of inflation, and a pressing concern given ongoing disruptions to the hydrocarbon global market. Fuel plays a central role in meeting basic needs, such as food and transportation, which means that fuel price inflation can be a key driver of wage inflation. Even short-term volatility can trigger stubborn inflation as wages and prices rush to adjust to global price shocks.

South Africa's position as a net importer of petroleum means the country is a price taker in global fuel markets, and that most of the volatility in domestic retail petrol prices results from global price movements that are beyond local control. Despite this, South Africa's administered price regime means that a significant portion of the price for domestic fuels is determined by a complex mix of taxes, levies and cost margins. Over the past decade, cost elements beyond the basic fuel price have typically accounted for between 40% and 60% of the total retail price of petrol (Department of Mineral Resources and Energy (DMRE) 2022a).

While the basic fuel price remains the key driver of both volatility and inflation in the overall petrol price, administrative prices have played an important role in overall fuel price inflation. Key components of the fuel price have risen notably in recent years, with the retail margin, Road Accident Fund (RAF) levy and transport cost components increasing by 40%, 44% and 49% respectively in real terms over the 10 years to November 2022 (DMRE 2022a).

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These price increases are the result of a combination of deliberate policy choices, institutional failures (particularly in the case of the RAF), real price and capacity changes in the broader economy, and the specific methodological choices made by the prices-setters at the DMRE. Reducing these prices is complex, because they are linked to key social considerations such as the viability of road accident insurance and the well-being of over 70 000 forecourt employees working at petrol stations (Statistics South Africa (Stats SA) 2022a). The ubiquity of fuel as an economic input means that trade-offs in the fuel price are particularly high – with each 10c/litre increase in the fuel price costing the economy just over a billion rand per year – and areas for improvement must be constantly reviewed (DMRE 2021).

At least four opportunities exist to improve the efficiency of price-setting mechanisms in the domestic fuel price:

- Review the methodology for calculating retail margins and reconsider proposals to move the petrol price to a maximum (rather than regulated) price.
- Review the viability of the RAF against alternative approaches, notably compulsory third-party insurance.
- Review the methodology for calculating inland transport costs.
- Update several outdated elements of the basic fuel price calculation.

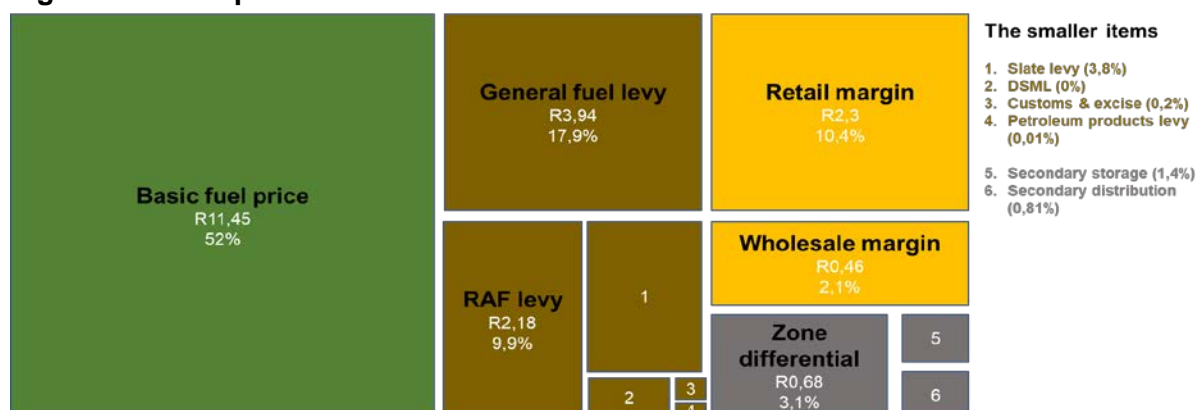
This economic note explores these issues in three parts. Section 2 provides a breakdown of the fuel price calculation. Section 3 examines trends in fuel price inflation. Section 4 focuses on the drivers of inflation among administered elements of the fuel by price, examines the underlying challenges, and proposes potential opportunities to improve the efficiency of the fuel price system.

2. Price structure

2.1 Basic fuel price

South Africa's petrol price is an aggregation of the elements shown in Figure 1. The basic fuel price, which is mostly determined by global market prices outside of South Africa's control, forms the largest part of the underlying fuel price.

Figure 1: Petrol price breakdown¹



Source: Department of Energy, 2022; author's own calculations.

While the basic fuel price is mostly market-related, and thus largely beyond the scope of this note, the way it is administered is nevertheless important for two reasons.

First, the basic fuel price itself comprises a relatively complex set of assumptions and calculations, as outlined in Table 1, some of which require additional scrutiny. These assumptions are more complex to assess, largely because the DMRE doesn't regularly publish detailed breakdowns of the basic fuel price calculations in the same manner as it does for the remainder of the fuel price methodology, which means that challenges can only be abstractly gleaned from the methodology itself.

Table 1: Methodology for calculating the basic fuel price, with unit costs and cost to economy

Cost	Methodology	Price, Nov 2019, c/l	Cost to economy, 2019, R million
Free-on board (FOB) values	FOB export values for export-oriented refining centres in the Mediterranean, Gulf and Singapore	587.146	58 714.6
Freight	As published by London Tanker Brokers Panel on 1 Jan each year, adjusted for risk and supply/demand of ships using the Average Freight Rate Assessment	21.002	2 100.2
Demurrage	As published by the World Scale Association, with total demurrage time limited to 3 days	0.632	63.2
Insurance and other fees	0.15% of FOB value and freight	0.913	91.3
Ocean loss	0.3% of FOB value, freight and insurance	1.829	182.9
Cargo dues	Based on tariff provided by National Ports Authority	2.648	264.8
Coastal storage	Based on average international storage rate in 2012, adjusted by producer price index annually	3.603	360.3
Stock financing costs	Calculated at 25 days of stockholding on landed cost values for refined petroleum, at prime minus 2%	2.890	289.0

Source: DMRE, multiple sources for methodology (DMRE 2022b), 2019 price (DMRE 2019) and total petrol consumption in 2019 (DMRE 2021).

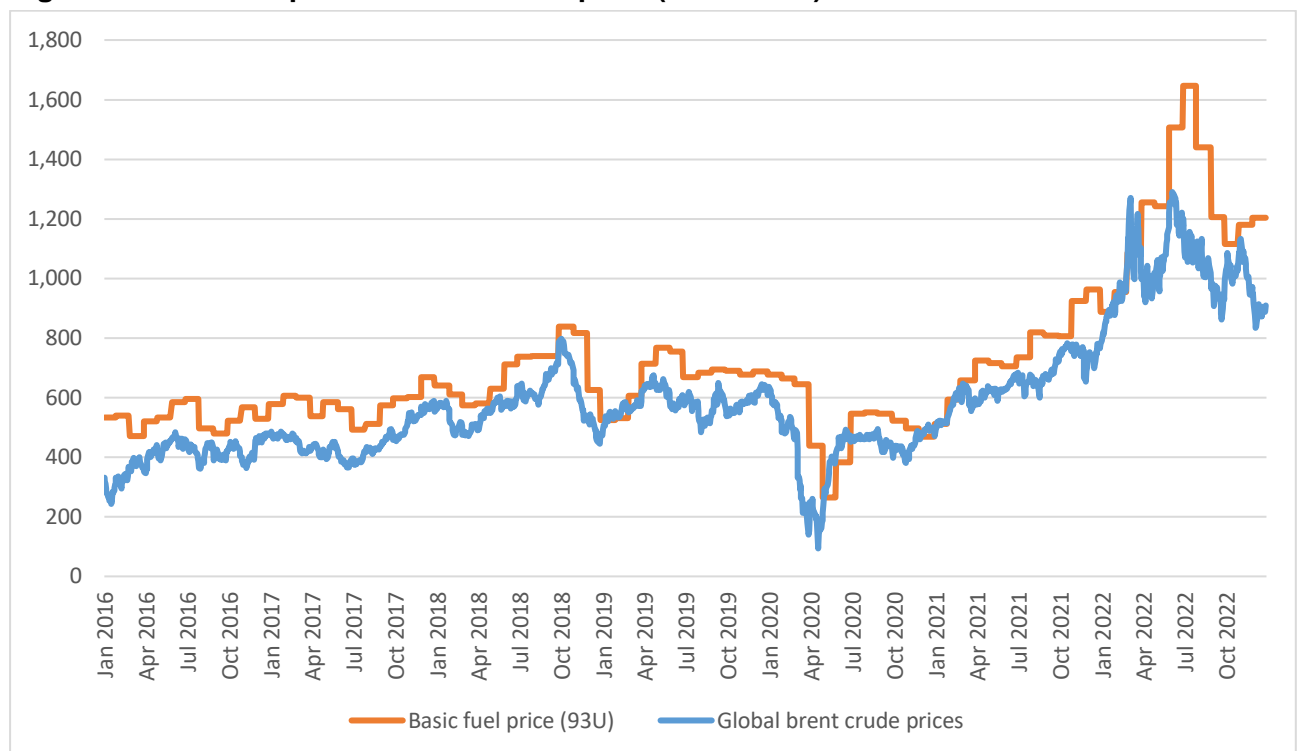
¹ Department of Energy website: Accessed October 2022 and based on October 2022 petrol Unleaded 95 prices.

