



MANUFACTURING SUBSECTORS

Glass and non-metallic minerals

December 2017

Industrial policy aims to promote diversification and tailor interventions to the needs of individual manufacturing industries. To support evidence-based policymaking, TIPS has completed a series of notes on the main manufacturing subsectors in South Africa. These notes provide information on the contribution to the GDP, employment, profitability and assets, the market structure and dominant producers, major inputs and international trade. They bring together data from Statistics South Africa, Quantec and Who Owns Whom to provide a more detailed overview of each sector.

This note summarises key data and information on the glass and non-metallic minerals subsector as of December 2017. It will be updated as information becomes available.

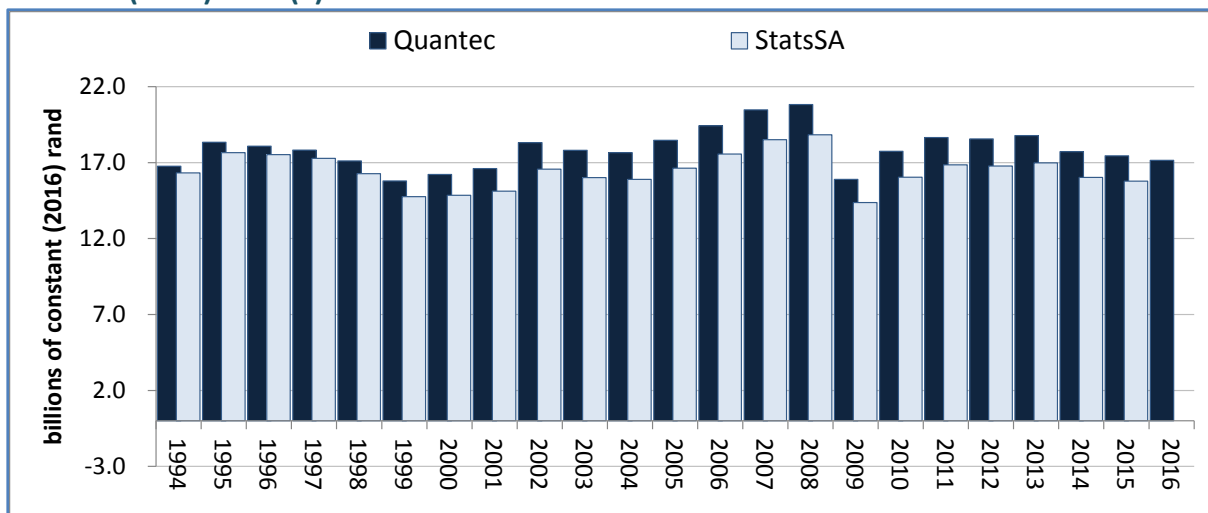
The glass and non-metallic minerals industry includes both glass products and minerals such as cement, bricks, ceramics and similar products, which are used principally in the construction industry. Around two thirds of turnover is cement and most of the rest is glass. The industry excludes coal.

1 Contribution to GDP

Data for the contribution of manufacturing industries to the GDP (that is, for value add by industry) comes from two sources: the GDP data published by Statistics South Africa, and Quantec, which develops estimates based on the Statistics South Africa figures for sales, production and employment by industry and sub-industries. The figures are not identical, but in the case of glass and non-metallic minerals they follow the same trends over time. This briefing note provides both.

Over the last two decades, value added in glass and non-metallic minerals fluctuated but ended up shrinking overall. The industry grew over 3% a year from 2001 to 2008, but then collapsed by 23% during the global financial crisis in 2008/9. A sharp recovery, at 8% a year, followed through 2011, with growth then levelling off. From 2013 to 2016, however, the industry shrank by 3% a year, as Graph 1 shows.

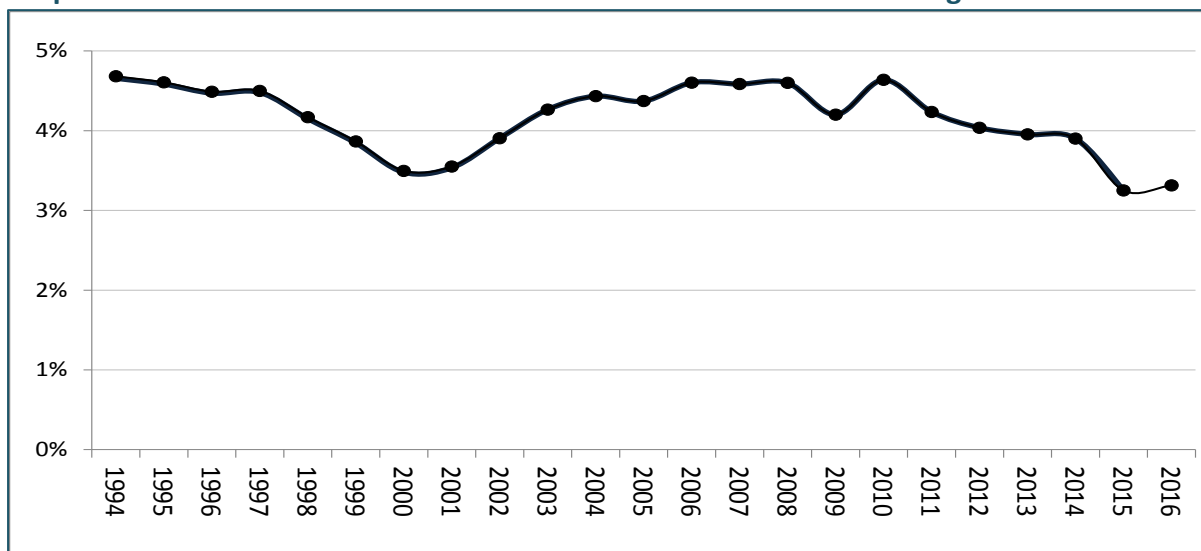
Graph 1. Value added in glass and non-metallic minerals, 1994 to 2016, in billions of constant (2016) rand (a)



Note: (a) Deflated by calculating the deflator used in the sources from figures in current and constant rand, and then rebasing to 2016. Source: Statistics South Africa, GDP P0441. Annual quarter and regional revisions. Q4 2016. Excel spreadsheet. Series on manufacturing subsectors in current and constant rand. Downloaded from www.statssa.gov.za in September 2017; and Quantec EasyData. Standardised regional data. Database in electronic format. Series on value added in current and constant rand. Downloaded from www.quanis1.easydata.co.za in September 2017.

From 2011 to 2015, the share of glass and non-metallic minerals dropped from 5% to 3% of value added in manufacturing as a whole. Only Quantec provides an estimate for 2016.

