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# LCRs and productivity in the SA Automotive sector: BRICS Comparative analysis

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# Context & Background

- **Importance of SA automotive sector (NAAMSA, 2024/5)**
  - Contributes 5.3% to GDP (3.2% from manufacturing and 2.1% from retail)
  - Accounts for 22.6% of total manufacturing value-added
  - Contributes about 14.7% to total export basket
  - Supports 115 000 direct manufacturing jobs
  - Generates one of the largest multiplier effect on the domestic economy

- **Growth in SA vehicle production and exports under the APDP**
  - SA vehicle production increased by 8.5%, from 555,885 units in 2022 to 602 302 units in 2025
  - Between 2022 and 2025, approximately 70% of total value production was exported, with nearly 80% of exports destined for EU, highlighting its integration into global value chain
  - Vehicle export volumes increased from 351 000 in 2022 to 414 000 units in 2025
  - The export value of vehicles and automotive components increased by R43.5bn, or 19.1%, to a record R270.8bn in 2023

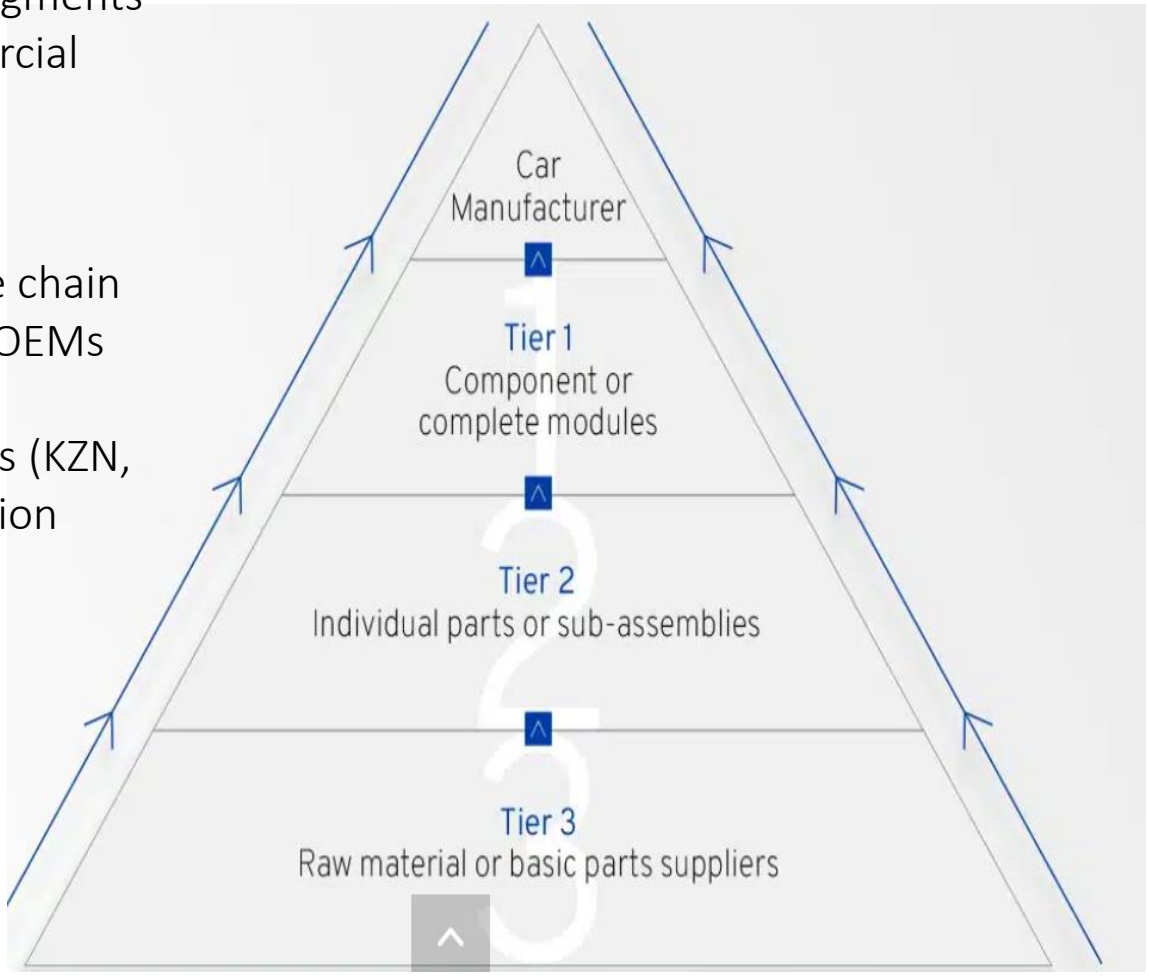
- **South Africa and BRICS global automotive production rankings**
  - SA ranks as the 21st largest vehicle producer globally and account for 51% of Africa's total vehicle output
  - India 4th, Brazil 8th, Russia 15th ,China 1st on global vehicle production rankings
  - SA global vehicle production market share is 0,65% (China is 34%; Brazil 3%, Russia 1.5%, India 7%)

# Overview: structure of the automotive industry

- The automotive industry is organised into 4 segments (Passenger, light commercial, medium commercial and heavy commercial vehicles & automotive components.

