



Bi-Annual Economic and Capacity Survey

July – December 2020

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1. Economic overview

1.1 International Developments

After what is expected to be the biggest contraction in global economic activity since 1930, a vaccine led recovery is expected for 2021, although the forecasts vary quite significantly between various countries, and is expected to show a divergence between advanced, emerging markets and developing economies. According to the IMF's estimates and forecasts, the global economy contracted by a staggering 3.5 percent in 2020. Overall, the economy is expected to grow by 5.5 percent in 2021, coming off that very low base, as the global population starts to become vaccinated, the IMF expects some economic activity to normalize, although they only expect Covid-19 transmission to be brought to low levels worldwide by the end of 2022. Advanced economies have already vaccinated relatively sizeable chunks of their populations, whereas many emerging markets are yet to administer their first injections. Another big difference between advanced economies and emerging markets is the fiscal situations going into the crisis, with many emerging market governments in a very precarious fiscal position already, including South Africa. This meant that they were simply not able to afford huge stimulus packages that some of the advanced economies have undertaken, which is a major contributing factor to the expected divergence in recovery.

Global growth forecasts by the IMF in their latest World Economic Outlook Report, which was released in January, show upwards revisions of global growth in both 2020 and 2021, with a better-than-expected recovery in the latter half of 2020 in many advanced economies, and higher than anticipated fiscal supporting the early stages of 2021 (in advanced economies). The vast majority of emerging markets (and many advanced economies such as the UK and the Euro Area), are only expected to get back to 2019 levels in 2023, with oil exporters and tourism-based economies expected to be particularly hard hit, given the expected slow return to cross border travel. Unfortunately, it is widely believed that the pandemic is going to leave a sort of permanent scarring on many economies, including South Africa. The IMF do however note several downside risks to the forecast, which remains uncertain, such as if new variants of the virus emerge, and are difficult to contain. As well as delays in vaccination programs, and widespread hesitancy to take the vaccine. As well as shorter lived immunity than anticipated from the vaccine, there remain many unknowns.

Table 1: Global economic outlook

	2017	2018	2019	2020	2021	2021
World	3.8%	3.6%	2.9%	-3.5%	5.5%	4.2%
Advanced Economies	2.4%	2.2%	1.7%	-4.9%	4.3%	3.1%
US	2.2%	2.9%	2.3%	-3.4%	5.1%	2.5%
Eurozone	2.4%	1.8%	1.2%	-7.2%	4.2%	3.6%
UK	1.8%	1.4%	1.3%	-10.0%	4.5%	5.0%
Emerging markets	4.7%	4.5%	3.7%	-2.4%	6.3%	5.0%
Brazil	1.1%	1.1%	1.2%	-4.5%	3.6%	2.6%
Russia	1.8%	2.3%	1.1%	-3.6%	3.0%	3.9%
India	6.7%	7.1%	4.8%	-8.0%	11.5%	6.8%
China	6.8%	6.6%	6.1%	2.3%	8.1%	5.6%
Sub-Saharan Africa	2.7%	3.0%	3.3%	-2.6%	1.5%	2.5%
SA	1.3%	0.8%	0.4%	-7.5%	2.8%	1.8%

Source: IMF World Economic Outlook January 2021

1.2 Domestic Economy

Stats SA today confirmed that the South African economy collapsed a staggering 7.0 percent in 2020 year on year. Although the data for the 4th quarter was marginally better than expected, this could not stop the worst contraction in economic activity in recorded history. From the production side, the construction industry again got the short end of the stick, as the sector was the worst performing industry in the economy in 2020, with construction GDP down a crippling 20.3 percent in the year. This comes as the industry was not declared an essential service (as it was in other countries) during the hard lockdown period of April and May, and as the government and the private sector massively dis-invested from the industry, in all segments, be it building or civil infrastructure.

Other poor performances were in the manufacturing and mining industries, with production down by 11.6 percent and 10.9 percent, respectively. The transport and communication sector was the 2nd worst performing after the construction industry, with that sector contracting by 14.8 percent. Other tertiary sectors such as retail and wholesale trade were also down quite dramatically, with South Africans getting significantly poorer, denting demand for most goods and services.

What is really going to hurt the economy in the medium to longer run, is the fact that investment in the South African economy collapsed to a staggering 17.5 percent for the year. Sizeable contractions in investment in both the non-residential industry, as well as transport equipment saw the biggest decreases for the year. In terms of the construction segments specifically, the civil industry saw the best figures, but still contracted by just over 18 percent (slightly worse than our forecasts at Industry Insight), while investment in the residential and non-residential industries contracted by 20.9 percent and 25.3 percent, respectively.