Graph 2. Glass and non-metallic minerals contribution to manufacturing value added



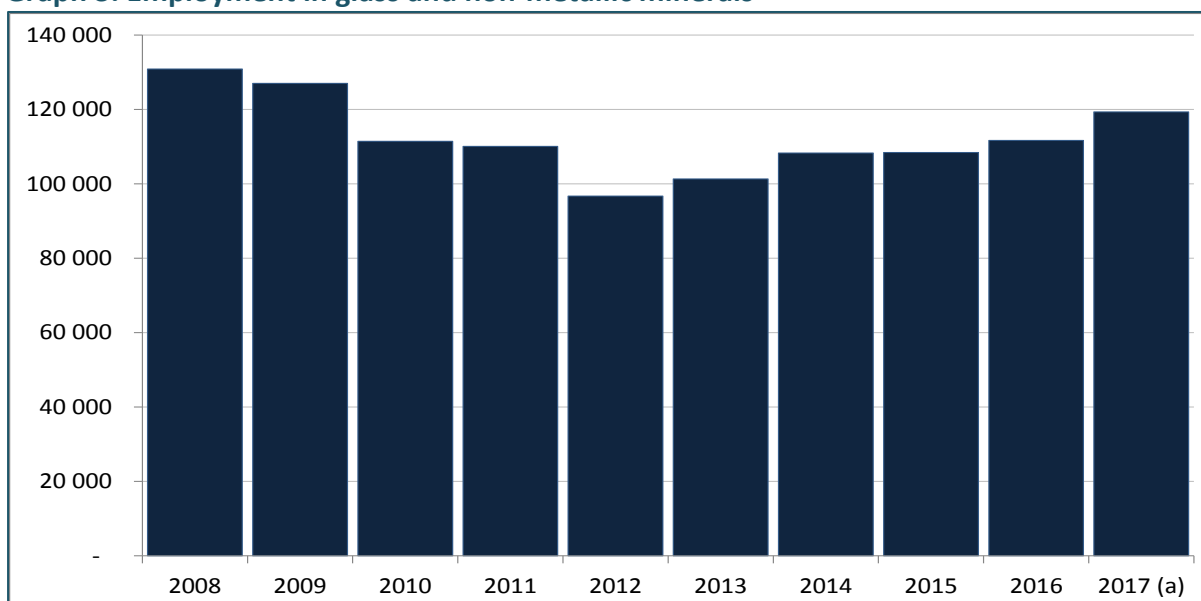
Source: Calculated from Statistics South Africa, GDP P0441. Annual quarter and regional revisions. Q4 2016. Excel spreadsheet. Series on manufacturing subsectors in current rand. Downloaded from www.statssa.gov.za in September 2017; and Quantec EasyData. Standardised regional data. Database in electronic format. Series on value added in current rand. Downloaded from www.quanis1.easydata.co.za in September 2017.

2 Employment

Employment data provided in this section draw on Statistics South Africa’s Quarterly Labour Force Survey, which was introduced in 2008. Its annual figures, in Labour Market Dynamics, are averages of the quarterly findings. This methodology is used to derive annual data for total employment by industry in 2016 and the year to the third quarter of 2017.

In 2016, there were around 105 000 people employed in glass and non-metallic minerals. From 2008 to 2012, the number dropped by a quarter before largely recovering from 2012 to 2016.

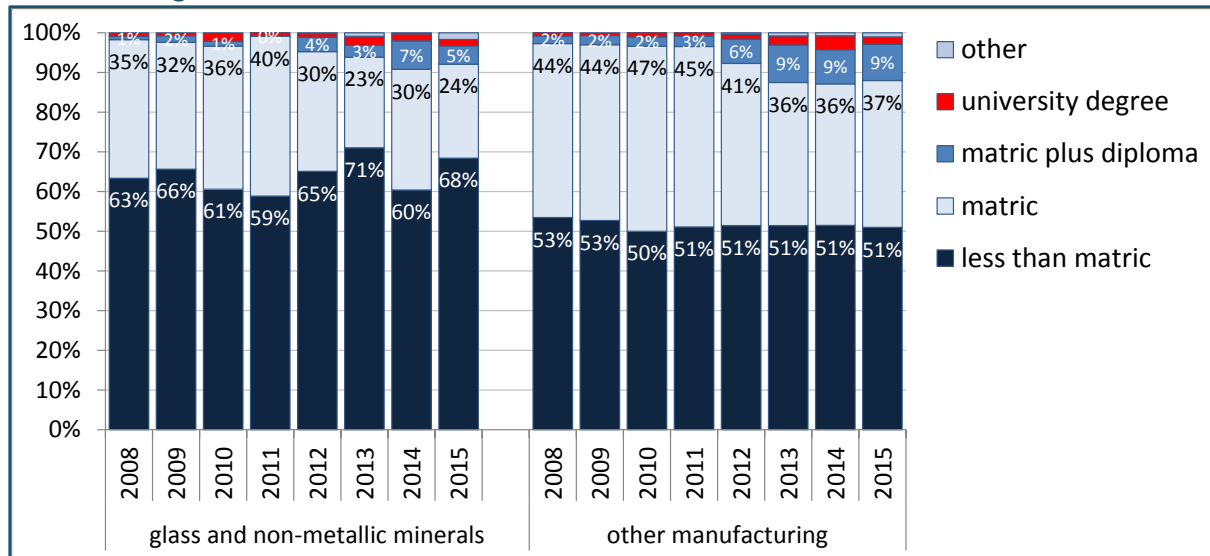
Graph 3. Employment in glass and non-metallic minerals



Note: (a) Year to third quarter. Source: Statistics South Africa. Labour Market Dynamics, 2008 to 2015, and Quarterly Labour Force Survey, 2016 to third quarter 2017. Electronic databases. Series on employment by industry. Figures for 2016 and 2017 are average of quarters. Downloaded from www.statssa.gov.za Nesstar facility in September 2017.

Education levels in glass and non-metallic minerals were lower than in the rest of manufacturing. In 2015, two thirds of workers in the industry did not have matric, compared to half of those in the rest of manufacturing. Moreover, only 8% of workers in glass and non-metallic minerals had a post-secondary diploma or degree, while in the rest of manufacturing the figure was 12%.