- Operates within integrated global supply value chain consisting of Tiers1,2,3 suppliers supporting OEMs

- 7 major OEMs & clustered across three regions (KZN, GP, & EC) with an investment value of R7,3 billion (2024)

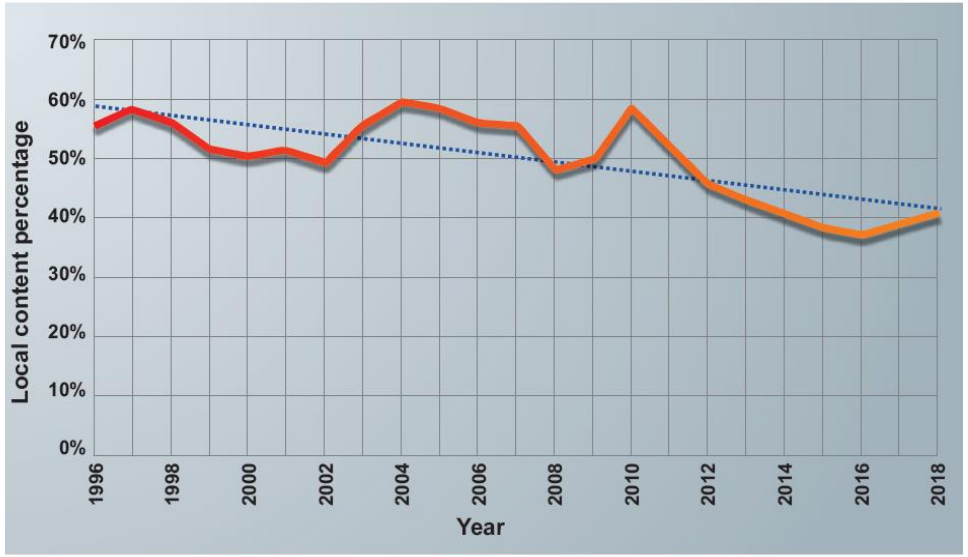


# Problem statement

- SAAM has a long-term policy target of increasing local content to 60% by 2035
  - Despite policy support and growth in vehicle production and exported, local content levels have continued to decline (actual 39% in 2025, significantly below the target of 48%)

Table 6: South Africa automotive performance potential to 2035 (in constant Rand values)

| Production | 2015 (base) | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|
| Light vehicles (4.5% CAGR for PVs, 3.5% for LCVs) | 583,999 | 735,669 | 900,044 | 1,101,746 | 1,349,373 |
| M&HCVs (3.0% CAGR) | 24,303 | 27,353 | 31,710 | 36,760 | 42,615 |
| Total vehicle production | 608,302 | 763,022 | 931,754 | 1,138,506 | 1,391,988 |
| Avg. value of SA produced vehicles (constant) | 225,804 | 225,804 | 225,804 | 225,804 | 225,804 |
| Value of production (Rm) | 137,357 | 172,293 | 210,394 | 257,079 | 314,317 |
| Local content (%) (2.2% annual improvement) | 38.70 | 43.18 | 48.19 | 53.77 | 60.00 |
| Local content value (Rm) | 53,157 | 74,403 | 101,382 | 138,231 | 188,589 |
| Employment (productivity adjusted – 61%) | 112,000 | 129,570 | 151,882 | 182,355 | 224,000 |




Source: Higuchi et al (2021)

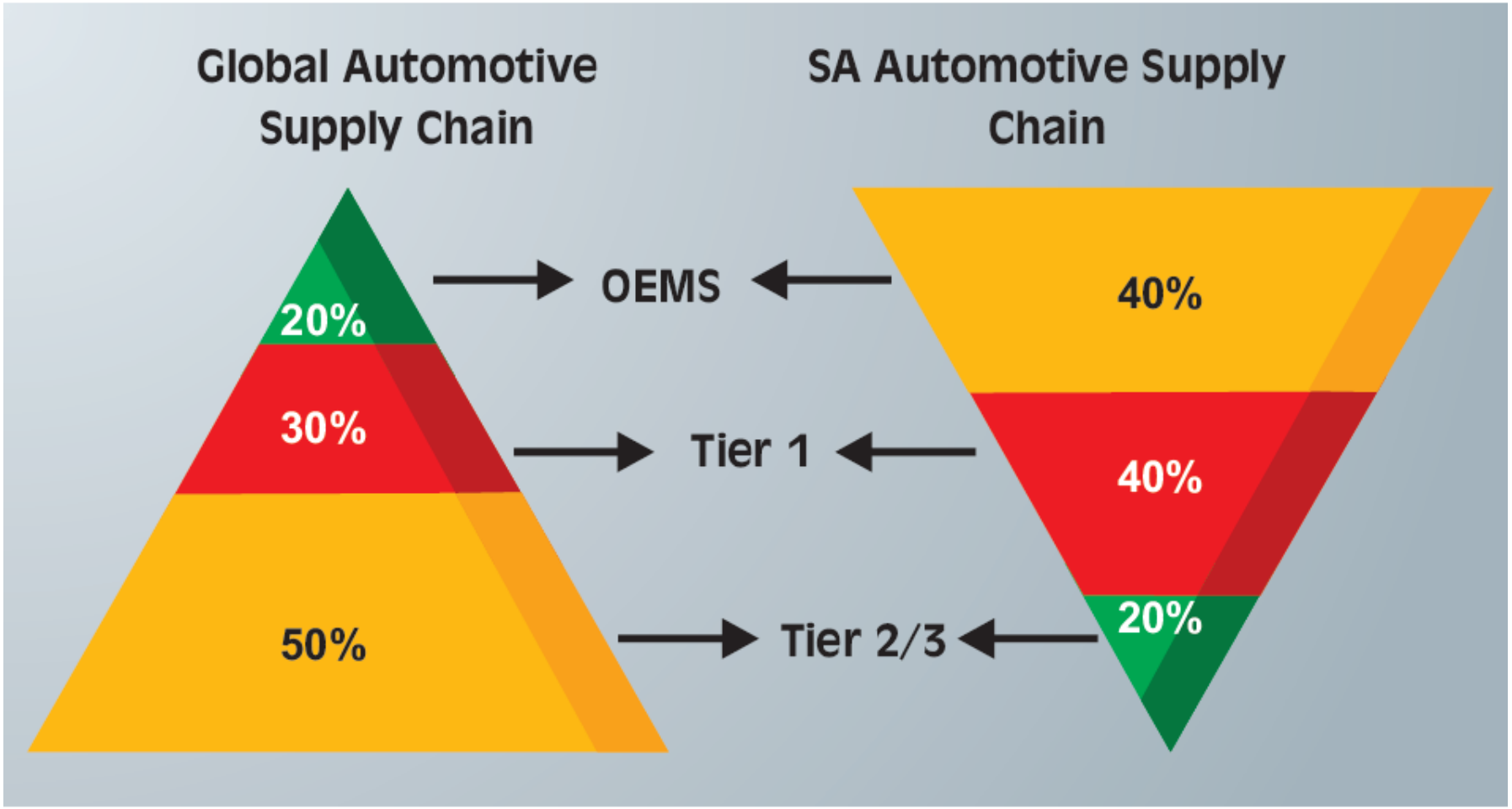
- The declining localization trend means that growth in domestic vehicle assembly is supported by imported components and intermediate inputs (e.g. 9.7% increase of imports of original equipment by major OEMs in 2023 ),

