TRADE & INDUSTRIAL POLICY STRATEGIES

MANUFACTURING SUBSECTORS

Food processing

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 food processing subsector as of December 2017. It will be updated as information becomes available.

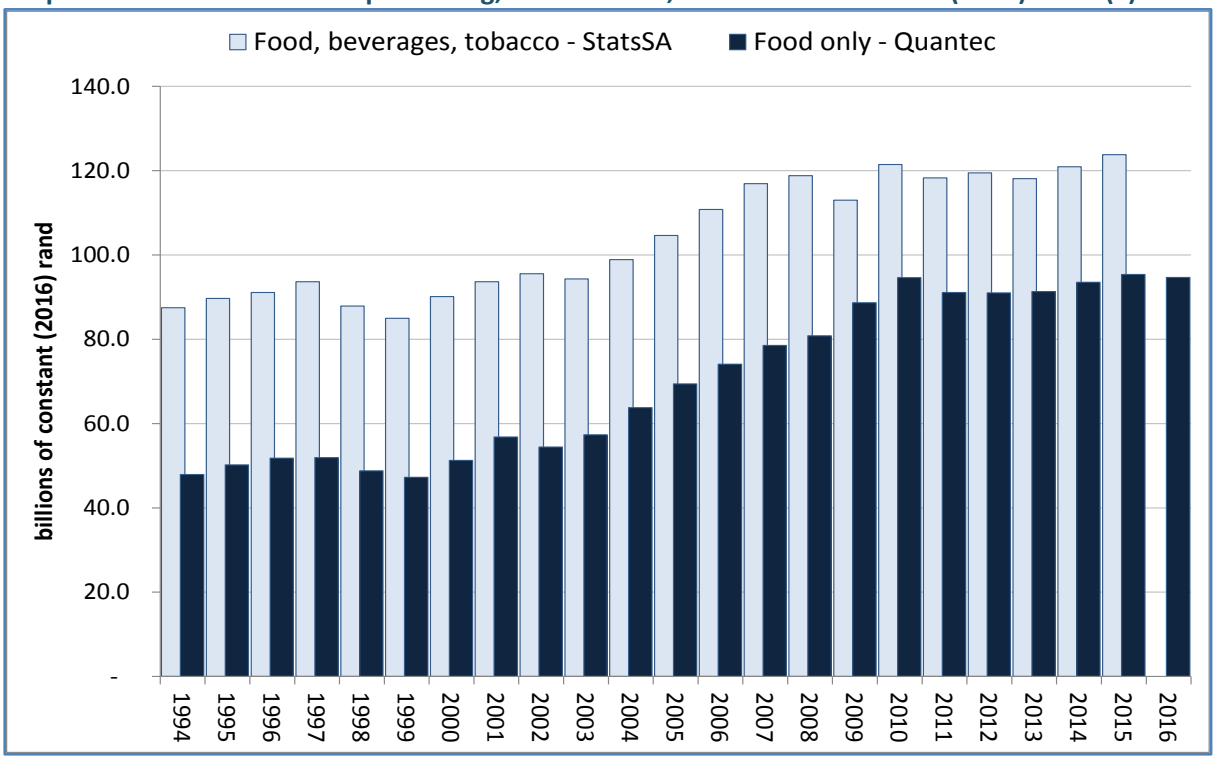
The food processing industry comprises the production of final food products based mainly, although not exclusively, on agricultural inputs. The line between agriculture and food processing is not always entirely clear, however, although the formal definition of food processing excludes processing that takes place on the farm. The industry is highly diverse, with significantly different processes used in major subsectors, for instance maize milling, bakeries, meat and poultry processing and horticulture.

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, although they typically show the same trends. This note provides both.

Food processing grew at 6% a year from 2000 to 2008, according to Quantec, and then levelled out. The Statistics South Africa data do not provide separate value add figures for food, but they show a similar trend for food, beverages and tobacco, as Graph 1 shows.

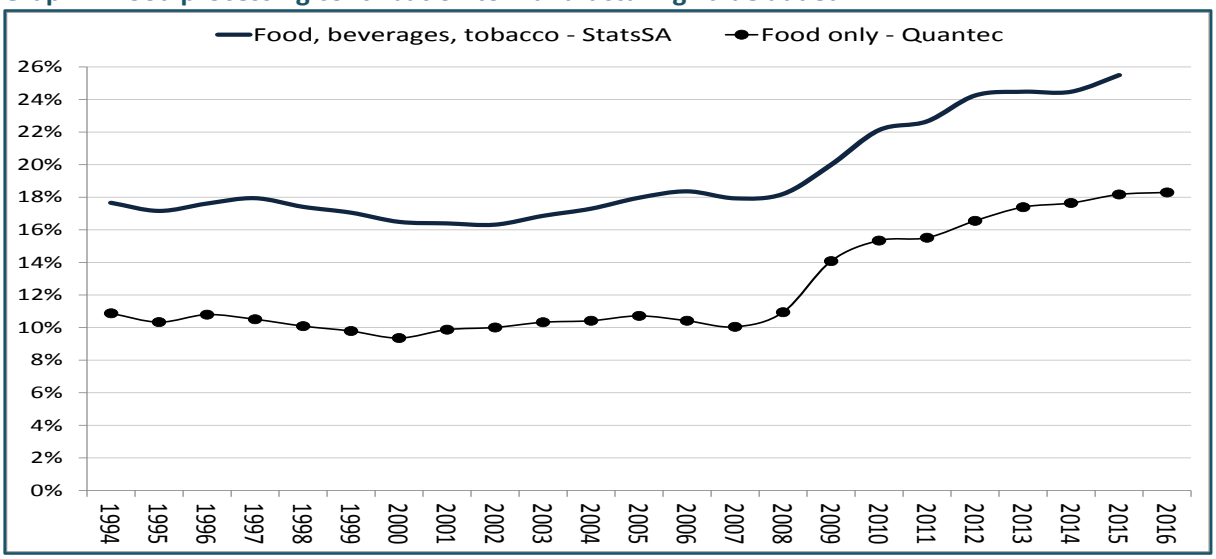
Graph 1. Value added in food processing, 1994 to 2016, in billions of constant (2016) rand. (a)



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.

Food processing lagged the rest of manufacturing during the commodity boom until the global financial crisis in 2008. As a result, the share of food processing climbed sharply in 2008 and it has become more important since then. From 2008 to 2016, it rose from 11% to 18% of value added in manufacturing as a whole, according to Quantec data (see Graph 2).

