THE REAL ECONOMY BULLETIN

TRENDS, DEVELOPMENTS AND DATA FOURTH QUARTER 2017

The Real Economy Bulletin is a TIPS review of quarterly trends, developments and data in the real economy, together with a comprehensive analysis of the main manufacturing industries and key data in Excel format.*

GDP growth

South Africa's GDP grew by 0,8% in the fourth quarter of 2017, representing a 1,9% increase from the fourth quarter of 2016. Compared to the previous two years, it signalled three quarters of relatively strong growth.

The last nine months of 2017 saw the most stable and prolonged period of growth since 2014. It suggested that South Africa was finally benefiting from the broader global recovery. As noted in the briefing note on page 15 (*What happened to the recession?*), the latest report also provided revised and increased growth figures for the six quarters from mid-2016, effectively eliminating a technical recession initially reported at the start of 2017.

As with the rest of the world, however, growth remained slower than in the run-up to the 2008/9 global financial crisis (see Graph 1).

Growth was still too low to boost per-capita GDP, which dropped by 0,1% from the final quarter of 2016. Still, the fall was less than the 1,5% decrease registered in 2016 (see Graph 2). GDP per person is affected by the marked recovery in population growth with the extension of anti-retroviral treatment over the past decade.

*Available at www.tips.org.za/the-real-economy-bulletin

CONTENTS

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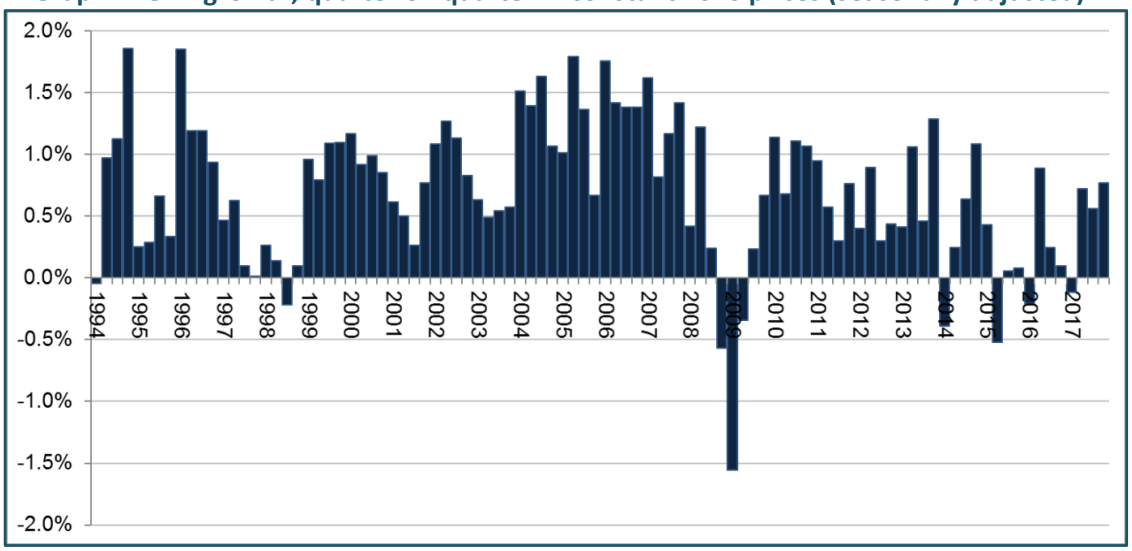
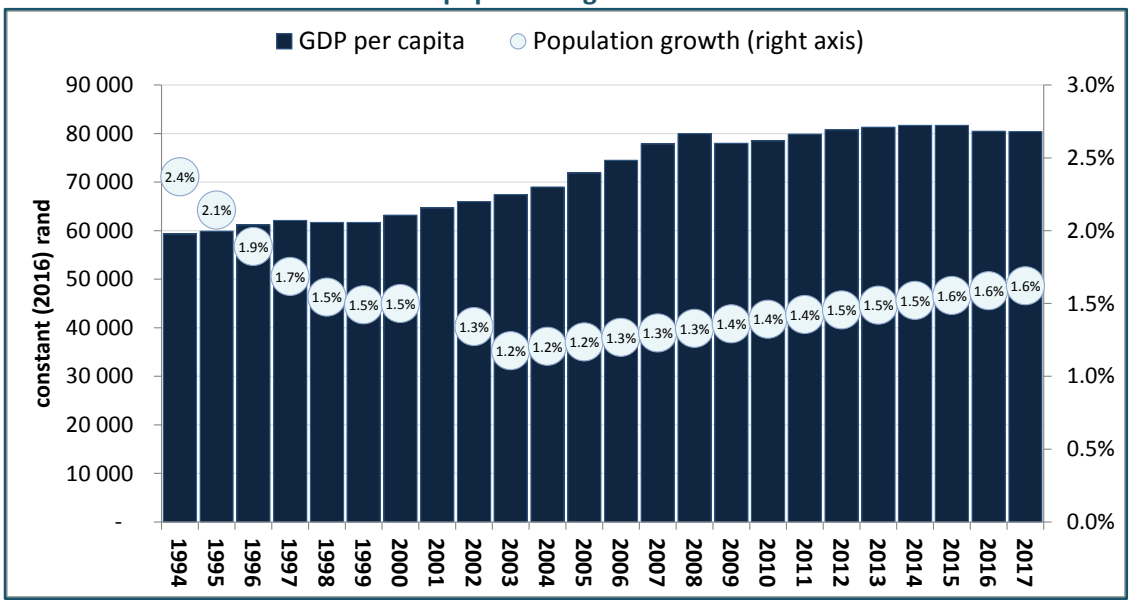
Graph 1: GDP growth, quarter on quarter in constant 2010 prices (seasonally adjusted)



Source: StatsSA GDP quarterly figures. Excel spreadsheet downloaded www.statssa.gov.za in March 2018

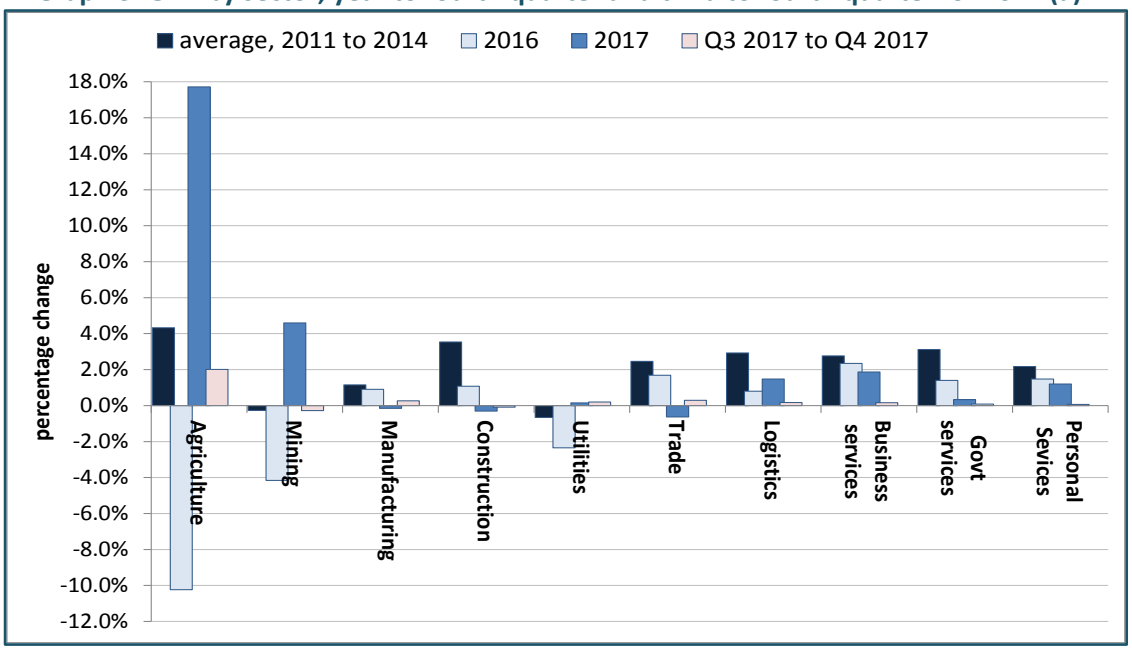
Graph 2: GDP Per capita in constant rand (year to fourth quarter) and population growth rate



Source: For the GDP, StatsSA GDP quarterly figures. Excel spreadsheet downloaded from www.statssa.gov.za in March 2018. For population, World Bank Development indicators to 2002, then StatsSA mid-year population estimates.