- This decline in localization has significant implications for SA including:
  - Weaker employment generation, limited development of upstream industrial capabilities, reduced industrial and technological spillovers, increases trade deficits, import dependence and weaker manufacturing led-industrialisation

# …Trend: Comparative BRICS automotive local content levels (2000-2025):

| Country | 2000 | 2010 | 2020 | 2025 (estimated) | Main Industrial Strategy |
|---|---|---|---|---|---|
| China | 40–50% | 70–80% | 85–95% | 90–95% | Aggressive industrial policy + technology transfer |
| India | 60–70% | 75–85% | 80–90% | 85–90% | Supplier ecosystem development |
| Brazil | 75–85% | 65–75% | 60–70% | 55–65% | Protectionism + local content incentives |
| Russia | 20–30% | 40–50% | 50–60% | 55–65% | Localisation agreements linked to FDI |
| South Africa | 45–55% | 35–40% | 38–40% | 39% | Export-oriented assembly model |

# …Local component manufacturing in SA versus the world




*Source: Black Barnes, Monaco (2017)*

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# Factors limiting localisation

- MIDP (1995-2012) exposed the industry Intense global competition (policy legacy)
  - Trade liberalisation resulted in closure of local firms and increased imports
  - The industry remains dependent on imported inputs and key components (e.g gearboxes, engines and electronic components)

- Sale of major upstream suppliers (steel) to foreign owners
  - Weakened domestic capabilities

- Weakening of domestic supply chain capabilities
  - Insufficient competitive firms capable of producing at cost, scale, quality required by OEMs

- Exchange rate volatility has also increased the cost of locally produced components
  - Investment by Tier1 suppliers has not translated into growth of T2&T3 firms

- Infrastructure constraints (ports, logistics, electricity)
  - Increase production costs

- Small domestic market size with lower economies of scale (SA: 603 302 )
  - China (33million), Brazil (2.8million), Russia (1,5million), India (6million)

# Aim and objectives of the study

- **Aim:** Examine the role of the LCRs in the automotive industry and their implications for productivity in South Africa through a comparative analysis across BRICS countries

- **Objectives:**
  - Characterize the SA automotive landscape with a focus on localization trends and supply chain constraints;
  - Conduct a comparative benchmark analysis of effects of LCRs on productivity across BRICS countries including their economy-wide effects on productivity;
  - To provide policy options for refining LCR to improve productivity and competitiveness within the automotive sector

- SAAM (2035) and APDP2
  - Grow SA vehicle production by 1% of global vehicle production (1,4million units)
  - increase local content in assembled vehicles to 60%
  - Double employment opportunities (from 112 000 to 224 000)
  - Improve manufacturing competitiveness levels comparable to those of leading int'l competitors
  - APDP: Incentive framework that allows duty rebates for localization of activities

# Literature Review: Theory

- **LCRs definition :** LCRs are industrial policy instruments that require the incorporation of a given percentage of domestic value-added or intermediate products into final products (Grossman, 1981)
- **Multiple Objectives** include protecting local industries and promote domestic value addition; creating employment opportunities; boosting exports; encourage use of local inputs; enhancing technological development; and supporting broader economic development
- **Impact on productivity (transmission channel):**
  - By requiring that firms use domestically sourced inputs, even when more competitive imported input are available;
  - This may generate inefficiencies when domestic suppliers cannot match intern'l standards of cost, quality or technological sophistication compared with global competitors.
  - Consequently, restricted access to globally competitive inputs increase production costs, reduce firm competitiveness and constrain productivity growth (Deringer, et al., 2018).
- **Competing Perspectives on LCR effectiveness:**
  - Veloso, Soto, and Amsden, (1998): LCR fail when domestic industries are sub-scale and shielded from competition
  - MacDuffie and Helper (1997) : LCR can promote domestic capability development, economies of scale and increased domestic production, particularly when paired with complementary policies such as R&D support, supplier development or export incentives

# Empirical literature

- **Research on the economic impact** of LCRs spans several market structures and policy contexts (Perfect competition, duopoly/oligopoly, and monopoly market)
  - Davidson et al., (1985) show that LCRs in a duopolistic structure reduce welfare, output and employment in both home and host countries.