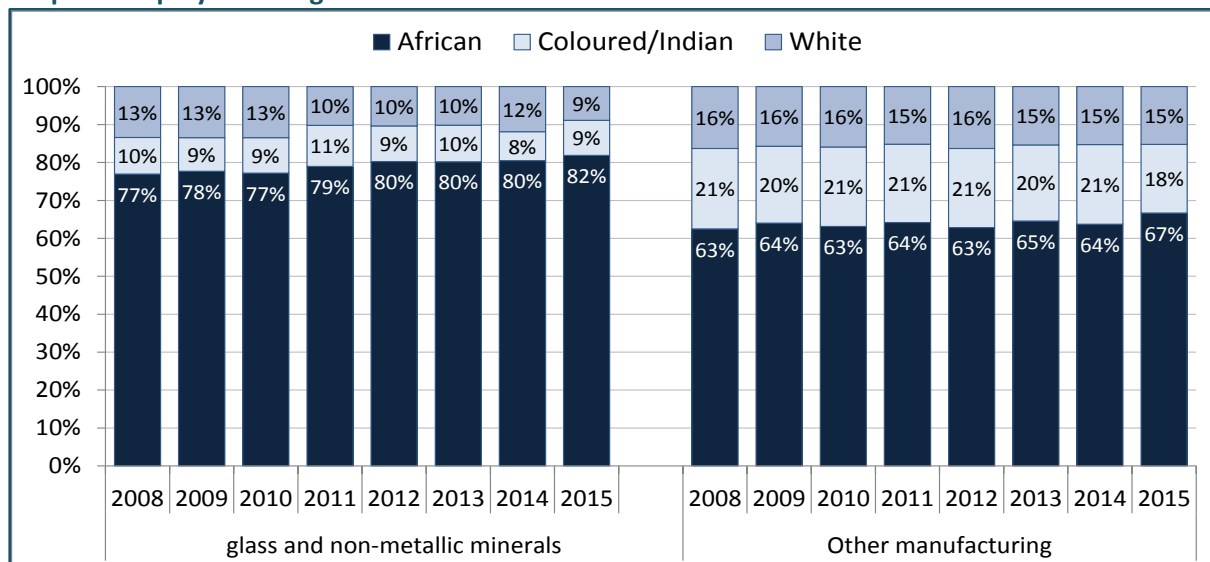
Graph 4. Employment by education level in glass and non-metallic minerals compared to other manufacturing



Source: Statistics South Africa. Labour Market Dynamics. Relevant years. Series on employment by industry and education. Electronic databases. Downloaded from www.statssa.gov.za Nesstar facility in September 2017.

Workers in glass and non-metallic minerals were much more likely to be African than in the rest of manufacturing. In 2015, Africans constituted four out of five workers in glass and non-metallic minerals, compared to two out of three in other manufacturing.

Graph 5. Employment in glass and non-metallic minerals



Source: Statistics South Africa. Labour Market Dynamics. Relevant years. Series on employment by industry and population group. Electronic databases. Downloaded from www.statssa.gov.za Nesstar facility in September 2017.

Women made up around 20% of the labour force in glass and non-metallic minerals, lower than for the rest of manufacturing. Only around 3% of women workers in manufacturing were employed in glass and non-metallic minerals, compared to 8% of men in manufacturing.

Graph 6. Employment in glass and non-metallic minerals and other manufacturing by gender

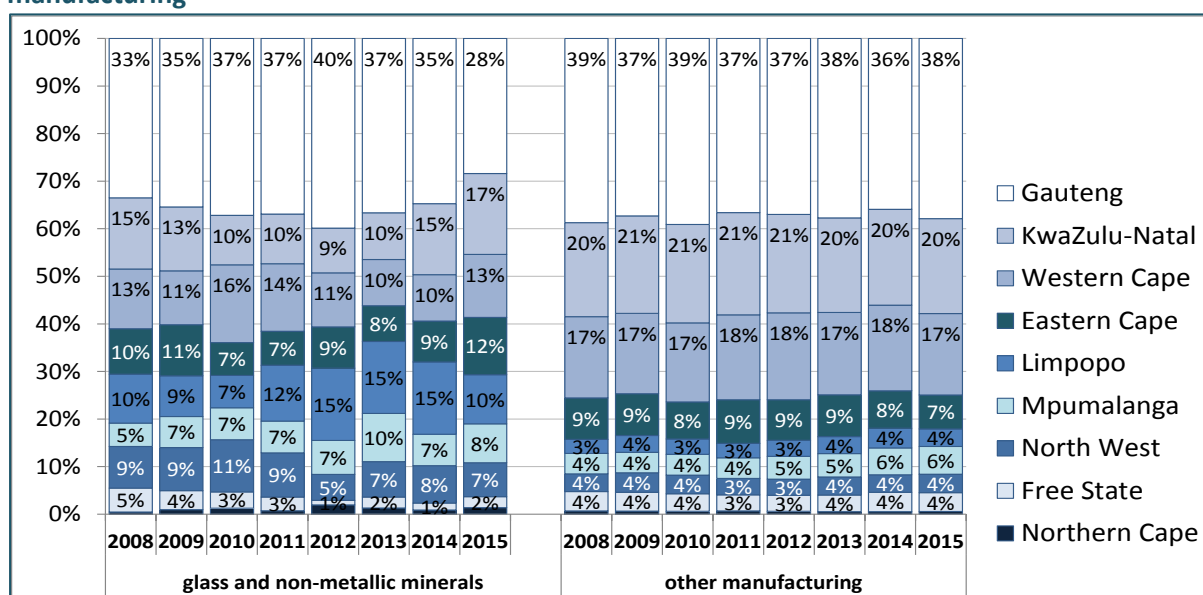


Source: Statistics South Africa. Labour Market Dynamics. Relevant years. Series on employment by industry and gender. Electronic databases. Downloaded from www.statssa.gov.za Nesstar facility in September 2017.

3 Location

Statistics South Africa provides information on employment by province. As the following graph shows, by this measure Limpopo, Mpumalanga and the Free State had a more important role in glass and non-metallic minerals than in the rest of manufacturing. In contrast, the shares of Gauteng, the Western Cape and KwaZulu Natal were lower than in other manufacturing industries.

