

Box 2 Unpacking gross fixed capital formation in South Africa¹

Gross fixed capital formation is an important macroeconomic aggregate in the construct of the *System of National Accounts 2008 (2008 SNA)*². This box showcases the various dimensions of the gross fixed capital formation statistics through a long-term analysis.

Growth in real gross fixed capital formation is an important driver of growth in real gross domestic expenditure and a major contributor to growth in real gross domestic product (GDP). The contraction in real gross fixed capital formation since 2018 has been exacerbated by the national lockdown aimed at curbing the spread of the coronavirus disease 2019 (COVID-19), which has contributed to the largest contraction on record in real gross fixed capital formation in the first half of 2020.

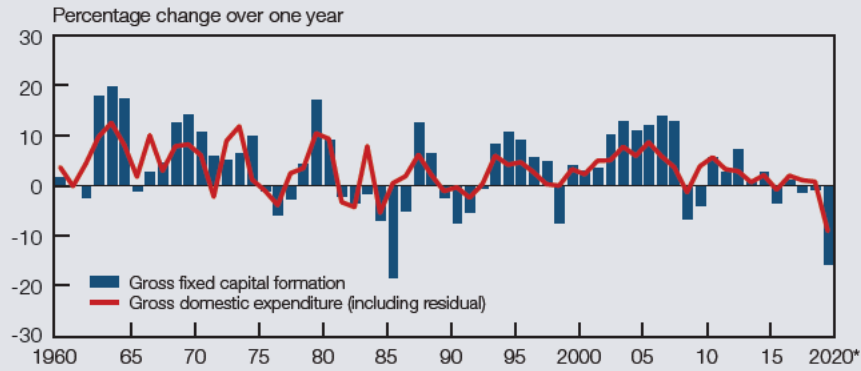
1 This box relates to the statistics on gross fixed capital formation on pages S–120 to S–126 of this *Quarterly Bulletin*.

2 The compilation of South Africa's national accounts adheres to the guidelines of the *System of National Accounts 2008 (2008 SNA)* as the International standard for the measurement of economic activity. See <https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf>

