



**TRADE & INDUSTRIAL POLICY STRATEGIES**

## **MANUFACTURING SUBSECTORS**

### **Glass and non-metallic mineral products**

**March 2021**

Industrial policy interventions aim to promote structural transformation and structural change in pursuit of economic growth. The effectiveness of these interventions depends to a crucial extent on the ability of policymakers to tailor interventions to the specific needs of individual manufacturing subsectors.

To support evidence-based policymaking, TIPS has completed a series of notes on the various manufacturing subsectors in South Africa. The aim is to provide synthesised data on the dynamics of the South African manufacturing subsectors, specifically in their contribution to the GDP, employment, profitability and assets, market structure and major companies, and international trade. The main data sources are Statistics South Africa, Quantec, Who Owns Whom, and the International Trade Centre.

This note provides an overview of the South African glass and non-metallic mineral products subsector as of December 2020.

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## Executive summary

South Africa's production of glass and non-metallic minerals fluctuated over the past two decades, but eventually declined. The production cycles from 1994 were marked by various periods. In constant rand, production shrank from the opening of the economy in 1994 to the early 2000s, then grew until the 2008/9 downturn. It recovered somewhat until 2011/12, when it again began to stagnate.

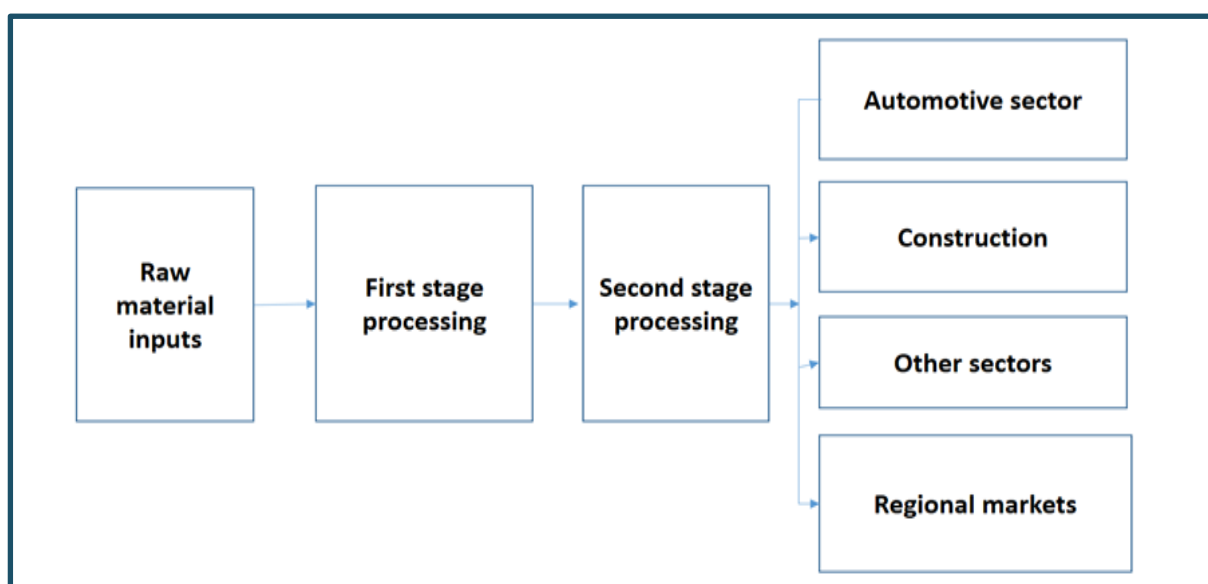
Various factors appeared to fuel these trends. First, the economy generally grew slowly before and after the international commodity boom that lasted from the early 2000s to 2011/12, depressing demand building products and ceramics as well as glass. From 2002 to 2008, however, production increased at a rate of roughly 3% a year before plateauing. In 2008/9, during the global financial crisis, production declined sharply, with a 24% overall fall in production. Thereafter, a slow recovery was dampened with the end of the commodity price boom in 2011/12. The recovery was also affected by the doubling of electricity prices in real terms from 2008 to 2016. By the end 2019, production remained 25% below the pre-financial crises levels.

The subsector has similarly been facing increased competition from overseas producers, primarily from China and Europe. Imports in this subsector are approximately twice as large as exports; they totalled R14 billion in constant rand in 2019, accounting for 1.2% of overall imports in South Africa, while exports accounted for roughly 0.5% of total exports.

During the COVID-19 pandemic, sales dropped more sharply in glass and other non-metallic mineral products than in other manufacturing, but they also recovered more quickly. By the end of 2020, total glass and other non-metallic minerals sales had returned to pre-pandemic levels. Both exports and imports, however, remained lower than in 2019, with a marked shift toward articles of vegetable fibre, carbon fibres, mineral wool possibly linked to the manufacture of protective equipment.

## Glass and non-metallic minerals value chain

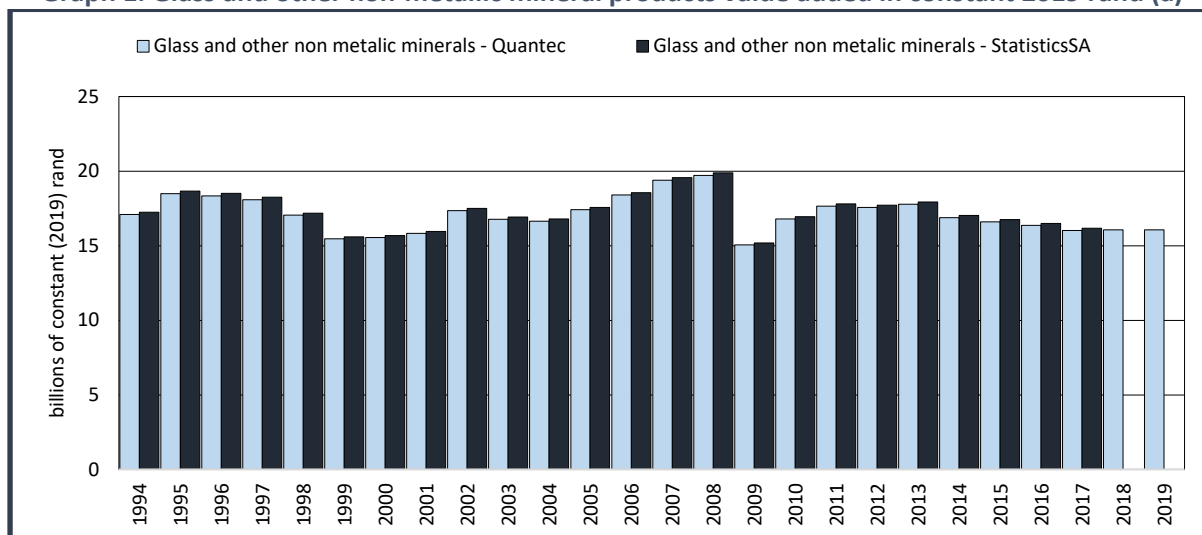
The glass and non-metallic minerals industry includes both glass products that are used in various sectors such as automotive, and mineral products such as cement, bricks, ceramics and similar products, which are used principally in the construction industry. In 2019, cement accounted for 60% of turnover the industry's turnover. Ceramics and glass accounted for 15% each. The industry excludes coal.



## 1. Contribution to GDP

Over the past two decades, glass and non-metallic minerals value added fluctuated, but eventually declined. From 2001 until 2008, the industry increased at a pace of 3% a year but then contracted by 24% during the 2008/9 global financial crisis. Through 2011, a considerable rebound occurred at a pace of 4% a year before growth levelled out. However, from 2013 to 2019, the industry contracted by 2% annually, as illustrated in Graph 1.