Although limited, the available information suggests that a number of improvements are possible. For example, the DMRE methodology for calculating coastal storage costs is based on an outdated base estimate, with the values for costs based on a 2012 study of global average storage costs, which is inflated by the producer price index for final manufactured goods each year (DMRE 2017). Given that South Africa has invested heavily in liquid fuel terminals at ports such as Saldanha Bay, the underlying price should reflect these structural changes in the industry, but almost certainly does not under the current methodology. Similarly, prices for insurance and ocean loss have not been updated since at least 2005, indicating that the basic fuel price could benefit from a more regularised and open process of revision in order to keep it cost reflective.

The second reason that it's important to consider how the basic fuel price is administered is the temporary lag in how it responds to changes in global petrol prices, given that prices are generally updated monthly. This is theoretically accounted for through the slate levy, but it is an imperfect solution because consumers purchase petrol at intervals that differ from the monthly adjustment, and could pay more or less than prevailing market prices based on when they have to refill their cars, particularly during periods of substantial price instability.

A global benchmarking exercise suggests that other markets update administered prices on a more regular basis than South Africa's monthly schedule, often releasing new prices every two weeks. Given that the calculation of the petrol price is a relatively mechanical process, it would be viable for the DMRE to increase the frequency with which prices are adjusted. This would require additional work on the part of retailers, but would improve the responsiveness of the fuel price and reduce the burden on the slate levy to adjust for short-term imbalances.

Figure 2: Basic fuel price vs brent crude price (2016–2022)



Source: DMRE, basic fuel price dataset (DMRE 2022c); FRED dataset on crude oil prices: Brent. Barrel to litre conversion based on DMRE conversion rates, 1 barrel = 42 gallons, 1 gallon = 3.8038 litres.

2.2 Fees, levies and margins

Realistically, the scope for addressing petrol price inflation by improving the basic fuel price calculation is more limited than that of addressing those price components more firmly under domestic control. Table 2 provides an overview of all fees, levies and margins in excess of the basic fuel price, and how they are calculated in the final petrol price.

Table 2: Methodology for calculating the petroleum price, with unit costs and cost to economy

Cost	Methodology	Price, Dec 2022, c/l	Cost to economy, 2022, R billion
Basic fuel price	As detailed in Table 1	1234.49	123 449
General fuel levy	Set by the Minister of Finance	394	39 400
Retail margin	Based on costs incurred by a benchmark service station	241.9	24 190
RAF levy	Set by the Minister of Finance	218	21 800
Slate	Calculated based on cumulative difference in sales prices between the set and daily basic fuel price, multiplied by the monthly fuel sales	83.28	8 328
Inland transport costs	Methodology not publicly available	67.9	6 790
Wholesale margin	15% of depreciated book values of assets, before tax and payment of interest, as outlined in Marketing of Petroleum Activities Return guidelines	56.6	5 660
Secondary storage	Methodology not publicly available	28.8	2 880
Secondary distribution	Methodology not publicly available	16.9	1 690
Customs and excise	Standard SARS levies	4	400
Petroleum products levy	Calculated to meet the annual budget of the Petroleum Pipelines Regulator	0.33	33
Equalisation fund	Currently not used. Set at a level to manage instability in petrol prices	0	0
Demand-side management	Set by the Minister of Energy, aims to discourage the use of 95 unleaded petrol in inland markets	0	0

Source: DMRE, multiple sources for methodology (DMRE 2022b), 2022 price (DMRE 2022a) and total petrol consumption (DMRE 2021).

The components of this administered segment of the petrol price broadly fall into three overlapping categories:

- A set of calculations that are meant to reflect the costs and profit margins of key distributors and retailers in the petrol value chain – this includes the distributor margin, a portion of the retail margin and a selection of transport costs.
- A set of levies and taxes – including the fuel levy and specific levies for the RAF and for the use of petroleum pipelines.

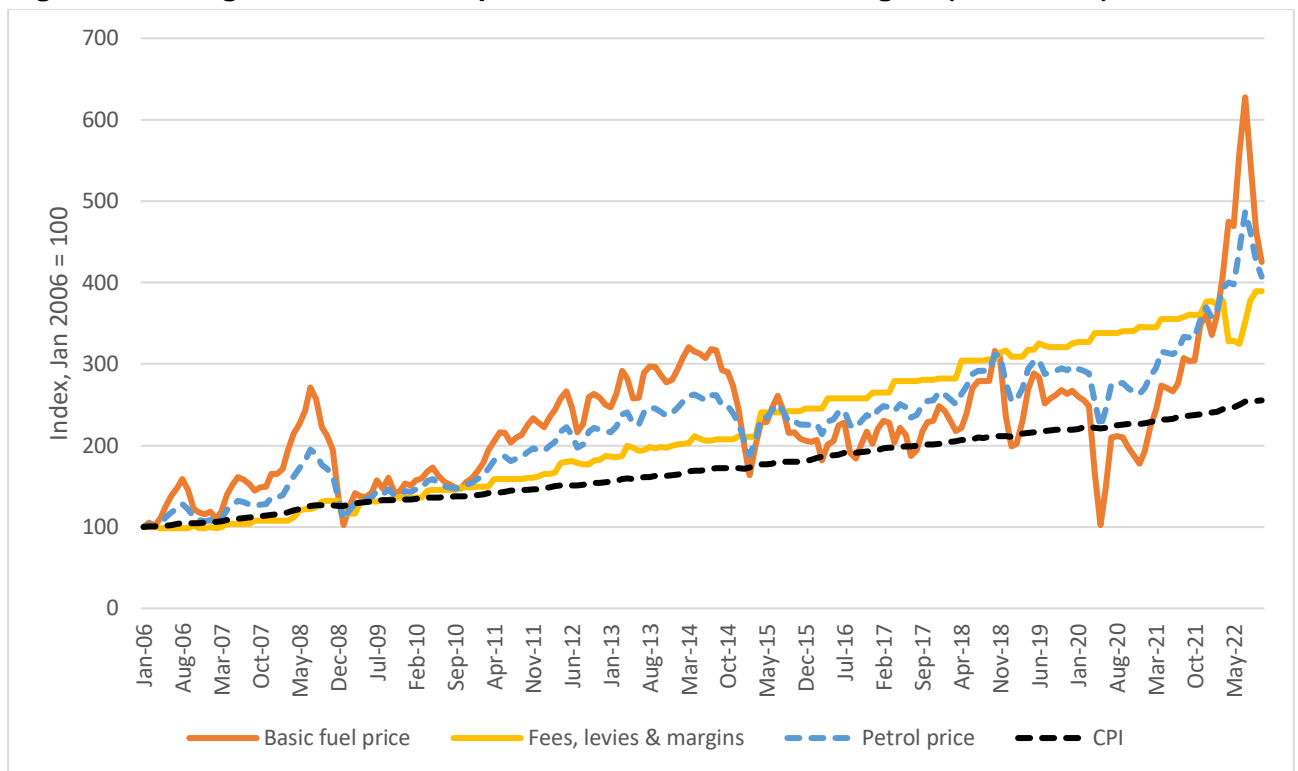
- Behavioural incentives that seek to account for a specific social consideration – and include the demand-side management levy, the equalisation fund (which is not currently used), and a portion of the retail margin (particularly the excess margin to maintain full-service, rather than self-service, petrol stations).

Decisions around these fees, levies and margins are mostly split between the Minister of Finance and the Minister of Energy. Except for the slate levy, components are typically updated once per year, although mid-year changes may occur.