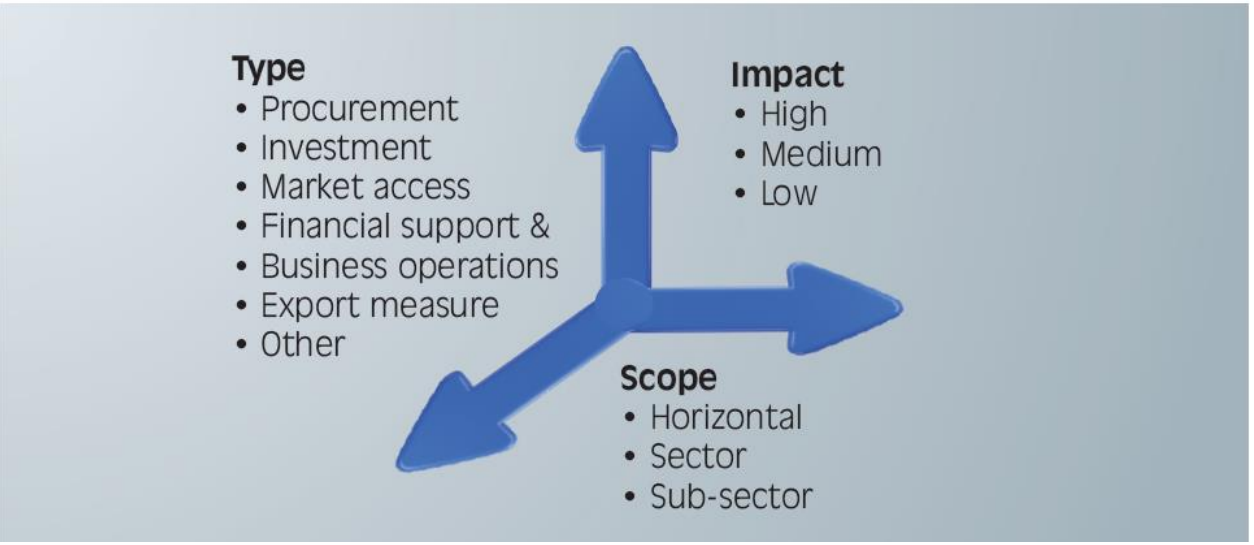
- **Studies using general equilibrium framework to analyse welfare implication of LCR policy.**
  - Applied CGE models in the automotive sector (Lopez-de-Silanes, Markusen, and Rutherford (1996, Belderbos and Sleuwaegen (1997) find that LCRs often reduce final output and are anti-competitive

- Veloso (2006) highlight **potential welfare gains** when LCRS support learning, scale economies and domestic capability development

- Overall, the empirical literature demonstrates that LCRs generate **mixed and content specific effects**
  - The central conclusion is that economic impact of LCRs depend on policy design, including the type of LCR, its severity, timing and whether it is accompanied by **complementary measures** such as supplier development or innovation support.

# Methodology

- A **two-stage analytical framework combining benchmark analysis and CGE modelling**
  - The first stage uses benchmarking by classifying LCRs according to type, scope and level of impact,



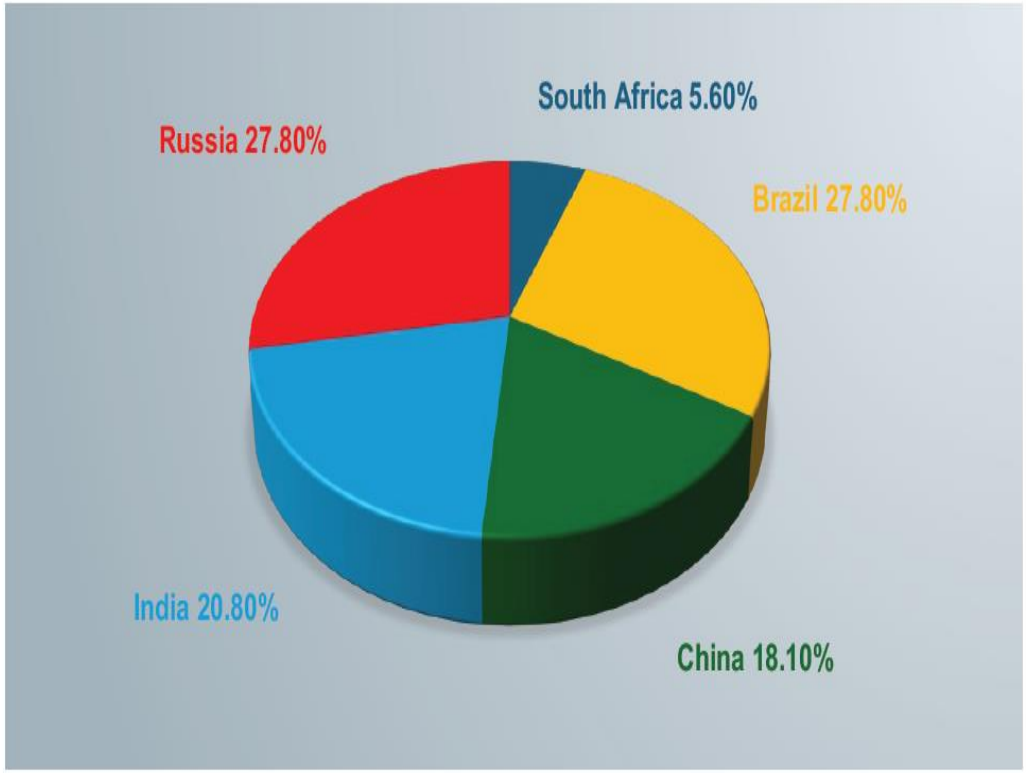

  - The second stage applies ad-valorem equivalents (AVE) within the computable general equilibrium (CGE) model