Graph 2. Food processing contribution to manufacturing value added



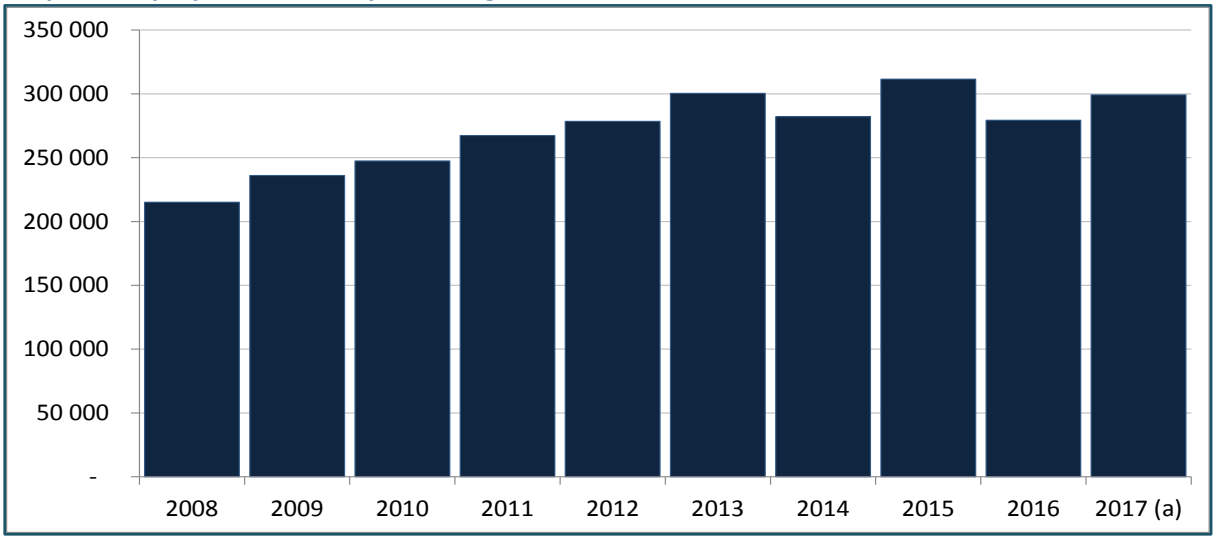
Source: Calculated from Statistics South Africa, GDP P0441. Annual quarter and regional revisions. Q4 2016. Excel spreadsheet. Series on manufacturing subsectors in current rand. Downloaded from www.statssa.gov.za in September 2017; and Quantec EasyData. Standardised regional data. Database in electronic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

Employment in food processing climbed by 7% a year from 2008 to 2013, then levelled out at around 300 000.

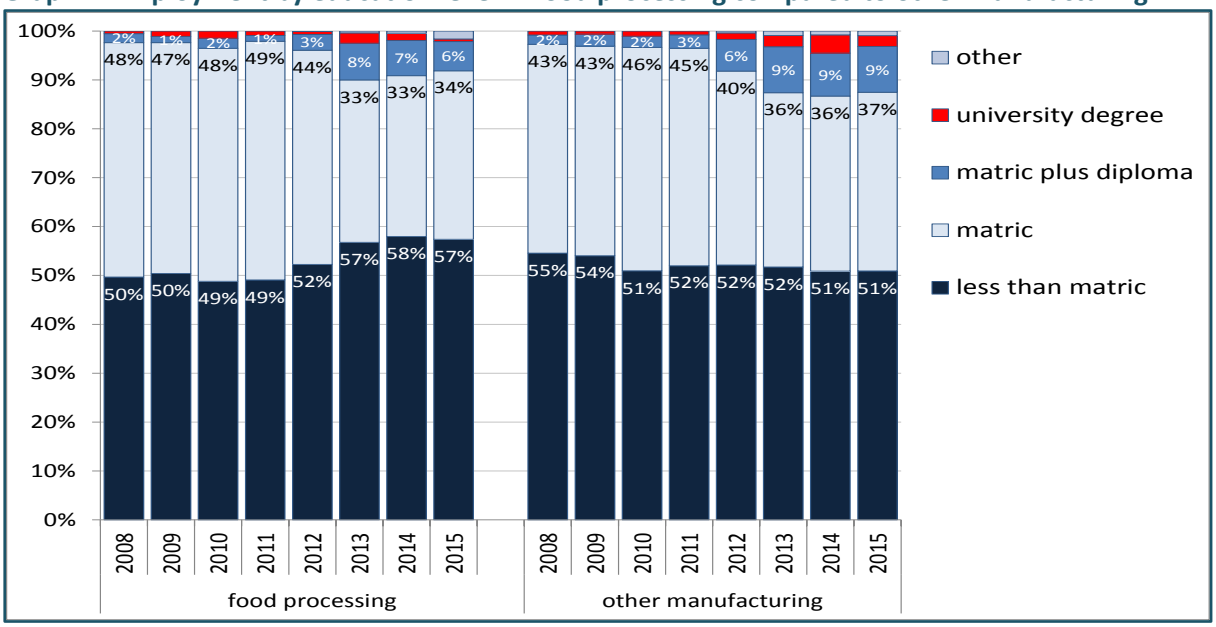
Graph 3. Employment in food processing



Note: (a) Calendar years except for 2017, which is the year to the third quarter. Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2008 to 2015. Series on employment by industry. Electronic databases. Downloaded from www.statssa.gov.za Nesstar facility in September 2017; and Quarterly Labour Force Survey. Q1 2016 to Q3 2017. Series on employment by industry. Electronic databases. Downloaded from www.statssa.gov.za Nesstar facility in December 2017.

Education levels in food processing were slightly lower than in the rest of manufacturing. In 2015, 57% of workers in the industry did not have matric, compared to 51% in the rest of manufacturing.

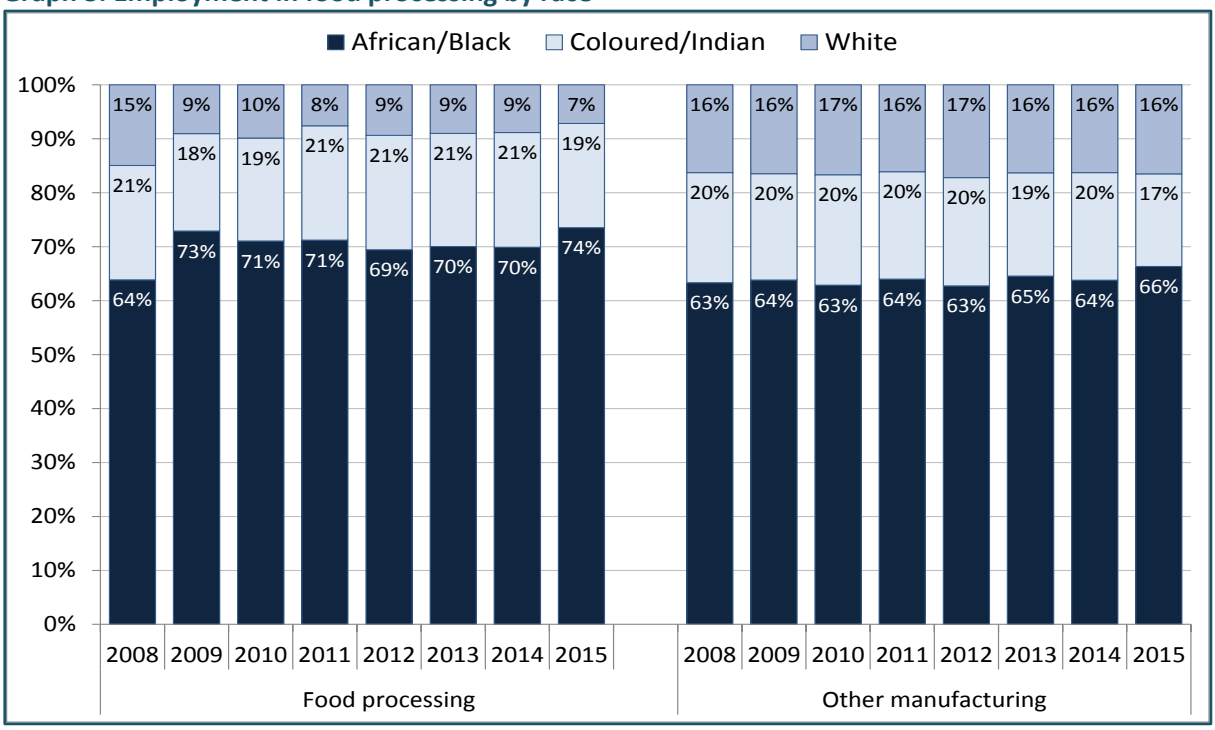
Graph 4. Employment by education level in food processing compared to other manufacturing