Graph 7. Employment by province in glass and non-metallic minerals compared to other manufacturing



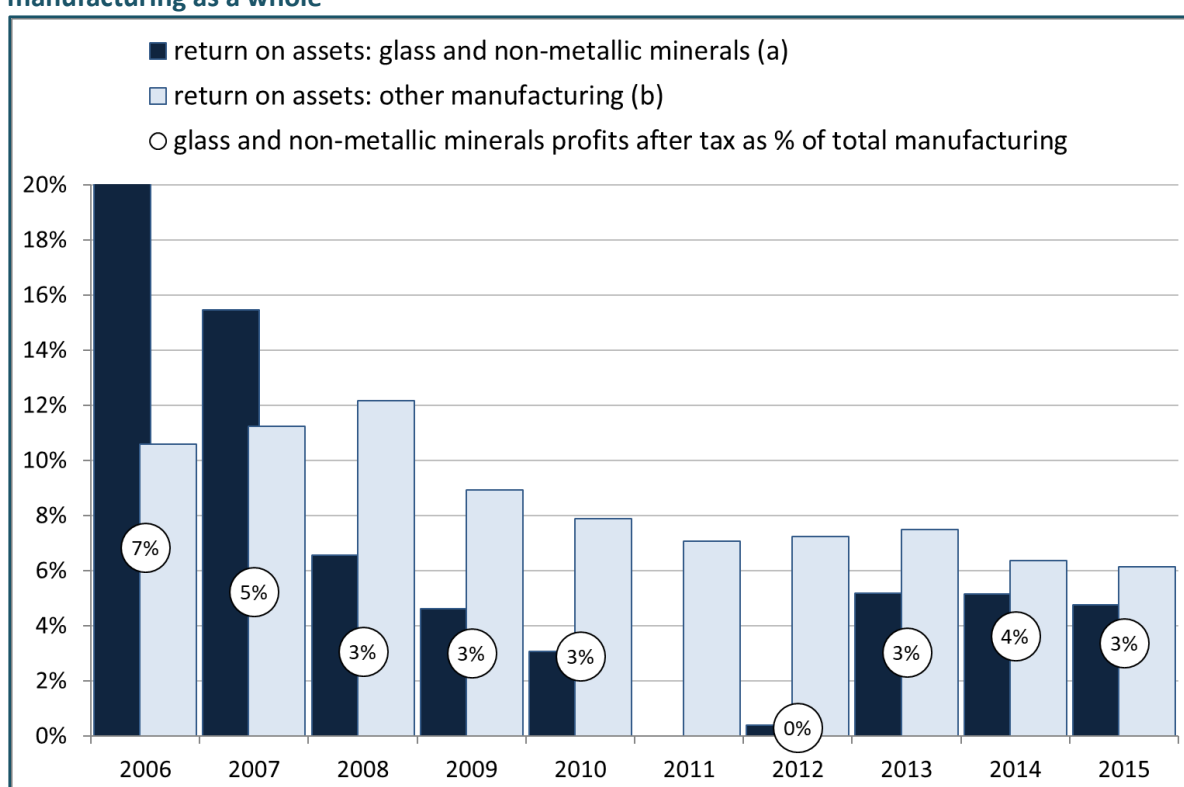
Source: Statistics South Africa. Labour Market Dynamics. Relevant years. Series on employment by industry and province. Electronic databases. Downloaded from www.statssa.gov.za Nesstar facility in September 2017.

The location of manufacturing can also be understood in how it was embedded in apartheid geography. To this day, only a tenth of manufacturing employment is in the former so-called “homeland” regions, where around a quarter of the population lives. In the case of glass and non-metallic minerals, around 23% of total employment was in the former “homeland” regions from 2008 to 2015. This was double that for manufacturing as a whole. The disparity largely reflected the location of processing near quarries, often in rural areas.

4 Profitability and assets

From 2008, the after-tax return on assets in glass and non-metallic minerals averaged 4% a year. That was a lower rate than in the rest of manufacturing, where returns averaged 8% a year. Glass and non-metallic minerals provided around 2% of all manufacturing profits.

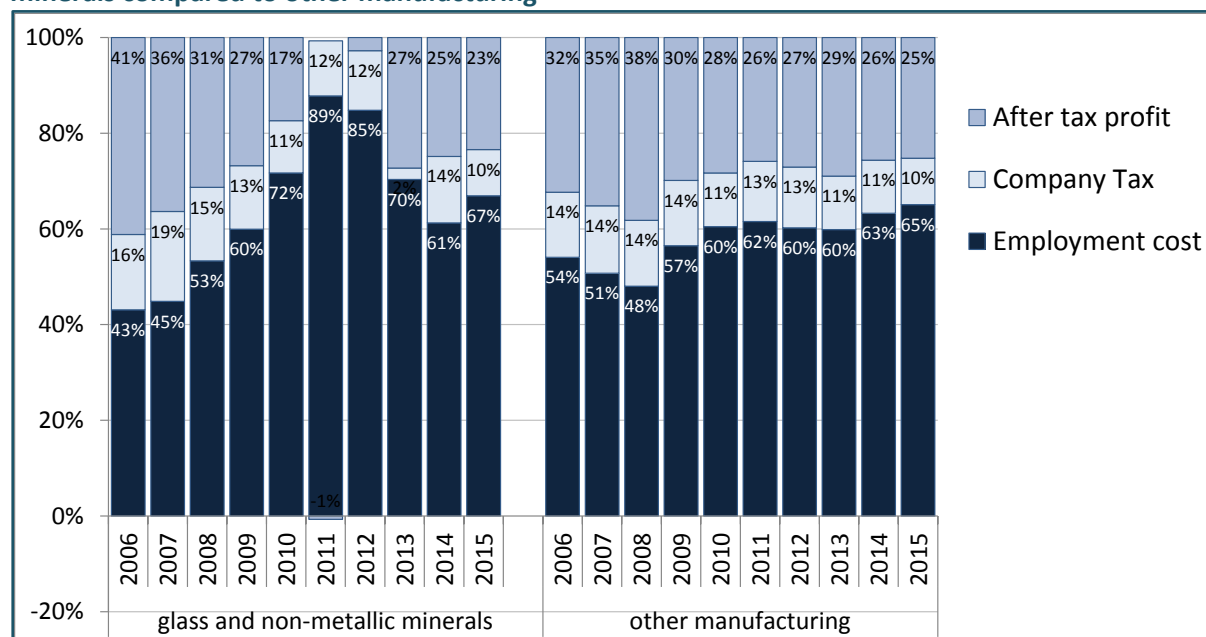
Graph 8. Return on assets (a) in glass and non-metallic minerals and (b) other manufacturing, and after-tax profits in glass and non-metallic minerals as percentage of after-tax profits in manufacturing as a whole



Note: (a) Profits before taxes and dividends less company tax as percentage of total assets. Source: Calculated from Statistics South Africa. Annual Financial Statistics. Disaggregated Industry Statistics for relevant year. Excel spreadsheet. Downloaded from www.statssa.gov.za in September 2017.

