The Structural Change Emergency in South Africa

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Motivation (1)

- Traditional manufacturing-led development is struggling to take off in Africa and other emerging economies outside Asia (Diao et al, 2024; Kruse et al., 2023; McMillan and Zeufack, 2022; Rodrik, 2016). Manufacturing employment growth predominantly informal.

- South Africa an atypically rich African country with a mostly formal manufacturing sector; one of the few 'premature deindustrializers' (Rodrik 2016, Hamilton and Mensah 2024); stuck in a 'middle-income trap' (Andreoni and Tregenna 2021).

- Chapters within Andreoni et al. (2021) show deep concern for the state of structural change in South Africa in the 2010s; particularly a stagnation of manufacturing productivity and switch in investment to more profitable non-tradeable services.

Motivation (2)

- The nature of global manufacturing and services are also changing (Baldwin & Forslid, 2023; Owusu et al., 2021; Rodrik, 2018); Emerging discussion on services as alternative pathway (African Development Bank, 2024a; Atolia et al., 2020; Sen, 2023; Peters et al. 2026)

- Within-sector changes for the structural transformation process, particularly within the services sector (Gollin and Kaboski, 2023; Duarte and Restuccia, 2020). High degree of formality in SA manufacturing limits potential for 'informal productivity gap' closure within this sector.

- We seek to set the empirical and policy discussion of structural change in SA in comparative perspective with a changing world and a changing literature.

Questions

- What has been the contribution of structural change to growth in South Africa in the decades since apartheid?
- How has this changed over time, in terms of sectoral composition, and in comparison with regional and peer economies?
- Were the 2010s as bad in terms of structural change as Andreoni et al. (2021) suggest, and are there signs of recovery?
- Can services contribute meaningfully to structural change in South Africa? Can they lead structural change? Can/should they be a focus for industrial policy? What is the role of international vs domestic demand?
- What are the implications for policymakers in South Africa?

Overview of Findings

- 2010-2019 was a 'structural change emergency': negative overall labour productivity growth; negative or negligibly small productivity growth within all broad sectors; growth-reducing structural change
- The 'emergency' stands out clearly both compared to previous decades and other regions/countries
- Post-2020 signs of recovery; labour productivity growth back above 1% on average. Structural change positive. *Caveat: Exceptional post-pandemic period*
- Productivity growth slower and (much) less balanced than in pre-'emergency' decade. Driven only by productivity growth **within services**, and small growth enhancing SC **towards services**. VA and jobs embodied in exports constant over time, mining declining.
- Productivity within manufacturing, mining, and other industry is declining as rapidly or worse than in the 'emergency' decade; common across provinces.

Changing Nature of Manufacturing and Emerging Potential of Services

- Technological progress and geopolitical shifts have resulted in fundamental changes
- Only the manufacturing sector exhibited unconditional convergence across countries (Rodrik, 2013)
- Among 'modern' sectors, manufacturing had a unique capacity to absorb low-skilled labour
- However, Rodrik (2022) acknowledged that this landscape may have changed, and that services now represented the bulk of future job creation
- Herrendorf et al. (2022) casts doubt on the unique convergence properties of the manufacturing sector
- Baldwin & Forslid (2023) envision a world 'where manufacturing is jobless and services tradeable'; Blanchard et al. (2023) illustrates the extent to which consumption service