Growth was driven by services and logistics. In the real economy sectors, only agriculture showed significant growth in 2017, thanks largely to the rebound from the 2015/6 drought. Manufacturing production dropped by 0,2% in 2017, although it eked out a 0,3% increase (in seasonally adjusted terms) in the last quarter. Mining enjoyed 4,6% growth in 2017, despite a fall of 0,3% in the final quarter. Construction continued the slowdown noted in the last issue of the REB, with a 0,2% decline over the year (see Graph 3).

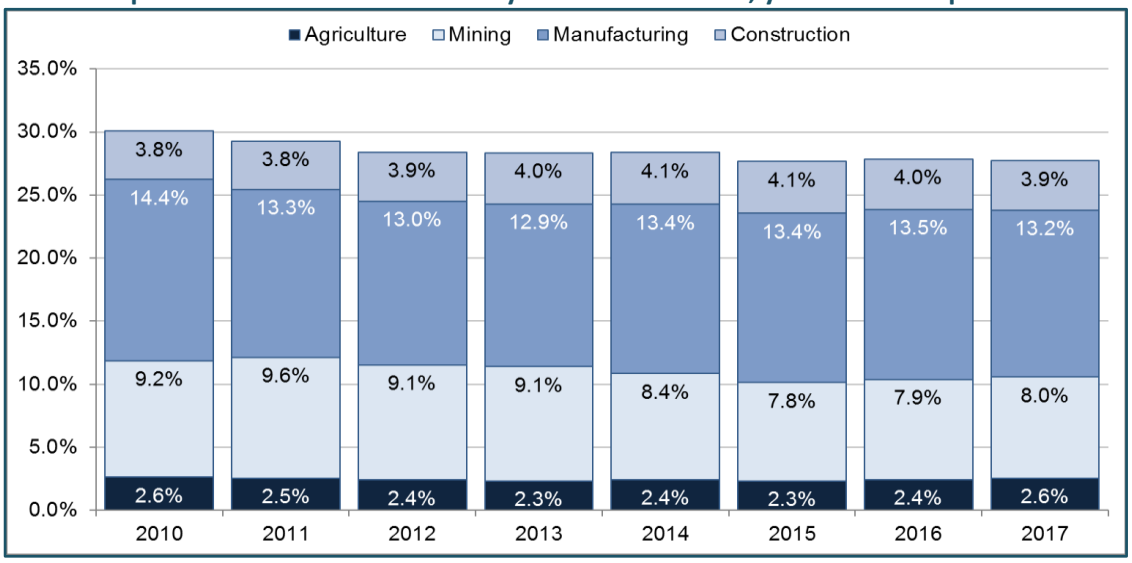
Graph 3: GDP by sector, year to fourth quarter and third to fourth quarter for 2017 (a)



Note: (a) Figures for third and fourth quarter 2017 are seasonally adjusted. Source: StatsSA GDP quarterly figures. Excel spreadsheet downloaded www.statssa.gov.za in March 2018

The share of the real economy in the GDP stabilised at just under 28% over the past three years, with only minor changes in the contribution by industry. (see Graph 4). Mining's share stabilised at around 8% after a sharp fall from 2011, when the commodity boom ended, to 2015; manufacturing also stabilised, although its share shrank slightly in 2017; and construction continued the decline of recent years. The recovery in agriculture showed up in the increase in its share in the GDP from 2,3% in the drought year of 2015 to 2,6% in 2017.

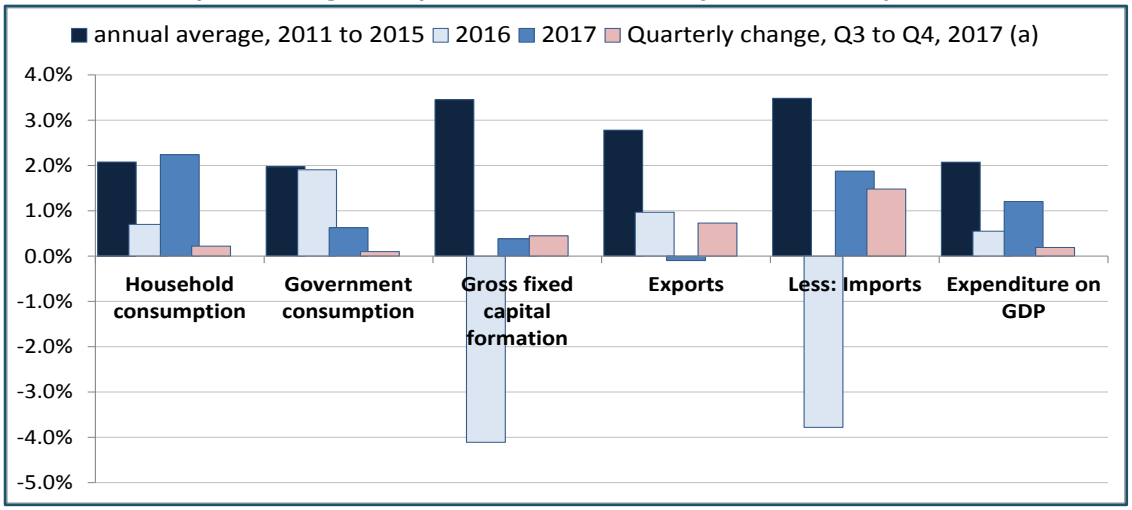
Graph 4: Share of the real economy sectors in the GDP, year to fourth quarter



Source: StatsSA GDP quarterly figures in current prices. GDPp_Tables_4q_2017. Excel spreadsheet downloaded from www.statssa.gov.za in March 2018

On the expenditure side, household consumption and investment, at 2,2%, was the main driver of growth from 2016 to 2017. Government expenditure continued to be well below the levels of previous years, reflecting continued fiscal consolidation. While there was a decrease in expenditure on exports of 0,1% from 2016 to 2017, there was a 1,9% increase in expenditure for imports. From the third quarter to the fourth quarter, the increase in imports of 1,5% is notable (see Graph 5).

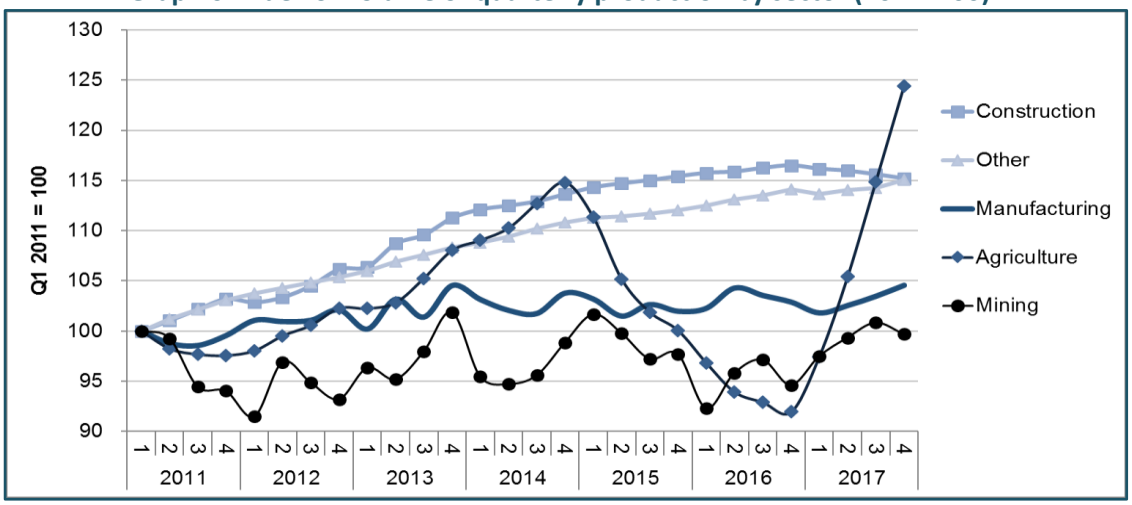
Graph 5: Change in expenditure on the GDP, year to fourth quarter



Note: (a) Figures for third and fourth quarter 2017 are seasonally adjusted. Source: StatsSA GDP quarterly figures. GDPp_Tables_4q_2017. Excel spreadsheet downloaded from www.statssa.gov.za in March 2018

In 2017, manufacturing production in volume terms recovered after falling for most of 2016. Mining output also recovered over most of the year but saw a sharp fall in the final quarter (in seasonally adjusted terms). Agriculture continued its steep growth, with output exceeding its pre-drought peak in 2014. Construction experienced a steady decline over the year (see Graph 6).