3. Inflation trends

Growth in the basic fuel price and the administered component of the petrol price have exceeded headline CPI in all but the COVID-19 years, as shown in Figure 3.

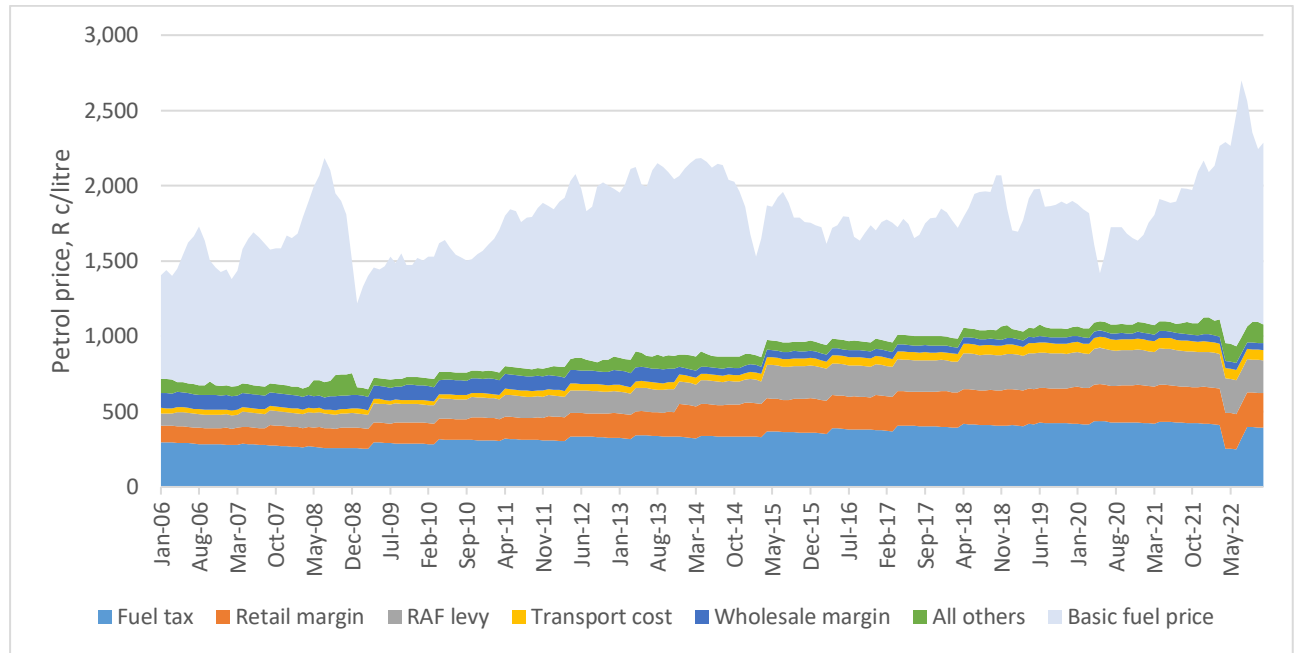
Figure 3: Price growth, basic fuel price vs fees, levies and margins (2006–2022)



Source: DMRE, dataset on petroleum 95 2022 price (DMRE 2022a); Stats SA CPI data.

Following a set of increases to key components in early 2015, administered prices have typically exceeded the basic fuel price as a share of the final petrol price. From January 2015 to March 2022 (after which the basic fuel price spiked as a result of global disruptions), administered prices were higher than the basic fuel price in all but one month.

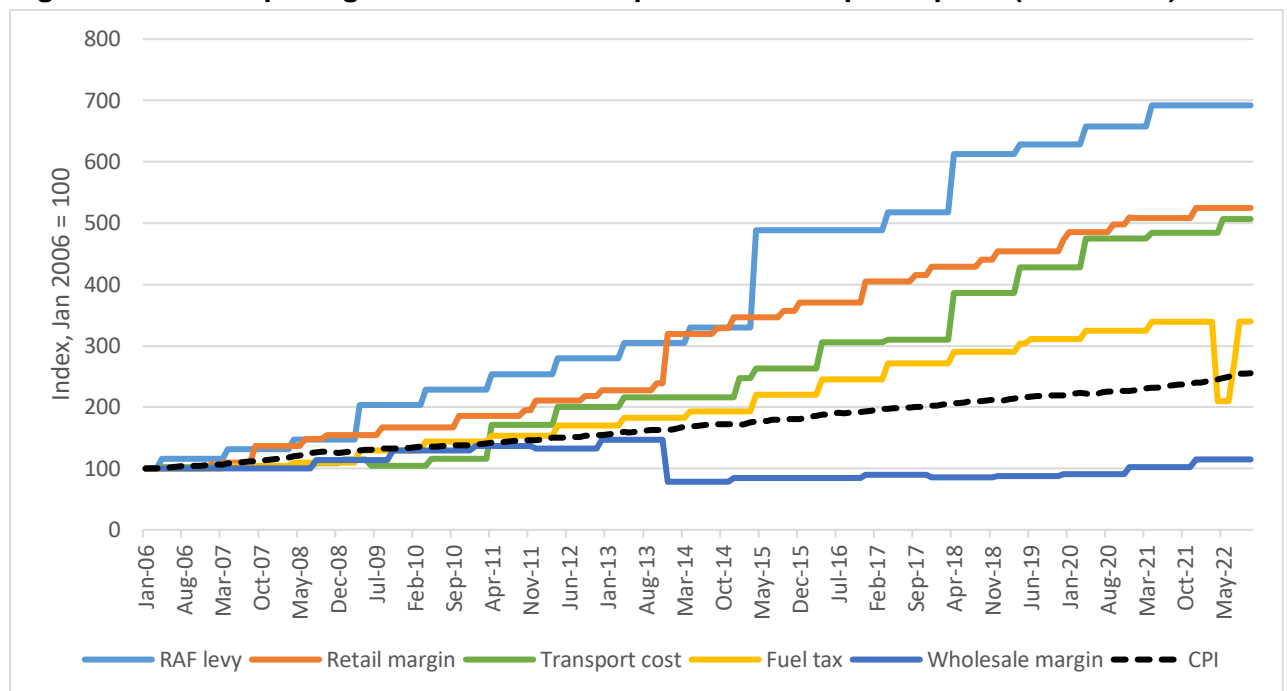
Figure 4: Components of the petrol price (2006–2022)



Source: DMRE, dataset on petroleum 95 2022 price (DMRE 2022a).

Disregarding the slate levy (which varies per month), three components account for 84% of the price increase seen in the administered portion of the petrol price over the last decade: the general fuel levy (37% of growth), the retail margin (34%) and the RAF levy (23%). The transport cost component, although a smaller contributor to growth (at 8%), has also grown quickly and deserves additional examination. These four inflation drivers are examined in depth in Section 3.

Figure 5: Index of price growth in select components of the petrol price (2006–2022)



Source: DMRE, dataset on the basic fuel price (DMRE. 2022c) and Stats SA (2022b).