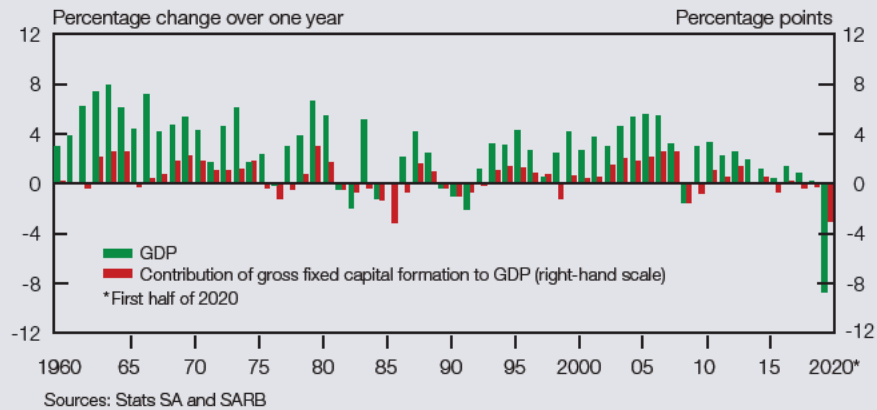




Real gross domestic expenditure



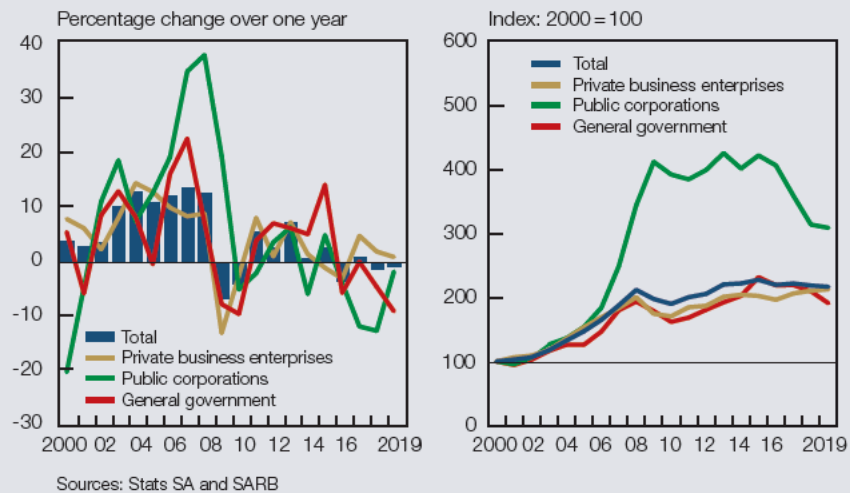
Real gross domestic product



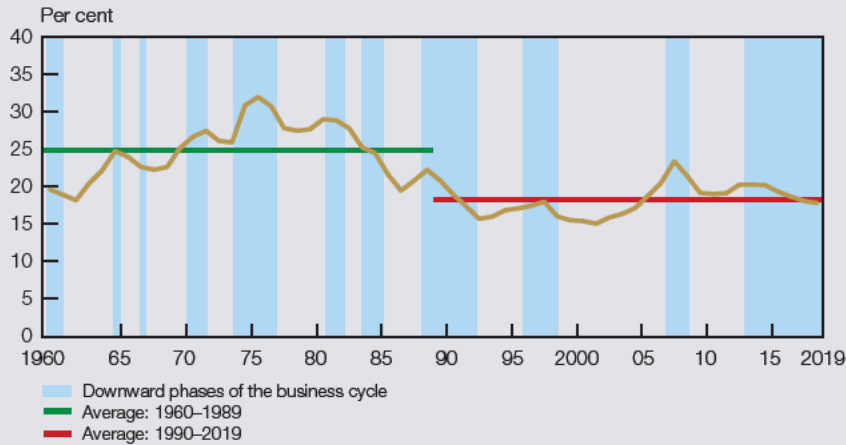
The contribution of gross fixed capital formation to GDP has declined significantly over time. The ratio of gross fixed capital formation to nominal GDP declined from 32.1% in 1976 to 15.2% in 2002. The ratio then increased to 23.5% in 2008 in the wake of the longest business cycle upswing on record, along with average growth of 7.4% per annum in real gross fixed capital formation during the 2000s. However, the ratio of gross fixed capital formation to GDP fell again to 17.9% in 2019 and further to 16.2% in the second quarter of 2020 – below its average of 18.3% during the 1990–2019 period – with average annual growth in real gross fixed capital formation of only 0.9% since 2010.

Weak growth, and at times contractions, in real gross fixed capital formation since 2009 reflects the slower pace of investment by all three institutional sectors: private business enterprises, public corporations and general government. Annual average growth in real capital outlays by all three of these sectors, in the sequence just indicated, slowed substantially from the 2000–2009 period to the 2010–2019 period: from 6.5% to 2.0%, from 12.6% to -2.8%, and from 6.6% to 0.7% respectively.

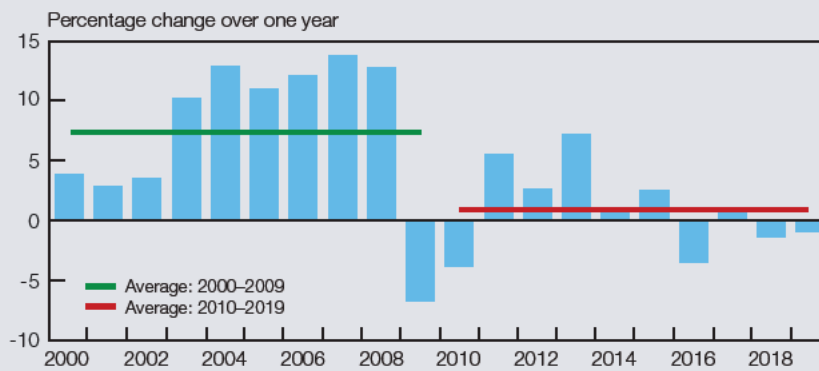
Real gross fixed capital formation by institutional sector