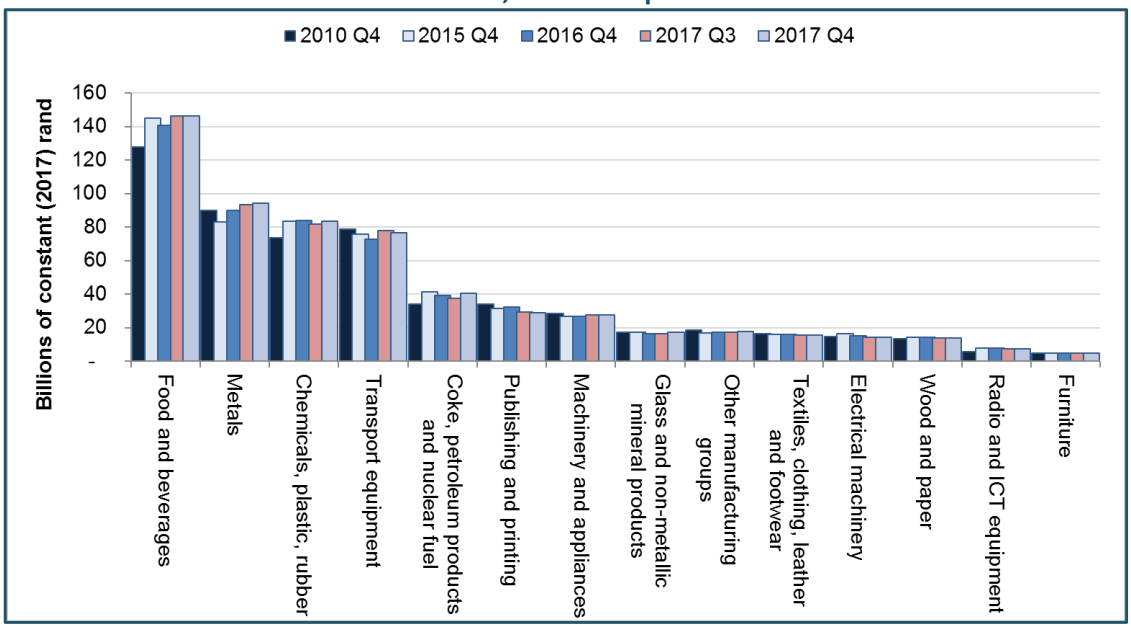
Graph 6: Index of volume of quarterly production by sector (2011=100)



Source: StatsSA GDP quarterly figures. GDPp_Tables_4q_2017. Excel spreadsheet downloaded from www.statssa.gov.za in March 2018

In constant rand, manufacturing sales went up 1,8% over the year, and 0,7% in the quarter. But growth was sharply divided by sector over the past year. It was driven almost exclusively by three large industries: food and beverages, which saw a 4,1% growth in sales; metals (4,8%) and transport equipment (5,3%). Petroleum, machinery and appliances, and glass and non-metallic mineral products saw more moderate growth, at between 2,8% and 3,2% for the year. The other manufacturing industries (chemicals, plastic and rubber; the wood value chain; clothing and footwear; electrical machinery; and ICT) all saw falling sales (see Graph 7).

Graph 7: Manufacturing sales in constant (2017) rand, fourth quarter 2010, 2015, 2016 and 2017, and third quarter 2017



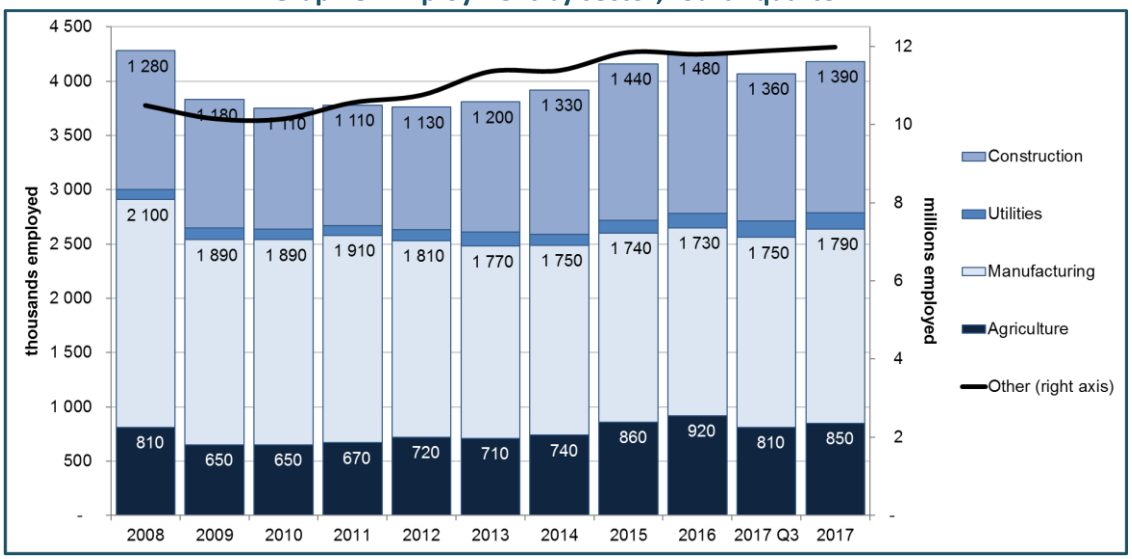
Source: StatsSA. Manufacturing volume and sales from 1998. Excel spreadsheet. Downloaded in February 2018.

Employment

Employment in the real economy was lower in the fourth quarter of 2017 than a year earlier. The job losses occurred in agriculture and construction; manufacturing saw a modest increase in employment; and mining employment remained essentially unchanged. Most of the growth in manufacturing resulted from job creation in food processing and beverages.

Employment in the real economy, excluding mining (which is captured in a different data series) was 4,18 million in the fourth quarter of 2017. That represented a fall of 80 000 over the fourth quarter of 2016. The employment data are not seasonally adjusted, and formal non-agricultural growth typically sees a boost in the third and fourth quarters followed by stagnation or even declines in the first half of the following year. In the event, employment climbed 2,5% (or 102 000 jobs) over the quarter, which was slightly stronger than the norm for the fourth quarter (see Graph 8).

Graph 8: Employment by sector, fourth quarter

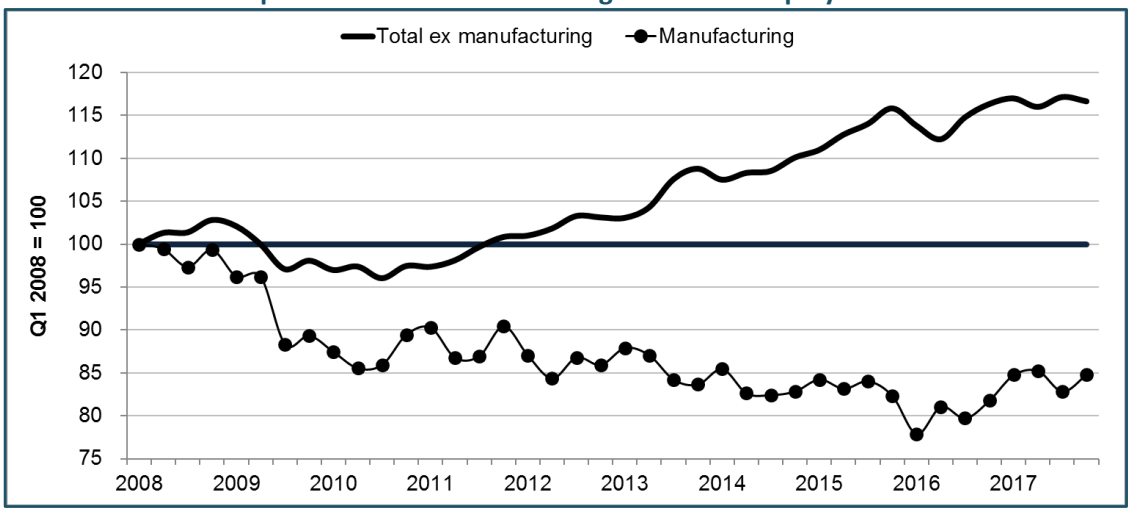


Source: StatsSA. QLFS trends 2008 - 2017. Downloaded from www.statssa.gov.za in February 2018

Job losses from the fourth quarter of 2016 to the fourth quarter of 2017 occurred almost exclusively in construction (92 000 jobs) and agriculture (70 000). In contrast, manufacturing increased employment by 3,5%, or 63 000 jobs, and the small utilities sector climbed 14%, or 18 000 jobs.

As shown in Graph 9, manufacturing employment has essentially stabilised around 15% below its peak before the global financial crisis in 2008/9. As a result, its share in total employment has declined from 14% of total employment in the fourth quarter of 2008 to 11% at the end of 2017.