It is also important to mention that the South African economy was already in a recession, so the data is already coming off a low base. The staggering collapse will surely highlight the urgent need for policies of economic reform and structural change, but whether there is political will for government to enact such policies, and escape the current state of implementation paralysis, remains to be seen.

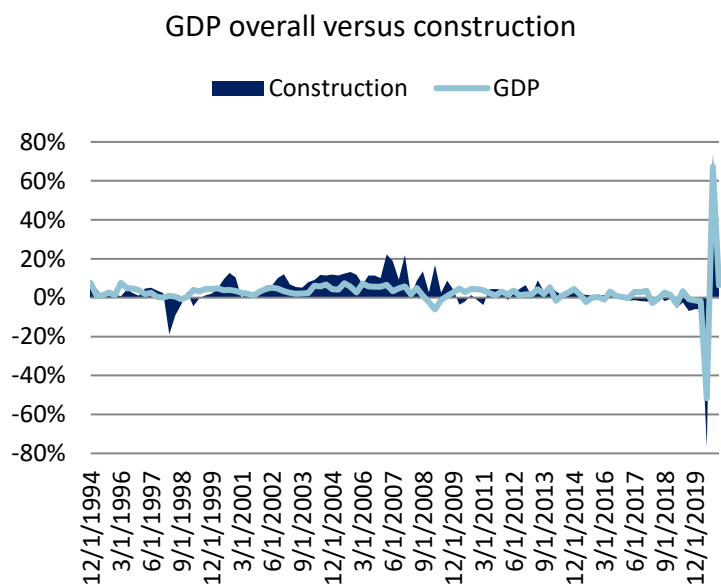


Figure 2: GDP overall versus construction

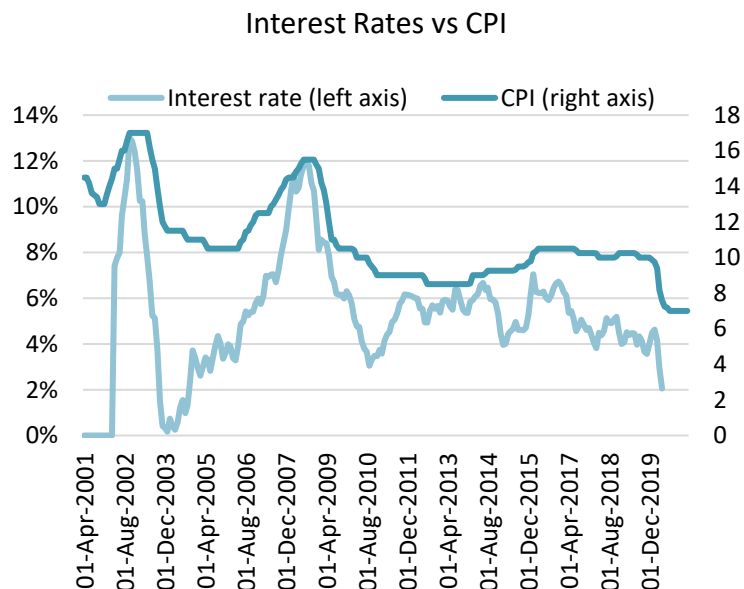
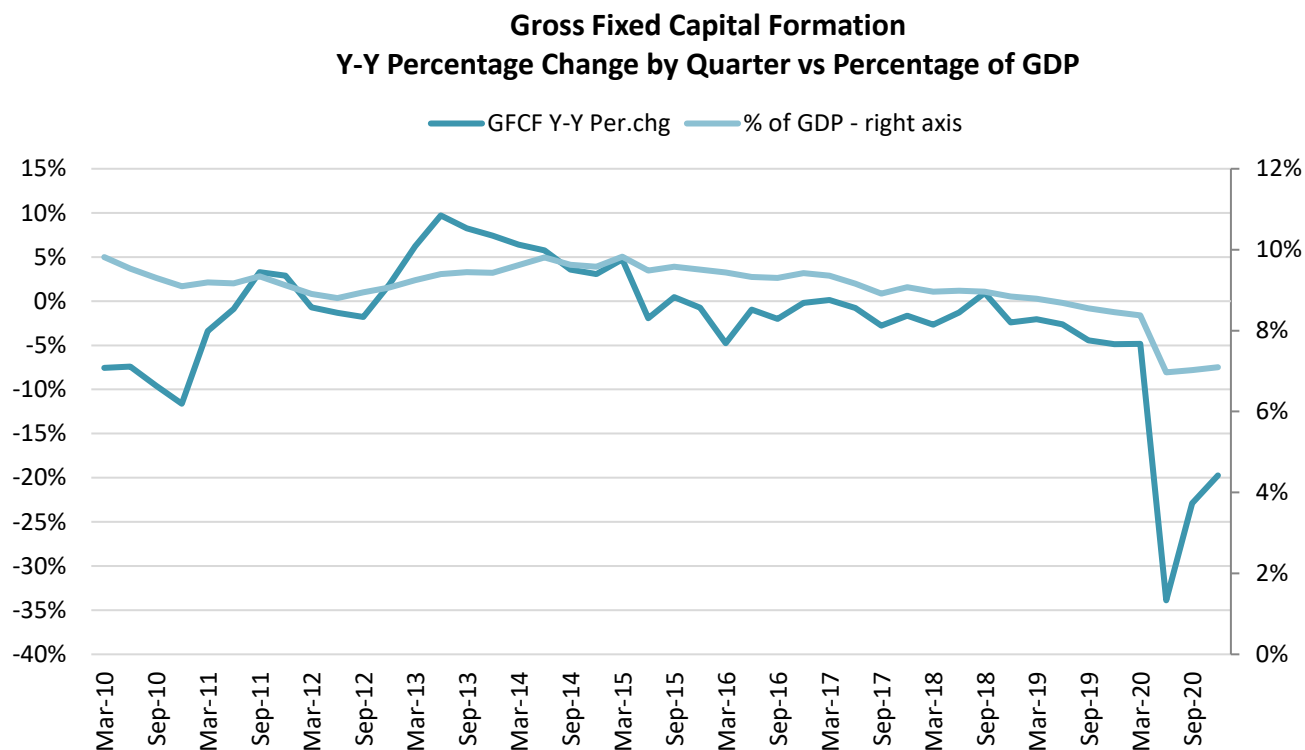