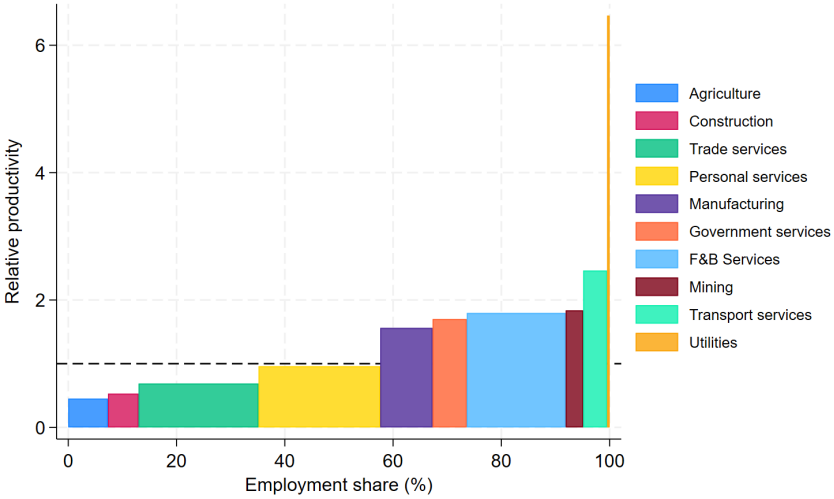
Data

- Sectoral employment and value added data (1990–2024) from Statistics South Africa and the GGDC Economic Transformation Database (ETD), allowing consistent shift-share decomposition. Stats SA Data allows for (first?) province level analysis.

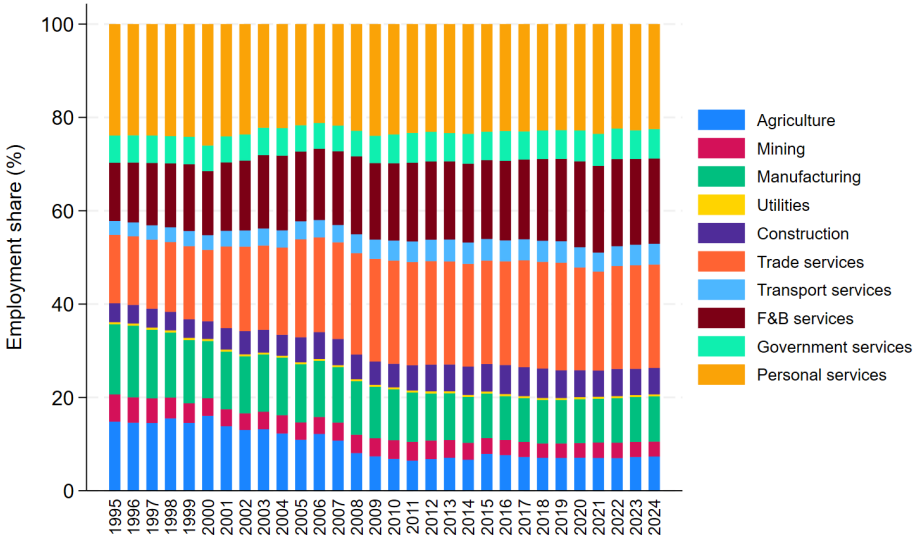
- Internationally comparable sectoral data (Africa & BRICS), including Russia via the ETD for Transition Economies (ETD-TE), enabling cross-country benchmarking (Hamilton & de Vries 2025).

- Input–output data from the Africa Supply and Use Tables (ASUT) to analyze value-added linkages and structural composition beyond simple sector shares (Mensah & de Vries 2024)