- The analysis draws on **secondary data sourced** mainly from the Global Trade Database (GTD) and Centre for International Political Economy (ECIPE)-
  - In total 72 distinct LCR measures are identified in the automotive sector

# Findings: Benchmarking

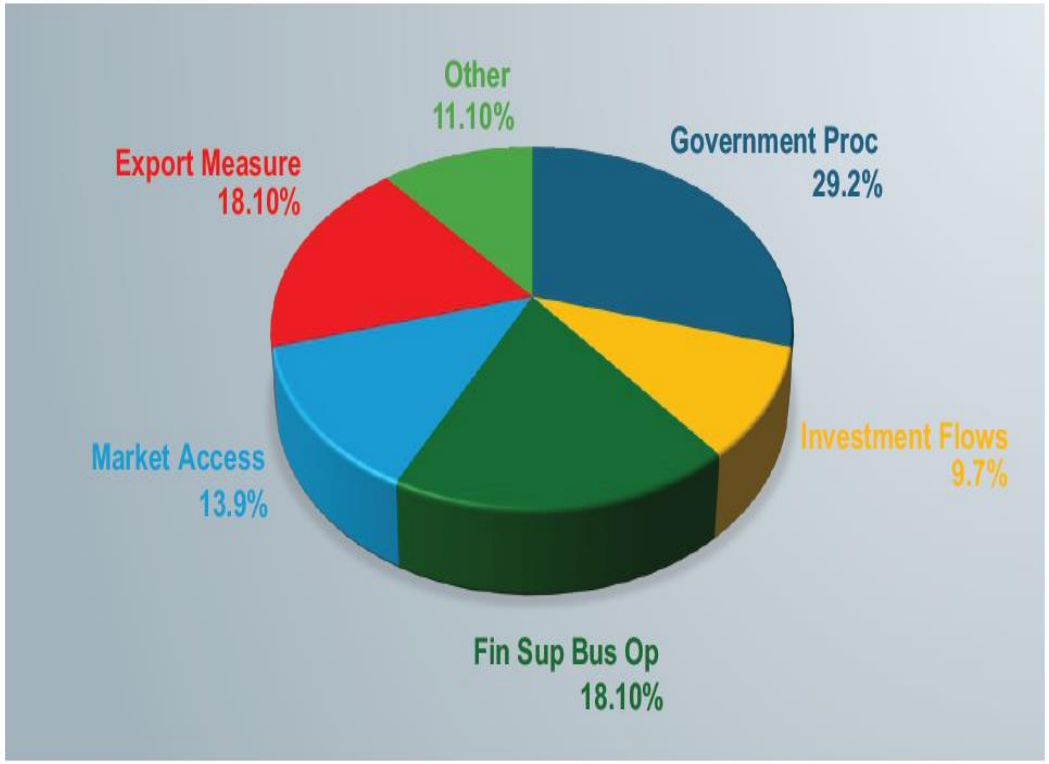
- The BRICS countries account for the largest share of LCRs globally (44%) with automotives alone accounting for 17% of all LCRs worldwide