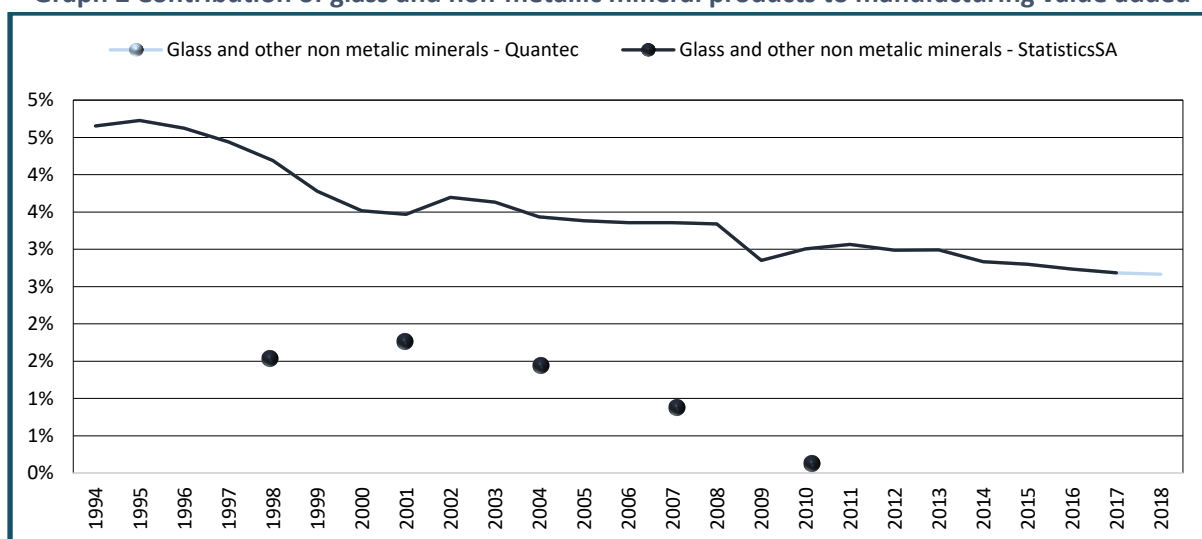
**Graph 1. Glass and other non-metallic mineral products value added in constant 2019 rand (a)**



Note: (a) Deflated by calculating the deflator used in the sources from figures in current and constant rand, and then rebasing to 2019. Source: Statistics South Africa, GDP P0441. Annual quarter and regional revisions. Excel spreadsheet. Series on manufacturing subsectors in current and constant rand. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) in January 2021; and Quantec EasyData. Standardised regional data. Database in electronic format. Series on value added in current and constant rand. Downloaded from [www.easydata.co.za](http://www.easydata.co.za) in January 2021.

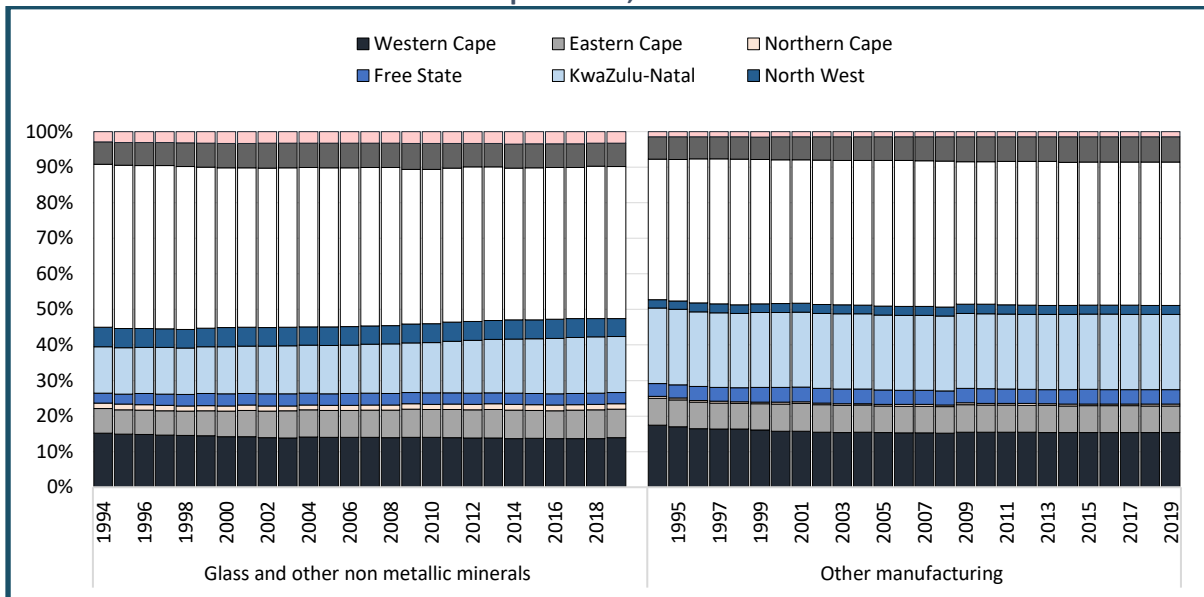
The contribution of glass, non-metallic mineral products to manufacturing value added declined from around 5% in 1994 to around 3% in 1994.

**Graph 2 Contribution of glass and non-metallic mineral products to manufacturing value added**



Source: Statistics SA, GDP P0441. Annual quarter and regional revisions. Excel spreadsheet. Series on manufacturing subsectors in current and constant rand. Downloaded [www.statssa.gov.za](http://www.statssa.gov.za) in January 2021; and Quantec EasyData. Standardised regional data. Database in electronic format. Series on value added in current and constant rand. Downloaded [www.easydata.co.za](http://www.easydata.co.za) in January 2021.

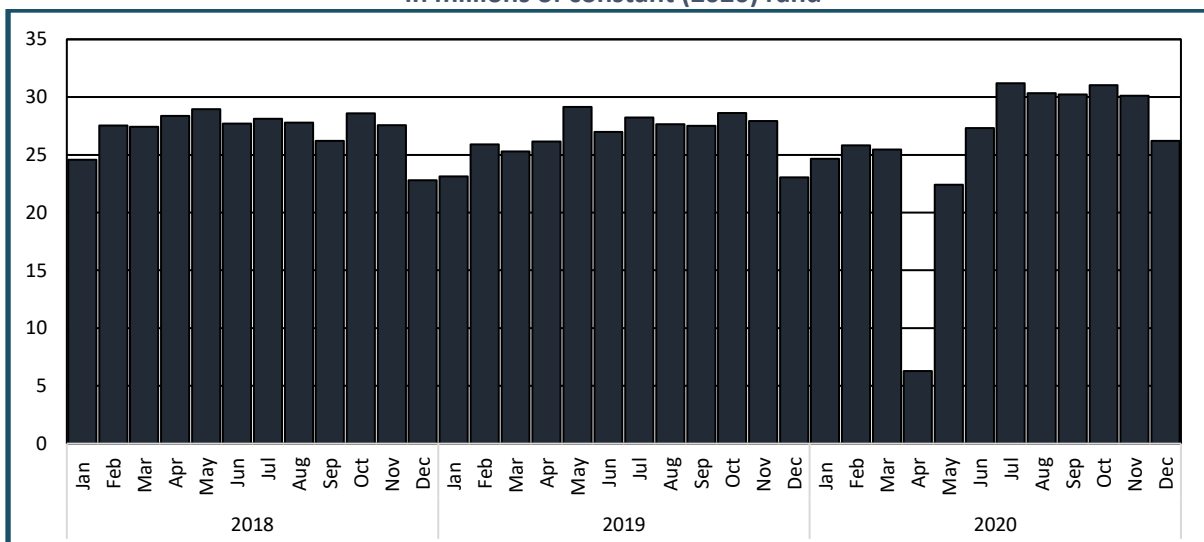
**Graph 3. Value added in glass and non-metallic mineral products across provinces, 1994 to 2019**



Source: Quantec EasyData. Standardised regional data. Database in electronic format. Series on value-added in current and constant rand. Downloaded from <https://www.quantec.co.za/easydata/> in January 2021.