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 food processing were somewhat more likely to be African than in the rest of manufacturing, while a smaller proportion were white. In 2015, Africans constituted 74% of employment in food processing, compared to 66% in other manufacturing.

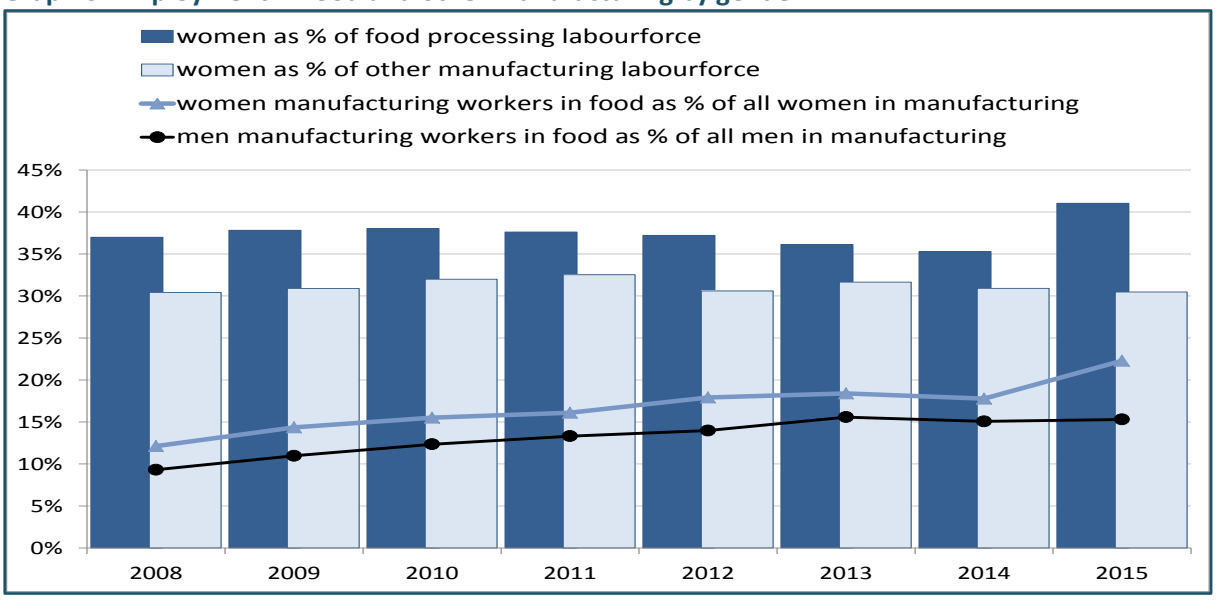
Graph 5. Employment in food processing by race



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 40% of the labour force in food processing, higher than for the rest of manufacturing. Almost one in five women working in manufacturing was employed in food processing, compared to one in seven men in manufacturing jobs.

Graph 6. Employment in food and other manufacturing by gender

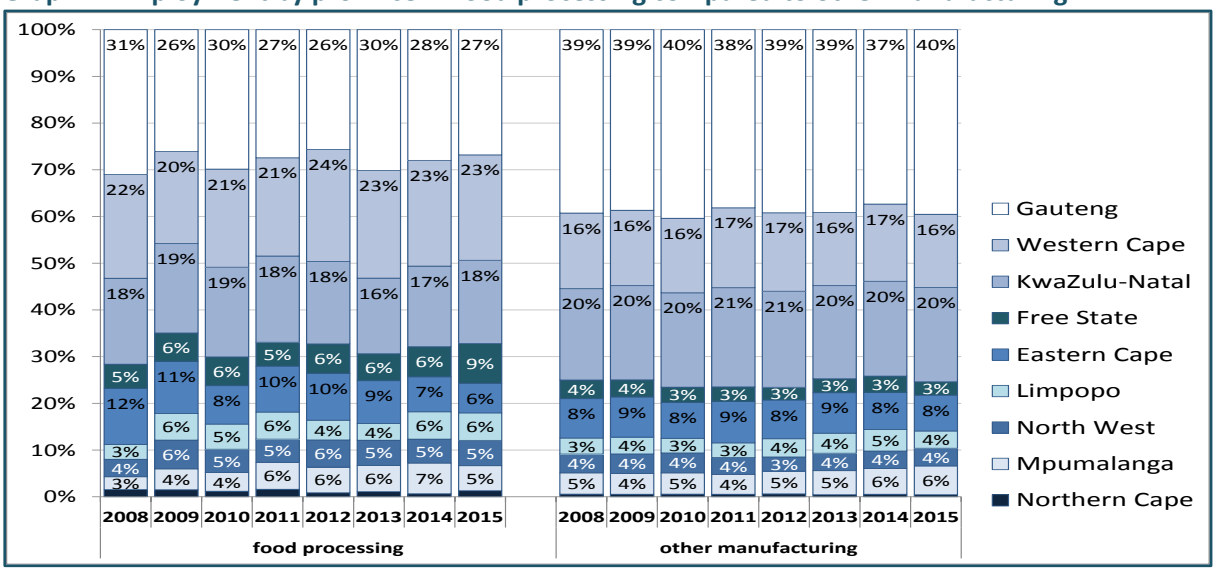


Source: Statistics South Africa. Labour Market Dynamics. Relevant years. Series on employment by industry and gender. Electronic databases. Downloaded from www.statssa.gov.za Nesstar facility in September 2017.

3 Location

Although Statistics South Africa does not provide data for the contribution of food processing to the GDP, it does track its employment by province. As the following graph shows, Gauteng was the largest employer in food processing, although it was less dominant in this industry than in the rest of manufacturing. The Western Cape and the Free State had a significantly larger share in food processing than in other manufacturing employment.

