CHEMICAL SECTOR MONTHLY UPDATE

DATA: NOVEMBER 2024

January 2024
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Introduction

These monthly reports continue to evolve as new data sources and/or their uses are revealed. The distinction between the petroleum and non-petroleum parts of the sector is taken further, and a special focus on salient trends in the coke, petroleum, and nuclear sub-sector is in an accompanying annexure.

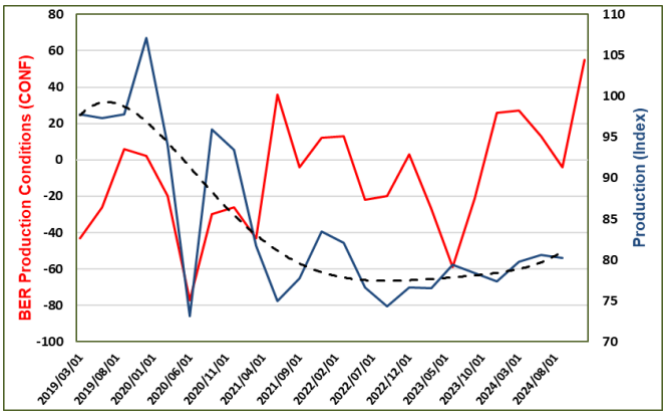
The economic trends emerging from the latest datasets were, in summary;

- The fourth quarter **BER Manufacturing Survey** (for the chemical sector; now full 2024) was released on 27 November. The Survey indicated optimism for higher chemical sector production in quarter 4 of 2024, which seems to stem from the non-petroleum sub-sector. Of some concern, however, is the negativity reflected regarding actual and expected capacity utilization. The expectations (and outcome) of the functioning of the government of national unity (GNU) up till Q4, enhanced business confidence but, there is certainly a measure of 'euphoria and relapse' evident in the political confidence indicator.
- The **Purchasing Managers' Index** (for the whole manufacturing sector) showed growing confidence due to new orders received, and also for higher (inflation adjusted) sales. Expectations regarding domestic and exported sales prices where a bit at odds with reality as reflected by production prices (over the last half of 2024).
- **Chemical sector production** grew by 2,7% over the 12 months to November, but the 11 months performance was only lower and November actually contracted on October (-2,7%) which is concerning. The near 50% share of the petroleum sub-sector, has had a major impact and the section goes into substantial detail to contrast the latter from the non-petroleum sub-sector. With more than three quarters of the year completed, the indications are that chemical sector production will end 2024 at around 3% higher than 2023.
- No Q4 actual production **capacity utilization** data is available (to be released soon in February).
- November was a worse **sales** month than October (-3%), bar petroleum, with enough 'weight' to result in 3,2% growth in Q3 on Q2 (overall), with a near 6% improvement (petroleum). The full year sales number should show +/-5% growth on 2023. Non-petroleum sales for 12 months (2024) would probably be around 3% better than 2023.
- This report (and the accompanying 'focus' annexure on the petroleum sub-sector) delves deeper into the petroleum/non-petroleum contrast in **trade in chemical products.** Petroleum product imports constitute 46% of the total, and nearly 30% of exports (in turn 15% of RSA international trade). The combined final imports and exports represents over 300% of the sector's gross domestic production – an extreme case of an 'open' sector. The policy implication of this reality is that the dramatic decline in refining capacity, and/or any interference in trade flows have multiple sector- and country-wide implications which increase the country's strategic risks. Logistics (see graph below), in turn, impacts these risks. (Excellent data obtained regarding the latter, will be shared in future reports).
- The average (final) **product price inflation** has been 0,7% for 2024. This was mainly due to average fuel prices (2024) dropping to 10% below its level 1 year ago. The PPI for chemicals was -4,7% in December. When fuel is stripped out of final product inflation, the picture changes substantially; price escalation of non-fuel products was 3,6% over 12 months (-0,7% on December 2023).

- The project to refine the **Input Cost Index** for the sector is continuing with its main objective to understand input costs relative to product price movements in the Sector. Research to generate a viable and appropriate labour cost index (+/- 15% weight), as well as more sensitive indicators of imported input product costs (40% weight) is continuing, in consultation with colleagues in other sectors and Statistics SA.