Gauteng, KwaZulu-Natal, and the Western Cape dominate South Africa’s non-metallic mineral product production (see Graph 3). These provinces are home to some of the country’s leading glass manufacturers, including Consol and PG bison. Gauteng’s value add of R7 billion in 2019 accounted for more than two-fifths of the total labour force, KwaZulu-Natal for approximately a fifth, and the Western Cape for around 15%. At the same time, Gauteng’s proportion of glass and non-metallic minerals was more than its share of other manufacturing. In contrast, KwaZulu-Natal’s share of glass and non-metallic minerals was three quarters that of other manufacturing.

**Graph 4. Seasonally adjusted glass and non-metallic minerals sales (value) in millions of constant (2020) rand**



Source: Calculated from Statistics South Africa, P3041.2. Excel spreadsheet. Downloaded in January 2021 from [www.statssa.gov.za](http://www.statssa.gov.za).

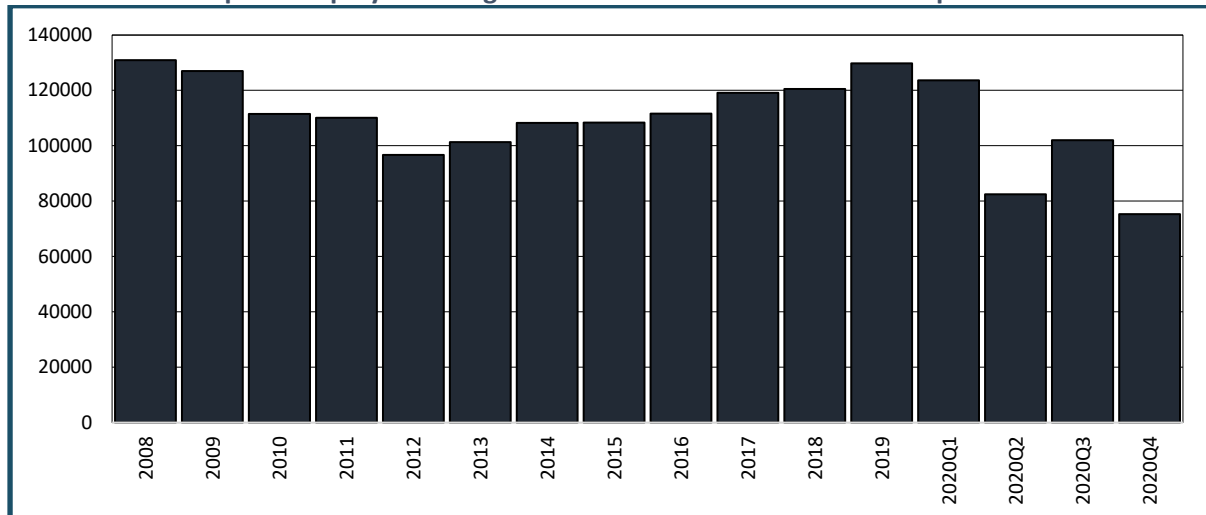
During the COVID-19 epidemic in 2020, sales of glass and other non-metallic minerals fell more sharply than in other manufacturing sectors, although they also recovered more quickly. According to Statistics South Africa’s monthly production and sales data, seasonally adjusted monthly sales of glass

and non-metallic minerals contracted nearly 77% in April 2020, exceeding the 50% contraction in other manufacturing. However, by the end of June 2020, total glass and non-metallic mineral sales recovered to the pre-pandemic levels of February 2020 (see Graph 4).

## 2. Employment

Between 2009 and 2012, employment in glass and other non-metallic mineral products dropped by 7% annually, indicating the combined effect of the global financial crises in 2008/9 and the end cycle of the commodities boom period in 2011/12. Between 2012 and 2019, employment increased by 4% per year and stabilised at around 130 000 in 2019.

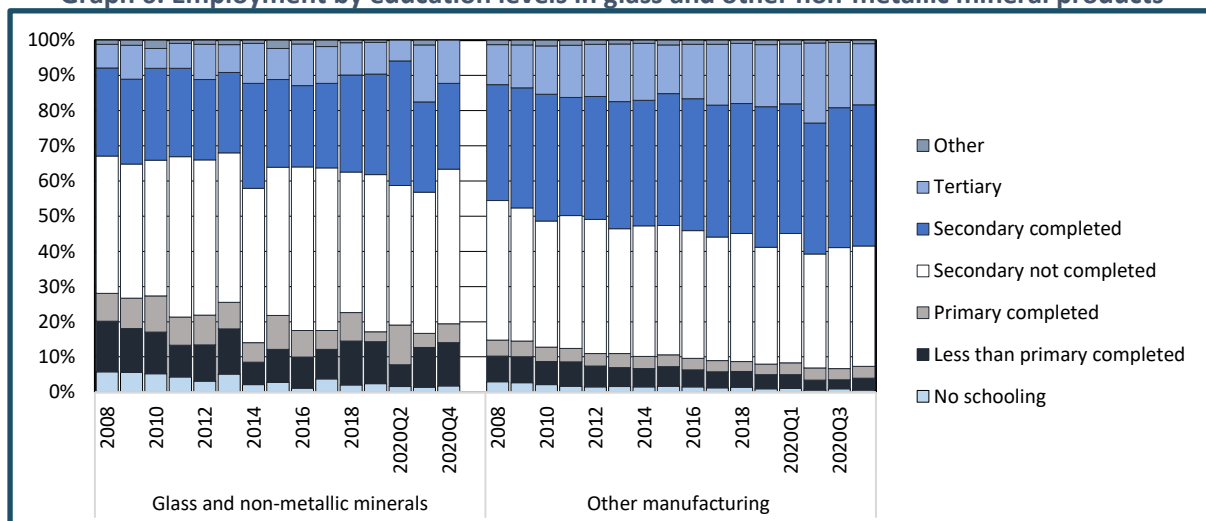
**Graph 5. Employment in glass and other non-metallic mineral products**



Source: Calculated from Statistics South Africa, P3041.2. Excel spreadsheet. Downloaded in January 2021 from [www.statssa.gov.za](http://www.statssa.gov.za).

Education levels were lower in glass and other non-metallic mineral products compared to other manufacturing. In 2019, 38% of the labour force in glass and other non-metallic minerals had an education level equivalent to matric or higher. This proportion was below the other manufacturing average of 60%.