4. Inflation drivers

4.1 Retail margins

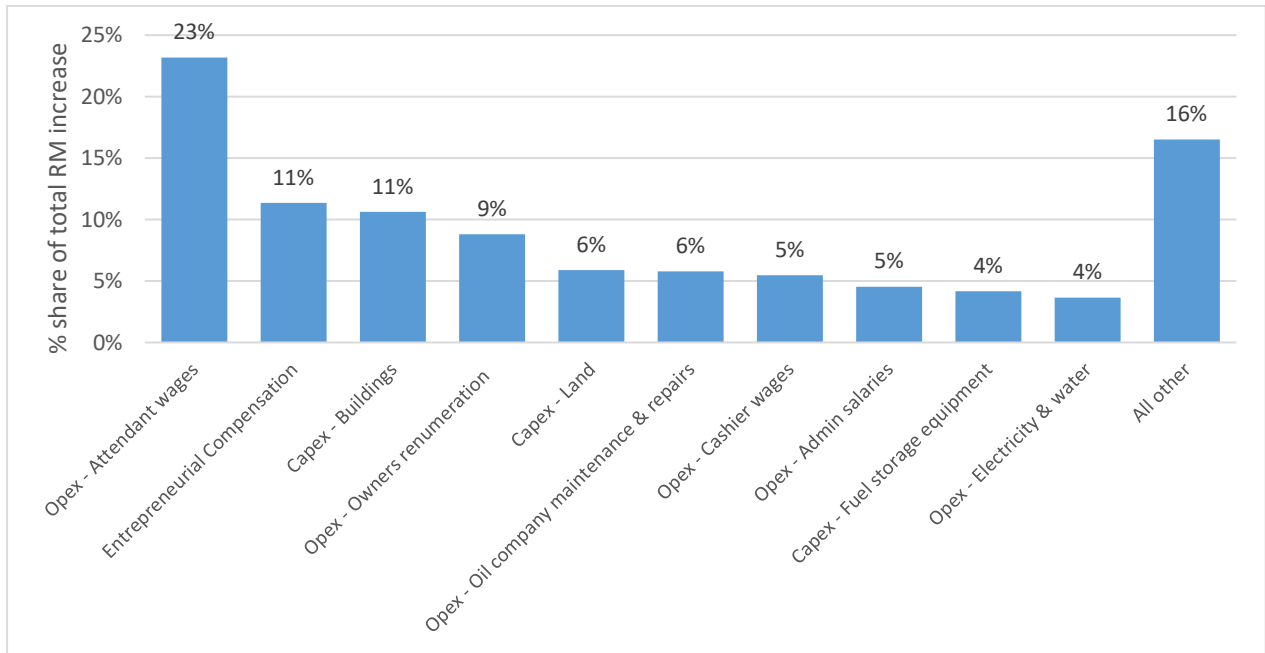
The retail margin has consistently been the most significant driver of fuel price inflation outside the basic fuel price and levies. Much of this inflationary pressure began after 2015, following the implementation of a significant change in the methodology for calculating retail margins.

Before 2015, retail margins were assessed through the retail margin determination model, as part of the broader Marketing of Petroleum Asset Retail methodology. The methodology effectively set a benchmark rate of return for all activities outside the refinery gate (including wholesale, retail and transport), locking returns in at between 10% and 20% of total assets, and then adjusting the margin if returns were higher or lower in the preceding year.

From 2015, this was replaced with the Regulatory Accounting System, which separated out individual margins for activities like retail and wholesale trade and aimed to reflect actual costs and sales volumes more closely. For the retail margin, this calculation is facilitated by a benchmark service station, which is meant to offer an indicative representation of costs facing an average petrol station. The benchmark service station matrix of costs and assets is primarily based on a 2009 survey, which is updated by components of the producer price index annually and should be revised regularly (although evidence suggests this is not the case) (Crompton et al. 2020). Full information on the methodology and the data underpinning it are not public, which makes it difficult to review the basis of the calculation in any detail.

However, evidence from publicly released matrices shows that all components of benchmark service station costs rose by more than headline CPI between 2015 and 2020, with the exception of two relatively fixed elements that account for evaporation and operational gains and losses (DMRE 2020, 2015). The greatest contributors to underlying cost increases appear to be wages and earnings for owners, with attendant wages growing particularly fast during this time, while basic capital expenditure costs like buildings, land and equipment also continue to rise.

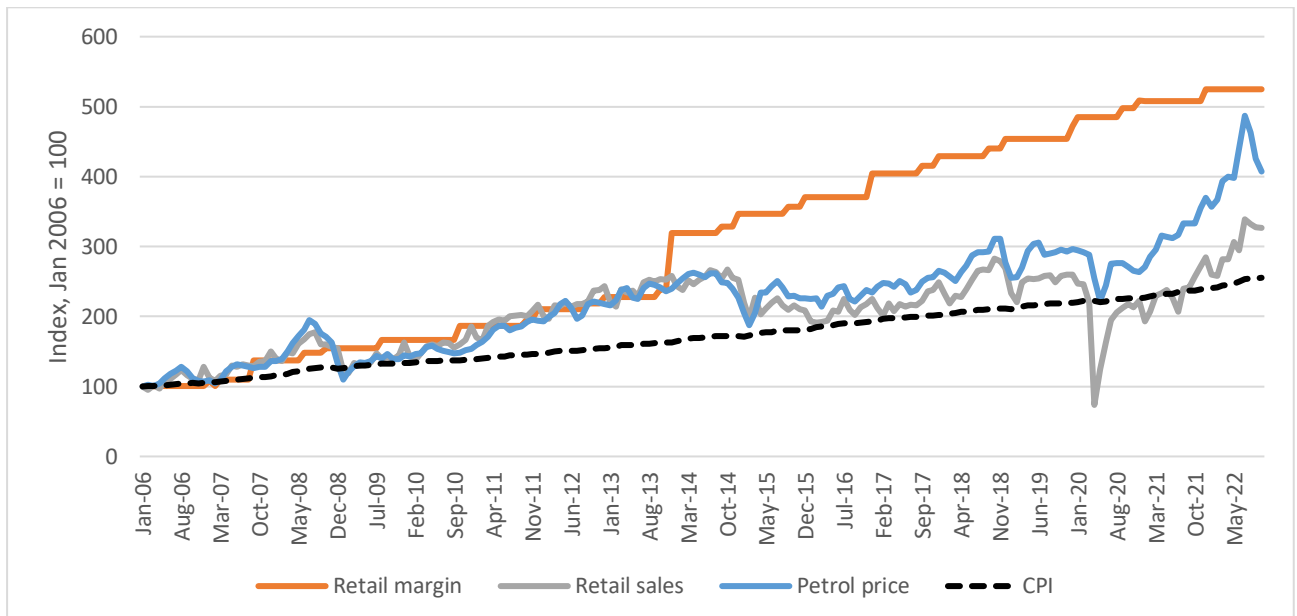
Figure 6: Cost drivers of retail margin (2015–2020)



Source: DMRE, benchmark service station matrices (DMRE 2020, 2015).

Much of this wage growth appears to result from the increasing number of retail employees, with little associated growth in sales. Over the same period indicated in Figure 6, forecourt employee numbers grew by 19% and cashier numbers grew by 52%, while sales volumes remained mostly stagnant. This appears to indicate either that employment is growing per service station, or that the number of low-volume stations expanded over the period.

Figure 7: Retail price margin vs retail petrol sales (2006–2022)



Source: Stats SA motor sales dataset (retail sales); DMRE petrol levies, taxes and margins dataset (retail margin, petrol price); Stats SA CPI dataset (CPI).

This wage growth is unusual in the global context, because most markets have self-pumping petrol stations. With attendant wages accounting for 44c of every litre filled (or 20% of the total retail margin), there is little question that switching to a self-service model would meaningfully reduce the petrol price. However, it would come at a steep social cost. As of 2022, more than 70 000 people were employed as forecourt attendants – an already substantial decline from pre-COVID employment of 108 000 (Stats SA 2022a). The sector is a key employer of those with less formal education; forecourt attendant is the 20th largest formal sector job for those without secondary education (Stats SA 2022a). With employment in retail petroleum sales already declining, the loss of margins for retail wages would risk triggering further job losses in the sector.

Given these considerations, three areas may offer the greatest scope to manage retail margin costs.

The first is to review the portion of the margin received by owners. At present, owners benefit from two sets of costs: owners remuneration (as part of their operating expenditure) and entrepreneurial compensation – a combination that could be seen as analogous to the owner receiving a wage and a dividend. Combined, owners take away a share of earnings that is larger per litre of petrol than total petrol attendant wages, with 21% of total retail margins accounted for by owner earnings.

While there needs to be an adequate incentive to encourage owners to invest in petrol stations, it is difficult to benchmark whether this is an appropriate return to offer owners. Crompton et al. (2020) estimate that the weighted average cost of capital calculation underpinning owner compensation is substantially overstated, at 27.47% against their calculation of 14.37%. They argue that the entrepreneurial compensation value should be reduced and the owners remuneration portion removed altogether. Few global benchmarks exist, although evidence from most markets indicates that owners make more on retail sales at petrol stations than on the sale of petrol (KPMG 2020). It appears that the retail margin may assume owners generate all revenue from the sale of petrol, which would suggest the margin is excessive.

This, however, points to a deeper problem in the retail methodology, which is a lack of transparency on the foundational logic and evidence behind the retail margin. It is unclear, for example, precisely what factors are used to calculate the entrepreneurial compensation element of retail prices, or why the owners' earnings are accounted for twice in the methodology.

This points to the second area for improvement, which is a more rigorous approach to calculating retail margins. At present, calculations seem to be based on an outdated survey, with relatively simplistic assumptions applied to adjust costs for inflation. Changes to some components are difficult to explain, and presumably result from a process of consultation with the industry. A more frequently applied and transparent process is needed to properly understand why the retail margin has grown so quickly.