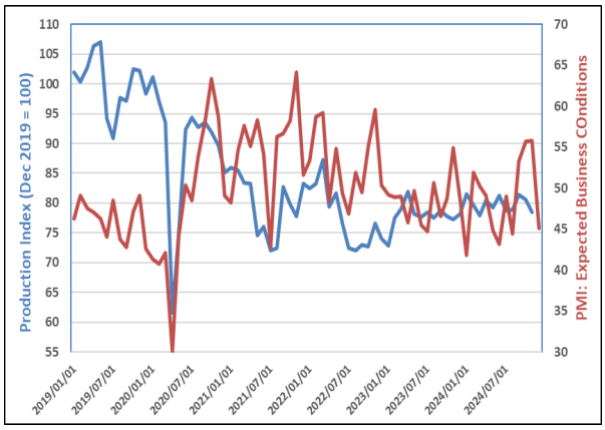
Business Confidence

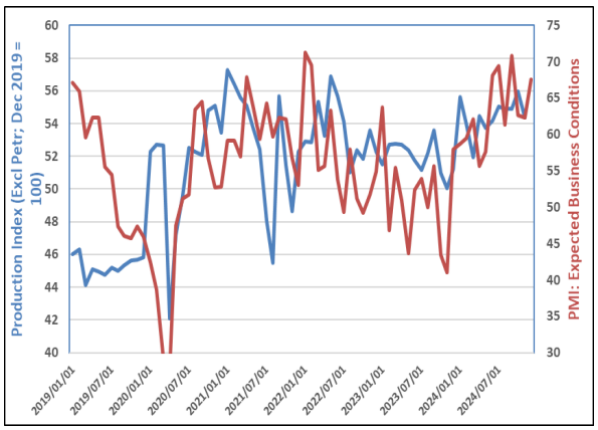
Continuing our 'quest' to discover reliable forward-looking indicators, this section compares the quarterly BER **Manufacturing Confidence Survey (chemical sub-sector)** with the monthly ABSA **Purchasing Managers' Index** (PMI; manufacturing),
The graph on the right (BER Manufacturing Survey) indicates optimism for higher chemical sector production in quarter 4 of 2024.



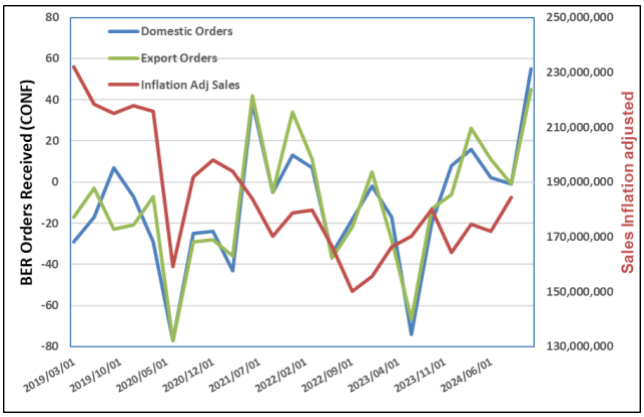
BER Confidence & Production Indices compared

Overall chemical production correlates best with the (general) PMI trend; graph on the left. **Production excluding petroleum** correlates best with the PMI Expected Business Conditions; graph on the right. The monthly results for the overall sector concur with the above confidence index, but December seems to have taken a turn for the worst, while non-petroleum confidence improved further in December.





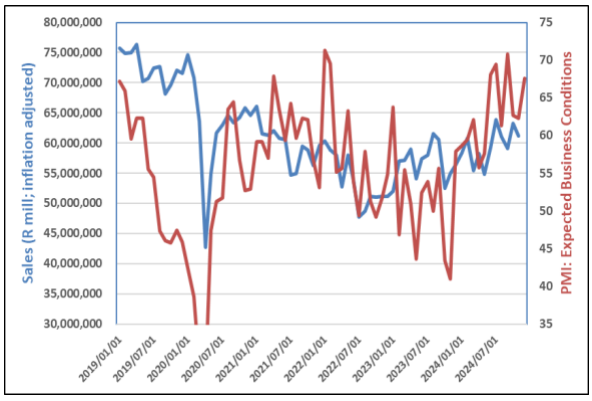
Sources: ABSA PMI & Statistics SA, Manufacturing Production & Sales, p3041.2

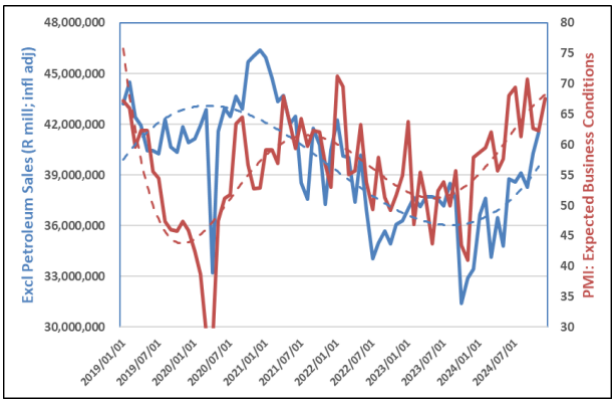


As far as **Sales** is concerned, the graph to the left also indicates optimism according to the BER Chemical Sector Confidence Survey, and inflation adjusted sales seems to follow its trend with about a one quarter time lag.