Graph 9: Index of manufacturing and other employment

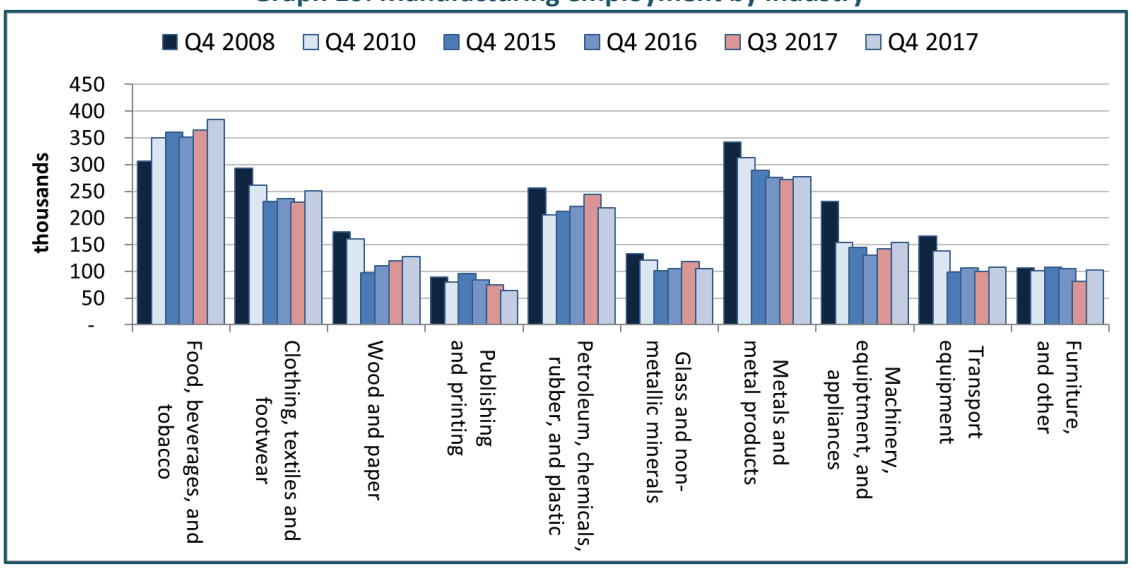


Source: StatsSA. QLFS trends 2008 - 2017. Downloaded from www.statssa.gov.za in February 2018

Food processing accounted for the bulk of job creation in manufacturing, growing by almost 10% from the fourth quarter of 2016. Its expansion presumably resulted in part from the agricultural recovery. In the other industries, the reported changes in employment and sales did not align particularly well. Machinery, equipment and appliances, clothing and footwear

and wood and paper saw growth over the year; petroleum, publishing, furniture and glass and non-metallic minerals reportedly shrank (see Graph 10).

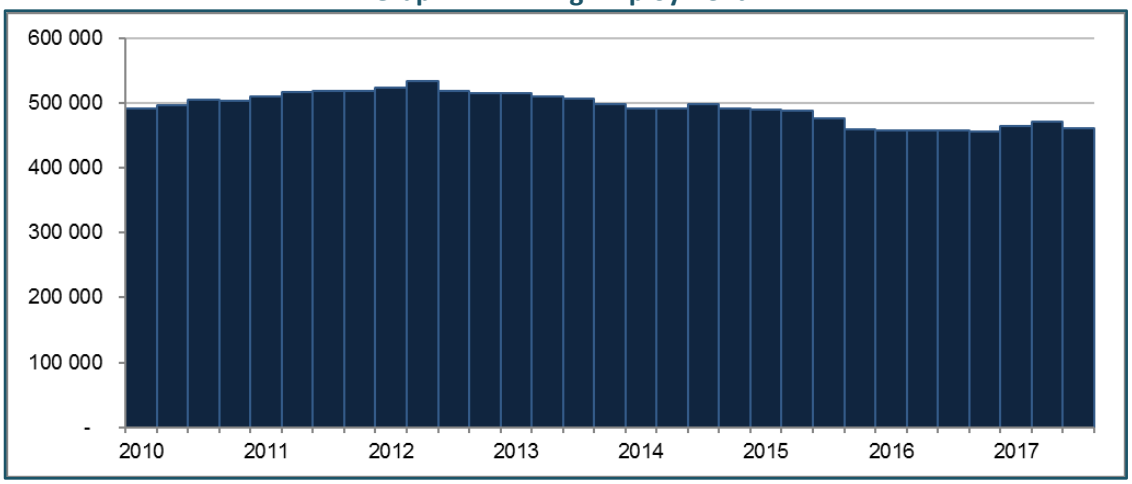
Graph 10: Manufacturing employment by industry



Source: StatsSA. QLFS trends. Electronic database. Downloaded from www.statssa.gov.za in February 2018

The mining sector saw virtually no employment growth in the year to the third quarter 2017 – the latest available data – stabilising at around 460 000 jobs. The end of the commodity boom saw the loss of around 50 000 jobs, or 10%, but the decline appears to have ended in the past two years (see Graph 11 below).

Graph 11: Mining Employment



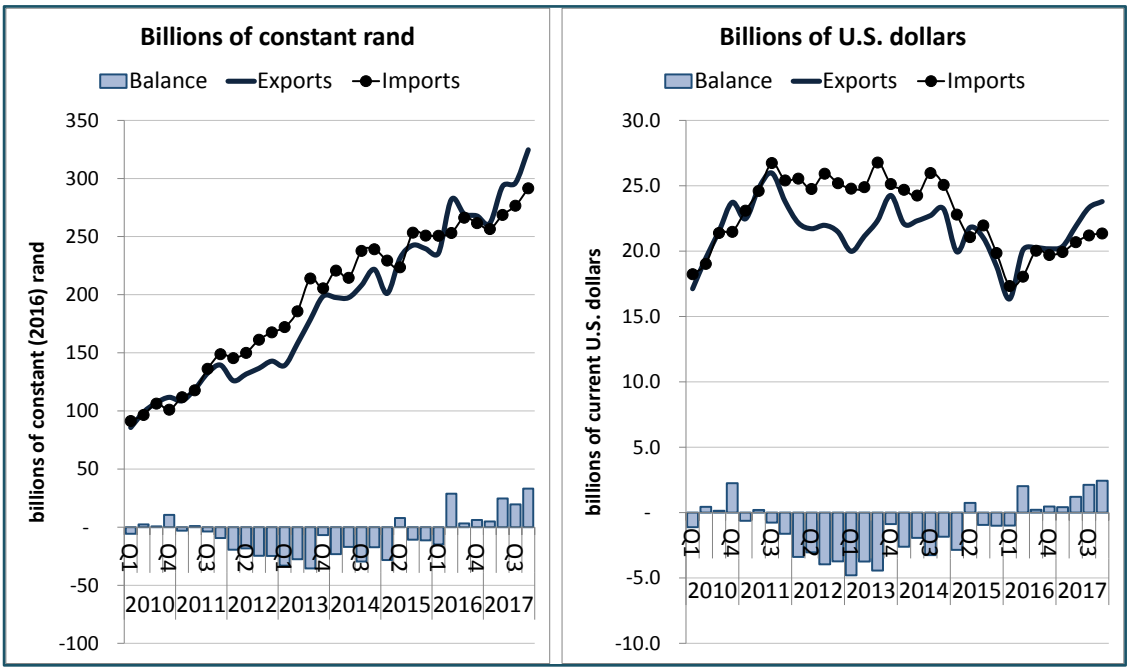
Source: StatsSA. Quarterly Employment Statistics. February 2018

International trade

In 2017, export growth outpaced imports, largely due to a jump in exports of manganese and chrome. As a result, for the past three quarters South Africa has seen a surplus on the balance of trade. In manufacturing, the fastest growth from the fourth quarter of 2016 to the fourth quarter of 2017 occurred in clothing, metals and machinery.

The fourth quarter of 2017 saw the third in a row with a positive balance of trade. In both rand and dollar terms, exports grew strongly, outpacing imports (see Graph 12).