One approach to achieve this would be to require mandatory annual disclosures of operating costs as part of the retailer's requirements under the Petroleum Products Act 120 of 1977.

This would add an administrative burden to the process, but would offer a much more reliable approach to understanding actual cost dynamics for retail firms. It would also allow for the development of more nuanced benchmark service stations.

The retail margin formula makes little distinction between the cost and earning structures of petrol stations in urban and rural areas; high- and low-traffic areas; whether leasing or owning their property; whether it is refiner, franchisee- or owner-owned; and a range of other factors. Reducing these complexities to a single benchmark station is where a lot of the inefficiency in the retail margin lies – but moving beyond this necessary simplification will require a better understanding of the retail firms this margin is supposed to serve.

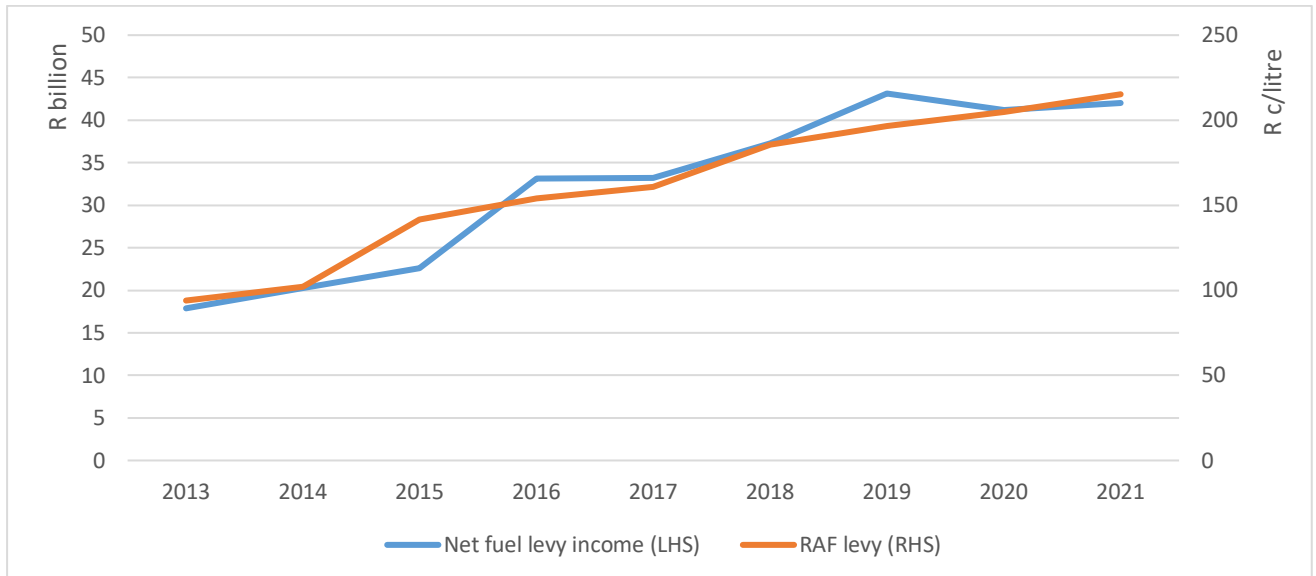
Finally, the third area of improvement in managing retail margin costs would be to implement the proposals made by the Department of Energy in 2018, which would reposition the regulated petrol price as a maximum price, allowing retailers to set prices below the petrol price. This would presumably be achieved by individual retailers discounting their margin, adding an element of competition that could account for failures in the retail margin calculations. Given the complexity of the retail petrol market, and the limits to the methodology detailed above, this may be the best available option to build a naturally correcting calculation for the retail margin.

4.2 Road Accident Fund levy

Perhaps the most unusual aspect of South Africa's fuel price is the Road Accident Fund (RAF) levy, which pays for public third-party road accident insurance. Few comparator schemes can be identified globally, as the more common model of managing costs associated with road accidents is to require mandatory third-party insurance for all drivers.

While high-quality data on South Africa's insurance coverage rates is not available, the figure frequently reported is that 70% of South African cars are uninsured (Automobile Association of South Africa 2020). Proponents of the RAF levy point to this insurance gap as a justification for the scheme, particularly given the high prevalence of road accidents in South Africa and their effect on pedestrians. The R42 billion raised by the levy in 2021 makes it among South Africa's largest social insurance schemes.

Figure 8: RAF fuel levy income vs fuel levy level (2013–2021)



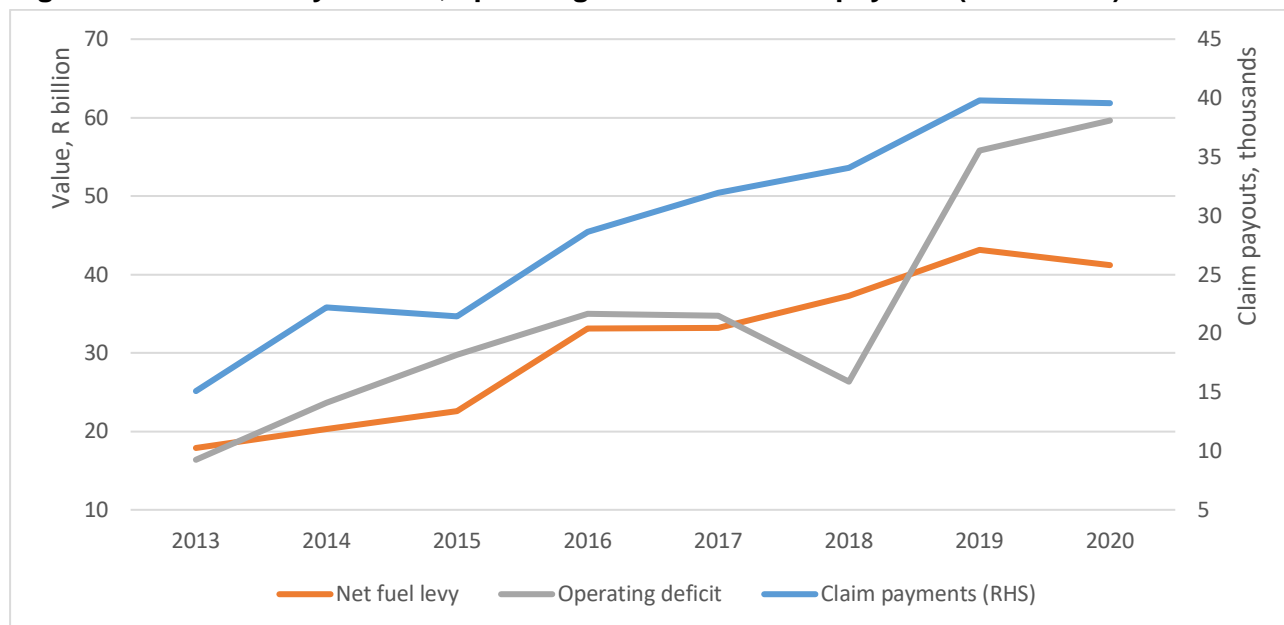
Source: RAF annual reports (net levy income), 2013–2021; DMRE petrol price margins (RAF levy).

Despite this, the rising cost of the RAF levy means that the additional cost to petrol prices has rapidly eroded the cost benefit for drivers relative to mandatory private insurance. For example, an online quote for third-party insurance for a Toyota Corolla returns prices ranging between R280 to R300 per month (based on a search in February 2023), whereas one full tank of petrol in the same car would pay about R109 in RAF levies. Whether the RAF is a net cost or benefit for most drivers would vary depending on the specifics of their vehicle, location and driving behaviour.

To examine this trade-off from another angle, the DMRE estimates that 10 billion litres of petrol were sold in the retail sector in South Africa in 2019, while NaTIS estimates that 7.7 million passenger vehicles were actively driven at the end of 2021. At this level of petrol consumption, the total RAF levy costs consumers R2 849 per car per year, meaning insurance would be, on average, a more competitive option if it could be offered at a rate of R237 per month. Of course, this average belies a great deal of complexity, in which those in higher-risk areas or who drive less often would likely face higher costs from insurance than from the RAF. But it does appear to indicate that the overall cost advantage of the RAF system relative to compulsory third-party insurance is rapidly closing.