The (monthly) ABSA Purchasing Managers' Index (below) shows the same trends, albeit with a bit more volatility right through.

Overall Chemical Sector (inflation adjusted) **Sales** correlate well with the PMI Expected Business Conditions (graph on the left), with marginal differences when petroleum is excluded (graph on the right).

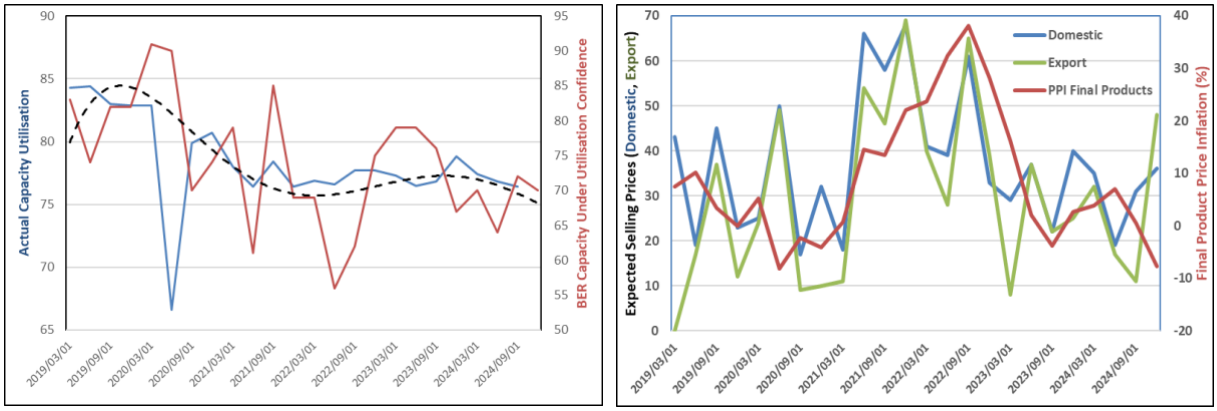




Sources: ABSA Purchasing Managers' Index & Statistics SA, Manufacturing Production & Sales, p3041.2

A greater deal of instability is evident and to be expected in monthly data, but despite such, the trends certainly point in the same direction as the BER survey.

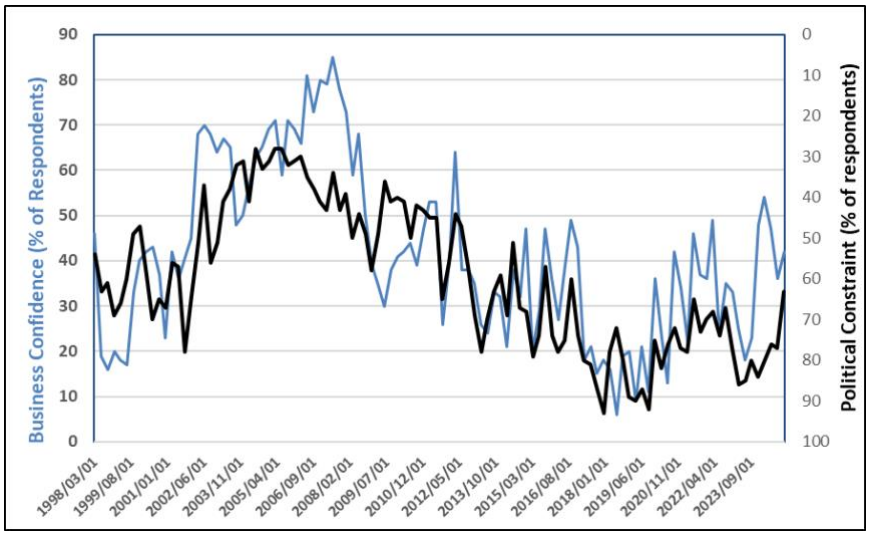
Capacity utilization indicators (left hand graph) are telling a slightly contradictory story.



Sources: BER chemical sector confidence index, and StatsSA, Production Price Index, p0142.1

Although expectations about selling prices (right hand graph above) and actual production price trends are roughly correlating, the last quarter of 2024 had some unexpected outcomes for the sector.

The expectations (and outcome) of the functioning of the government of national unity (GNU) up till Q4 enhanced business confidence but, there is certainly a measure of 'euphoria' and relapse evident in the political confidence indicator, as shown on the graph to the right.