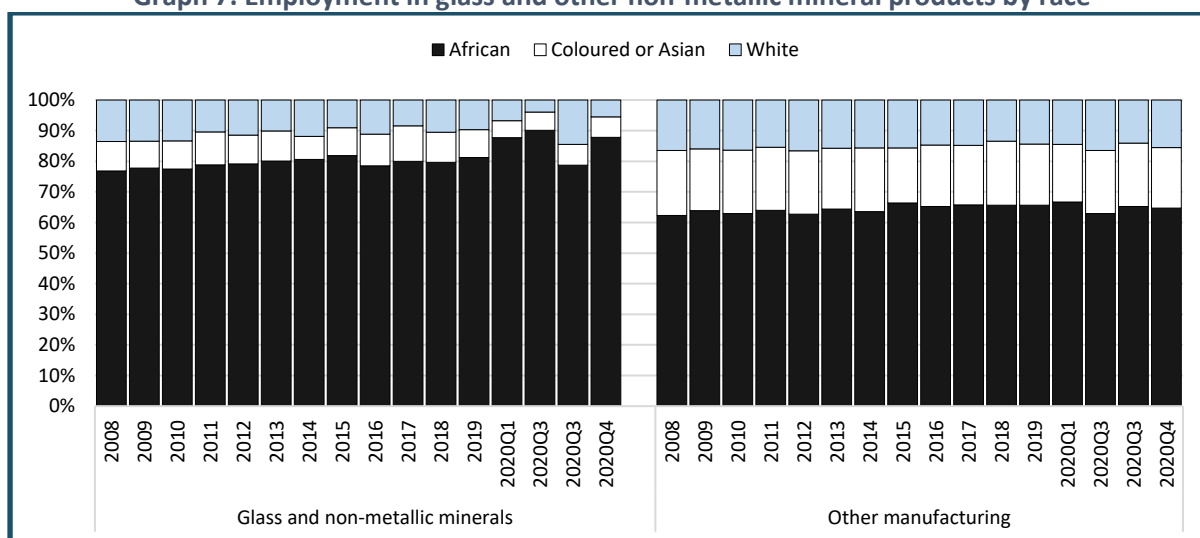
**Graph 6. Employment by education levels in glass and other non-metallic mineral products**



Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2008 to 2019. Series on employment by industry. Electronic databases. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) Nesstar facility in January 2021; and Quarterly Labour Force Survey. Q1 2020 to Q4 2020. Series on employment by industry. Electronic databases. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) Nesstar facility in January 2021.

Since 2011, the share of Coloured, Asian and White employees in the non-metallic minerals sector has steadily decreased. In comparison, the percentage of Black employees has steadily increased. This could be due to the relatively lower skills in glass and non-metallic minerals.

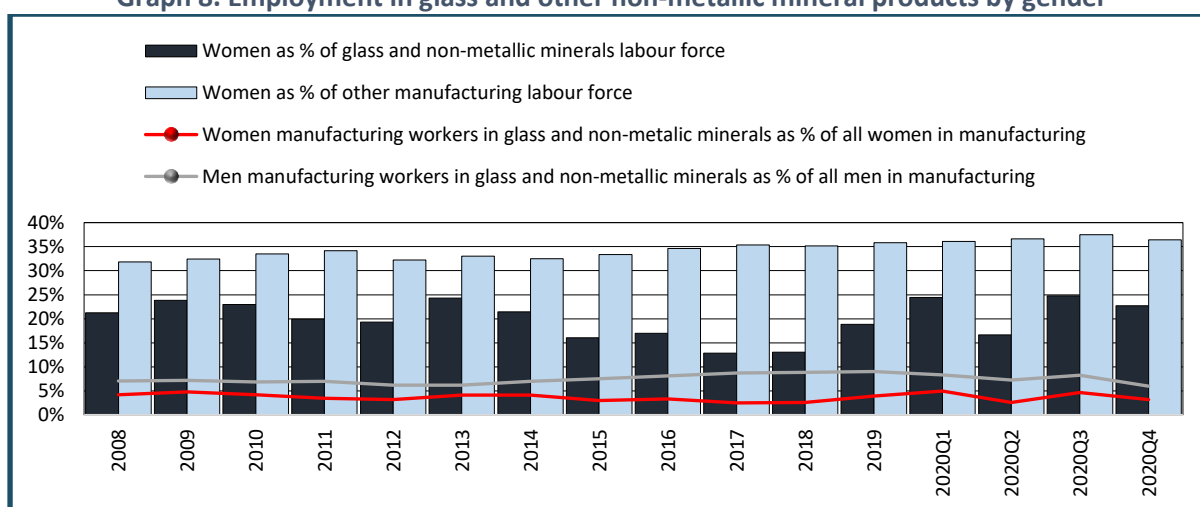
**Graph 7. Employment in glass and other non-metallic mineral products by race**



Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2008 to 2019. Series on employment by industry. Electronic databases. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) Nesstar facility in January 2021; and Quarterly Labour Force Survey. Q1 2020 to Q4 2020. Series on employment by industry. Electronic databases. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) Nesstar facility in January 2021.

Graph 8 depicts employment by gender in glass and non-metallic mineral products, as well as other manufacturing, from 2008 through the last quarter of 2020. Women’s labour force participation rate is the most notable distinction between glass and other non-metallic mineral products and other manufacturing. Women accounted for 19% of total labour in glass and other non-metallic mineral goods in 2019, compared to 35% in other manufacturing. Furthermore, in the same year, women in glass and non-metallic mineral products accounted for 4% of women manufacturing workers. In contrast, men manufacturing workers in glass and non-metallic minerals accounted for 9% of men manufacturing workers.

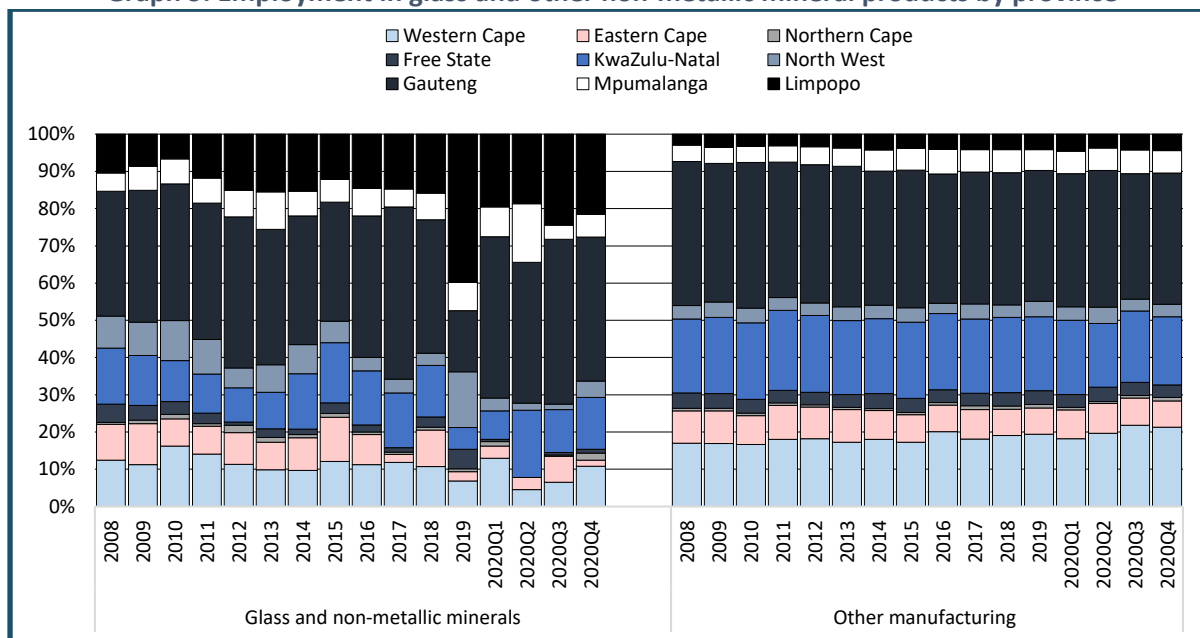
**Graph 8. Employment in glass and other non-metallic mineral products by gender**



Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2008 to 2019. Series on employment by industry. Electronic databases. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) Nesstar facility in January 2021; and Quarterly Labour Force Survey. Q1 2020 to Q4 2020. Series on employment by industry. Electronic databases. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) Nesstar facility in January 2021.