Graph 7. Employment by province in food processing compared to other manufacturing



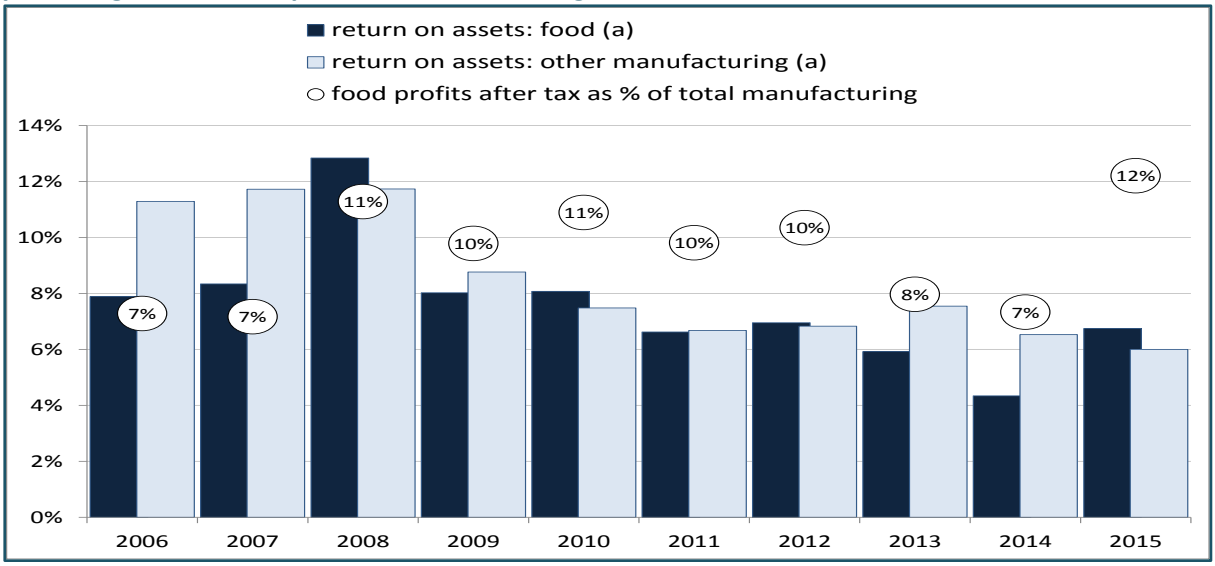
Source: Statistics South Africa. Labour Market Dynamics. Relevant years. Series on employment by industry and province. Electronic databases. Downloaded from www.statssa.gov.za Nesstar facility in September 2017.

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 food processing, around 10% of total employment was in the former "homeland" regions from 2008 to 2015, virtually the same as for manufacturing as a whole.

4 Profitability and assets

From 2008, the after-tax return on assets in food processing averaged 7% a year. That was a lower rate than in the rest of manufacturing, where returns averaged 8% a year. Food processing provided around 10% of all manufacturing profits.

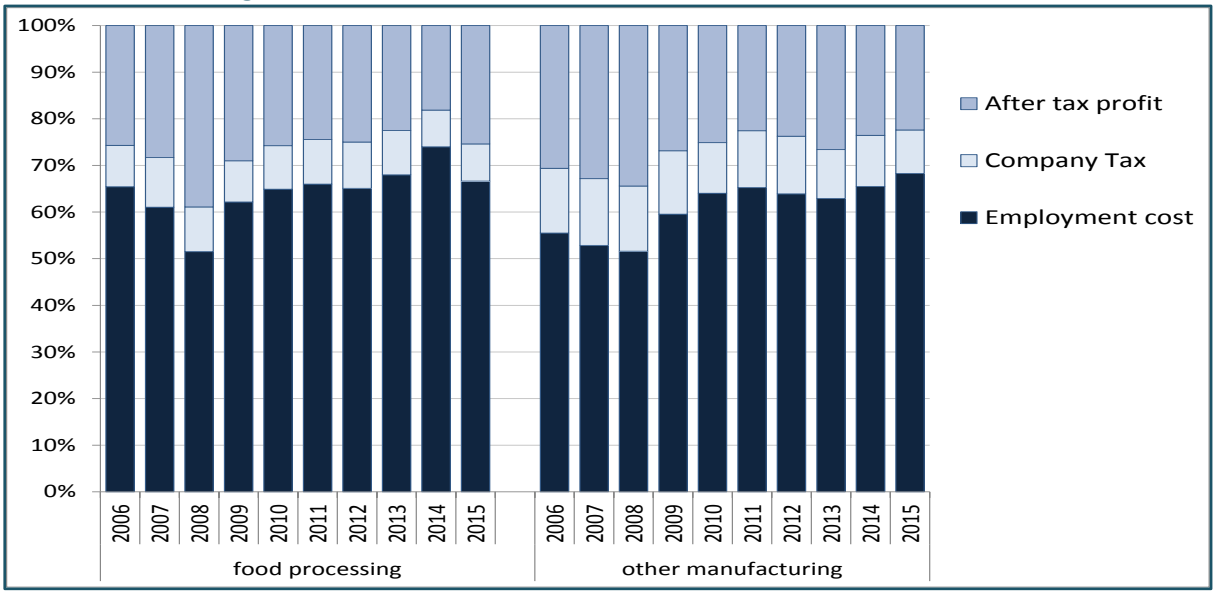
Graph 8. Return on assets (a) in food and other manufacturing, and after-tax profits in food as percentage of after-tax profits in manufacturing as a whole



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.

Between 2008 and 2015, company taxes accounted for an average of 9% of income from food processing, compared to 12% for the rest of manufacturing. After-tax profits in both food processing and the rest of manufacturing came to 26%. Employment costs averaged 65% of income in food processing, compared to 63% in the rest of manufacturing.

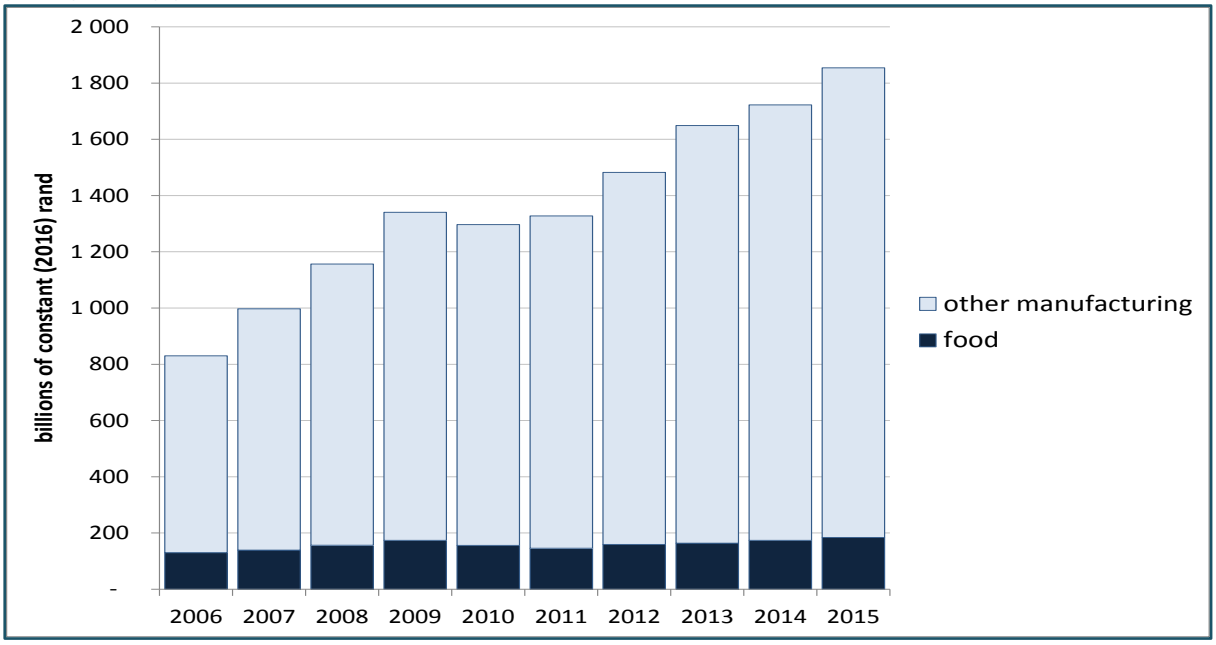
Graph 9. Share of remuneration, profits and taxation in income from food processing compared to other manufacturing



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

The value of food-processing assets climbed by 18% from 2008 to 2015, while the assets in the rest of manufacturing rose 67%. As a result, the share of food processing total manufacturing assets fell from 14% to 10% over this period.