Production Trends

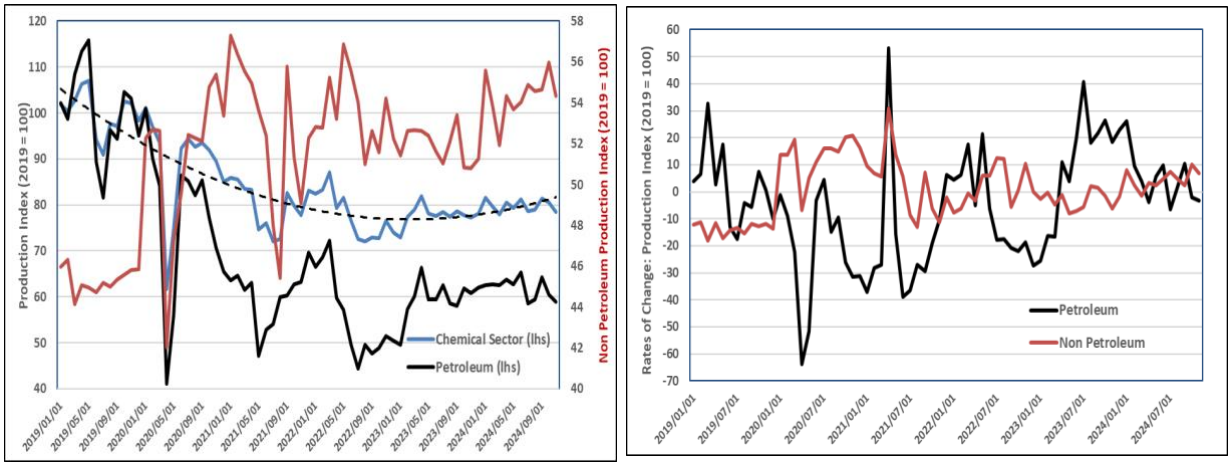
Chemical sector production grew by 2,7% over the 12 months to November, but the 11 months performance was only 2,5% better and November contracted on October (-2,7%) which is concerning. It is quite clear that the near 50% share of the petroleum sub-sector, again had a major impact with 4,1% growth up to November. See table and discussion for variations over different periods below.

With more than three quarters of the year completed, the indications are that chemical sector production will end 2024 at around 3% higher than 2023.

Production Index Seasonally Adjusted	Nov on Oct '24	Year to Nov '24	Nov '24 on '23	Q1 '24 on Q4 '23	Q2 '24 on Q1 '24	Q3 on Q2 '24	12 Mths to Nov '24
Total	- 2.7	2.5	1.4	3.1	1.0	- 0.5	2.7
Coke, petrol & nucl	- 2.6	4.1	- 3.3	2.7	2.5	- 4.8	5.5
Basic chemicals	- 2.4	1.9	- 0.6	- 0.2	0.8	- 0.8	2.2
Other chemicals	- 2.3	1.5	9.0	6.5	- 0.7	5.4	0.7
Rubber	1.3	- 6.3	- 6.4	- 0.1	- 6.1	- 0.5	- 5.5
Plastics	- 5.2	3.4	3.3	1.4	3.3	- 1.4	3.2
Total Excl Petroleum	- 2.9	4.6	7.0				4.1

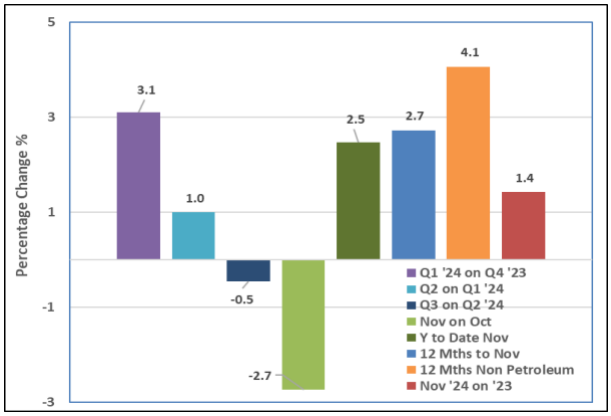
Source: Statistics SA, Manufacturing Production & Sales, p3041.2, Quantec

The graphs below show the difference between the overall sector and petroleum vs non-petroleum production trends. The right-hand graph gives clear comparisons of the differential growth patterns. The left-hand graph shows the whole sector (blue) and petroleum (black; left vertical axis) and non-petroleum on the right (different vertical scales).

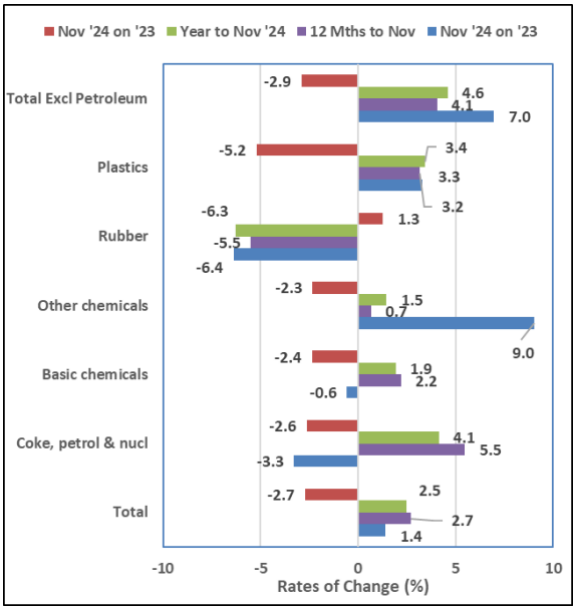


Source: Statistics SA, Manufacturing Production & Sales, p3041.2, Quantec

The substantial decline in petroleum product production is evident from the left graph (see focus annexure). The right-hand graph shows the relative stability in non-petroleum production as against the volatile changes in petroleum production; swings varying between +40% and -30% have occurred several times since 2019.