Gross fixed capital formation as a ratio of gross domestic product



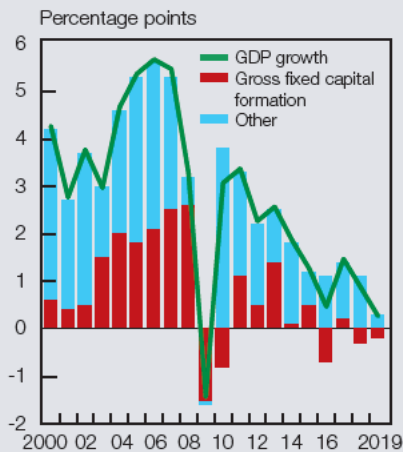
Real gross fixed capital formation



Sources: Stats SA and SARB

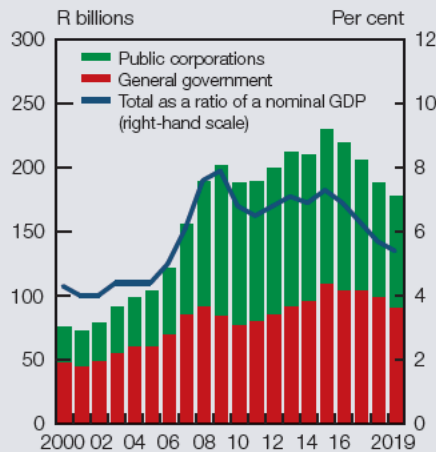
The significant contribution of gross fixed capital formation, as part of the expenditure components, to growth in real GDP waned after the global financial crisis, and subtracted from real GDP growth in three of the four years since 2016. Although the global financial crisis contributed to a contraction in fixed investment in South Africa, this was mitigated to some extent by substantial public infrastructure spending on residential buildings, the Gautrain project, the upgrading of the South African Airways (SAA) fleet as well as the commencement of Eskom's capacity expansion programme. The sustained spending by public corporations, and in particular the commencement of construction of renewable energy infrastructure, contributed to annual growth in real GDP in 2011 and 2012, and even more so in 2013.

Contribution of expenditure components to growth in real gross domestic product



Sources: Stats SA and SARB

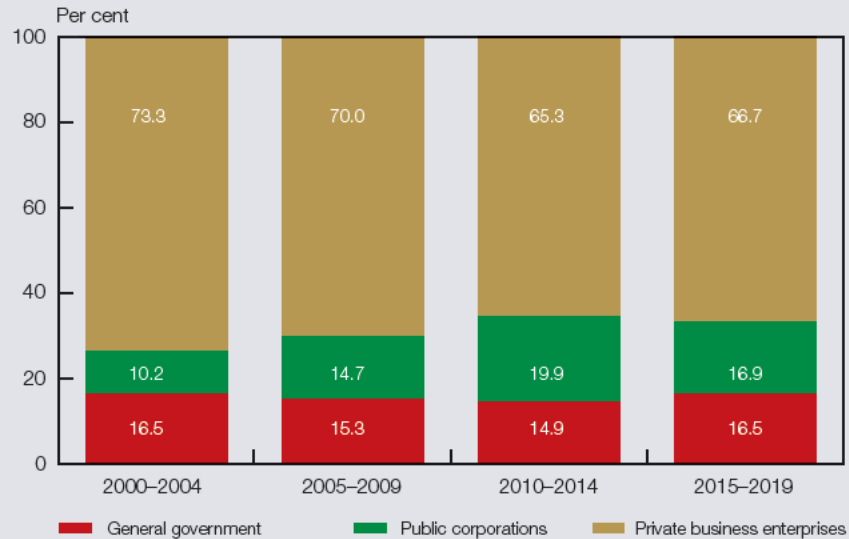
Real gross fixed capital formation by the public sector





Real gross fixed capital formation by the public sector, both public corporations and general government, has contracted since 2016 due to underspending on the infrastructure budget, delays in the awarding of contracts and completion of infrastructure projects, the lack of financial sustainability of some state-owned companies (SOCs) as well as governance issues. As a consequence, capital spending by the public sector relative to nominal GDP declined from 7.3% in 2015 to only 5.4% in 2019.

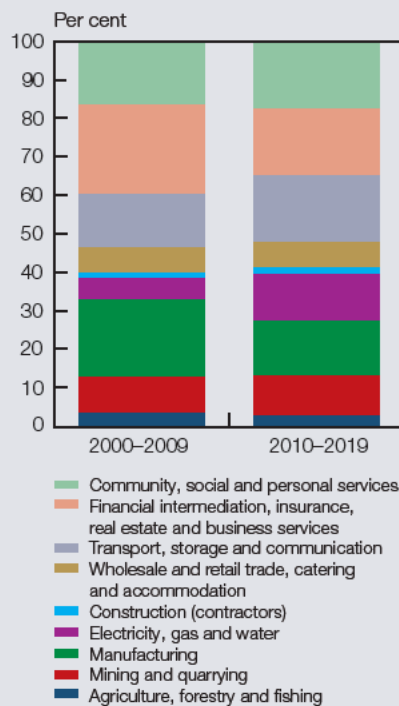
Contribution to nominal gross fixed capital formation by type of institution