Gauteng dominated South Africa's glass and non-metallic minerals subsector. In 2018, its 43 000 employees accounted for over a third of South Africa's glass and non-metallic mineral products labour force. In the same year, KwaZulu-Natal and Limpopo accounted for 15% each; however, Limpopo's share was significantly higher than its contribution to other manufacturing.

**Graph 9. Employment in glass and other non-metallic mineral products by province**

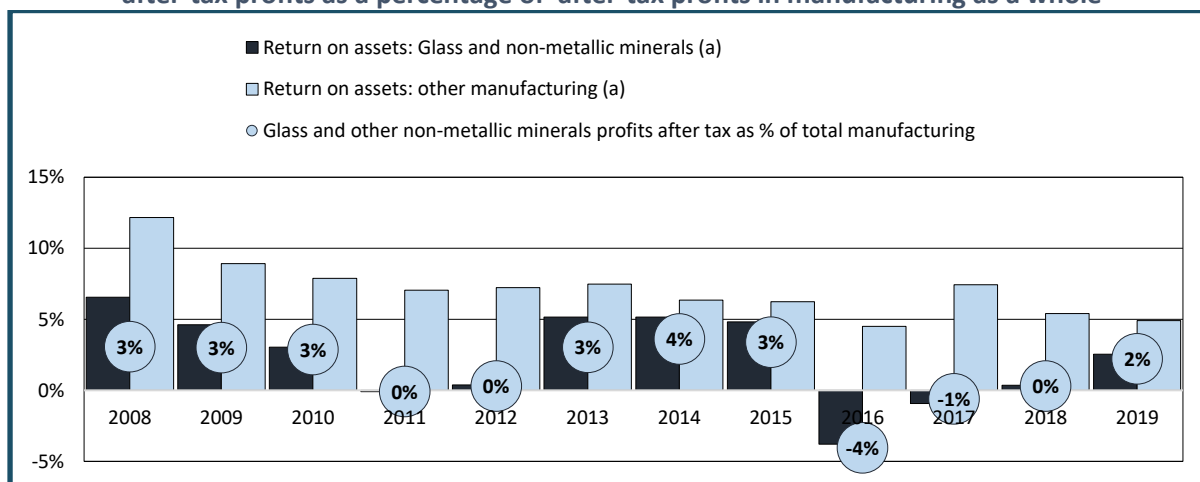


Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2008 to 2019. Series on employment by industry. Electronic databases. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) Nesstar facility in January 2021; and Quarterly Labour Force Survey. Q1 2020 to Q4 2020. Series on employment by industry. Electronic databases. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) Nesstar facility in January 2021.

## 2. Profitability and assets

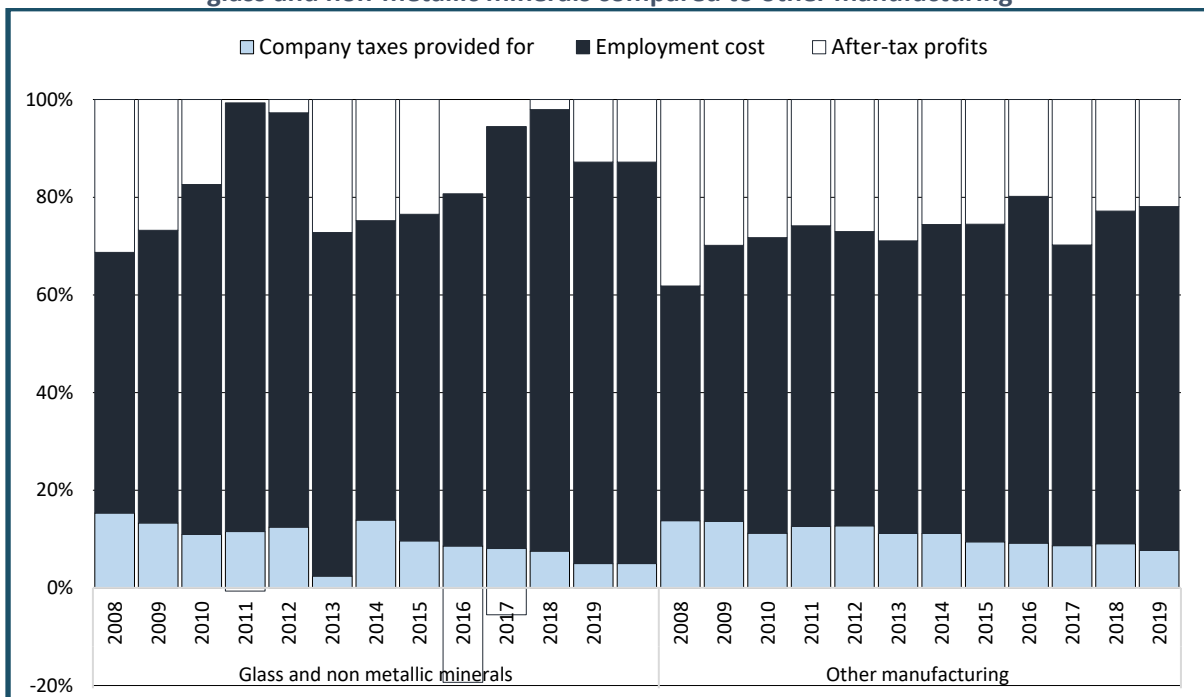
From 2008, the after-tax return on assets glass and non-metallic minerals averaged 4% a year. This rate was below the other manufacturing average of 7% a year. Glass and other non-metallic mineral products provided around 2% of all manufacturing profits in 2019, down from 3% in 2009.

**Graph 10. Return on assets (a) in glass and non-metallic minerals, other manufacturing and after-tax profits as a percentage of after-tax profits in manufacturing as a whole**



Note: (a) Profit before taxes and dividends less company tax as a percentage of total assets. Source: Calculated from Statistics South Africa. Annual Financial Statistics. Disaggregated Industry Statistics for the relevant year. Excel spreadsheet. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) in January 2021.

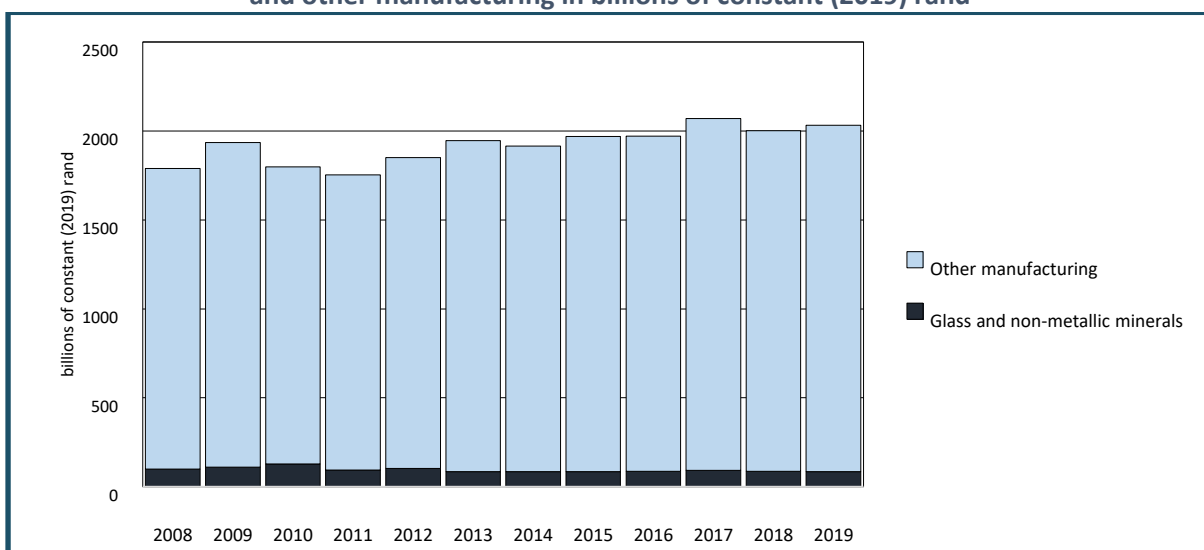
**Graph 11. Share of remuneration, profits and taxation in income from glass and non-metallic minerals compared to other manufacturing**