Graph 10. Value of total assets in food processing and other manufacturing in billions of constant (2016) rand (a)

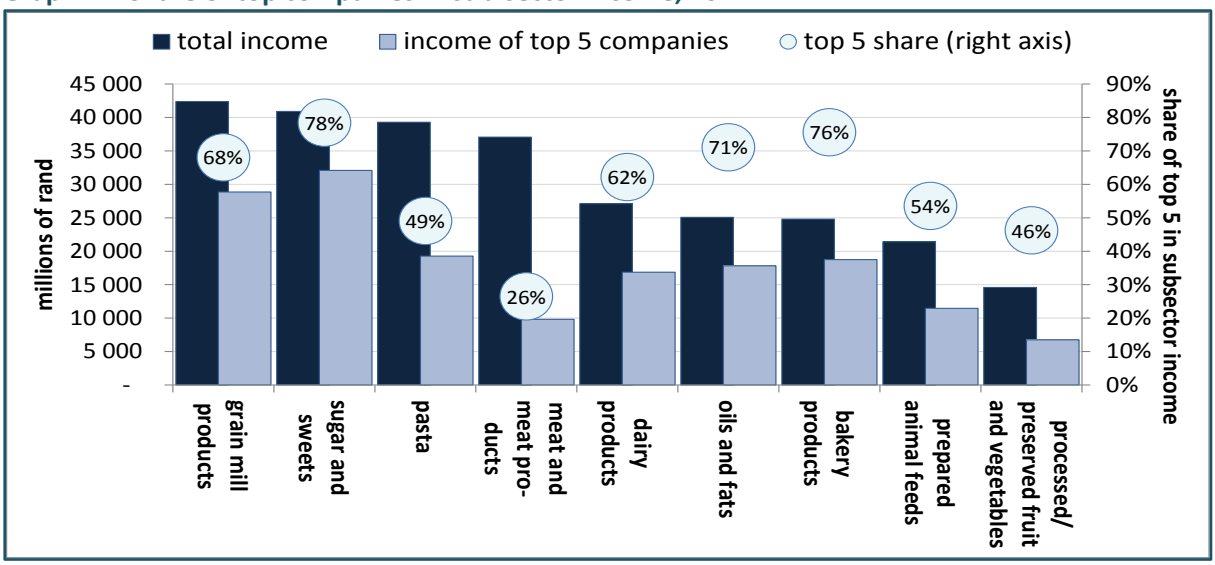


Notes: (a) Deflated with CPI. Source: Calculated from Statistics South Africa. Disaggregated Industry Statistics for relevant year. Excel spreadsheet. Downloaded from www.statssa.gov.za in September 2017.

5 Market structure and major companies

According to Statistics South Africa's Manufacturing Financial Statistics, in 2014 the share in total income of the largest five companies in food processing and beverages production was 26%. That was lower than any other industry but clothing. Within subsectors, however, concentration was much higher, at between 60% and 75% in milling, sugar, dairy, oils and bakery products.

Graph 11. Share of top companies in sub-sector income, 2014



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

In 2015, the Labour Market Dynamics Survey found around 8 000 formal enterprises (that is, employers and self-employed) in formal food, beverages and tobacco, compared to a total of around 60 000 in manufacturing as a whole, and 671 000 for the entire economy. The numbers are too small to analyse for trends. There were around 20 000 informal enterprises in the industry.

The largest companies in food processing are described in Table 1.

Table 1. Market structure for major food products

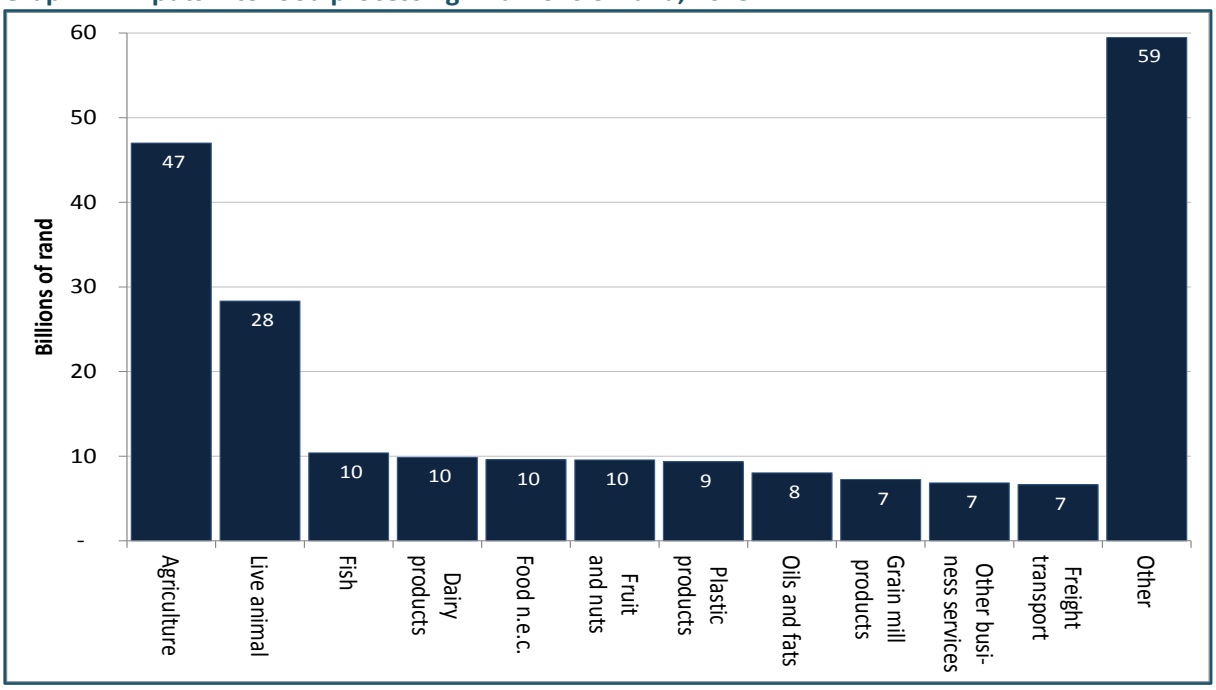
Sector	Commercial farmers	Dominant processing companies
Maize and bread	9 000 in maize. Under 4 000 in wheat.	Seventeen silo companies, based on former co-ops, control over 90% of storage; Senwes, Afgri and NWK control 75% Premier, Tiger Brands, Pioneer and Pride account for 75% of maize milling, with around 300 smaller millers also functioning Pioneer, Tiger Brands, Premier and Foodcorp control virtually all wheat milling; Pioneer, Tiger Brands and Premier account for over 85% of bread sales. (a) Estimates suggest over 50 000 smaller formal and informal bakers, including pizza and similar franchises.
Dairy	There were 1 728 formal milk producers in August 2015, down from 3665 in January 2008 and over 7000 in 1997 (b).	Market shares: Clover 26%, Parmalat 18%, Unilever 7%, Danone 6%, and Cape Oil and Margarine 6%.
Poultry	Poultry is grown mainly by direct subsidiaries of the large companies as well as by farmers contracted to them.	Vertically integrated companies, which also produce feed, dominate poultry production, with Astral and Rainbow together controlling around half of total production. (c) Around 400 farmers are considered "emerging" poultry farmers.
Processed fruit and vegetable	Around 8 000 farmers grew fruit and vegetables, but only about a third sold for processing.	There are around 55 processors, but dominant companies are Tiger Brands followed by Rhodes (which took over Del Monte in SA in 2010) – market share varies by product.
Confectionary	Sugar company estates produce 7%; 1 500 commercial farmers produce 85%; 14 000 small outgrowers grow the rest.	Six sugar milling companies dominated by Illovo and Tongaat Hulett, which control over half of production. Mondelez, Nestle, Tiger Brands accounted for 68% in 2015; the rest is mainly imported.