Sources: Stats SA and SARB

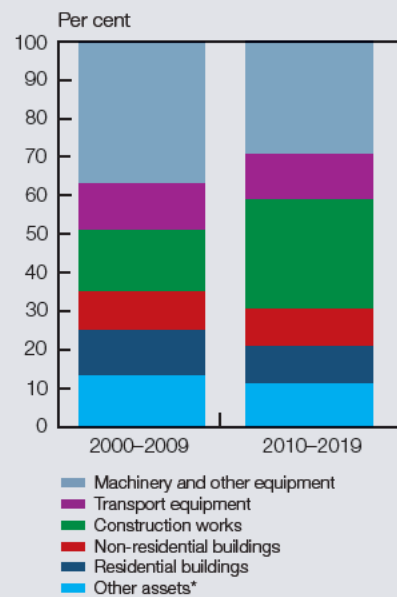
The contribution to gross fixed capital formation by institutional sector has nevertheless shifted gradually from private business enterprises to public corporations since the early 2000s. The decline in the share of private capital investment spending from 73.3% during the 2000-2004 period to 66.7% during the 2015-2019 period coincided with the reduced share of capital investment by the manufacturing sector. In contrast, the share of investment spending by public corporations in total capital investment increased from 10.2% to 16.9% between the same periods.

Contribution to nominal gross fixed capital formation by industry



Sources: Stats SA and SARB

Contribution to nominal gross fixed capital formation by asset



* Other assets include information, computer and telecommunications equipment, computer software, research and development, transfer costs, cultivated biological resources, and mineral exploration and evaluation.

The slower growth in real capital spending since the global financial crisis also coincided with a structural change in investment spending related to the kind of economic activity, as depicted by the different industries. The contribution of the manufacturing industry to total gross fixed capital formation, which declined from 20.1% during the 2000–2009 period to 14.3% during the 2010–2019 period, does not bode well for industrialisation in South Africa. This is the largest decrease in the relative contribution of any industry to gross fixed capital formation, followed by the financial intermediation, insurance, real estate and business services industry. The latter reflected a decline in the contribution of investment in residential buildings to gross fixed capital formation, from 11.6% during the 2000–2009 period to 9.3% during the 2010–2019 period.

The change in the asset structure of gross fixed capital formation also reflects the declining share of investment spending on machinery and other equipment, from 36.8% during the 2000–2009 period to 29.4% during the 2010–2019 period. In contrast, the share of fixed investment in the electricity, gas and water industry increased markedly, specifically on construction works. The share of construction works in total investment increased from 16.0% during the 2000–2009 period to 28.5% during the 2010–2019 period. Despite this significant increase in investment spending, the country remains subject to frequent instances of electricity load-shedding.

When focusing on the period since 2010, machinery and other equipment contributed 0.3 percentage points to annual growth in real gross fixed capital formation, on average, during the 2010–2014 period, and subtracted to the same extent during the 2015–2019 period. Similarly, transport equipment and construction works contributed, on average, 1.0 and 0.6 percentage points respectively to the annual growth in total real gross fixed capital formation during the 2010–2014 period, before each subtracted 0.2 percentage points, on average, since 2015.

Contributions to growth in real gross fixed capital formation by asset type

Percentage points

Asset type	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Residential buildings	-2.1	-0.4	0.1	0.4	0.8	0.5	-0.4	0.2	-0.3	-0.3
Non-residential buildings	-0.4	-0.8	-0.1	0.1	0.7	-0.4	0.2	-0.7	-0.3	-1.0
Construction works	-2.2	1.5	-0.3	3.1	0.7	0.2	-0.8	-0.1	0.0	-0.2
Transport equipment	0.7	1.4	1.4	2.1	-0.7	1.0	-1.0	0.1	-0.7	-0.5
Machinery and other equipment	0.2	3.0	-0.2	0.0	-1.4	0.3	-2.2	1.2	-1.5	0.4
Other assets*	-0.1	0.9	1.6	1.6	0.7	0.9	0.6	0.4	1.4	0.8
Total	-3.9	5.5	2.6	7.2	0.7	2.5	-3.5	1.0	-1.4	-0.9

* Other assets include information, computer and telecommunications equipment, computer software, research and development, transfer costs, cultivated biological resources, and mineral exploration and evaluation.

Source: Stats SA