Source: Statistics SA, Manufacturing Production & Sales, p3041.2, Quantec



The graph above shows the overall sector performances over different time horizons. Of particular interest is that the overall chemical sector grew by less than half the rate (2,7%) of the non-petroleum sub-sector (4,1%) over a 12-month period. This further underlines the different dynamics within the sector. The numbers also indicate that 2024 production was probably between 2,5% and 3% higher than during 2023. The trend indicates a (+/-3 year) plateau around 20% below the 2019 performance.

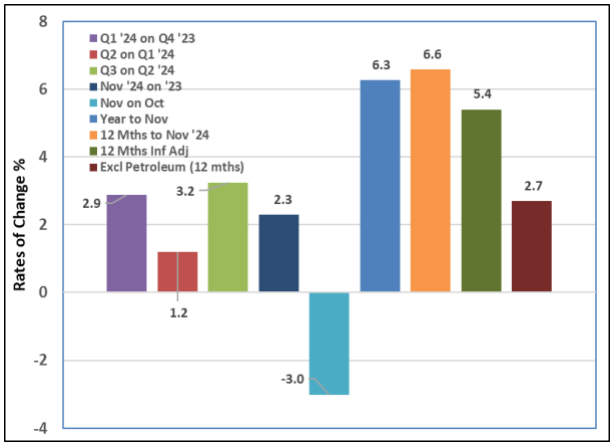
The graph on the right shows further details of the variations across sub-sectors, with 'rubber's' contrary performance. All sub-sectors had a bad November (rubber did better), all sub-sectors performed better over 11 and 12 months (rubber declined), and against a year ago rubber (-6,4%), coke, petroleum and nuclear (-3,3%) and basic chemicals (-0,6%) produced less.

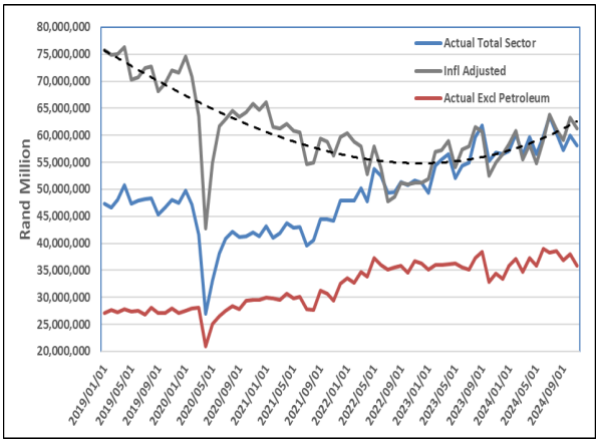
Sales Trends

November was a worse month than October (-3%), bar petroleum, with enough 'weight' to result in 3,2% growth in Q3 on Q2 (overall), with a near 6% improvement (petroleum). The full year sales number should show +/-5% growth on 2023. Non-petroleum sales for 12 months (2024) would probably be around 3% better than 2023.

Sales Values Seasonally Adjusted	Nov on Oct '24	Year to Nov '24	12 Mths to Nov '24	Q1 '24 on Q4 '23	Q2 on Q1 '24	Q3 on Q2 '24	Nov '24 on '23
Total	-3.0	6.3	6.6	2.9	1.2	3.2	2.3
Coke, petrol & nucl	1.3	10.9	13.7	-3.5	-4.0	5.7	-0.7
Basic chemicals	-5.6	4.5	3.1	13.1	7.5	-4.0	2.8
Other chemicals	-4.0	2.8	2.1	6.7	3.5	8.0	8.6
Rubber	-2.9	-4.6	-6.7	3.5	-1.4	-1.4	-8.8
Plastic	-8.8	6.5	5.8	2.0	3.5	-1.1	1.4
Total Inflation Adjusted	-3.3	5.2	5.4	6.4	-1.5	7.2	11.4
Total Excl Petroleum	-5.5	3.8	2.7				4.3

Source: Statistics SA, Manufacturing Production & Sales, p3041.2





Source: Statistics SA, Manufacturing Production & Sales, p3041.2

The graphics above again shows the differential patterns between the overall sector and petroleum versus 'the rest' sub-sector. The sales patterns virtually mirror the production trends of the different components.