Notes: (a) Ledger, T. 2016. Power and Governance in Agri-Food Systems: Key Issues for Policymakers. TIPS Working Paper. TIPS. Pretoria. March. (b) Food Price Monitoring Committee. 2003. Final Report. Department of Agriculture, Forestry and Fisheries (DAFF). Downloaded www.gov.za in September 2016. p. 201. (c) DAFF. 2012. A Profile of the South African Broiler Market Value Chain. Pretoria. p.7. Source: Information from sector reports by Who Owns Whom, latest version for sector, unless otherwise noted.

6 Major inputs

The main inputs into food processing are agricultural products and live animals, business services and freight. In constant rand, the value of inputs remained almost unchanged from 2012 to 2015. Agriculture, animals, fish, dairy products and fruit and nuts constituted half of all inputs.

Graph 12. Inputs into food processing in billions of rand, 2015

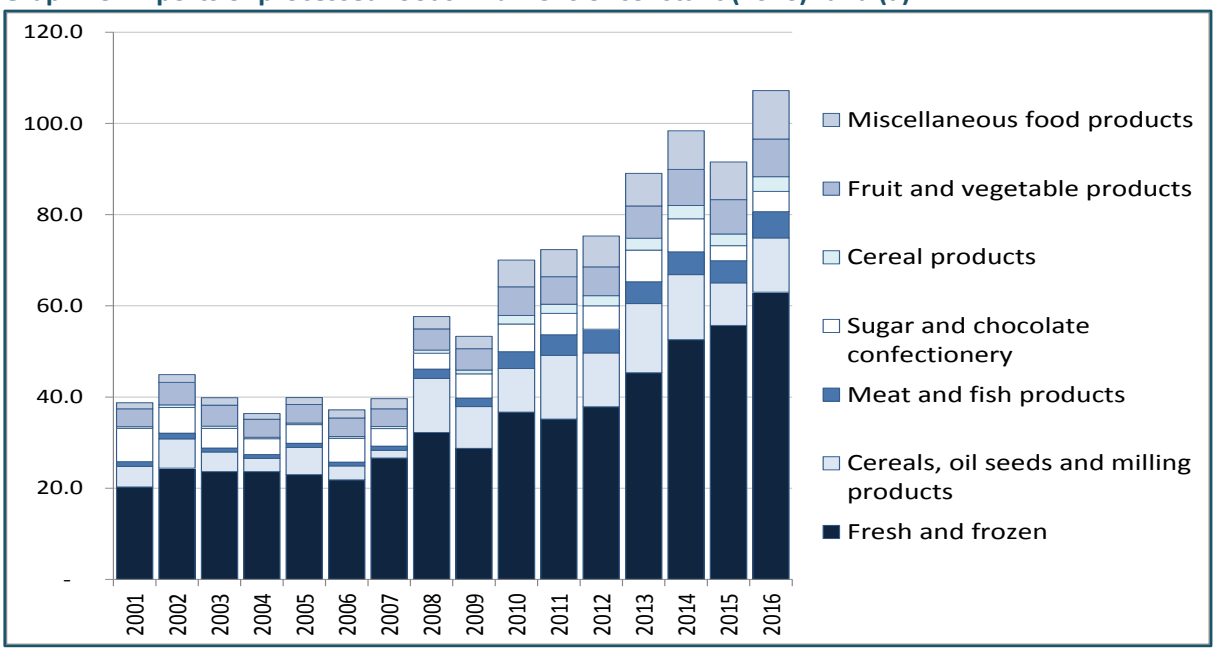


Source: Calculated from Statistics South Africa. Statistics South Africa, GDP data in excel format, Fourth Quarter 2017. Use Tables. Downloaded from www.statssa.gov.za in October 2017.

7 Trade

Processed food exports (excluding beverages) accounted for 3% of total exports in 2016, around half the total for fresh and frozen foods. From 2008 to 2016, both processed and unprocessed food exports grew significantly more rapidly than total exports in constant rand. Processed food exports climbed some 13% a year in this period, while unprocessed foods rose 10% a year. In contrast, total exports increased just 2% a year.

Graph 13. Exports of processed foods in billions of constant (2016) rand (a)



Notes: (a) Deflated using CPI. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African exports at 4-digit HS level. Downloaded from www.trademap.org in February 2017.

In terms of size, processed food exports are dwarfed by fresh, dried and frozen foods, mostly fruit and nuts but also fish, and by wine. Maize exports vary significantly year-on-year depending on the size of the crop, typically emerging only when there is a national surplus.

Table 2. Largest export products – average value for past three years in 2016 rand, and growth in constant rand (a) from 2001 to 2016

Fresh, dried or frozen foods	Citrus – R15,0 billion (323% increase) Grapes (including dried) – R8,1 billion (156% increase) Apples, pears, quinces – R7,2 billion (355% increase) Fish and shellfish – R6,0 billion (21% increase) Nuts – R3,7 billion (965% increase) Milk products – R3,2 billion (460% increase)
Processed foods	Miscellaneous food preparations – R4,9 billion (510% increase) Preserved fruit and vegetables – R4,1 billion (90% increase) Fruit juices – R3,9 billion (149% increase) Alcohol – R3,7 billion (92% increase) Sugar – R2,9 billion (66% decline)
Raw and intermediate materials	Maize – R5,1 billion (205% increase)

Notes: (a) Deflated using CPI. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African exports and world imports at 4-digit HS level. Downloaded from www.trademap.org in February 2017.

