



**National Employment Vulnerability Assessment:
Petroleum-based Transport
Value Chain**

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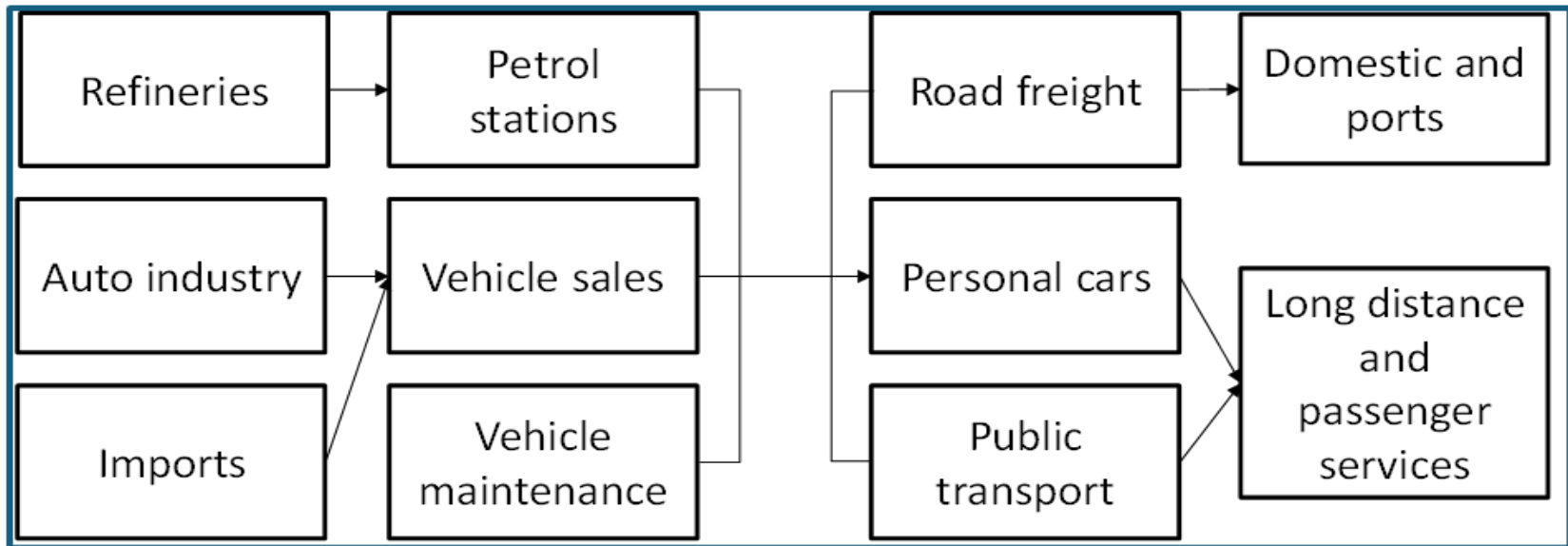
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Outline

- Background and scope of the value chain
- Major trends in the value chain
- Dimensions of climate change-related impacts
- Nature of vulnerability across the value chain
- Vulnerable groups
- Takeaways

Background and scope of the value chain

Figure 1: Petroleum-based transport value chain



Source: Makgetla, et al., (2019:69)

- The value chain makes up a sizable share of global GHG emissions (11% locally).
- Emissions largely at consumption
- Decarbonisation efforts focused on cleaner fuels and shift to NEVs.
- Changing global policy landscape
 - EU still looking to ban ICE vehicle imports by 2035
 - Implementation of CBAM will place additional cost on exports to EU
- Local transition to NEVs is still far off
 - But various policies introduced to guide the transition, including the National EV white paper

Major trends in the value chain

- The value chain employs almost 1.4 million people as of 2024
 - Over half of employment in road transport services (largely informal)
 - Almost a fifth in maintenance and repairs (largely informal)
 - Manufacturing concentrated in GP, KZN and EC
- GVA amounted to R546 billion in 2024, almost doubled from 2000
 - Almost two thirds in land transport, and over a quarter in sales, maintenance and repairs
- SA has a trade deficit (auto trade) with the rest of the world
 - Exports growing faster (averaged 9% vs 6% per annum between 2000 and 2024)



Dimensions of climate change-related impacts

RISK	IMPACT ON VALUE CHAIN	PROBABILITY	TIMEFRAME
Carbon taxes (CBAM and local carbon tax)	<p>The local and global push to internalise the cost of GHG emissions will increase costs for passenger and freight transport:</p> <ul style="list-style-type: none"> - The South African Carbon tax has been in place since 2019 and is applicable to industries that emit GHG emission. The Act includes offsets for use of renewable energy, energy efficiency etc.). - CBAM is not directly applicable to the automotive sector. However, impacts would arise due to CBAM application in iron and steel, and aluminium, and later, if expanded to more sectors. 	High.	<p>Already happening.</p> <p>Scope 2 emissions inclusion postponed for at least 2 years</p>
Cleaner fuels	<ul style="list-style-type: none"> - Imported ICE vehicles would need to be adapted to local fuel standards. - This would also impact on local production and exports, with exports using a different fuel standard. 	High.	Already happening.
Shift from ICE vehicles to NEVs	<ul style="list-style-type: none"> - EU ban on imports of ICE vehicles in 2035 (and other possible bans in other countries) would reduce demand for ICE vehicles manufactured in South Africa unless South Africa could shift its exports to other regions still using ICE vehicle. - Increase in local NEV adoption would reduce demand for petroleum fuels and therefore reduce employment in petrol stations. - Increase in local NEV adoption would reduce demand for maintenance and repairs services and would largely impact on workers in the informal sector. - Increase in production and adoption of NEVs globally will reduce demand for platinum (for use in catalytic converters). 	High.	<p>Medium to long-term (≥10 years).</p> <p>Long term (>10 years).</p>

Nature of vulnerability across the value chain

- Land transport
 - Mainly freight and passenger services (buses and mini-bus taxis)
 - Transition will impose costs on businesses (own-account workers and small businesses) due to cost
 - Availability of technology also a problem for buses and taxis
- Repairs and maintenance
 - Impact mainly from shift to (N)EVs
 - Aside from standard components (chassis, tyres etc.), EVs have fewer moving parts
- Petrol stations
 - Impact will arise from shift to NEVs, which still make up a low share of local vehicle sales
 - PHEVs and HEVs might increase demand for charging ports at petrol stations, but not enough to sustain the current 4000 stations
- Auto and components manufacturing
 - Scope of the impact will depend on OEM decisions about local NEV manufacturing
 - If OEMs do not transition to NEV production, local industry will lose export revenue from key markets (esp. EU – key driver of exports)



Vulnerable groups the value chain

- All workers (including own account workers and small businesses) in the value chain are vulnerable, but at different levels
 - Extent of vulnerability will depend on timeframes and location in the value chain
- Based on resources criteria (nature of employment, education levels, social and financial resources), repairs and maintenance and transport workers most vulnerable
 - More likely to be in informal employment and business ownership
 - Least likely to contribute to retirement/pension funds and UIF
 - Also means fewer workers are part of trade unions or have an employment contracts
 - More likely to have lower education levels (slightly above other industries)



Take aways

- Structure of the value chain remains unchanged
- Notable shifts in local and global policy environment, with the EU ICE imports bans and CBAM being the most immediate
- Impact across entire value chain, but more pronounced for repairs and maintenance and land transport workers
- Timeframes will impact on the scope of the impact

Thank You

