National Employment Vulnerability Assessment: Petroleum-based Transport Value Chain

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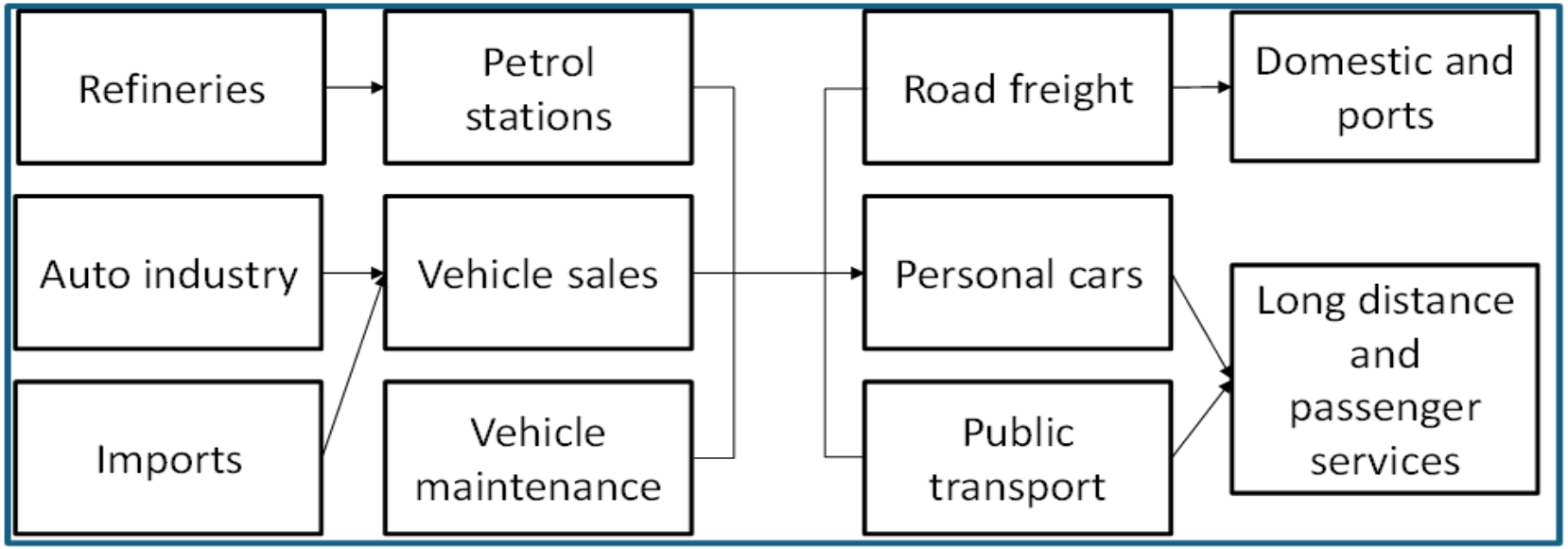
06 November 2025

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
- Proposals

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)
    - R277 billion for imports vs R262 billion for exports in 2024 (lowest deficit thus far)

Dimensions of climate change-related impacts

RISK	IMPACT ON VALUE CHAIN	PROBABILITY	TIMEFRAME
Carbon taxes (CBAM and local carbon tax)	The local and global push to internalise the cost of GHG emissions will increase costs for passenger and freight transport: - 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.	Already happening. Scope 2 emissions inclusion postponed for at least 2 years
Cleaner fuels	- 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	- 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.	Medium to long-term (≥10 years). Long term (>10 years).

Nature of vulnerability across the value chain

- Extent of vulnerability impacted by transition timeframes and technology types
  - i.e. for petrol station workers and mechanics, higher uptake of hybrids over the medium to long-term might enable phased transition of workers to other areas of work
- Availability and cost of the technology is also key
  - i.e. availability and cost of mini-bus taxis and buses
  - China still has highest share of NEV buses globally.
  - A few pilots happening locally for mini-bus taxis, but cost is still too high per vehicle
- Local production decisions for 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 across 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)
- At community level, EC most concerning due to limited economic diversification compared to GP and KZN

Proposals

- Enable road transport services to transition to new technologies
  - Financing support to access new technologies
  - Infrastructure support as well
- (Re)skilling support for mechanics
  - Can be transitioned to jobs needing similar skills
  - Use recognition of prior learning to formalise qualifications
  - Integration into OEM production processes where possible

Thank You