In 2015, the distribution of income in glass and non-metallic minerals between remuneration, profits and company taxes was more or less the same as for the rest of manufacturing, with around two thirds going for remuneration, a quarter for profits, and a tenth for taxation. In 2011 and 2012, however, as Graph 8 shows, profits in the industry as a whole dropped to near zero. As a result, the share of remuneration climbed, but it subsided as profitability normalised. (See Graph 9)

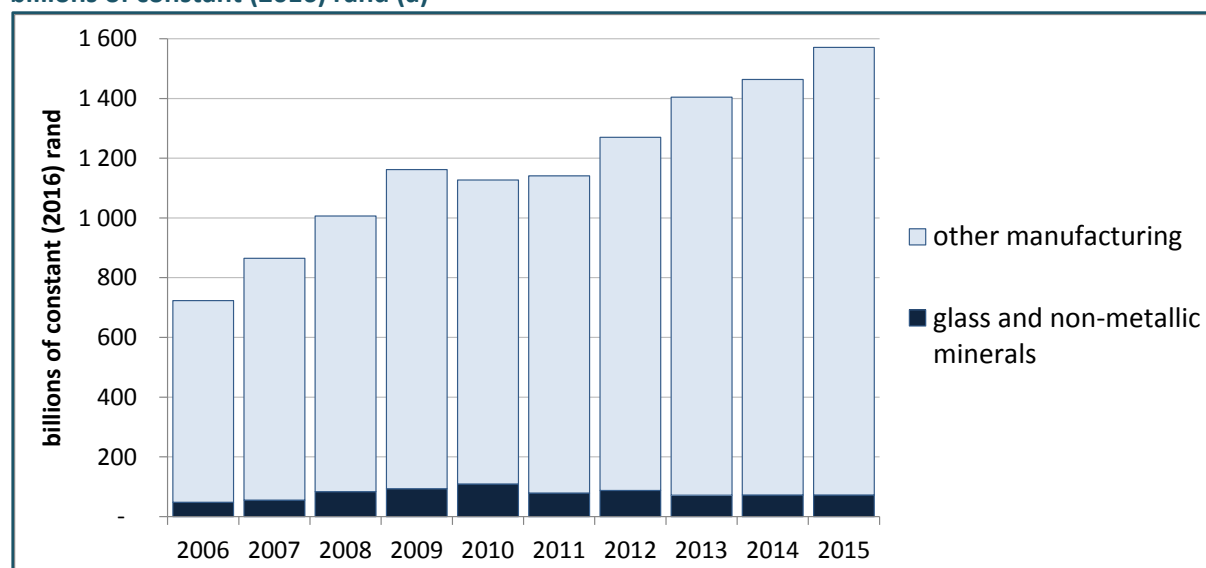
Graph 9. Share of remuneration, profits and taxation in income from glass and non-metallic minerals compared to other manufacturing



Source: Calculated from Statistics South Africa. Annual Financial Statistics. Disaggregated Industry Statistics for relevant year. Excel spreadsheet. Downloaded from www.statssa.gov.za in September 2017.

The value of glass and non-metallic minerals-processing assets dropped by 13% from 2008 to 2015, while the assets in the rest of manufacturing rose 62%. As a result, the share of glass and non-metallic minerals total manufacturing assets fell from 8% to 5% over this period.

Graph 10. Value of total assets in glass and non-metallic minerals and other manufacturing in billions of constant (2016) rand (a)



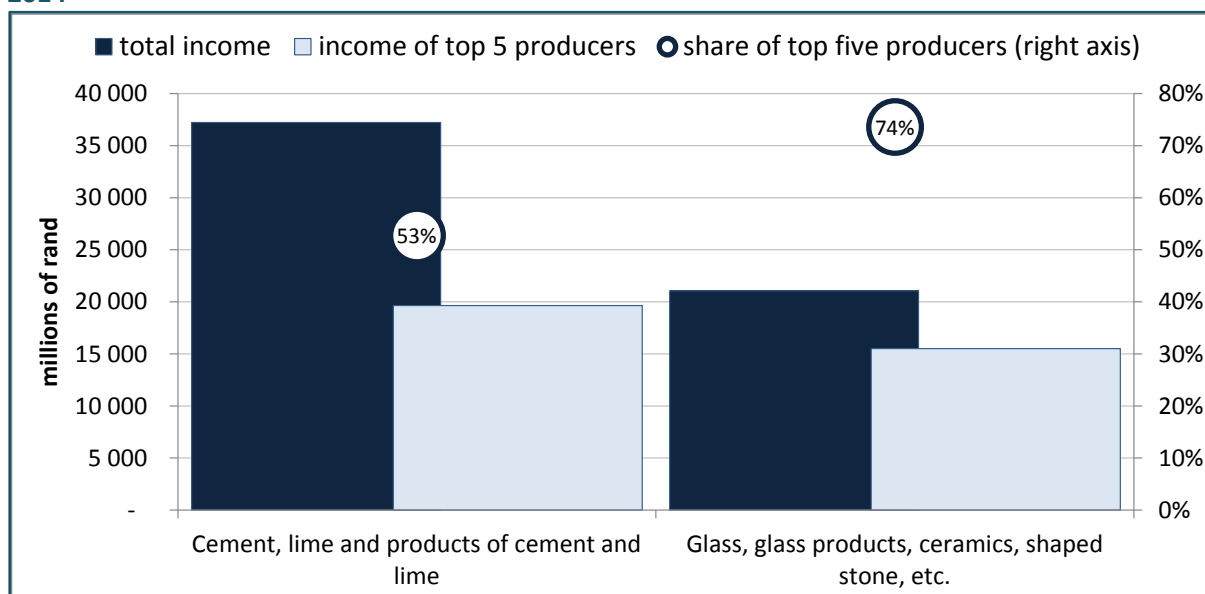
Notes: (a) Deflated with CPI. Source: Calculated from Statistics South Africa. Disaggregated Industry Statistics for relevant year. Excel spreadsheet. Downloaded from www.statssa.gov.za in September 2017.

5 Market structure and major companies

According to Statistics South Africa's Manufacturing Financial Statistics for 2014, the top five companies received just over half of income in the cement industry, which was on the high side for

manufacturing industries. Glass was even more concentrated, with three quarters of income going to the five largest producers.

Graph 11. Share of top five companies in income by subsector in glass and non-metallic minerals, 2014



Calculated from Statistics South Africa. 2016. *Manufacturing Industry: Financial, 2014*. Pretoria. Table 9, p 33, ff.

In 2015, the Labour Market Dynamics Survey found around 3 000 formal enterprises (that is, employers and self-employed) in formal glass and non-metallic minerals, compared to a total of around 60 000 in manufacturing as a whole, and 671 000 for the entire economy. The figure was too small for meaningful analysis.

The largest companies in glass and non-metallic minerals are described in Table 1. Most of the companies are owned locally. A number belong to the large construction companies.