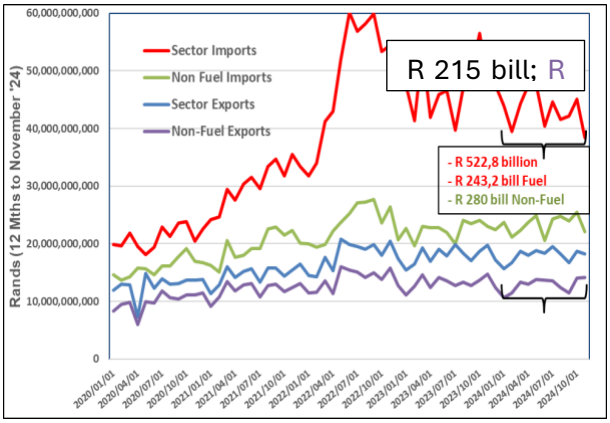
The right-hand graph shows the actual levels of sales (on one axis) and are therefore directly comparable.

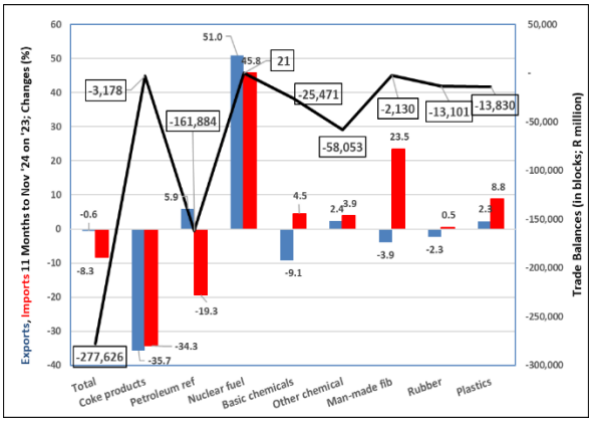
International Trade

In this report we look a bit deeper into the petroleum/non-petroleum contrast in international trade in chemical products**.** Of total chemical imports, 46% were petroleum products which also accounted for nearly 30% of exports over the last 12 months (this represents 15% of RSA international trade). The combined international trade (final imports and exports) represents over 300% of the sector's gross domestic production – an extreme case of an 'open' sector, and a major component of the country's predicament (dependencies) as well.

The policy implication of this reality is that any interference in trade flows have multiple sector- and country-wide implications which more often than not, is self-defeating.

The graphs below illustrate the point succinctly.

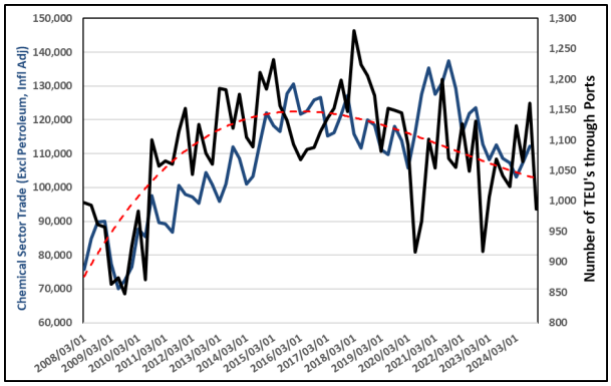




Source: SARS Export/Import data

Exports	Month-on-Month Nov on Oct 2024 %	Year to date Nov '24 on '23 %	12 Months to Nov '24 %	Nov '24 on '23 %	Trade Balance 12 Mths Billion
Total	- 2.4	- 0.6	- 0.7	- 8.0	- 307,894
Coke products	31.6	- 35.7	- 37.9	8.3	- 3,534
Petroleum ref	- 13.1	5.9	5.5	- 20.2	- 182,080
Nuclear fuel	- 37.2	51.0	38.7	- 1.3	94
Basic chemicals	6.8	- 9.1	- 9.2	- 13.9	- 27,253
Other chemical	- 1.5	2.4	2.7	9.7	- 63,794
Man-made fib	- 6.9	- 3.9	- 2.0	- 5.6	- 2,243
Rubber	5.6	- 2.3	- 1.9	- 2.1	- 14,155
Plastics	- 6.1	2.3	2.4	- 8.9	- 14,930
Imports					
Total	- 14.7	- 8.3	- 8.2	- 19.8	
Coke products	- 59.3	- 34.3	- 32.8	- 73.3	
Petroleum ref	- 16.5	- 19.3	- 19.3	- 34.4	
Nuclear fuel	- 55.2	45.8	44.4	- 68.1	
Basic chemicals	- 11.2	4.5	4.0	1.5	
Other chemical	- 13.5	3.9	5.0	- 8.1	
Man-made fib	1.8	23.5	24.2	38.0	
Rubber	- 6.3	0.5	0.6	21.5	
Plastics	- 19.3	8.8	8.7	- 7.5	

The sector is therefore also extremely vulnerable to logistical constraints and disruptions.