The trade-offs between the RAF model and mandatory third-party insurance have been further complicated in recent years by the RAF’s financial challenges. The RAF is severely indebted, with huge quantities of outstanding claims – the organisation’s net liabilities in 2020 reached R320 billion (RAF 2020). Even with a rapidly increasing RAF levy, the fund’s annual operating deficit has widened to R52 billion, and no practical expansion of the levy seems capable of stemming the organisation’s eroding financial position. The RAF levy would have to more than double just to cover the fund’s operating deficit in 2020.

Figure 9: RAF fuel levy income, operating deficit and claim payouts (2013–2020)



Source: RAF annual reports (net levy income).

The RAF contests that these claims and deficits overstate their liabilities, because it is only liable for funds equal to the value of fuel levy income (RAF 2022). Even if this is the case, it is effectively an admission that the fund’s current funding model is not able to provide for all claimants and means that the RAF is a much more limited scheme than envisioned by the legislation.

The RAF likely has a role to play in filling gaps in insurance coverage. Rolling out mandatory third-party insurance would be complex and has historically been opposed by influential vested interests such as the taxi industry. However, as it stands, the RAF is an expensive and ineffective way to provide third-party cover and should be reviewed. Compulsory third-party accident insurance, alongside a much smaller RAF levy with narrower coverage, could be a viable option to reduce petrol price inflation relatively quickly. This would be a complex process and would require much more detailed analysis before a decision is made, but it is perhaps the most concrete option to consider when trying to stem fuel price inflation.

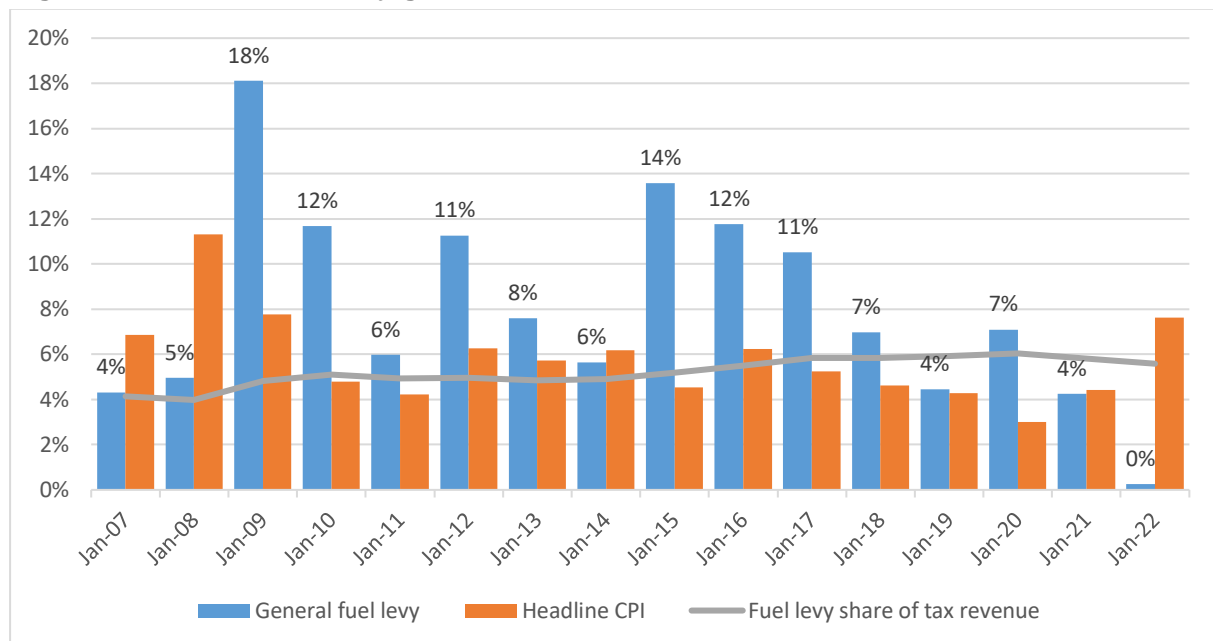
4.3 General fuel levy

The general fuel levy has been the single largest driver of administered price inflation in the petrol price over the last 10 years. This has primarily resulted from the challenging fiscal environment facing the South African government, and the need to find alternative sources of taxation to narrow a widening fiscal deficit. The fuel levy is the fourth largest source of government tax revenue, accounting for 5.8% of total tax revenue in 2021/22 (National Treasury 2022a).

As a result of these concerns, the Minister of Finance introduced an above-inflation increase in the general fuel levy for every year between 2009 and 2020, with the exception of 2014 (DMRE 2022a; Stats SA 2022b). More recently, the rate of these increases has slowed, with

an at-inflation increase in 2021 and a hold on increases in the fuel levy in 2022, accompanied by a temporary reduction in the levy between April and August 2022.

Figure 10: General fuel levy growth vs CPI

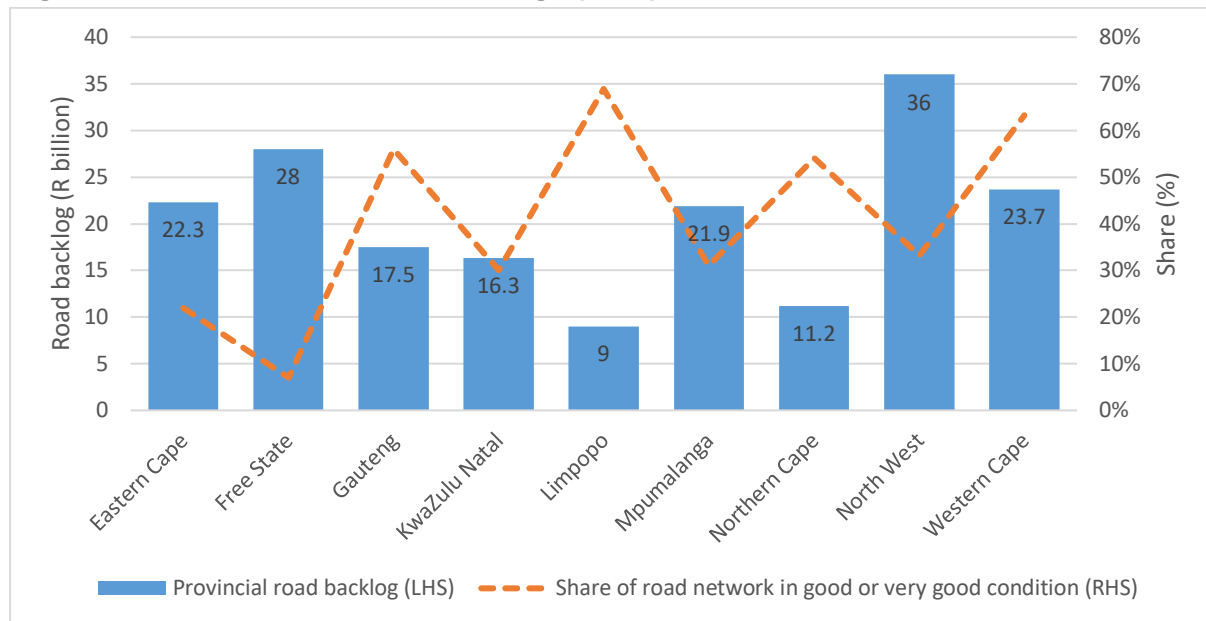


Source: DMRE petrol levies, taxes and margins dataset (retail margin, petrol price), Stats SA CPI dataset (CPI).

The fuel levy is collected into the National Revenue Fund, and is not technically ring-fenced. As such, it is meant to be distributed to a range of agencies and departments focused on road maintenance, and is considered alongside licence and toll fees as the central funding pillar of South Africa’s road infrastructure (Department of Transport 2016). This distribution of funds is not mechanical and appears to result from a negotiated process between National Treasury, the Department of Transport, and key agencies like the South African National Roads Agency Limited. About 17% of fuel levy revenue is distributed to the eight metropolitan municipalities, announced annually, but the use of the remaining levy is more opaque (National Treasury 2022b).

The link between the fuel levy and road maintenance infrastructure complicates some of the considerations around the levy’s increases. The poor state of road infrastructure imposes significant costs on both consumers and on general growth, and rebuilding from this degraded base can be up to 18 times more expensive than base road maintenance (National Treasury 2021). National Treasury estimates that backlogs on provincial roads alone will cost R186 billion to repair (National Treasury 2021).