Source: Calculated from Statistics South Africa. Annual Financial Statistics. Disaggregated Industry Statistics for the relevant year. Excel spreadsheet. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) in January 2021.

After-tax profits in glass and other non-metallic mineral products were around 8% of total income in 2019, below the rate in other manufacturing, which amounted to 20% of total income in the same year. Employment costs were also higher in glass and other non-metallic mineral products, amounting to over 80% of total incomes, compared to 70% in other manufacturing. The share of company taxes in total income was around 5%, compared to around 7% in other manufacturing. In 2016 and 2017, profits in the subsector as a whole dropped to negative. As a result, the share of employment costs climbed, but it subsided as profitability normalised in 2019 (see Graph 11).

**Graph 12. Value of total assets in glass and non-metallic minerals and other manufacturing in billions of constant (2019) rand**



Source: Calculated from Statistics South Africa. Annual Financial Statistics. Disaggregated Industry Statistics for the relevant year. Excel spreadsheet. Downloaded from [www.statssa.gov.za](http://www.statssa.gov.za) in January 2021.

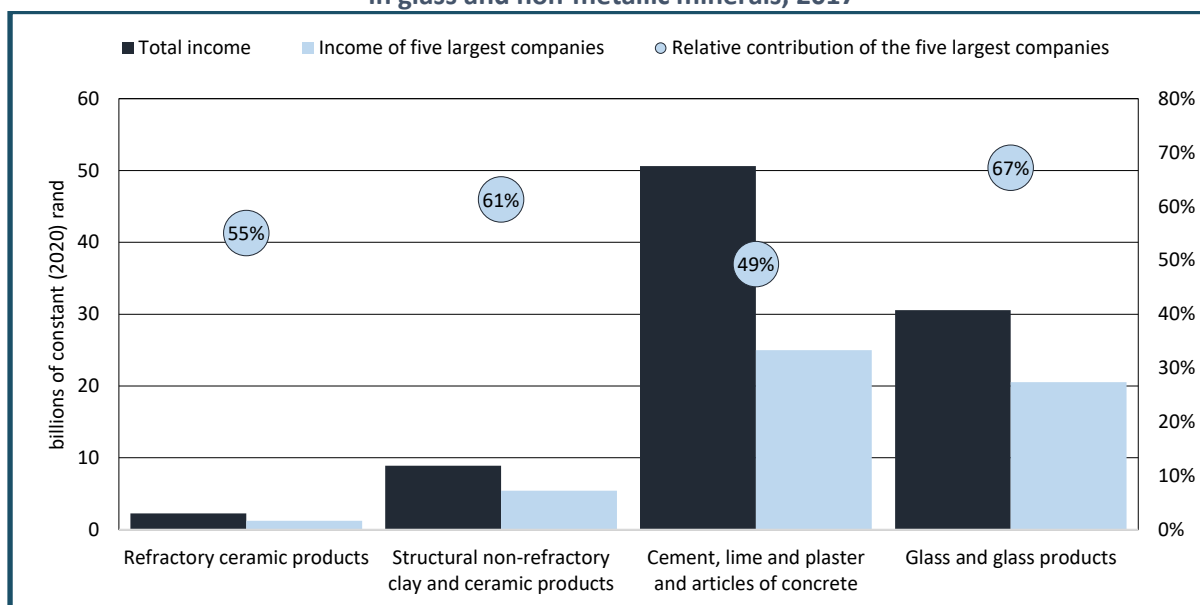


From 2008 and 2019, the value of glass and non-metallic minerals products assets declined by 14%, while the value of assets in the rest of manufacturing increased by 15% (see Graph 12). As a result, the share of glass and non-metallic minerals products to total manufacturing assets fell from 6% to 4% over this period.

### 3. Market structure and major companies

According to Statistics South Africa’s Manufacturing Financial Statistics for 2017, the top five companies received just under half of the income in the cement industry, which was higher than the manufacturing average of 17% manufacturing industries, or the industry average of 30%. Glass was even more concentrated, with over three-quarters of income going to the five largest producers

**Graph 13. Share of top five companies in income by subsector in glass and non-metallic minerals, 2017**



Source: Calculated from Statistics South Africa. Manufacturing Industry: Financial, 2017. Pretoria. Table 9, p33,ff.

**Table 1. Large companies in major glass and non-metallic minerals products**

#### A. Cement and cement products

Company	Employees	Operations
Aveng Africa	11 544 (Group)	Manufactures precast concrete products such as culverts, paving, and roof tiles to support its core construction business.
Raubex Group	7 418 (Group) (6 884 – South Africa; 534 – International)	In addition to construction activities in South Africa and neighbouring countries, supplies aggregates and produces asphalt. It has 17 asphalt plants in South Africa and one in Botswana.
Consolidated Infrastructure	2 111 (Group) (estimate)	To support its core construction business, subsidiaries manufacturing crushed stone and rock, clay bricks and concrete roof tiles.
PPC	3 759 (Group) (2 153 – South Africa)	Manufactures aggregates, milled slag, metallurgical-grade lime, burnt dolomite and limestone, mainly for the retail building industry. It has 11 cement manufacturing factories, five milling plants, five blending facilities and 29 ready mix batching plants in South Africa and other African countries, and several quarries.

Corobrik	2 550	Manufactures and markets clay bricks, pavers and allied building materials for the domestic, regional and overseas market.
Infrastructure Specialist Group	1 800 (Group) (700 – Technicrete; 1 100 – Rocla)	Manufactures concrete products such as paving stones, kerbs, bricks and roof tiles. Subsidiaries have over 20 manufacturing facilities in South Africa, Namibia and Botswana.
Afrimat	2 289	Manufactures concrete, bricks and blocks, primarily for infrastructure and civil engineering projects. It has nine factories and 16 ready-mix batching sites, as well as several quarries.
Lafarge Industries	1 600	Manufactures and distributes ready-mix concrete, cement and gypsum plasterboard for South Africa and the region.
Saint-Gobain Construction Products	1 450	Manufactures building products, including plasterboard and gypsum plasters, glass wool and mineral wool for thermal and acoustic insulation, and other inputs.
Afrisam (SA)	1 850	Manufactures and retails road stone, concrete aggregate, ready mixed concrete and cement.
Idwala Industrial Holdings	700	Processes white calcitic and dolomite limestone through flotation and fine milling/micronising; processes of silica, magnetite, calcium carbonate and pyrophyllite.
Brikor	706	Manufactures and supplies clay bricks, roofing tiles, clay pipes, aggregates, building and construction materials.
Silicon Smelters	660	Manufactures silicon for global sale.
Mazor Group	445	In addition to other construction products, manufactures and distributes laminated, toughened safety glass and processed glass.
Sephaku Holdings	707	Manufactures cement, limestone clinker, and ready-mixed concrete.
Everite	500	Manufactures and markets fibre cement products for the building industry.
BMI Coverland (Pty) Ltd Monier Coverland	550	Manufactures concrete and clay roofing tiles, roofing components and energy systems.
West End Clay Brick	431	Manufactures face, semi-faced and plaster clay bricks and concrete roof tiles.
Dangote Cement South Africa	490	Produces cement and ash.
Elematic SA	330	Manufactures and installs precast, prepressed hollow-core slabs.
NPC-Cimpor (Pty) Ltd Former NPC-Cimpor	363	Manufactures and distributes cement, concrete and aggregate products.
Brakkefontein Clay Products (Pty) Ltd Former Apollo Brick	174	Manufactures, wholesales and retails clay and plaster bricks.
PBD Holdings	300 (Group)	Manufactures and supplies limestone and related products, including fertiliser.