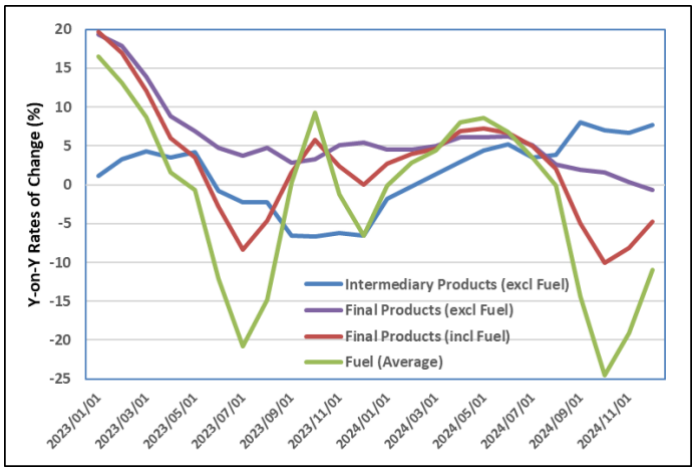


Sources: SARS trade data, Transnet National Port Authority

Petroleum products are to a large part exposed to the performance of the different pipelines transporting product across the country. The non-petroleum component of the sector is largely dependent on the efficient flow of container logistics through harbours and on rail and road transport (graph to the left).

Excellent, detailed data about 'liquid bulk' throughput at harbours have been obtained, the analysis of which will be incorporated in future sections on 'logistics'.

Chemical Sector Product/Sales Price trends



The average (final) product price inflation has been 0,7% for 2024. This was mainly due to average fuel prices dropping to 10% below its level 1 year ago. The PPI for chemicals was -4,7% in December. When fuel is stripped out of final product inflation, the picture changes substantially; price escalation of non-fuel products was 3,6% over 12 months (-0,7% on December 2023).

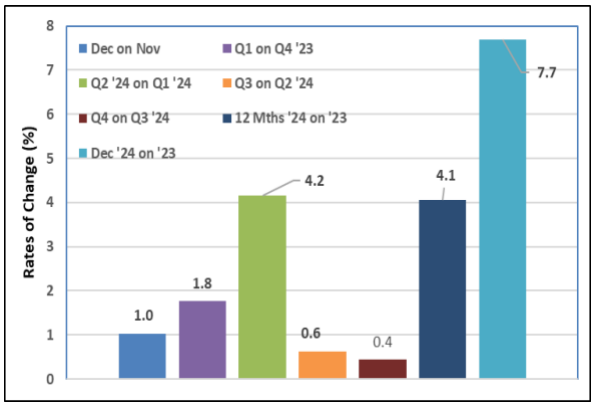
Source : Statistics SA, Production Price Indices, P0142.1, Quantec

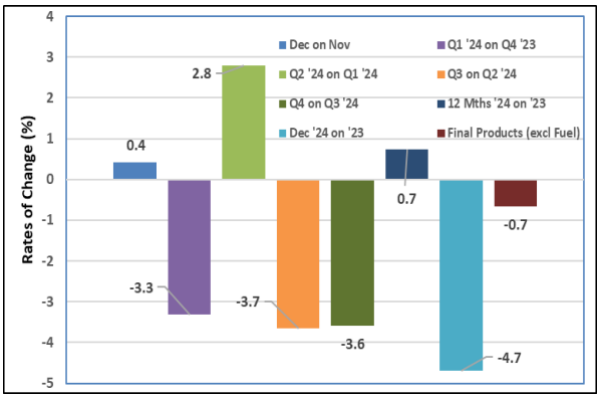
Intermediate product inflation was near 4,1% for 2024 and 7,7% in December 2024 on 2023.

Production Price Indices (Dec '23 = 100)	M-o-M Dec on Nov %	Year to date Dec '24 Index	Prev Y to date Dec '23 Index	Year to date Change %	12 Mths to date Dec '24 Index	Prev 12 mths Dec '23 Index	Change 12 mths %	Y-o-Y Dec '24 on '23 %
	Intermediary Products							
Total	1.0	105.2	101.1	4.1	105.2	101.1	4.1	7.7
Basic & Other Chem	1.6	106.0	101.5	4.4	106.0	101.5	4.4	9.6
Plastics	-0.5	103.7	100.0	3.7	103.7	100.0	3.7	3.1
Rubber	-0.7	99.7	99.7	0.0	99.7	99.7	0.0	-0.1
	Final Products							
Total (incl Fuel)	0.4	98.8	98.0	0.7	98.8	98.0	0.7	-4.7
Coal & Petroleum	0.7	96.5	98.0	-1.5	96.5	98.0	-1.5	-10.0
Petrol	0.4	99.4	101.6	-2.2	99.4	101.6	-2.2	-9.5
Diesel	3.1	94.1	98.8	-4.8	94.1	98.8	-4.8	-12.4
Other	-1.6	95.9	93.6	2.5	95.9	93.6	2.5	-7.6
Chemical Products	0.2	100.5	98.1	2.4	100.5	98.1	2.4	0.3
Rubber & Plastics	-0.3	104.6	98.2	6.6	104.6	98.2	6.6	5.9
Total (excl Fuel)	-0.5	100.2	96.8	3.6	100.2	96.8	3.6	-0.7