Figure 11: Road infrastructure backlogs (2021)



Source: Intergovernmental Fiscal Review 2021 (National Treasury 2021).

Given the important role the fuel levy plays in plugging the fiscal deficit and tackling the poor state of logistics infrastructure, there are no easy solutions to lowering the levy in the absence of alternative fundraising mechanisms. With taxation already nearing the point of diminishing returns, and with funding tools like licensing fees seemingly having little room to expand, these alternatives do not appear promising.

Despite this, costs of the fuel levy remain high. Beyond the pure inflationary impact, continued increases are concerning because, like all product taxes, the fuel levy is regressive. While poorer South Africans are less likely to drive, they nevertheless feel the impact of these increases through transport costs. Globally, fuel levies are also considered regressive because poorer drivers tend to have older and therefore less fuel-efficient cars.

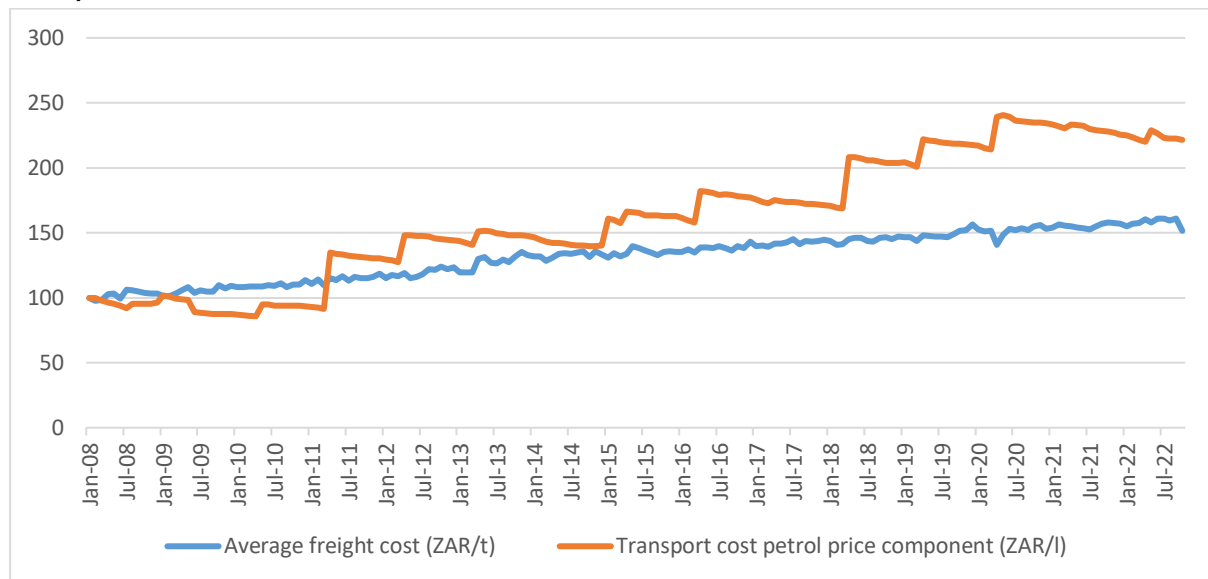
The fuel levy should be subject to more detailed review as part of any revision of the petrol price. However, for now, the scope for improvement on the fuel levy is much narrower than the retail margin or RAF levy, and seems less likely to offer price relief for consumers.

4.4 Transport costs

The transport costs component of the petrol price is smaller than the others listed above, but it does indicate how more marginal aspects of the price methodology have change rapidly with no obvious justification.

The transport costs element refers narrowly to domestic transport of refined petroleum, with international shipment costs falling under the basic fuel price, and storage and other associated wholesale costs dealt with in separate margins. While high-quality information on liquid fuels transport costs is not available, evidence from general freight costs indicates that the transport cost component has been rising significantly faster than market rates.

Figure 12: Average freight transport costs vs transport cost price component (2008–2022)



Source: Land transport survey; DMRE petrol levies, taxes and margins dataset.

The methodology for calculating transport costs is not publicly available and is perhaps the opaqueness component of the petrol price. The DMRE has previously stated that transport costs are calculated by applying the “most cost-efficient mode of transport to determine primary transport cost implemented into fuel price structures”, but no detail is available on how this is achieved (Department of Energy 2018).

There is little that can be said about the transport cost component, which indicates a continued lack of transparency in the petrol price calculation. This, combined with the rapid increases that appear out of step with the evidence, makes transport costs one of a number of components that require review and greater public scrutiny.

5. Conclusion

While global petrol prices are outside of South Africa’s control, improvements to the administered components of the petrol price may offer some limited relief for consumers facing steep inflation. Seven elements have been identified as possible areas for reform, as outlined in Table 3. These interventions would require substantial additional review prior to implementation.

Table 3: Scoping of possible interventions

Component	Intervention	Potential impact
Retail margin	Consider transitioning the petrol price to a maximum price, rather than a regulated price	High
Retail margin	Review the entrepreneurial compensation and owner remuneration elements of the benchmark service station	Medium
Retail margin	Update the survey underpinning the benchmark service station and/or require mandatory annual disclosure of costs and assets by service stations	Low
RAF	Review the viability of compulsory third-party insurance as an alternative to the RAF	High
Transport costs	Publish and review the methodology for calculating inland transport costs	Low
Basic fuel price	Update the methodology for calculating insurance, coastal storage and ocean loss	Low
Basic fuel price	Increase the regularity of basic fuel price updates to every two weeks	Low

The Minister of Finance has indicated that a process is under way to review the petrol price, but none of these reforms are likely to be easy. The two reforms that could offer the most significant benefits – the review of the RAF system and the shift to a maximum petrol price – are also the most difficult, and would require significant additional evaluation work and weighing of large, vested interests. With global fuel markets entering a period of protracted instability, even marginal improvements to the regulation of the petrol price could offer real benefits to strained consumers.

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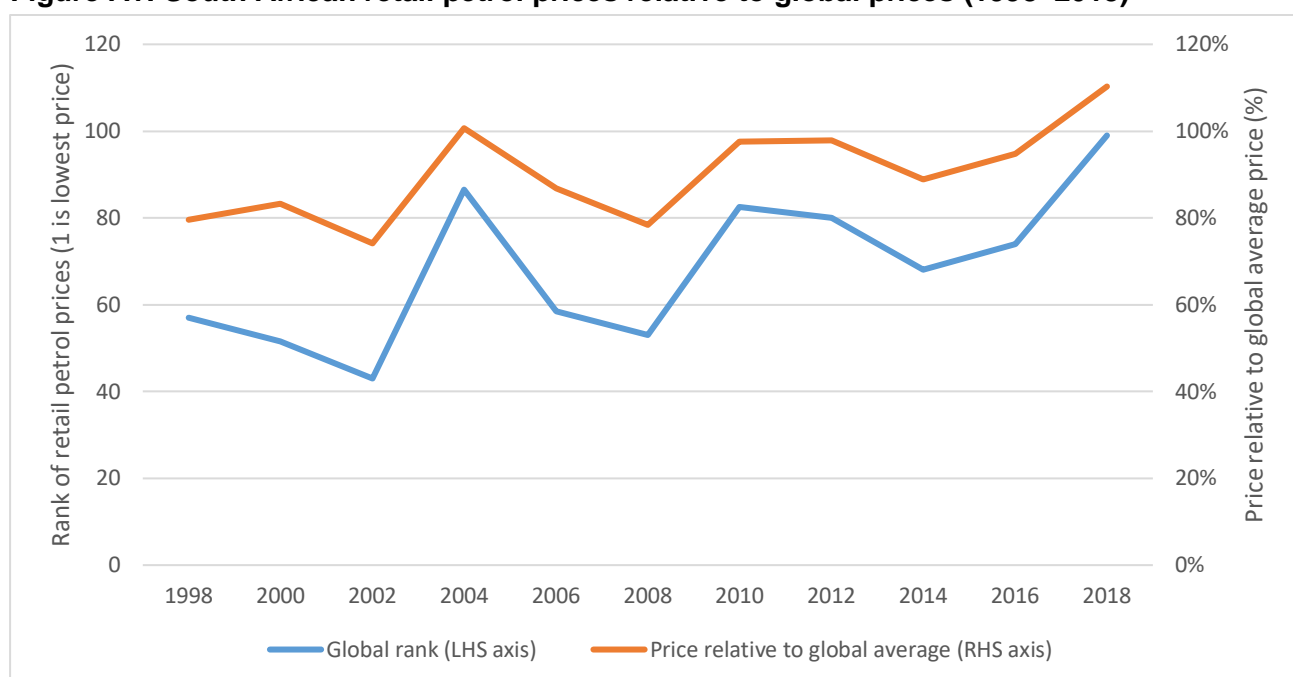
Annexure

Global benchmarking

International benchmarks

Globally, South Africa's retail petrol price has historically been relatively competitive. As shown in Figure A1, South Africa's retail petroleum price has typically been marginally lower than the global average, ranging between 55th and 80th out of 167 markets for cheapest prices. Considering that both averages and this ranking include markets that subsidise fuel, this has typically put South Africa ahead of other oil-importing markets with regulated price regimes, such as India, Australia and Poland.