In terms of growth, the fastest-growing processed foods were cereals, baked goods and preserved fruit and vegetables. Berries and nut exports climbed five-fold, while processed cereals multiplied between five and eight times.

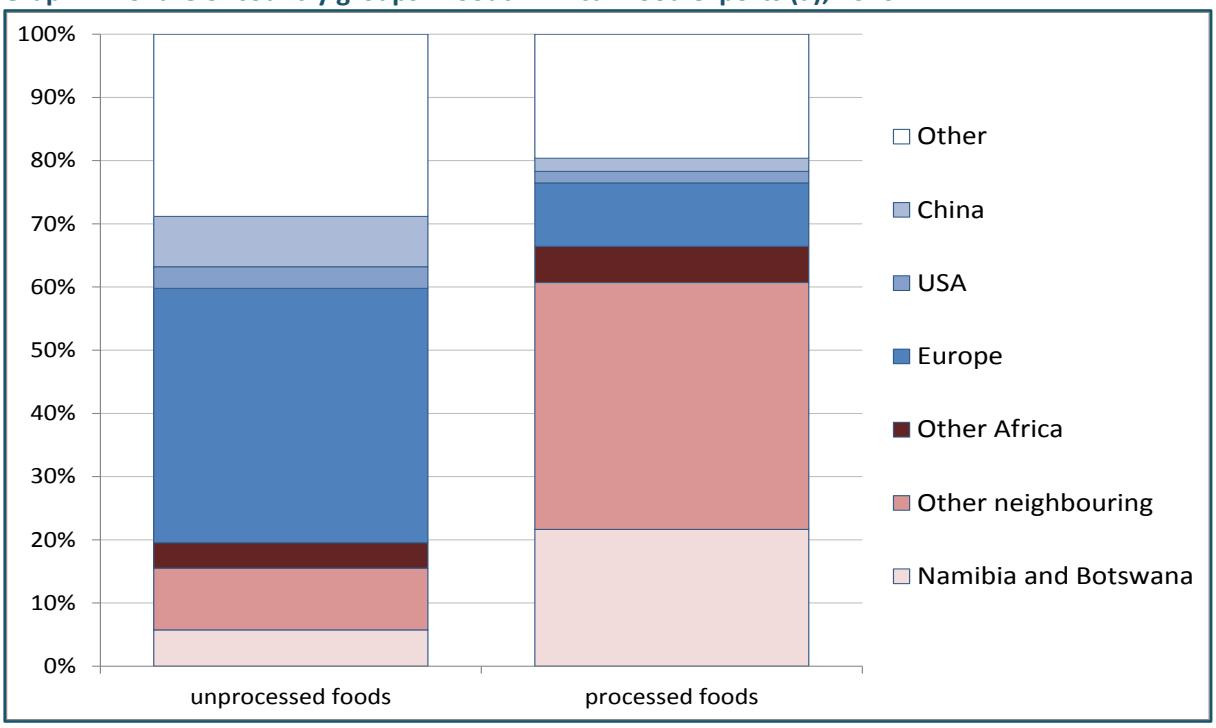
Table 3. Fastest growing exports – percentage growth from 2001 to 2016 and average exports from 2014 to 2016 in constant rand (a)

Fresh, dried or frozen foods	Fresh berries – 979% increase (R1,1 billion) Nuts – 965% increase (R3,7 billion) Fresh/frozen red meat – 762% increase (R2,1 billion) Fresh/frozen poultry – 527% increase (R1,3 billion) Fresh vegetables – 509% increase (R2,2 billion) Milk products – 460% increase (R3,2 billion)
Processed foods	Processed cereals – 1487% increase (R1,0 billion) Baked goods – 650% increase (R1,0 billion) Spices – 639% increase (R0,7 billion) Preserved fruit and vegetables – 556% (R0,7 billion) Other food preparations – 510% increase (R4,9 billion) Cereal flours and meals – 351% (R2,4 billion) Seed oils – 566% increase (R1,2 billion)

Notes: (a) Deflated using CPI. This chart only includes products with over R50 million in sales in 2016. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African exports and world imports at 4-digit HS level. Downloaded from www.trademap.org in February 2017.

In 2016, neighbouring countries accounted for two thirds of South African exports of processed food compared to a fifth of unprocessed food. Europe bought two-fifths of South Africa's exports of unprocessed food but only a tenth of processed food, mainly in the form of juice. In contrast, China and Hong Kong – South Africa's largest single trading partner overall – purchased almost no manufactured agro-products, whether food or industrial goods, and under a tenth of fresh and frozen foods.

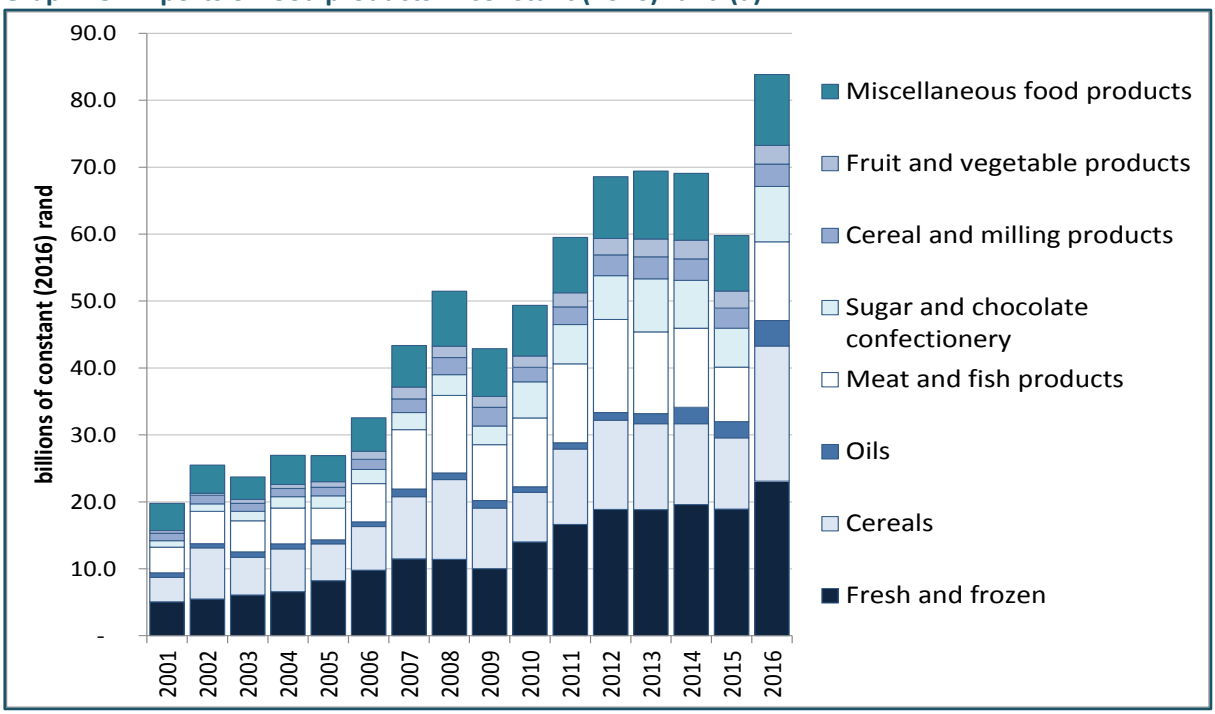
Graph 14. Share of country groups in South African food exports (a), 2016



Notes: (a) Groups consolidated based on HS-2 digit figures, so they are only broad groupings. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African exports and world imports at 4-digit HS level. Downloaded from www.trademap.org in February 2017.