Source : Statistics SA, Production Price Indices, P0142.1, Quantec

Intermediate (left had graph) and Final Product Price movements (right hand graph)



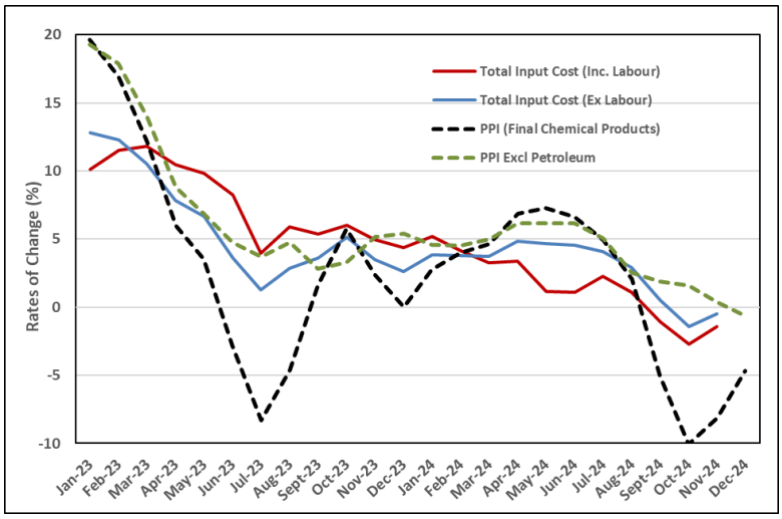


Source : Statistics SA, Production Price Indices, P0142.1, Quantec

If these numbers are correct (and there is no reason that they are not) this is the first time this economist has seen 'deflation' of any kind, in a career spanning 40 years!

Chemical Sector Input Cost Index

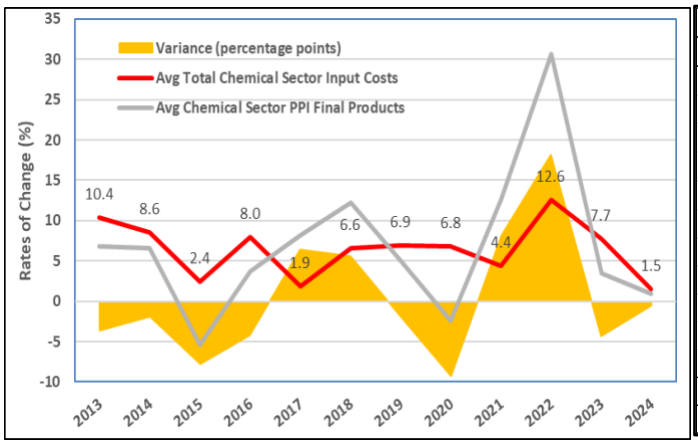
The project to refine the Input Cost Index for the sector is continuing. The cost basket and relative weights have not been adjusted. Work is continuing to refine the indices used which reflect cost increases in the different input categories.



Research to generate a viable and appropriate labour cost index (+/- 15% weight), as well as more sensitive indicators of imported input product costs (40% weight) is continuing, in consultation with colleagues in other sectors and Statistics SA.

The results of the second 'run' of the numbers (with full year 2024 data) are shown here.

Annual comparison between Input costs and selling prices of final products (PPI)



Avg Total Chemical Sector Input Costs		PPI	Variance
Year	%	%	% Point
2013	10.4	6.8	- 3.6
2014	8.6	6.6	- 1.9
2015	2.4	- 5.3	- 7.8
2016	8.0	3.8	- 4.2
2017	1.9	8.2	6.4
2018	6.6	12.2	5.6
2019	6.9	5.1	- 1.9
2020	6.8	- 2.5	- 9.3
2021	4.4	12.6	8.1
2022	12.6	30.7	18.2
2023	7.7	3.4	- 4.3
2024	1.5	0.9	- 0.5
Input Costs up to November 2024		2024	2024 Estimate

The 'variance' reflects the percentage point difference between the rise in costs and the selling prices of final chemical products. The numbers indicated (red line) reflect average input cost inflation in each particular year.