Graph 12: Exports, imports and balance of trade in constant (2017) rand (a) and current US dollars

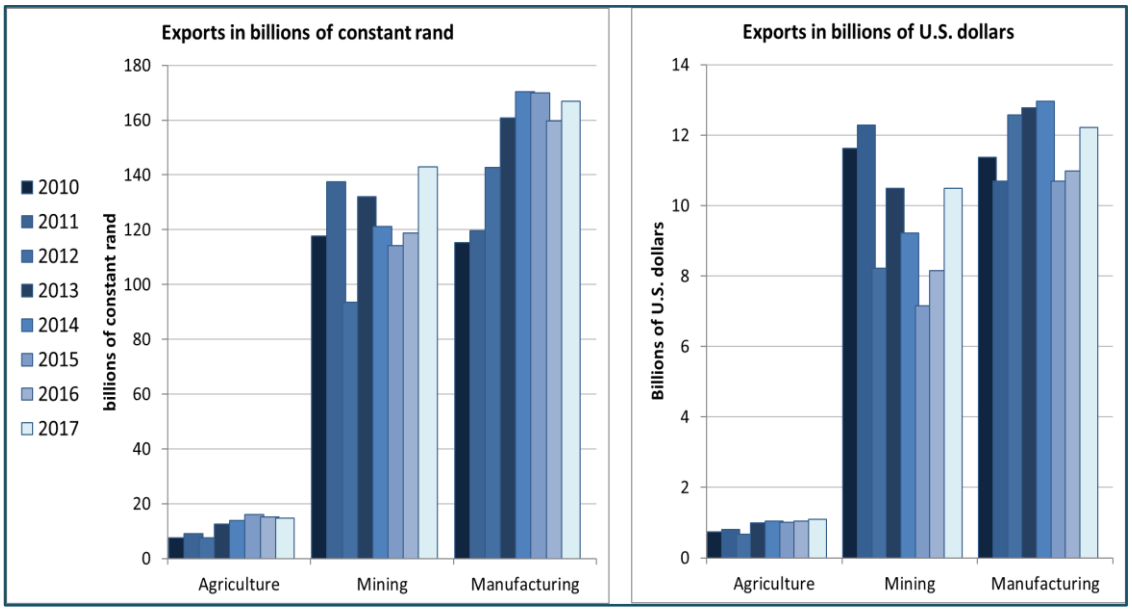


Note: (a) Deflated with CPI rebased to fourth quarter 2017 Source: SARS monthly trade data

Mining dominated export growth from the fourth quarter of 2016 in both constant rand and US dollars. The stronger rand meant that exports generally grew faster in dollars than in rand. In constant rand terms, mining exports grew by 20% from R118 billion in 2016 to R143 billion in 2017, while in dollar terms they increased by 25% from US$8 billion in 2016 to US$10 billion in 2017.

Manufacturing exports increased by 4% in constant rand from R159 billion in 2016 to R166 billion in 2017, and in dollar terms by 11% from US$11 billion in 2016. In contrast, agricultural exports fell by 2% in constant rand, although they climbed 4% in dollar terms (see Graph 13).

Graph 13: Fourth quarter exports in billions of constant (2017) rand (a) and current US dollars



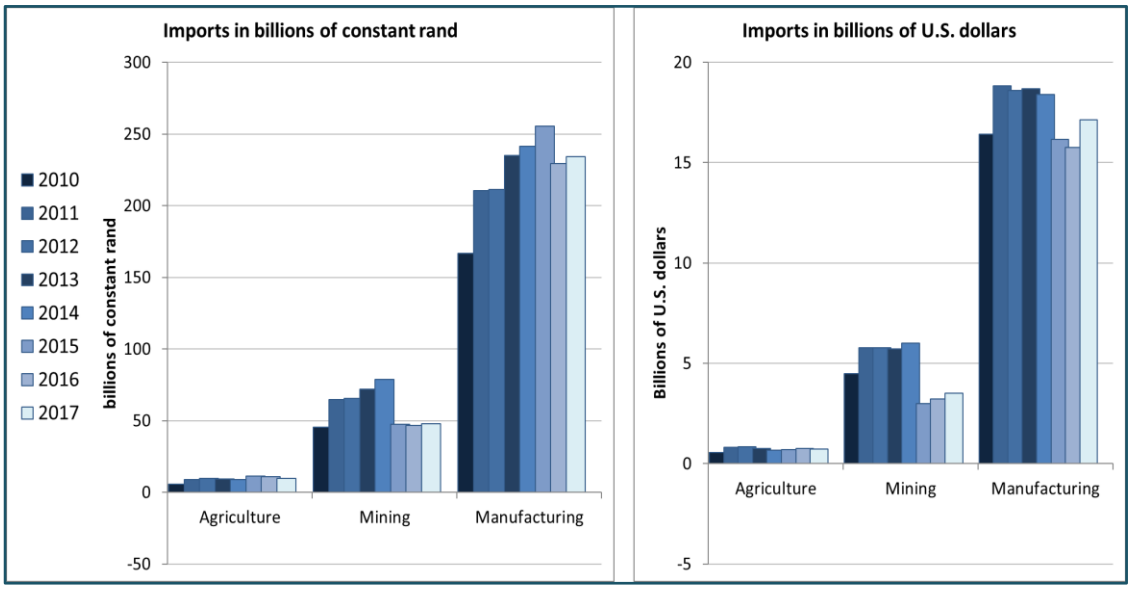
Note: (a) Deflated with CPI rebased to fourth quarter 2017 Source: SARS monthly trade data

The increase in mining exports resulted principally from a sharp increase in manganese and chrome exports, which together rose from 1% of total minerals exports in 2004 to 15% in 2017. From 2016 to 2017, the average unit price of manganese and chrome together climbed almost 50% in constant rand, while their exports rose 21% in volume. In contrast, the average unit price of South Africa's other main exports – gold, platinum, iron ore and coal – rose on average just 3%, while the volume of production grew 9%.[1]

Manufacturing imports climbed 9% in dollars, but only 2% in constant rand because of the strengthening exchange rate. In contrast, as the drought ended, imports in agriculture fell by 10% in constant rand terms, and by 4% in dollar terms (see Graph 14). Mining imports were flat in constant rand and increased somewhat in dollar terms.

[1]Figures for the change in unit price and exports are weighted by share in exports, by value, of the minerals in each group.

Graph 14: Fourth quarter imports in billions of constant (2017) rand (a) and current US dollars



Note: (a) Deflated with CPI rebased to fourth quarter 2017 Source: SARS monthly trade data

The biggest manufacturing sub-sectors for exports are metals and metal products, auto, machinery and appliances, and chemicals. From 2016 to 2017, in constant (2017) rand terms, exports of autos increased by 1% or R0,44 billion, while metals and metal products grew 10% (R3,33 billion), and chemicals increased 5% (R1,33 billion).

The main imports in manufacturing are machinery and appliances, autos and chemicals. In constant (2017) rand terms, imports of autos fell by 6% (R3,22 billion), while imports of machinery grew by 4% (R2,86 billion), and those of chemicals grew by 8% (R3,55 billion). Paper and publishing, which accounts for only 3,6% of manufactured imports, reported a particularly sharp 83% increase (R3,75 billion), due to a presumably once-off jump in purchases of postage stamps. Imports in food and beverages fell by 10% (R1,34 billion) (see Table 1).

Table 1: Trade by manufacturing subsectors

	Value (billions)		% change from Q4 2016		Change in billions	
	USD	**Rand**	**USD**	**Rand**	**USD**	**Rand**
Exports						
Food and beverages	1.1	15.3	13%	6%	0.13	0.86
Clothing and footwear	0.6	7.7	16%	9%	0.08	0.63
Wood products	0.1	1.9	1%	-5%	0.00	-0.10
Paper and publishing	0.4	5.8	11%	4%	0.04	0.20
Chemicals, rubber, plastic	1.9	26.3	12%	5%	0.21	1.33
Glass and non-metallic mineral products	0.1	1.6	5%	-1%	0.01	-0.02
Metals and metal products	2.8	37.9	17%	10%	0.40	3.33
Machinery and appliances	2.1	28.3	7%	1%	0.14	0.23

	Value (billions)		% change from Q4 2016		Change in billions	
	USD	Rand	USD	Rand	USD	Rand
Motor vehicles, parts and accessories and other transport equipment	2.7	37.1	8%	1%	0.20	0.44
Imports						
Food and beverages	0.9	12.6	-4%	-10%	-0.04	-1.34
Clothing and footwear	1.1	14.9	7%	1%	0.07	0.11
Wood products	0.1	1.3	2%	-4%	0.00	-0.05
Paper and publishing	0.6	8.2	96%	83%	0.30	3.75
Chemicals, rubber, plastic	3.4	46.5	15%	8%	0.45	3.55
Glass and non-metallic mineral products	0.2	3.3	10%	3%	0.02	0.11
Metals and metal products	1.0	13.7	1%	-5%	0.01	-0.67
Machinery and appliances	6.0	81.4	11%	4%	0.57	2.86
Motor vehicles, parts and accessories and other transport equipment	3.4	46.5	-1%	-6%	-0.02	-3.22