The bulk of South African food imports were processed foods plus cereals and oils – mainly wheat, soya and palm oil. Drought years like 2015/6 also saw significant maize imports. From 2008 to 2016, in constant rand total imports remained virtually unchanged, but imports of processed foods rose by 5% a year in constant rand. Imports of sweets and cooking oil expanded particularly rapidly.

Graph 15. Imports of food products in constant (2016) rand (a)



Notes: (a) Deflated using CPI. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African imports at 4-digit HS level. Downloaded from www.trademap.org in February 2017.

The largest imports of processed foods included palm oil, fruit juice, chocolates and cooking oils. Maize, wheat and soya beans were also imported for further processing inside South Africa.

Table 4. Largest import products – average value for past three years in 2016 rand, and growth in constant rand (a) from 2001 to 2016

Fresh, dried or frozen foods	Poultry – R4,7 billion (641% increase) Prepared fish – R1,7 billion (273% increase) Frozen fish – R1,4 billion (1225% increase) Coffee – R1,1 billion (272% increase)
Processed foods	Palm oil – R3,5 billion (325% increase) Spirits – R3,9 billion (166% increase) Fruit juice – R1,1 billion (1737% increase) Chocolates – R1,3 billion (496% increase) Cooking oil – R2,0 billion (342% increase)
Food inputs	Maize – R4,0 billion (fluctuates)(b) Rice – R5,3 billion (180% increase) Wheat – R4,8 billion (612% increase) Sugar – R3,4 billion (increase not available) (c) Soya beans – R1,1 billion (2714% increase)

Notes: (a) Deflated using CPI. (b) Maize imports increased sharply in 2015/6 during the drought. (c) Data on imports from Swaziland start from only 2010. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African imports at 4-digit HS level. Downloaded from www.trademap.org in February 2017

The fastest growing imports of processed foods were fruit juices, mainly apple juice from China for blending with local products, as well as coffee and tea products. Staples such as oil seeds and frozen meat also grew rapidly in constant rand.

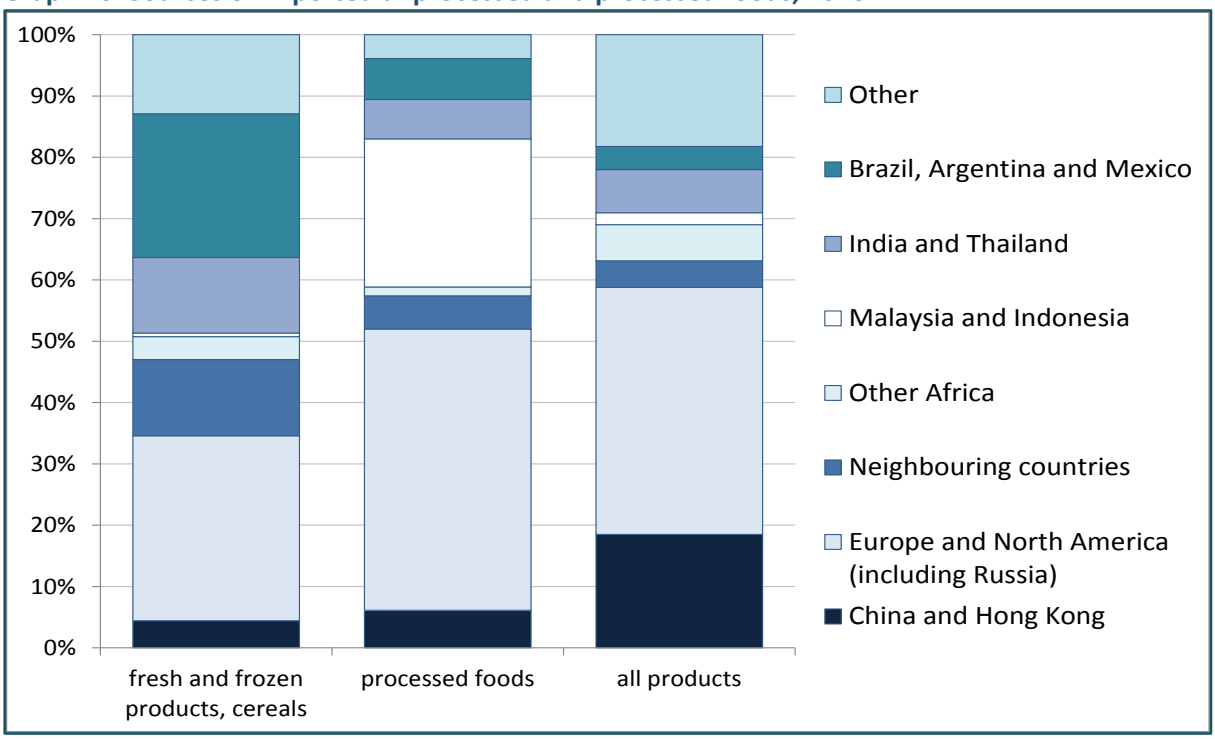
Table 5. Fastest growing imports – percentage growth from 2001 to 2016 and average exports from 2014 to 2016 in constant (2016) rand (a)

Fresh, dried or frozen foods	**Frozen fish – 1225% growth (R1,4 billion)** **Pepper – 925% growth (0,6 billion)** **Poultry – 641% growth (R4,7 billion)** **Frozen beef – 604% growth (0,5 billion)** **Cheese and curd – 357% growth (R0,7 billion)**
Processed foods	**Fruit juices – 1737% growth (R1,1 billion)** **Extracts of coffee and tea – 1366% growth (R1,1 billion)** **Preserved tomatoes – 724% growth (R0,5 billion)** **Chocolates – 496% growth (R1,3 billion)** **Preserved fruit and nuts – 485% growth (R0,5 billion)** **Mineral waters – 357% growth (R0,9 billion)**
Food inputs	**Sunflower seeds – 3273% growth (R0,5 billion)** **Soya beans – 2714% growth (R1,1 billion)** **Wheat – 612% growth (R4,8 billion)**

Notes: (a) Deflated with CPI. Includes only products that averaged over R50 million in imports from 2014 to 2016. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African exports and world imports at 4-digit HS level. Downloaded from www.trademap.org in February 2017.

Half of all imports of processed foods came from Europe, with Malaysia and Indonesia becoming important sources especially for cooking oil. In contrast, China was a much smaller source of imported foods than other goods. Neighbouring countries were a relatively minor source of food imports. Over a third of food imports from the region consisted of fish from Namibia and sugar products from Swaziland.

Graph 16. Sources of imported unprocessed and processed foods, 2016



Notes: (a) Groups consolidated based on HS-2 digit figures, so they are only broad groupings. Source: Calculated from ITC. TradeMap. Electronic database. Series on South African exports and world imports at 4-digit HS level. Downloaded from www.trademap.org in February 2017.