Structural Conditions in South Africa



Sectoral Shifts Over Time



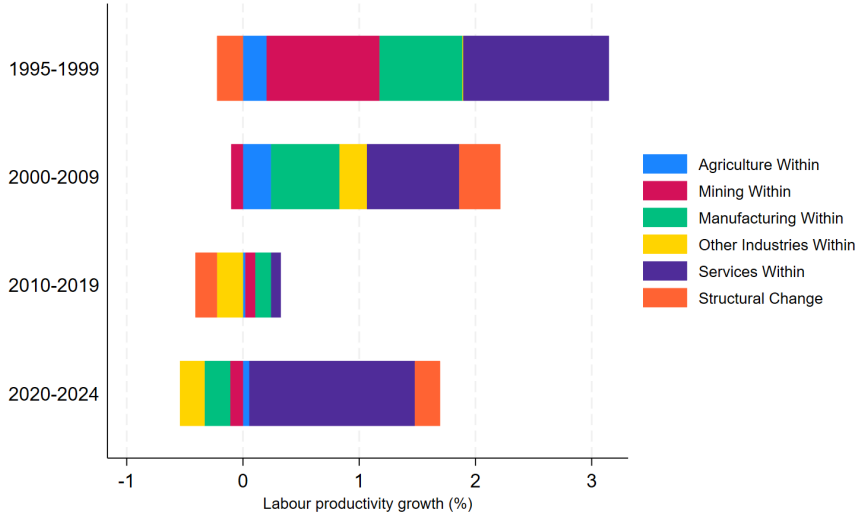
Shift-Share Decomposition

$$p_t = \sum_i p_{i,t} s_{i,t} \tag{1}$$

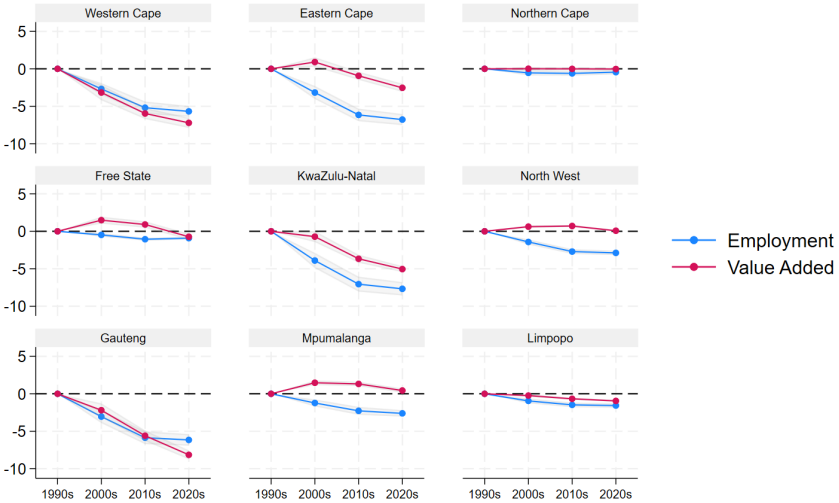
where p_t is aggregate labour productivity in year t, $p_{i,t}$ is labour productivity of sector i in year t and is calculated as $p_{i,t} = \frac{VA_{i,t}}{L_{i,t}}$, where $VA_{i,t}$ is real value added in sector i and $L_{i,t}$ is the number of persons employed in sector i, both in year t. $s_{i,t}$ is the employment share in sector i defined as the ratio of employment in sector i to total employment in the economy at time t. Equation 1 can be decomposed as:

$$\dot{p} = \frac{\Delta p}{p^{t-1}} = \sum_{i=1}^{N} \left[\frac{(p_i^t - p_i^{t-1}) s_i^{t-1}}{p^{t-1}} \right] + \sum_{i=1}^{N} \left[\frac{(s_i^t - s_i^{t-1}) p_i^t}{p^{t-1}} \right] \tag{2}$$