**Figure 5B: Share of LCRs by BRICS**




*Source: ECIPE*

**Figure 5C: LCRs by policy type**




*Source: ECIPE*

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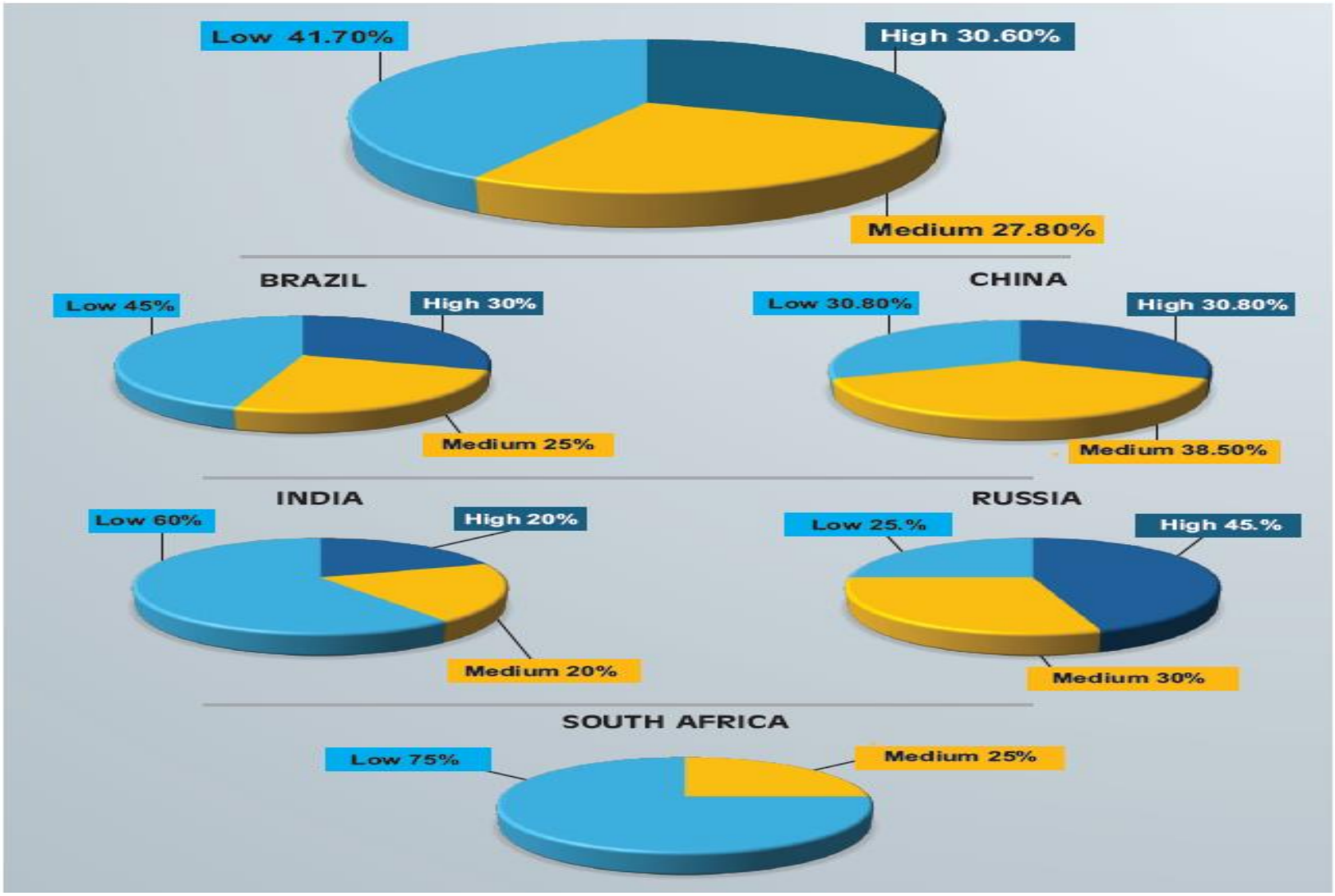
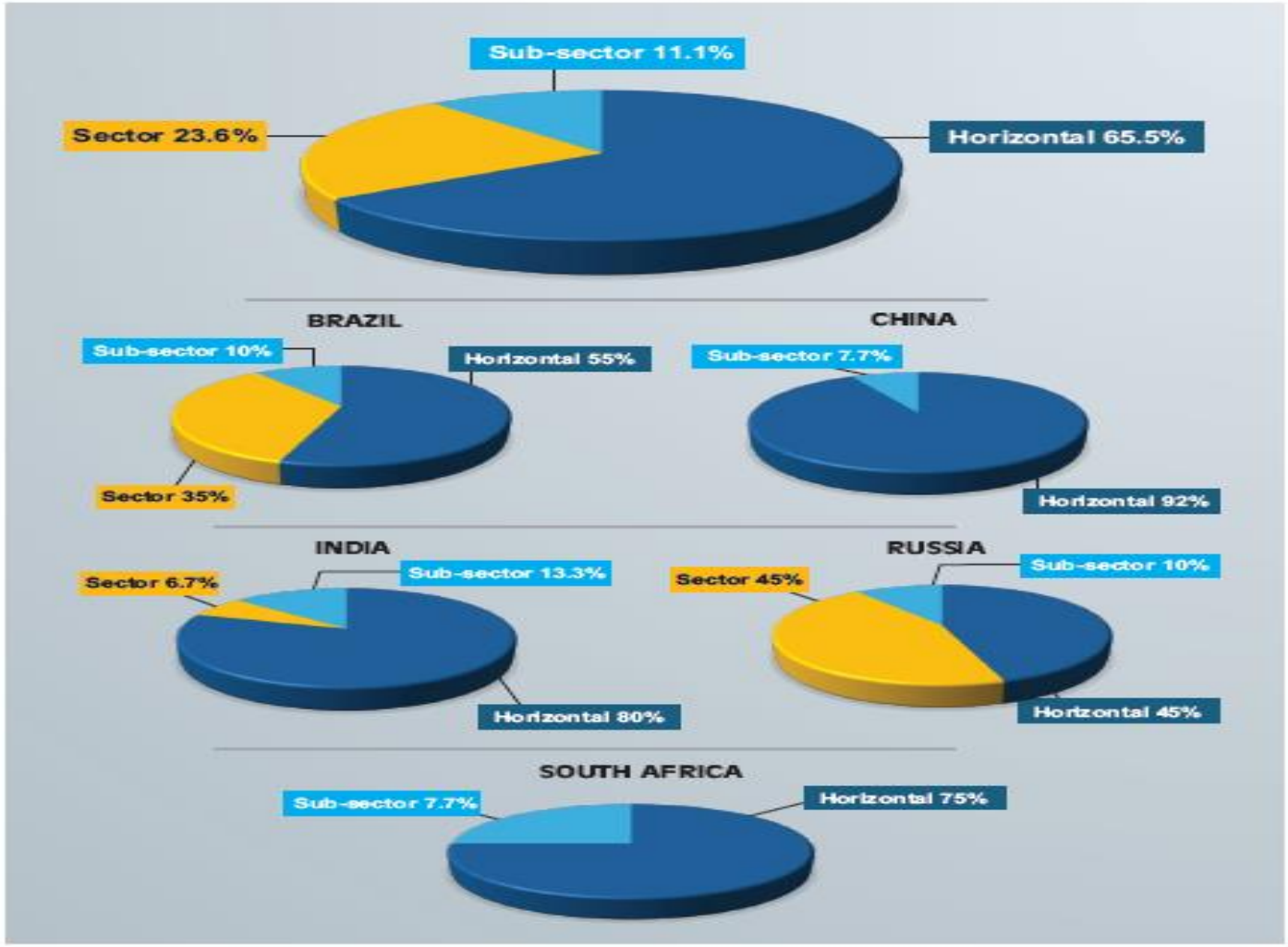
# Benchmarking: LCR by impact for each BRICS