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

Company	Employees	Nature of Business
Cement and cement products		
Aveng Africa	17 000 (group; 13 500 in SA)	To support its core construction business, manufactures precast concrete products such as culverts, paving and roof tiles.
Raubex Group	10 500 (Group) (8 800 in SA)	In addition to construction activities in SA and neighbouring countries, supplies aggregates and produces asphalt. Has 17 asphalt plants in SA and one in Botswana.
Consolidated Infrastructure	2 700 (Group)	To support its core construction business, subsidiaries manufacturing crushed stone and rock, clay bricks and concrete roof tiles.
PPC	3 900 (Group) (2 575 in SA)	Manufactures aggregates, milled slag, metallurgical-grade lime, burnt dolomite and limestone, mainly for the retail building industry. Has 11 cement manufacturing factories, five milling plants, five blending facilities and 29 readymix batching plants in SA and other African countries, as well as a number of quarries.
Corobrik	2 550	Manufactures and markets clay bricks, pavers and allied building materials for the domestic, regional and overseas market. Has 15 factories and alliance relationships with five independently owned brick factories. Also has 43 sand and aggregate quarries.
Infrastructure Specialist Group	2 500 (Group)	Manufactures concrete products such as paving stones, kerbs, bricks and roof tiles. Subsidiaries have over 20 manufacturing facilities in SA, Namibia and Botswana.

Company	Employees	Nature of Business
Afrimat	2260	Manufactures concrete, bricks and blocks, mostly for infrastructure and civil engineering projects. Has nine factories and 16 ready-mix batching sites, as well as a number of quarries.
Lafarge Industries	2000 (est.)	Manufactures and distributes readymix concrete, cement and gypsum plasterboard for SA and the region. Has 55 readymix concrete plants plus a number of quarries.
Saint-Gobain Construction Products	1800	Manufactures building products, including plasterboard and gypsum plasters, glasswool and mineral wool for thermal and acoustic insulation, as well as other inputs. Has 18 factories.
Afrisam (SA)	1778	Manufactures and retails road stone, concrete aggregate, ready mixed concrete and cement. Has six cement production facilities, 40 readymix concrete plants and a slagment plant.
Idwala Industrial Holdings	900	Processes white calcitic and dolomite limestone through flotation and fine milling/micronizing; processes of silica, magnetite, calcium carbonate and pyrophyllite.
Brikor	712	Manufactures and supplies clay bricks, roofing tiles, clay pipes, aggregates, building and construction materials. Has two plants.
Silicon Smelters	660	Manufactures silicon for global sale.
Mazor Group	639	In addition to other construction products, manufactures and distributes laminated, toughened safety glass and processed glass.
Sephaku Holdings	625	Manufactures cement, limestone clinker, and ready-mixed concrete. Has 11 mixed concrete plants and three cement plants.
Everite	532	Manufactures and markets fibre cement products for the building industry. Has one plant. Owned by construction company Group 5.
Monier Coverland	510	Manufactures concrete and clay roofing tiles, roofing components and energy systems. Has 10 production facilities.
West End Claybrick	500	Manufactures face, semi-faced and plaster clay bricks and concrete roof tiles. Has three factories.
Dangote Cement SA	400 (est.)	Produces cement and ash. Has two production facilities as well as a limestone mine.
Elematic SA	350	Manufactures and installs precast, prepressed hollow core slabs. Has two factories.
NPC-Cimpor (RF)	320	Manufactures and distributes cement, concrete and aggregate products. Has six readymix plants and three quarries.
Apollo Brick	300	Manufactures, wholesales and retails clay and plaster bricks. Has one plant.
PBD Holdings	300 (Group)	Manufactures and supplies limestone and related products including fertiliser.
Inca Concrete	300	Manufactures, wholesales and retails concrete products such as facing and paving. Has one manufacturing facility.
Marley (SA)	300	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. Has one factory.
Scribante Concrete	254	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	220	Manufactures and wholesales clay brick products, including face bricks, stock bricks and pavers. Has two plants.
West End Cement Bricks	160	Manufactures, wholesales and retails cement bricks and paving. Has three manufacturing plants.

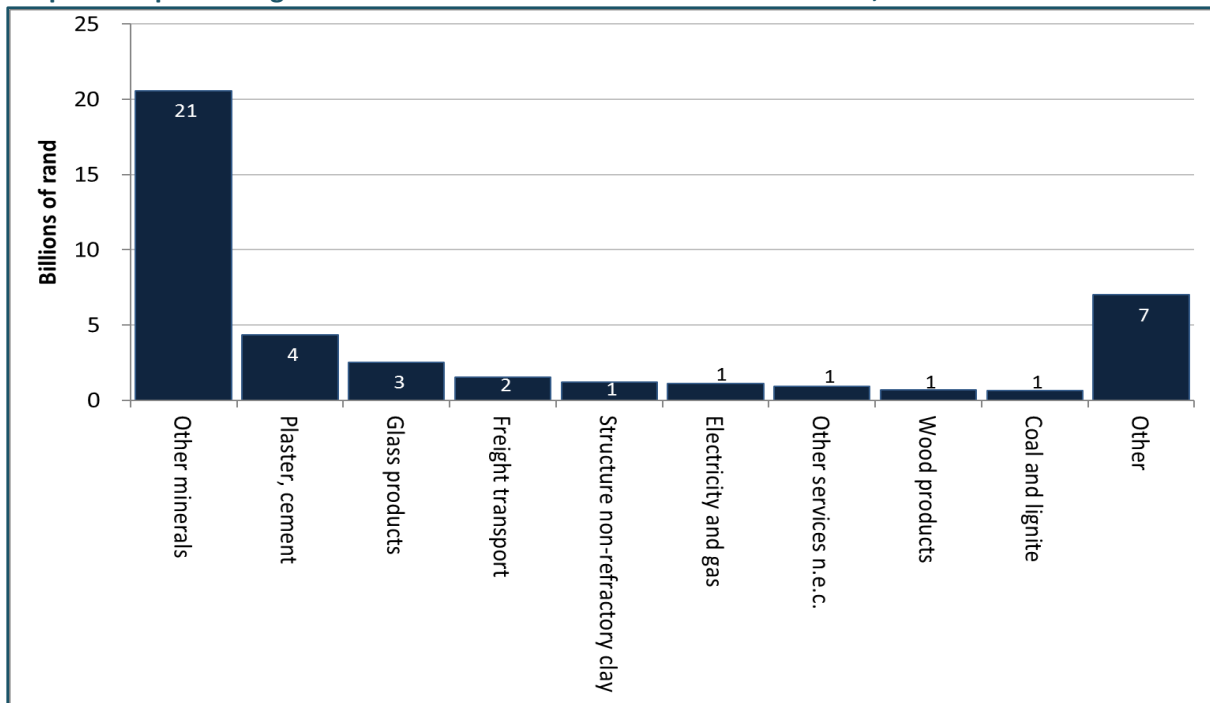
Company	Employees	Nature of Business
Topfloor Concrete	110	Manufactures pre-stressed hollow-core concrete flooring slabs. Has one production plant.
Rickford Investments	106	Manufactures and wholesales corrugated iron roof tiles. Has one manufacturing facility.
Glass and glass products		
Nampak	6 678 (Group) (4 185 in SA)	In addition to other metal and plastic packaging, manufactures glass bottles and jars. Has a total of 51 production facilities.
PG Group	4 000	Manufactures and distributes automotive and building glass.
Consol	2 449	Manufactures, packages and markets glass and plastic as well as glass containers, for which it mines and processes silica and feldspar. Has four manufacturing sites with 12 furnaces.
Union Tiles	500 (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	250	Manufactures flat glass as well as aluminium products for the building industry. Has eight factories.