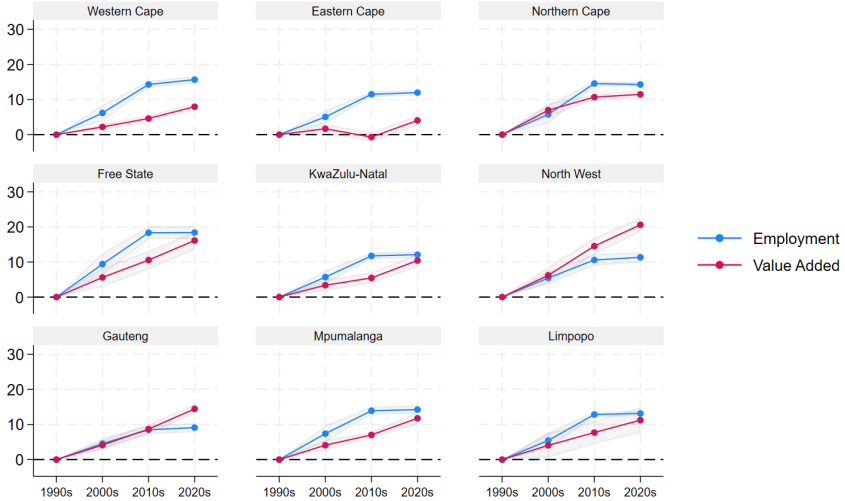
Decomposition Results



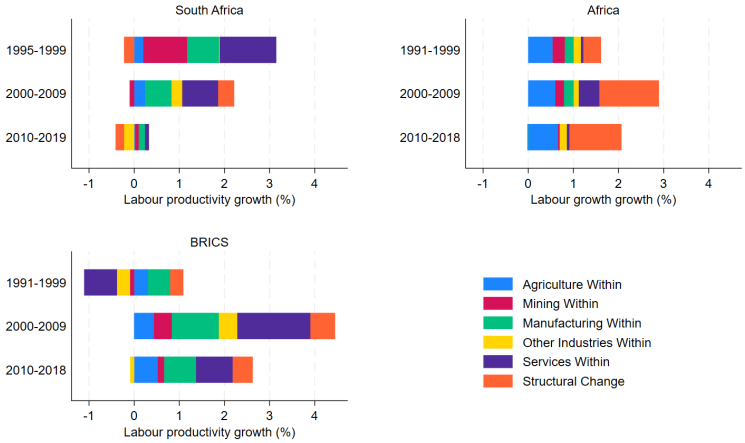
Deindustrialization by Province



Servicification by Province

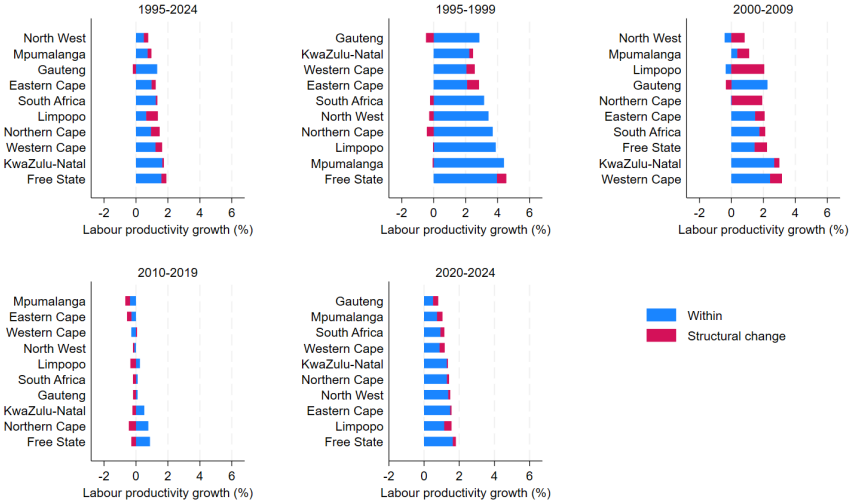


International Comparison

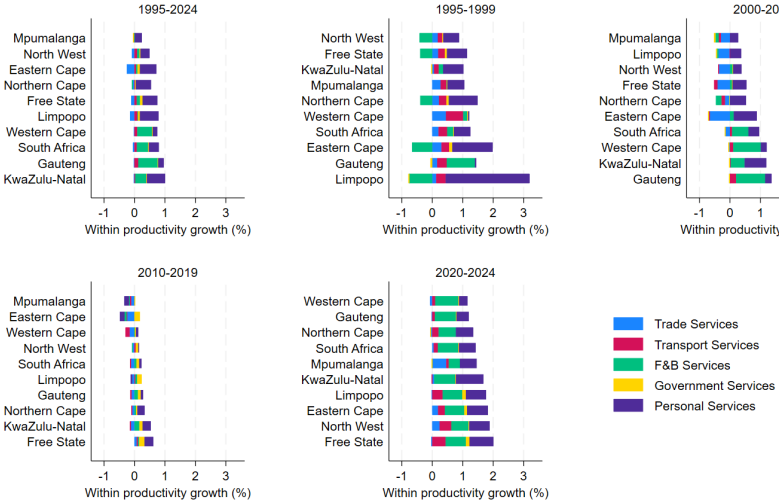


* Also holds separately for most BRICS except Brazil and most 'big' Africa except Nigeria