# Benchmarking: LCR by scope for each BRICS

**Figure 5E: LCRs by scope**




*Source: ECIPE*

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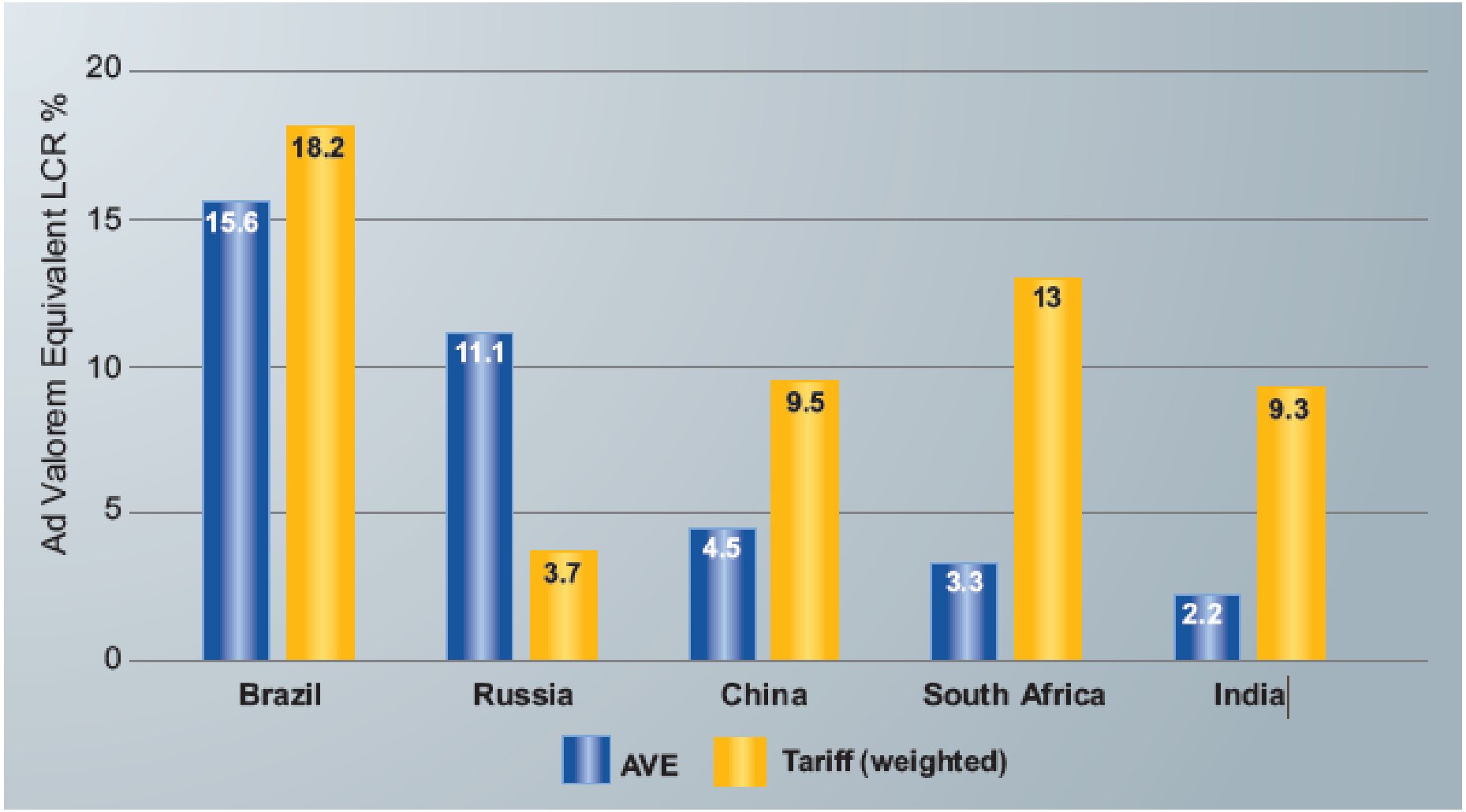
# LCRs AVEs and Tariffs for BRICS