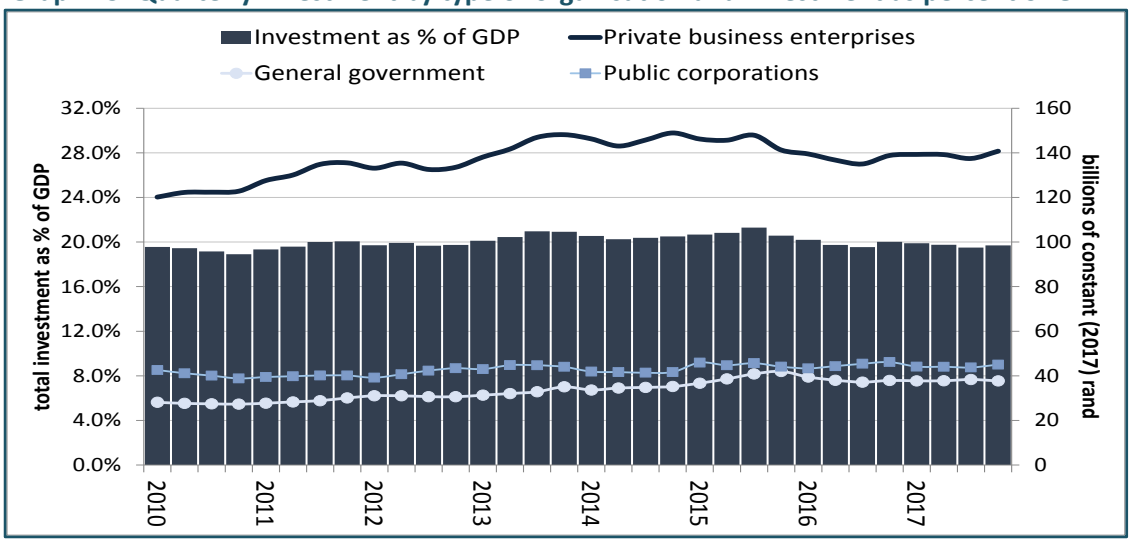
Note: (a) Deflated with CPI rebased to fourth quarter 2017 Source: SARS monthly trade data

Investment and profitability

Investment increased in 2017 after declining in 2016. The increase resulted primarily from a modest expansion in private investment, while public investment continued to fall.

Investment as a percentage of GDP fell from 19,5% in 2016 to 18,7% in 2017. Still, total investment climbed by 0,4%, after declining 4% in 2016.

Graph 15: Quarterly investment by type of organisation and investment as percent of GDP



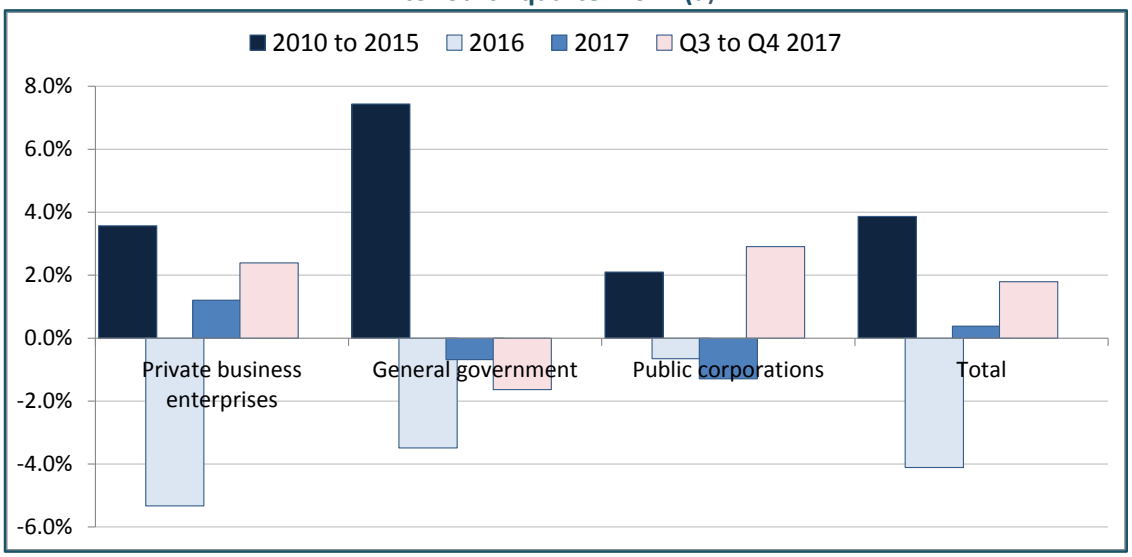
Source: StatsSA GDP quarterly figures. GDPp_Tables_4q_2017. Excel spreadsheet downloaded from www.statssa.gov.za in March 2018

After two years of decline, in 2017 private investment recovered, albeit by a modest 1,2%.

Most of the growth resulted from a 16% increase in mining investment, with investment in manufacturing climbing 1%.

For the second year in a row, however, investment by general government and state-owned companies declined. Experience suggests that fiscal austerity typically leads to deeper cuts in investment. Because it is project based and often contracted out, it usually proves easier to curtail than on-going programmes.

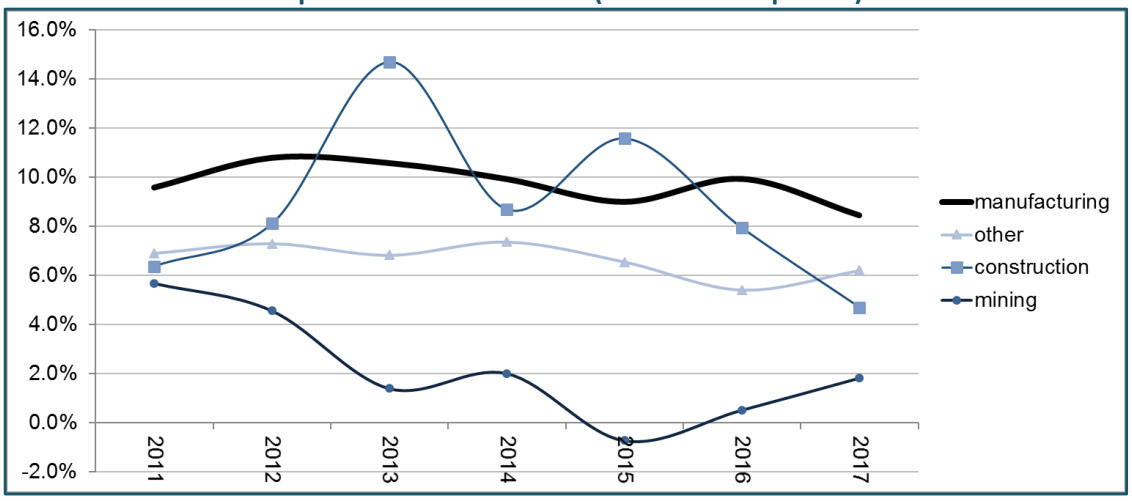
Graph 16: Change in investment by type of investor, annual and third to fourth quarter 2017 (a)



Note: (a) Third to fourth quarter 2017 figures seasonally adjusted. Source: StatsSA GDP quarterly figures. GDPp_Tables_4q_2017. Excel spreadsheet downloaded www.statssa.gov.za in March 2018

Using the year to the third quarter, the latest available data, manufacturing saw returns on assets of 8,4%, below the 2016 rate of 9.9%. In construction, the rate of return continued to fall, declining from a peak in 2015 of 11,6% to just 4,7% in 2017. Mining saw another year of improvement after the losses of 2015, but returns reached only 1,8% for the year (see Graph 17).