Figure 1: Interest rates versus CPI history

Table 2: Macro economic growth projections (Industry Insight Forecast Report)

Macro-Economic Forecasts	2019	2020	2021	2022	2023
GDP	0.1%	-7.0%	1.8%	-2.2%	0.2%
Household consumption	1.0%	-4.2%	1.6%	-1.7%	-0.2%
Government consumption	1.5%	5.2%	-4.6%	-3.4%	2.1%
Gross Fixed capital formation	-0.9%	-12.7%	2.3%	-0.2%	0.3%
Imports	-0.5%	-2.3%	1.0%	2.2%	4.0%
Exports	-2.5%	-12.2%	6.2%	1.2%	3.9%
Prime Lending rate	7.0%	7.3%	8.3%	9.0%	7.0%
ZAR/US\$	R 16.50	R 15.00	R 15.30	R 15.61	R 16.50
CPI Inflation	4.1%	4.0%	4.6%	4.3%	4.5%

1.3 Gross fixed capital formation

**Figure 3: GFCF (Y-Y percentage changes vs Percentage of GDP) Source SARB Quarterly Bulletin**

What is really going to hurt the economy in the medium to longer run, is the fact that investment in the South African economy decreased by 17.5 percent for the year. Sizeable contractions in investment in both the non-residential industry, as well as transport equipment saw the biggest decreases for the year. **In terms of the construction segments specifically, the civil industry saw the best figures, but still contracted by just over 18 percent (slightly worse than our forecasts at Industry Insight), while investment in the residential and non-residential industries contracted by 20.9 percent and 25.3 percent, respectively.** Although extremely poor, this was slightly better than our forecasts at Industry Insight for the year. **What was very interesting to see in the data, is that if we look at investment by client, unsurprisingly, the private sector heavily disinvested in the construction sector.** This was expected. But what was more unexpected is that **State Owned Entities also massively disinvested in the industry in 2020**, very much in line with the contraction in private sector investment. This is disappointing given that they are generally the biggest spenders in the construction sector.

What could be seen as more encouraging, is that 'general government' actually increased their investment in the civil industry for example, increasing by 2.5 percent in real terms (while SOE's disinvested in civil infrastructure by 27.2 percent). Nonetheless, this is a worrying trend, as a lack of investment continues to damage the productive capacity of the economy, potentially shifting the economy onto an even lower expected growth path.

As the construction industry underperforms the economy in 2020, the contribution of investment in construction as a proportion of GDP continues to decline. Investment (in the construction industry as a proportion of GDP was just 7.1 percent in the 4th quarter. This is down from hovering just under 10 percent over the last few years, which is significant.