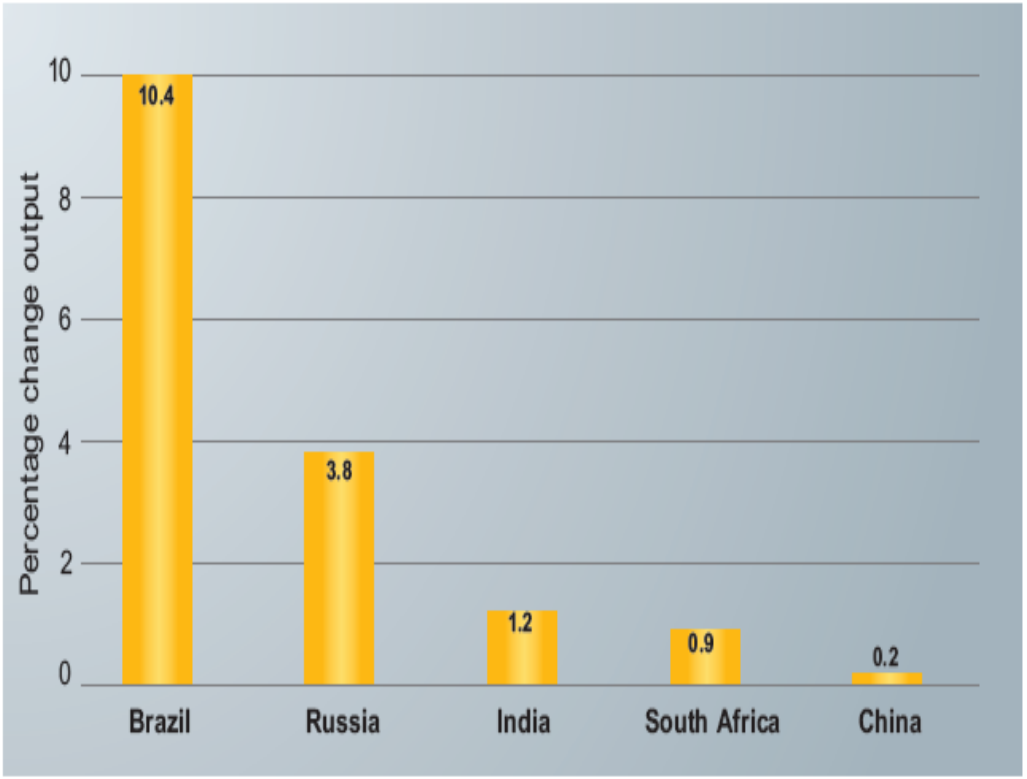
**Figure 5F: LCRs AVE and weighted tariffs for BRICS**




*Source: ECIPE*

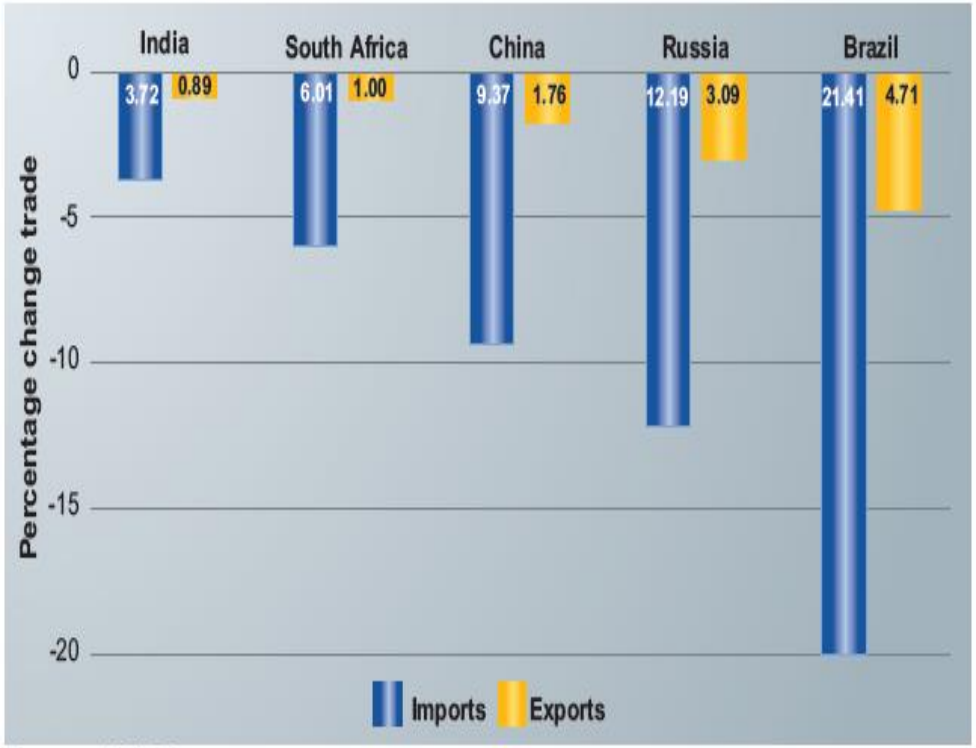
# CGE Results (Economic impact: output, trade and prices)

**Figure 5G: LCRs impact on output**




*Source: ECIPE*

**Figure 5H: Imports and Exports impact of LCRs in BRICS**




*Source: ECIPE*

# Impact of LCRs on prices in BRICS

**Figure 5I: Impact of LCR on prices in BRICS**


*Source: ECIPE*

# Conclusion and Recommendations

- **Benchmarking results-**
  - SA retains significant scope to increase localisation in selected automotive components. However, several structural constraints impede productivity gains including limited supplier capabilities, high-input costs and infrastructure bottlenecks
- **The CGE results demonstrate that stringent use of LCRs may –**
  - Increase production costs, reduce sectoral competitiveness, and generate negative spillover effects across the economy, thereby offsetting potential employment and value-added gains
- **Policy Lessons from BRICS countries**
  - South Africa's LCRs strategy should be designed within a broader productivity enhancing framework. LCRs should be:
    - ❑ aligned with supplier readiness,
    - ❑ complemented by targeted interventions including skills development, supplier upgrading, technology diffusion and support for Tier-2 and Tier-3 local component manufactures.
    - ❑ Strengthening infrastructure reliability and reducing input costs, particularly in energy and logistics to ensure that localisation contributes to productivity and competitiveness rather industrial inefficiency

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# THANK YOU

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