Inca Concrete	350	Manufactures, wholesales, and retails concrete products such as facing and paving.
Marley (SA)	260	Manufactures and distributes concrete roofing tiles and imports clay tiles. Has four factories/warehouses.
Cape Concrete Works	280	Manufactures concrete products such as curbs, pipes, precasting for the civil engineering industry and precast garages.
Scribante Concrete	227	Manufacture and retail of concrete, mortars, plaster and related products to major projects.
Nylstene	250	Manufactures clay bricks.
Grinding Techniques	240	Manufactures abrasive products such as sandpaper and grinding wheels.
Grahamstown Brick	236	Manufactures and wholesales clay brick products, including face bricks, stock bricks and pavers. Has two plants.
West End Cement Bricks	110	Manufactures, wholesales and retails cement bricks and paving.
Topfloor Concrete	50	Manufactures pre-stressed hollow-core concrete flooring slabs.
Rickford Investments	106	Manufactures and wholesales corrugated iron roof tiles. Has one Manufacturing facility.

## B. Glass

Company	Employees	Operations
Nampak	5061 (Group) (3 385 in South Africa)	In addition to other metal and plastic packaging, manufactures glass bottles and jars.
PG Group	4 000	Manufactures and distributes automotive and building glass.
Consol	2 100	Manufactures, packages, and markets glass and plastic and glass containers, for which it mines and processes silica and feldspar.
Union Tiles	300 (Group)	Manufactures, wholesales, and retails ceramic, porcelain and stone tiles, paints and other wall coatings for hardware stores and the public.
Continental China	300	Manufactures ceramic tableware for hotels, caterers and retailers.
Natglass Distributors	450	Manufactures flat glass as well as aluminium products for the building industry.
CGIS Refrigeration Group (Pty) Ltd	200	Designs and manufactures specialised glass doors for refrigerated applications, undertaking glass processing and producing insulated doors, shelving, and insulated panels.
Isanti Glass 1 (Pty) Ltd	470	Manufactures glass bottles for beer, wine and spirits, carbonated soft drinks, edible oil and preserved foods.

Source: *Who Owns Whom. Report generator. Companies in chemicals manufacturing and pharmaceutical retail.* Downloaded in February 2021.

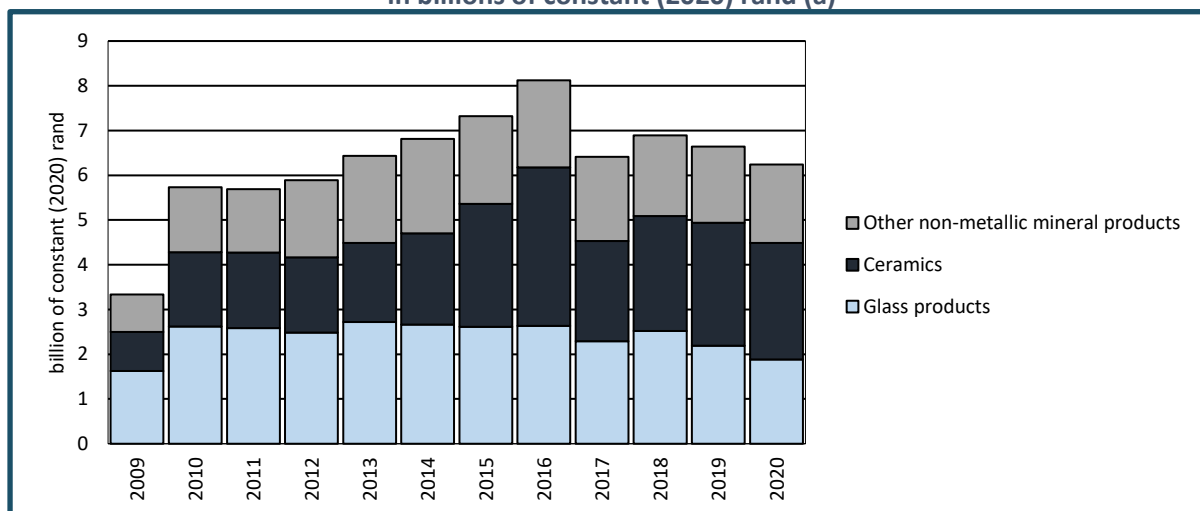
## 5. International trade

South Africa's glass and non-metallic minerals imports account for only 1.2 % of imports, while exports account for 0.5%. Imports in this industry are roughly twice as high as exports, totalling R14 billion in 2019. Furthermore, while most imports are from overseas countries, most exports are to neighbouring countries, except a few specialised products.

South Africa's exports of glass and non-metallic mineral products increased 135% from 2009 to 2016, then declined 17% in the following three years. The fall from 2016 to 2019 was almost entirely attributable to ceramics, which fell by 8% every year on average during the time. Ceramics accounted

for between 40 and 45% of the industry's exports. In 2019, these sales accounted for 20% of the value of ceramics imports, up from 18% in 2009.

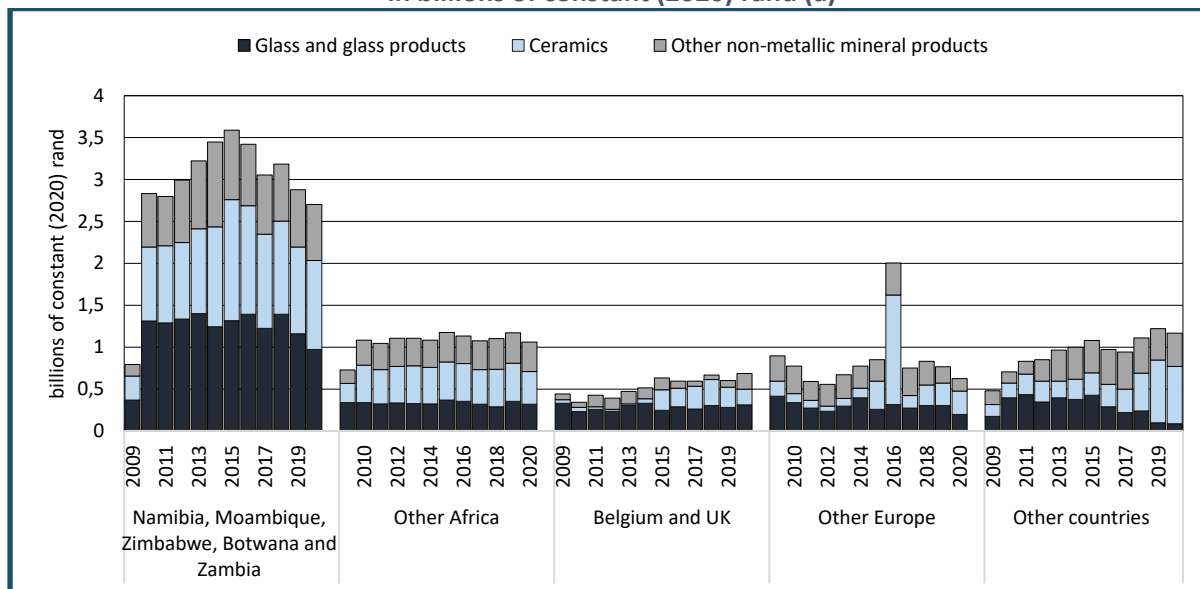
**Graph 15. Exports glass and non-metallic minerals, by product, in billions of constant (2020) rand (a)**