Source: Who Owns Whom. Report generator. Companies in chemicals manufacturing and pharmaceutical retail. Downloaded in December 2017.

6 Major inputs

The main inputs into glass and non-metallic minerals are other minerals, plaster, cement and glass products. In constant rand, the value of inputs remained almost unchanged from 2012 to 2015. Other minerals, plaster, cement and glass products constituted 66% of all inputs.

Graph 12. Inputs into glass and non-metallic minerals in billions of rand, 2015



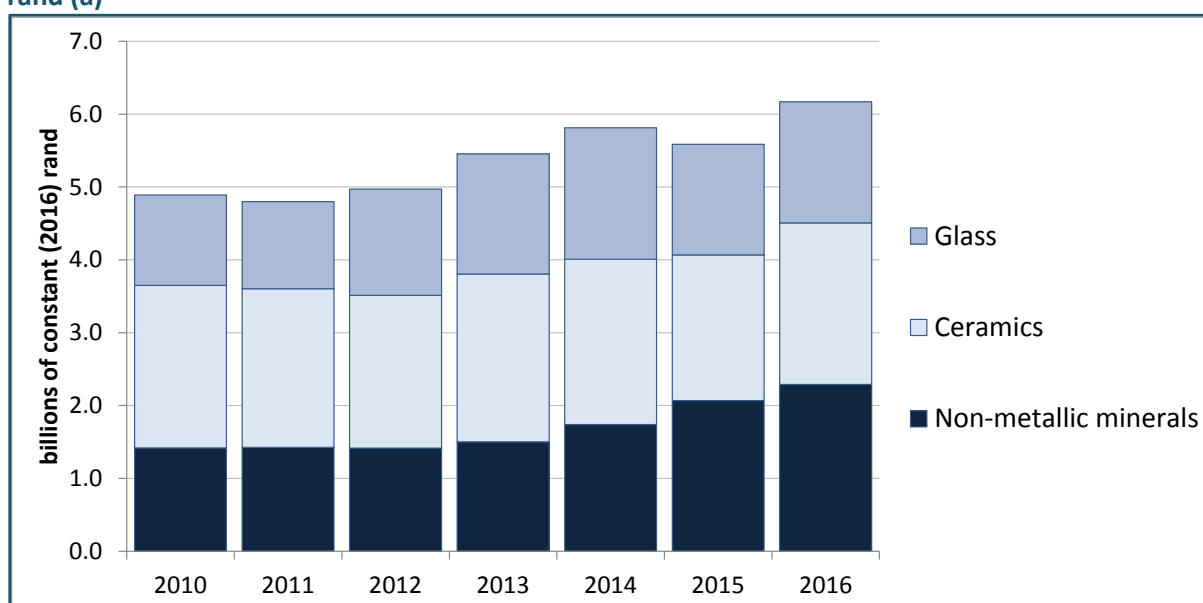
Source: Calculated from Statistics South Africa. Statistics South Africa, GDP data in excel format, Fourth Quarter 2017. Use Tables. Downloaded from www.statssa.gov.za in October 2017.

7 Trade

Because of their bulk, trade in non-metallic minerals is limited worldwide. In South Africa, imports come to just 1,2% of the total, and exports to 0,6%. At R13 billion in 2016, imports in this industry are around twice as high as exports. Furthermore, while the bulk of imports come from overseas, outside of some niche products most exports go to neighbouring countries.

Total exports of glass and non-metallic minerals reached R6 billion in 2016. They grew 4% a year from 2010 to 2014, and 3% a year from 2014 to 2016. Non-metallic minerals, largely granite and plaster, contributed most of the growth. Non-metallic minerals accounted for 37% of the total in 2016, up from 29% in 2010; ceramics for 36%, down from 46%; and glass for 27%, compared to 25% six years earlier.

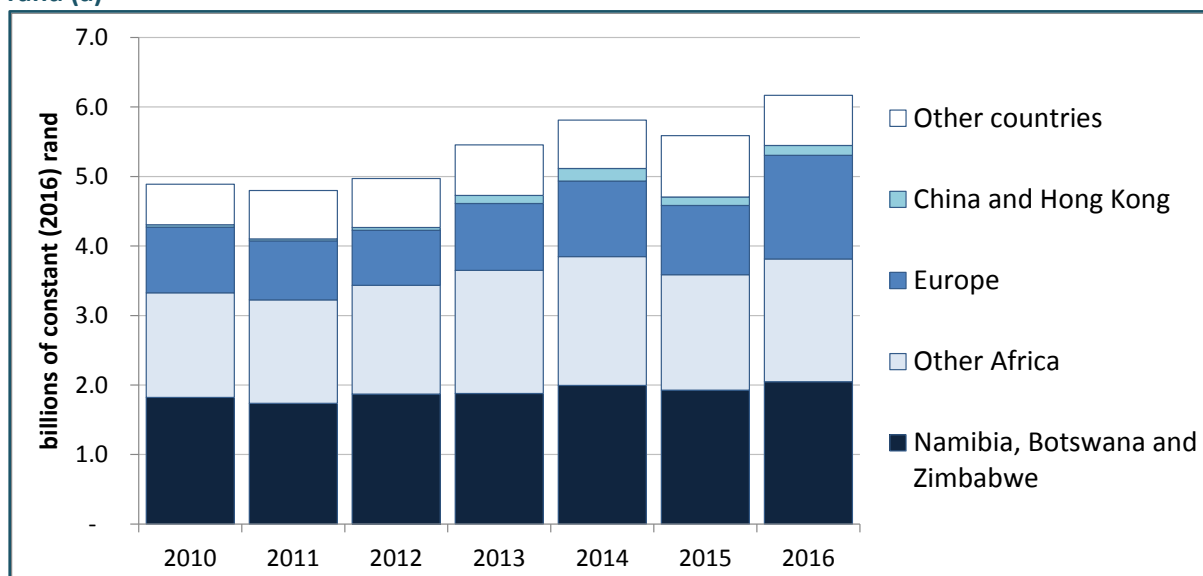
Graph 13. Exports glass and non-metallic minerals, by major product, in billions of constant (2016) rand (a)



Notes: (a) Deflated using CPI. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African exports of glass, ceramics and non-metallic minerals in rand. Downloaded from www.trademap.org in December 2017.