Figure A1: South African retail petrol prices relative to global prices (1998–2018)



Source: GIZ global retail fuel prices dataset (GIZ 2019), including as reported by the World Bank (World Bank n.d.).

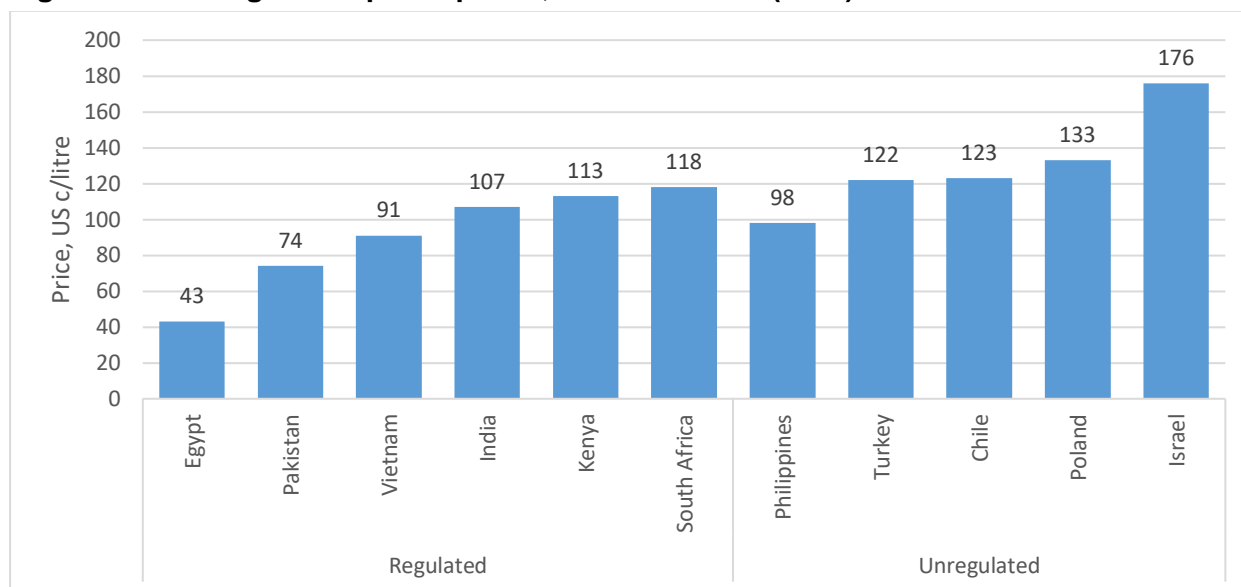
However, this position has been eroded over time, and the most recent results (following increases in a range of regulated price components) show South Africa's petrol price exceeding global averages in 2018 for only the second time in the last 20 years. A lack of more recent publicly available global data on retail petrol prices makes it difficult to evaluate how this picture has changed following further rises in administrative components of the petrol price.

Global case studies

To understand the position of South Africa's petrol prices relative to comparator markets, 10 markets were examined: Chile, Egypt, India, Israel, Kenya, Pakistan, Philippines, Poland, Turkey and Vietnam. Most of these markets were selected because they have similar import levels to South Africa, and no or limited local production of petrol, while India and Kenya were included because they have similar administered price structures to South Africa. Of these,

the most similar regimes to South Africa are those found in Pakistan, Vietnam, India and Kenya.

Figure A2: Average retail petrol prices, select markets (2018)



Source: GIZ global retail fuel prices dataset (GIZ 2019).

In Pakistan, an underlying ex-refinery price (which is similarly calculated to South Africa’s basic fuel price) makes up about 62.5% of the total retail price, with the remainder including inland freight costs (approximately 3.6% of the total), a petroleum levy (14.2%), retail (3.7%) and distributor margins (2.8%), and ordinary sales tax (13.3%) (Hina and Malik 2021). While the structure of prices is set by the Ministry of Petroleum and Natural Resources, price calculations and adjustments are set by a nominally independent regulatory agency, the Oil & Gas Regulatory Authority.

In Vietnam, import prices (the closest equivalent to the basic fuel price) make up about 53% of total final petrol prices. The administered component comprises a special environmental protection tax (18.3% of the final price), distribution costs (6.41%), profit margins for both retail and wholesalers (1.83%), a stabilisation fund contribution (1.83%), and a selection of taxes that include import duties, VAT and a special consumption tax (Bang 2019).

In India, the basic price of petrol accounted for 59% of total retail petrol costs at the end of 2022, although this basic price appears to also include some initial taxation and transportation costs (which are not explicitly broken down in relevant documents). Excise taxes are the largest of the administered portion (at 21% of the final price), followed by VAT (16%) and dealer commissions (4%) (Petroleum Planning & Analysis Cell 2022).

In Kenya, the landed cost of petrol (the equivalent of South Africa’s basic fuel price) makes up 49% of the final retail price; with the remainder consisting of a wide range of excise and duties (making up 35% of the final price), margins for retailers and wholesalers (7%), a price stabilisation levy (6.5%), and storage and distribution costs (2.15%) (Energy & Petroleum Regulatory Authority 2022). These are, however, maximum prices, with the price free to adjust below the set retail price.

Egypt is in the midst of major petrol market reforms, following efforts to phase out subsidies that largely account for the significant price differential shown in Figure A2. Being mid-reform, they appear to use a hybrid system, in which international market prices determine retail prices, but cannot move outside of a 10% stabilisation band. Given the uncertainty around their reforms, there isn't much useful benchmark information available from Egypt at this time.

Petrol prices in the remaining markets are largely unregulated, albeit with mixed results. Of those countries, the closest with a similarly high administered component of fuel prices is Chile, which levies a specific excise tax (IEC) of about US\$0.48/litre (roughly R8.15 per litre). However, this system is not directly comparable to South Africa's regime, because the IEC effectively serves as a price stabilisation tool. Under Chile's price stabilisation policy (Mecanismo de Estabilización de Precios de los Combustibles, or MEPCO), a portion of fuel levies are variable, and increase or decrease based on a fortnightly review of price volatility in the preceding five weeks.

The concept of building a variable, price-linked component into fuel taxes may offer lessons for South Africa, given the dormant equalisation fund that nominally forms a part of the petrol price. Such a policy could be considered comparable to direct policy actions taken by National Treasury during the extreme petrol price spikes seen in 2022, when the fuel tax was temporarily reduced. However, constructing the variance as an automatic stabiliser, rather than a specific ad hoc action taken by the Minister of Finance, would make for a more credible and responsive system.

In addition, fuel for industrial use is fully tax deductible under the Chilean system. While this wouldn't necessarily be a meaningful change for petrol prices, it could be an important consideration for diesel pricing, considering Eskom's near-term dependence on diesel power to run open-cycle gas turbines, and the potential pass-through costs of either purchasing this diesel or increasing loadshedding.

Similar exemptions are available in Israel, where a 50% rebate is available to economically important vehicles like buses, taxis and tractors. Israel deregulated its administered petrol price in 2007, but has subsequently seen a worsening in its already poor position in global petrol prices, with a ranking among the worst in the world. A significant reason for this poor performance can be accredited to very high excise taxes applied to petroleum, which are set at 3.1 new Israeli shekels per litre (R15/litre).

Turkey similarly deregulated its energy market in 2005 and also has petrol prices that are among the highest in the world, although much of this is due to currency instability. In Poland, prices are mostly set by a dominant private sector player, Orlen, which has been frequently accused of high levels of political influence, indicating some of the risks of dominant market structures in strained governance systems. The cases of Turkey and Poland show the complexity of full deregulation in the face of a concentrated domestic market and poor macroeconomic fundamentals.