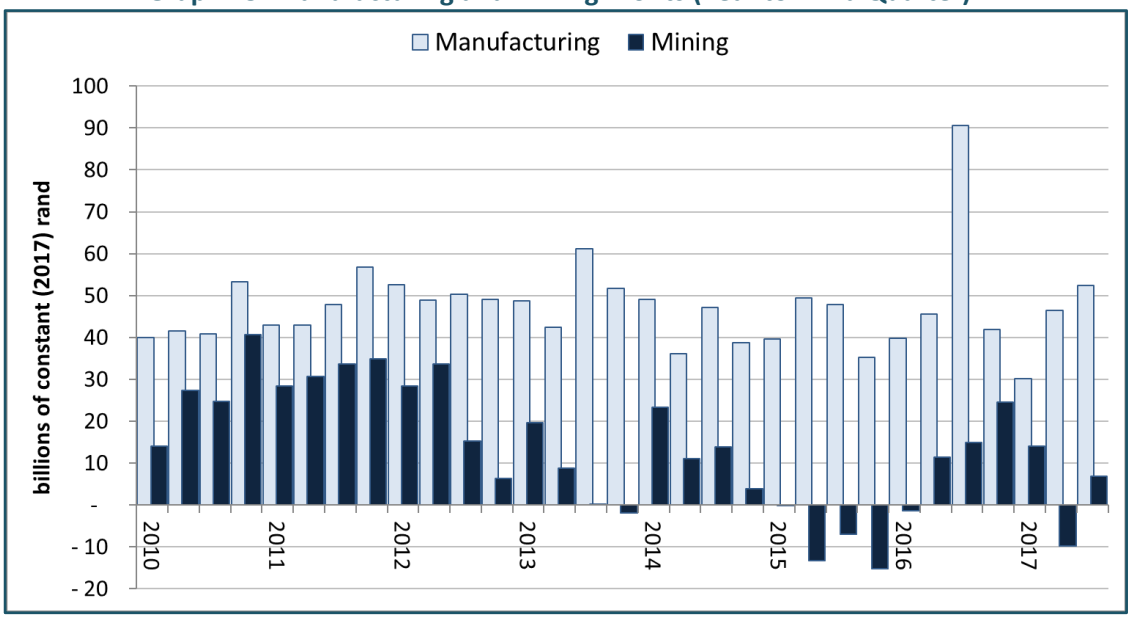
Graph 17: Return on Assets (Year to third quarter)



Note: Net profit before tax as % of carrying value of assets. Source: StatsSA, Quarterly Financial Statistics

In constant rand, profits in the manufacturing sector grew steadily in the first three quarters of 2017, rising from R30 billion in the first quarter to R52 billion in the third. Mining made R7 billion in profits in the third quarter of 2017, after experiencing losses in the second quarter (see Graph 18). Construction profits increased to R2 billion in the third quarter, up from R1 billion in the first two quarters.

Graph 18: Manufacturing and Mining Profits (Year to Third Quarter)



Source: StatsSA, Quarterly Financial Statistics, relevant quarters

Foreign Direct Investment projects

The TIPS Foreign Direct Investment (FDI) monitor tracks FDI projects based on public announcements, analysing new and updated projects on a quarterly basis.

In the fourth quarter of 2017, the monitor identified eight projects. Two of these were newly announced, one was in construction and five recently completed. In short, most of the projects tracked in this quarter indicate deepening of existing investment.

Table 2: FDI projects as of the fourth quarter of 2017

	ANNOUNCED	CONSTRUCTION	COMPLETE
Number of projects	2 Projects	1 Project	5 Projects
Value of projects	R4,46 billion	R3 billion	R2,85 billion
Sectors	Manufacturing and mining	Manufacturing	Manufacturing, mining and services
Type of investment	2 Upgrades	1 Expansion	2 Greenfield 3 Expansions
Companies investing	South 32 BMW South Africa (BMW SA)	Ford Motor Company South Africa (Ford SA)	Africa Pipe Industries North The Goodyear Tire and Rubber Company (Goodyear) Volvo Financial Services Hino Motors (Hino)

Continuing the trend from the third quarter, manufacturing and mining projects dominate investment in this quarter. Manufacturing contributed R4,4 billion, or 42%, to the total reported FDI value for the quarter, with the rest going to a single large mining project valued at R5,59 billion. Automotives once again feature a strong presence, with only one project outside of the sector. Value data was available for only six of the projects with a total value of R10,31 billion.

Of the five auto investments, three expand existing manufacturing capacity in core automotive activities at Ford SA, BMW SA and Toyota's subsidiary Hino. The remaining two investments, by Volvo and Goodyear, strengthen the broader value chain.

Ford announced plans to invest a further R3 billion to expand its plant in Silverton. It is building on a R2,5 billion investment announced in 2016 to increase the facility's capacity to manufacture the Ford Everest in South Africa. This new investment project will expand output of the Ford Ranger and initiate production of the Ford Raptor SUV, which is expected to reach the local market in 2019.

BMW announced that it would invest a further R160 million to upgrade the company's Rosslyn plant. This follows its R6 billion investment in 2015 to expand to produce the next generation BMW X3s and other products in its X-line. The new investment includes a new 22 000 m^2 body shop and increased automation. It will raise production-line speed to expand production capacity by just under 10%, from 71 000 to 76 000 units per annum.

Hino, Toyota's light industrial vehicle subsidiary, has completed the expansion of its Prospecton plant in Durban, ahead of the introduction of the Hino 500 Wide Cab. The range is being expanded from five models to 12, representing the company's first full model change in 14 years. The R20 million investment will upgrade the assembly process to improve productivity and quality. It will permit more adaptability in design, permitting additional engine options, automatic transmission and 6x4 drive systems.

Goodyear has completed a R1 billion upgrade and expansion of its tyre production facility in Uitenhage. The new state-state-of-the-art facility, coupled with training, will improve production capacity to produce low rolling resistance tyres that enhance fuel efficiency. It will produce high value-added (HVA) 4x4 tyres to meet the needs of the growing SUV market.

Finally, Volvo is establishing a new financial services division. It will focus on commercial and industrial products, including buses, trucks and construction equipment, while continuing to provide consumer finance through WesBank. The value of Volvo's expansion was not available.

Amplats and joint venture partner API's pipe manufacturing plant in Mokopane, Limpopo, is the only reported manufacturing project outside of the automotives sector. The recently completed factory will be owned and operated by API, although it was funded mainly by Amplats. It will provide 76 permanent jobs at peak capacity, operating a modern pipe mill to manufacture technically advanced helical welded steel piping for the water, oil and gas industries. The project forms part of efforts to promote sustainable mine community development, as required by the Mining Charter.

In mining, South32 is investing R4,3 billion to extend the life of the Klipspruit colliery by 20 years. The colliery employs 720 people. The expansion will unlock 616 million tonnes of coal at the Klipspruit South and Weltevreden deposits. This will feed into offtake agreements with Transnet rail, with the remainder focused on export. It may also supply other long-term offtake customers such as the Kusile power plant. The project is part of a broader plan by South32 to regroup its energy coal business into a separate subsidiary, South Africa Energy Coal (SAEC), which will then seek new BEE partners.

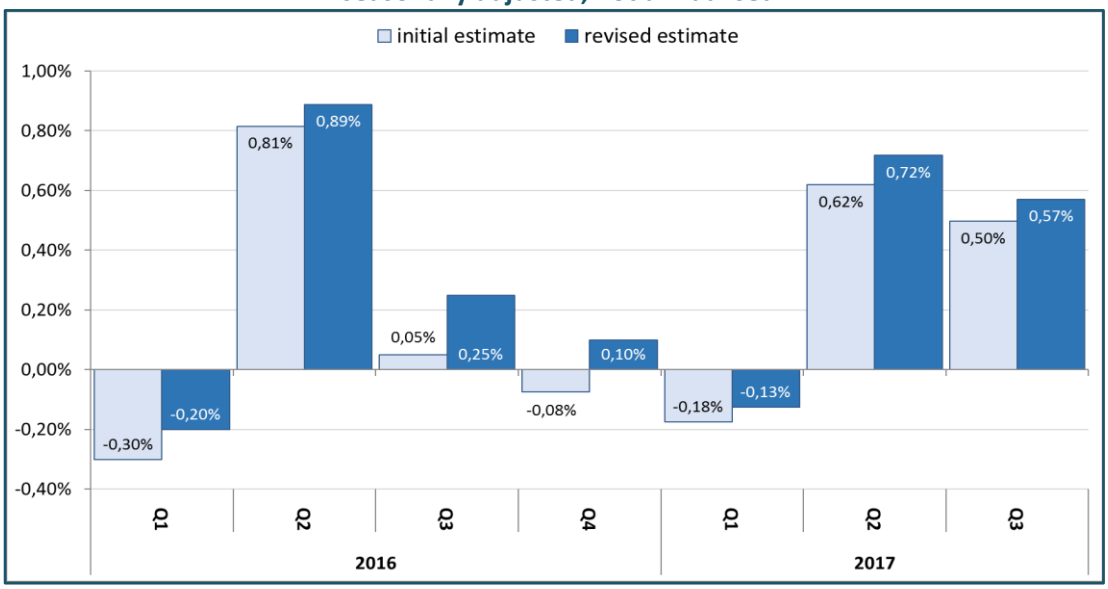
Petra Diamonds completed its R1,65 billion development of a new diamond processing plant at the Cullinan site. The new plant replaces an older facility that dated back to 1947. It will increase throughput capacity to six million tonnes per year while significantly increasing efficiency. It will incorporate improved diamond-liberation technology that will increase the overall grade by 10%. The new processing plant is linked to a R4,2 billion expansion at Cullinan in an attempt to revitalise the mine, which still produces a quarter of the world's diamonds. The new investments have avoided closure and provided access to an entirely fresh and untapped ore body that should extend the life of the mine to at least 2030.