Just under two thirds of South African exports of glass and non-metallic minerals went to other African countries, with a third bought by Namibia, Botswana and Zimbabwe alone. But sales were growing far faster in Europe, rising from 19% of total exports by the industry to 24% between 2010 and 2016. China and Hong Kong, which are major markets for other South African mining products, bought almost no exports from this industry.

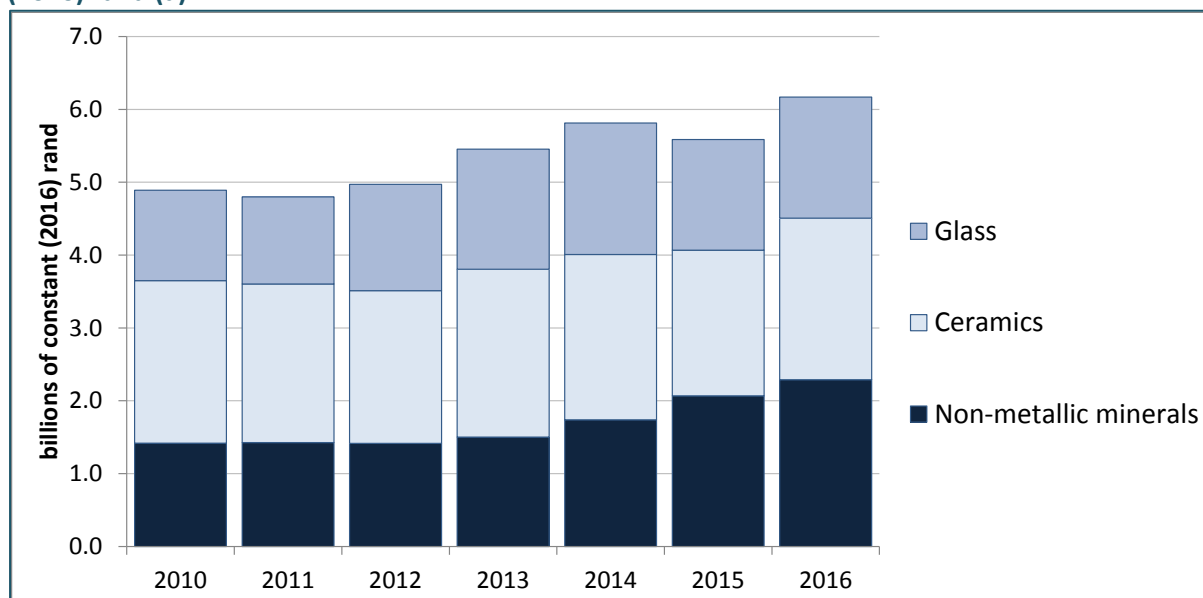
Graph 14. Exports of glass and non-metallic minerals by destination in billions of constant (2016) rand (a)



Notes: (a) Deflated using CPI. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African exports of non-metallic minerals, ceramics and glass in rand. Downloaded from www.trademap.org in December 2017.

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 2016.

Graph 15. Imports of glass, ceramics and non-metallic mineral products in billions of constant (2016) rand (a)

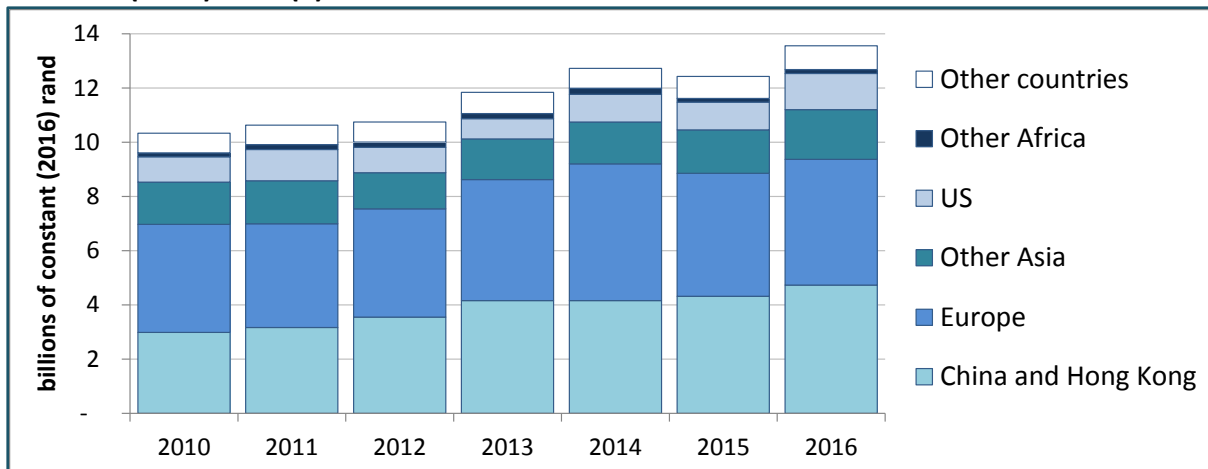


Notes: (a) Deflated using CPI. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African imports of glass, ceramics and non-metallic minerals in rand. Downloaded from www.trademap.org in December 2017.

China and Europe each accounted for just over a third of South African imports of glass and non-metallic mineral products in 2016. The rest of Asia and the US provided around a seventh each. In contrast, the rest of Africa supplied only 1%. China and the US saw by far the fastest growth in

exports to South Africa of glass and non-metallic minerals from 2010 to 2016. Imports from China climbed at 8% a year in this period, while those from the US rose 6% annually.

Graph 16. Imports of glass, ceramics and non-metallic minerals by country, in billions of constant (2016) rand (a)



Notes: (a) Deflated using CPI. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African imports of glass, ceramics and non-metallic minerals in rand. Downloaded from www.trademap.org in December 2017

Trade & Industrial Policies Strategies (TIPS) is an independent, non-profit, economic research institution established in 1996 to support economic policy development. TIPS undertakes quantitative and qualitative research, project management, dialogue facilitation, capacity building and knowledge sharing. Its areas of focus are: trade and industrial policy, inequality and economic inclusion, and sustainable growth.

info@tips.org.za | +27 12 433 9340 | www.tips.org.za