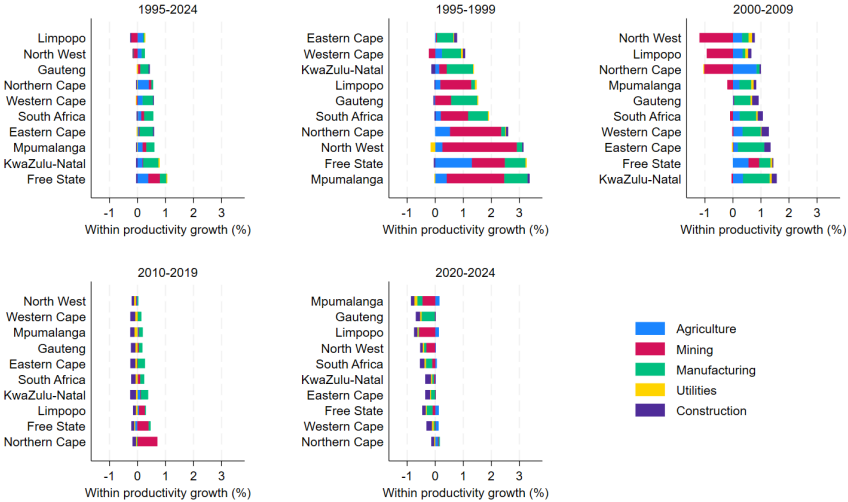
Shift-Share by Province



Within Services by Province



Within Non-Services by Province



Hypothetical Extraction Method

- Use ASUT and hypothetical extraction method (Los et al. 2016)
- Trace VA and employment embodied in exports (from Mensah and de Vries, 2024)

$$GDP_H = v_H \begin{bmatrix} x_H \\ x_F \end{bmatrix} = v_H(I - A^*)^{-1} Y^* i + v_H(I - A^*)^{-1} \begin{bmatrix} e_H \\ 0 \end{bmatrix} \tag{3}$$

Value Added in Exports

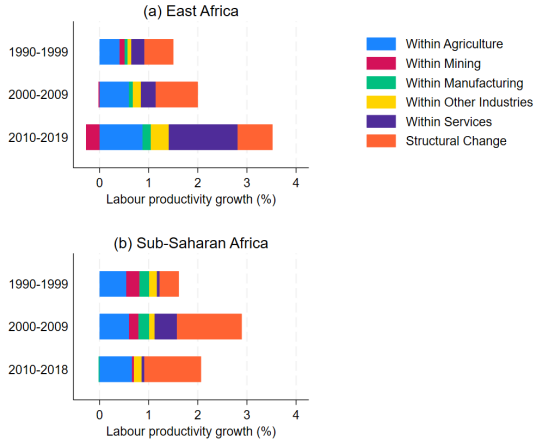
Table: Share of total value added and jobs embodied in exports in South Africa by sector; 1994, 2007, 2019

	Agric	Mining	Manu	Bus/Fin	Other	Total
Share of value added embodied in exports						
1994	0.9	6.8	5.3	2.1	5.8	20.9
2007	0.6	7.0	5.9	4.0	8.2	25.6
2019	0.8	5.1	5.6	3.2	9.0	23.6
Share of jobs embodied in exports						
1994	4.1	5.2	2.8	1.1	6.7	20.0
2007	2.9	2.0	4.7	2.4	9.6	21.5
2019	4.9	1.4	4.0	3.5	8.9	22.7

Notes: Table shows the share of total South African value added and jobs embodied in exports by sector for three representative years.

How does "good" services-led structural transformation look? The case of East Africa

From: Hamilton, Mensah, and Sennoga (2026). See also Fan et al. (2023) for Indian case.



Summary of results (1/2)

- 2010–2019: South Africa experienced a period of *structural change emergency*:
  - overall labour productivity declined;
  - productivity growth was weak or negative across broad sectors;
  - labour reallocated from more- to less-productive activities.
- This period was exceptionally weak both:
  - relative to earlier decades; and
  - in international comparison.
- In contrast, the 2000s saw labour productivity growth of about 2% per year, supported by:
  - within-sector productivity growth; and
  - growth-enhancing structural change.
- Since 2020, there has been a modest recovery:
  - labour productivity growth has risen to above 1% per year on average;
  - the contribution of structural change has turned positive again.

Summary of results (2/2)

- The post-2020 recovery remains narrow and uneven:
  - driven mainly by productivity growth in services;
  - manufacturing, mining, and industry continue to decline.
- Across provinces, the recovery is relatively broad-based, but:
  - there are no clear leading provinces;
  - industrial productivity is declining everywhere.
- A persistent pattern of deindustrialization and servicification remains:
  - expansion is concentrated in low-productivity trade services;
  - personal services remain large but low-productivity.
- Exports have not become a strong engine of growth:
  - value added and jobs embodied in exports have remained fairly flat;
  - the job-sustaining role of mining and manufacturing exports has weakened substantially.