Briefing Note: What happened to the recession?

Revisions in the latest GDP data effectively wiped out a technical recession initially reported for the fourth quarter of 2016 and the first quarter of 2017. So what happened to the recession that was initially announced, and what do these revisions mean for our understanding of the GDP data?

Data revisions are a normal part of the statistical process. For most quarters (unfortunately not for the final quarter of 2016), StatsSA publishes the revisions with a brief explanation of the changes. The following graph indicates the revisions to GDP data from the first quarter of 2016 to the third quarter of 2017. In virtually every quarter in this period, the GDP figures were ultimately revised upward. For a discussion on why revisions happen, as well as findings on revisions to South Africa's quarterly GDP estimates, see TIPS policy brief ***Revisions to South Africa's Gross Domestic Product.***

Graph 19. Growth rates in gross domestic product, 2016-2017, seasonally adjusted, not annualised



Source: StatsSA GDP quarterly figures. Excel spreadsheet downloaded www.statssa.gov.za in March 2018.

The revisions can have important implications for economic policy and investment decisions, which in turn may shape subsequent economic trends. First, because of time constraints, policy decisions typically have to rely on initial published estimates. These estimates typically feed into choices around interest rates and budget limits. Second, the reported recession was a major concern for investors, whose planning takes national economic prospects into account. The initial reports of a recession also fuelled commentary that now turns out to have been largely unfounded. Analysts attributed the (non-existent) recession to unconducive economic policies; the global economic slowdown; and political instability, corruption and even the president.

StatsSA has not explained what led to the changes in the estimates, which are based on a blending of information. For example, the quarterly estimates are obtained by interpolating in, and extrapolating from, the most recent annual estimates, and from quarterly and monthly indicators based largely on sample surveys.

The takeaways for data users include:

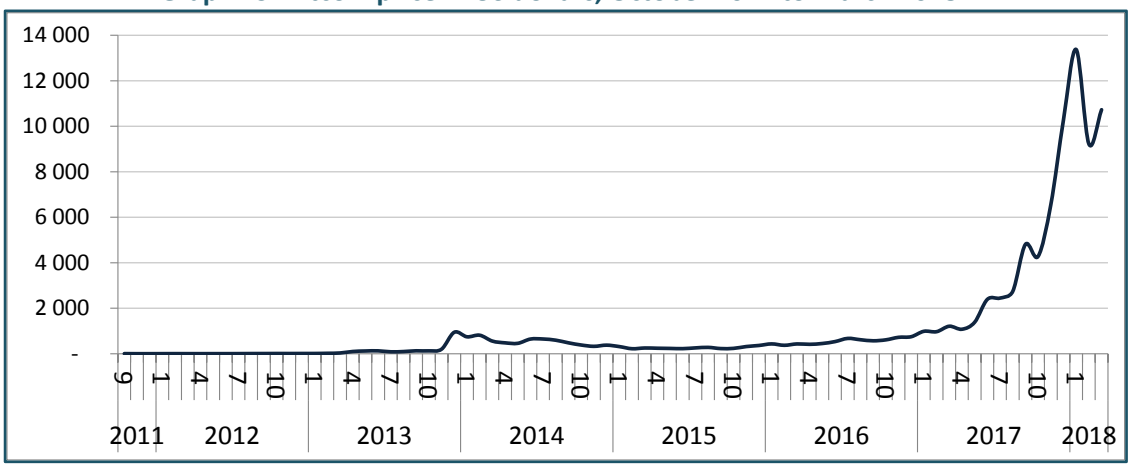
- It makes more sense to focus on long-term trends than to attribute great significance to quarterly changes, especially as reflected in initial GDP estimates. Policymakers, investors and commentators should rather focus on the full range of available evidence when evaluating overall economic performance
- South Africa needs greater transparency and accountability from StatsSA about its revisions policy and the reliability of initially published estimates. StatsSA generally provides an extraordinary array of information, but it could do more to report clearly and timeously on the strengths and shortcomings of the data.
- Strong statistics require that StatsSA develop a genuine and accountable engagement with its many users and supporters in government, the research community, and the media. Oversight and consultation processes need to reach most users, who now at best may be invited to comment on specific series at infrequent workshops.

Briefing Note: Bitcoin — Disruptive technology or Ponzi scheme?

You cannot miss the Bitcoin hype, at least if you read the financial pages. It comes up regularly in articles, on twitter, at social events and even in conversations over coffee. In some countries institutions are investing in it, while others have banned it. That said, estimates suggest that worldwide, only between three and six million people actually own any of it.

The price curve for Bitcoin is instructive, especially if you know about asset bubbles. It stayed around the US$30 mark for many years, then rose slowly to nearly $200 in 2013. Before January 2017, it climbed toward US$800. But in 2017, after a flurry of activity it shot up to almost US$20 000 for a brief period in December, then crashed back to between $10 000 and $11 000. That kind of volatility is astounding – and obviously opens the door to speculators.

Graph 19. Bitcoin price in US dollars, October 2011 to March 2018



Source: Investing.com, downloaded from za.investing.com in March 2018.

Clearly, if you invested early you might have made millions; if you invested late but got out before the crash, you could also do spectacularly. That's the kind of story we hear about in the urban legend circuit. But if you missed the cycle, you stood to lose a fortune. That's less widely publicised. And it is why financial advisors and experts regularly advise against Bitcoin.

Bitcoin was set up almost a decade ago as a way to disrupt central banks' control of payments. It operates through linked ledgers for users (a "blockchain" system) that are encrypted and password-controlled. In theory, these transactions are completely traceable and exist in the cyberworld forever. In practice, accessing and identifying participants is near impossible. As a result, Bitcoin transactions can take place away from the watchful eye of central bankers, law enforcement and tax authorities, which means it was for many years seen as a currency for the illicit economy. Equally, Bitcoin is removed from the domain of the big banks.

This poses a fundamental problem, however. Bitcoin is not linked to an underlying asset or have any kind of guarantee to stabilise its value, while its utility as a payments mechanism is in question.

Unlike the stock exchange, the Bitcoin price does not rise because a company has increased its profits and assets. Nor does it have a guarantee from any reserve bank. Rather, its value should in theory equal the amount of energy and time required to generate a coin, which is effectively established by an algorithm. In practice, however, as Bitcoin has become a speculative asset, the price has escalated because new buyers come into the market and bid it up.

The hope that cryptocurrencies would provide an independent payment mechanism seems unlikely to materialise as long as they remain speculative investments with wild swings in value. Moreover, the blockchain system has turned out to be slow compared to existing electronic payment systems such as debit and credit cards, and may never be able to handle the billions of payments made daily around the world.

Furthermore, it's turned out that the promise of encryption often falls short. Estimates suggest that as much as a third of all Bitcoin have disappeared, either lost or stolen.

Bitcoin uses up huge amounts of energy although it creates almost no jobs. In effect, as currently structured, Bitcoin turns energy into speculative fortunes – surely a case of financialisation run mad, given the risks of global warming.

Estimates suggest that each Bitcoin transaction requires thousands of times more electricity than a conventional payment. Bitcoin "miners" have located their hugely energy-intensive operations in areas with cheap or subsidised, often dirty, electricity – initially in China, which has since cracked down on their operations; now anywhere in the world where electricity is available and low cost.

In sum, Bitcoin itself is neither a good investment nor a useful economic initiative, and the risks remain of it being used for illicit transactions. But the underlying idea of self-regulating secure transactions could prove an important disruption to payments systems, if the current shortcomings can be fixed.

Briefing Note: TIPS reviews of manufacturing sub-sectors

Industrial policy aims to promote diversification and tailor interventions to the needs of individual manufacturing industries. But meeting these objectives often proves difficult because the national statistical system only provides limited data on industries within manufacturing. Moreover, the available information is scattered between a variety of publications and sources.

To address this gap, TIPS has completed a series of briefing notes on the main manufacturing sub-sectors. For each, the 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 draw primarily on Statistics South Africa, Quantec and Who Owns Whom.

The manufacturing sub-sectors covered are: food processing; beverages; clothing, textiles, footwear and leather; heavy chemicals and petroleum refining; other chemicals, rubber and plastics; transport equipment; capital equipment; wood and paper; publishing and printing; metals and metal products; electronics and appliances; glass and non-metallic minerals; and furniture and other manufacturing.

The briefing notes will be updated at least annually. They are available at www.tips.org.za.