Notes: (a) Deflated using CPI. Source: Calculated from ITC. Trade Map. Electronic database. Series on South African exports of Glass, ceramics and non-metallic minerals in rand. Downloaded from [www.trademap.org](http://www.trademap.org) in January 2021.

In 2019, African countries accounted for more than two-thirds of South Africa's exports of glass and non-metallic mineral products. Namibia, Mozambique, Zimbabwe, Botswana, and Zambia accounted for two-thirds of the African total.

**Graph 16. Exports of glass and non-metallic minerals by destination in billions of constant (2020) rand (a)**

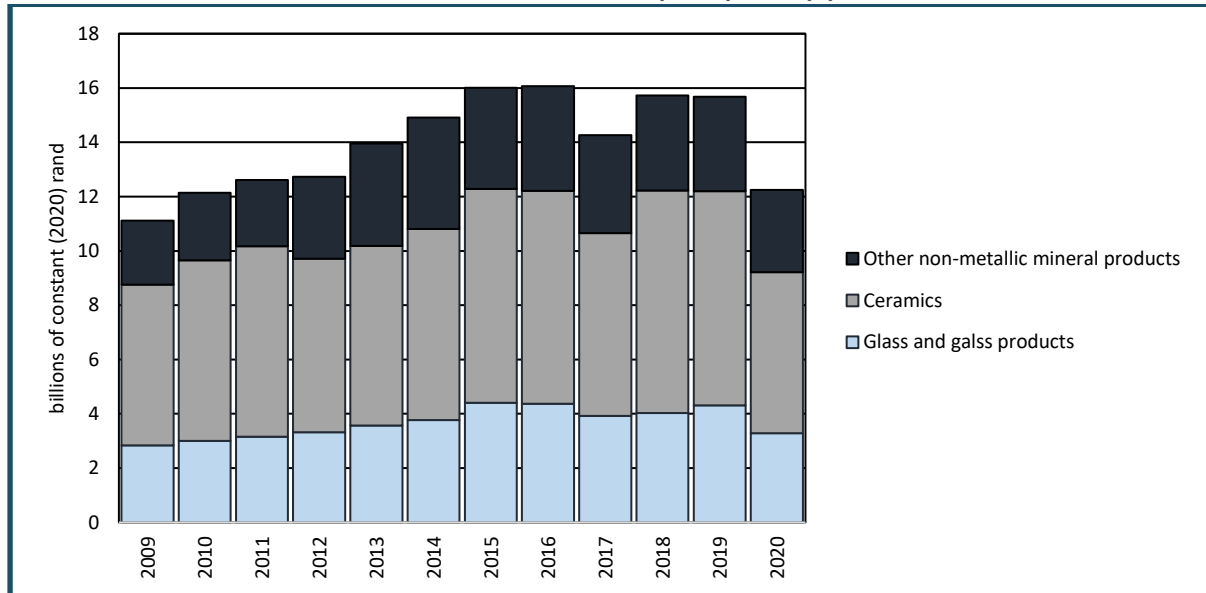


Notes: (a) Deflated using CPI. Source: Calculated from ITC. Trade Map. Electronic database. Series on South African exports of glass, ceramics and non-metallic minerals in rand. Downloaded from [www.trademap.org](http://www.trademap.org) in January 2021.

In 2019, South Africa's imports of glass and other non-metallic mineral products exceeded its exports. In 2019, they represented 1.2% imports, down from 1.6% in 2009. In 2019, ceramics accounted for half of the total imports, while glass and glass products accounted for two-sevenths and other non-metallic mineral products accounted for two-ninths.

While most South African exports of glass and non-metallic minerals were fairly basic, imports were mostly more processed, particularly for imported insulation, abrasives and technical ceramics. In constant rand, they climbed at 4% a year from 2010 to 2019.

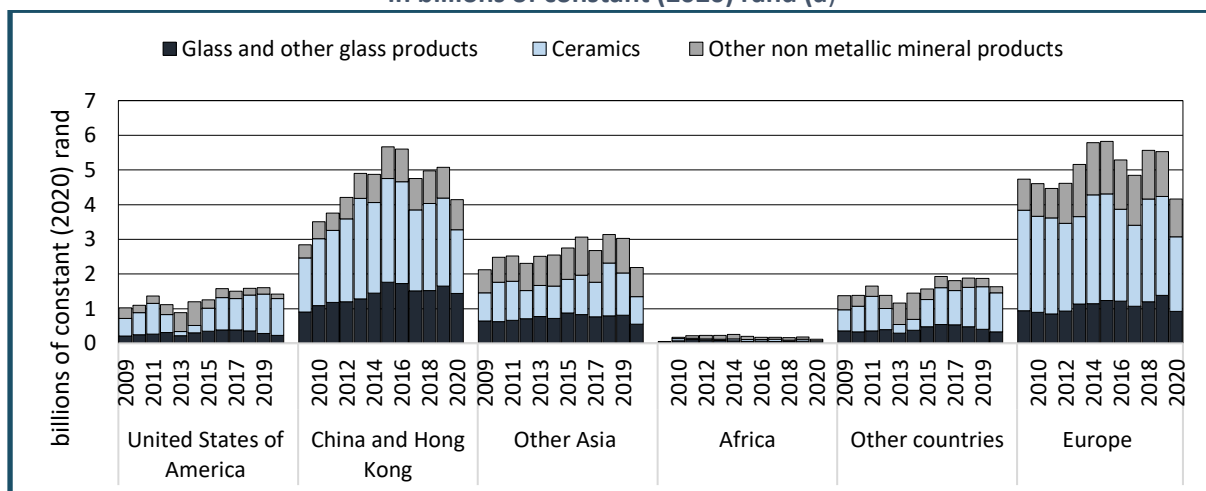
**Graph 17. Imports of glass, ceramics and non-metallic mineral products in billions of constant (2020) rand (a)**



Notes: (a) Deflated using CPI. Source: Calculated from ITC. Trade Map. Electronic database. Series on South African imports of Glass, ceramics and non-metallic minerals in rand. Downloaded from [www.trademap.org](http://www.trademap.org) in January 2021.

China, including Hong Kong and Europe, each accounted for a third of South Africa’s imports of glass and non-metallic mineral products in 2019. The rest of the Asian countries provided around a seventh of the total.

**Graph 18. Imports of glass, ceramics and non-metallic mineral products in billions of constant (2020) rand (a)**



Notes: (a) Deflated using CPI. Source: Calculated from ITC. Trade Map. Electronic database. Series on South African exports of Glass, ceramics and non-metallic minerals in rand. Downloaded from [www.trademap.org](http://www.trademap.org) in January 2021.

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