Implications for Policy in South Africa

Policy Priorities for a Productivity Growth

- South Africa faces a strategic choice:
  - lean fully into a services-led growth path; or
  - revive industry to restore a more balanced pattern of structural change.
- Regardless of that choice, three policy priorities stand out:
  1. Stop industrial decline: manufacturing and other industrial sectors cannot continue to drag down aggregate productivity growth.
  2. Raise productivity within services: growth in services must come not only from labour reallocation, but also from:
     - ⋆ expansion of higher-productivity service activities; and
     - ⋆ productivity growth within large trade services.
  3. Diversify export markets: with limited gains from conventional trade partners, South Africa should explore:
     - ⋆ new export destinations;
     - ⋆ stronger South–South trade; and
     - ⋆ deeper within-Africa trade integration.

A Balanced Strategy: Manufacturing and Services

- The policy question is not simply which sector to choose, but rather how to balance emphasis across sectors.
- The recommended approach is a dual strategy:
  - manufacturing remains important for value added, innovation, and demand linkages;
  - services are likely to play a growing role in job creation, especially with upgrading into higher-productivity activities.
- In South Africa, restoring productivity growth in manufacturing and industry requires:
  - expansion of value added in these sectors;
  - less emphasis on manufacturing as a source of mass low-skill employment;
  - more emphasis on manufacturing as a source of revenue, productivity growth, and demand for services
- This makes high-value-added, modern, and capital-intensive manufacturing more attractive as part of a broader recovery strategy.

Services as the Main Source of Job Creation

- If manufacturing is expected to focus on raising value added, then the main burden of employment expansion falls on services.
- The key issue is not only whether services absorb labour, but where that labour is absorbed:
  - workers need to move into higher-productivity service activities;
  - not simply into expanding low-productivity services.
- South Africa has a growing pool of labour in:
  - trade services; and
  - personal services,

  both of which have below-average productivity.
- This implies that a productivity-oriented employment strategy should place strong emphasis on:
  - upgrading service-sector productivity; and
  - directing industrial policy toward productive job creation in services, not only in industry.

Why services could drive growth in South Africa

1. Firm size: Services firms are smaller on average than manufacturing firms (see also Bento & Restuccia, 2021).
2. Productivity and size: Size matters less for productivity; small service firms can be as productive as large ones (OECD; Nayyar et al., 2021).
3. Role of capital: Physical capital plays a smaller role in services relative to manufacturing.
4. Productivity growth: Productivity growth within services is similar to that in manufacturing (Nayyar et al., 2021).
5. Implication: Services are promising where labor is abundant, capital is expensive, and small firms dominate.

Conclusion

- The 2010s were a period of structural change emergency in South Africa:
  - productivity growth was exceptionally weak;
  - structural change reduced, rather than enhanced, growth.
- Since 2020, a modest recovery has emerged, but it remains:
  - services-led;
  - fragile and unbalanced;
  - held back by continued industrial productivity decline across provinces.
- Policy must therefore pursue a dual strategy:
  - continue to rely on services for labour absorption and job creation;
  - arrest productivity decline in manufacturing and other industries.
- South Africa may have moved beyond the worst of the crisis, but a sustained and balanced recovery still has a long way to go.

Panel Discussion Questions

1. Can South Africa rely on a services-led growth path without deepening low-productivity employment? In other words, under what conditions can services absorb labour *and* deliver sustained productivity growth?
2. At the same time low-productivity employment in services reduce unemployment in SA? Can this be achieved without informality?
3. What should be the role of manufacturing in South Africa's development strategy today? Should policy still view manufacturing as a source of mass employment, or rather as a source of value added, innovation, export capacity, and demand linkages with services?
4. How should industrial policy be redesigned in light of deindustrialization and servicification? Should policy focus more explicitly on raising productivity in tradable and higher-productivity services, alongside efforts to halt industrial decline?