Table 3: GFCF Residential, Non-Residential and Construction works, by client 2020, constant 2010 prices (millions)

2020	Government	SOE's	Private	Total
Residential	750	31	41729	42511
Non-residential	14134	1325	20173	35633
Civil works	51250	42786	43965	138002
Total	66134	44142	87711	216146

Source: South African Reserve Bank Quarterly Bulletin

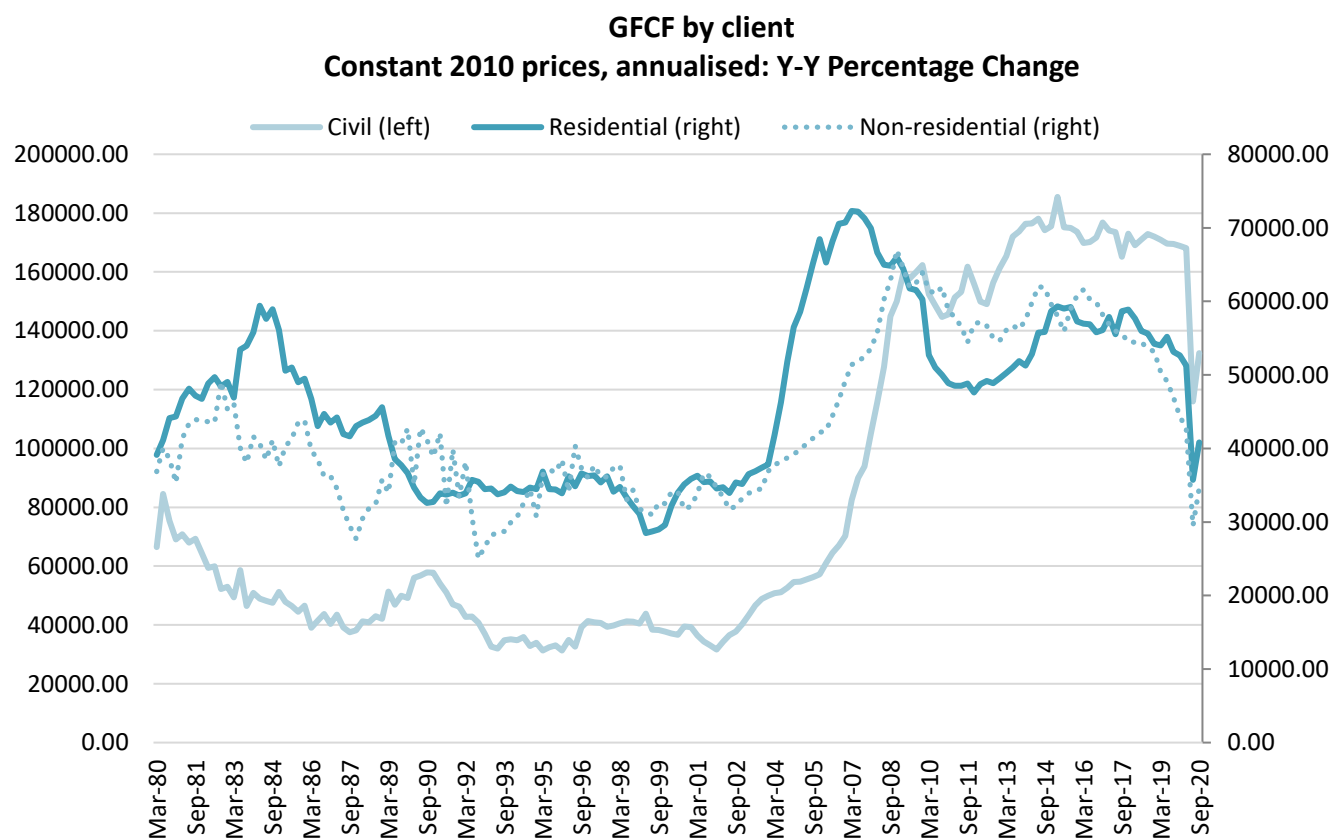


Figure 4: GFCF by client, constant 2010 prices (Source SARB)

2. CESA Survey: Background

A total of 48 questionnaires were returned via both an on-line and hard copy system. The sample represents a cumulative fee income of R1.62bn, and 3215 employees for the period July – December 2020.

The analysis of the questionnaires completed by active firms in the consulting engineering profession provides a proxy for current and expected working conditions for the profession, which can be measured and benchmarked on a regular basis.

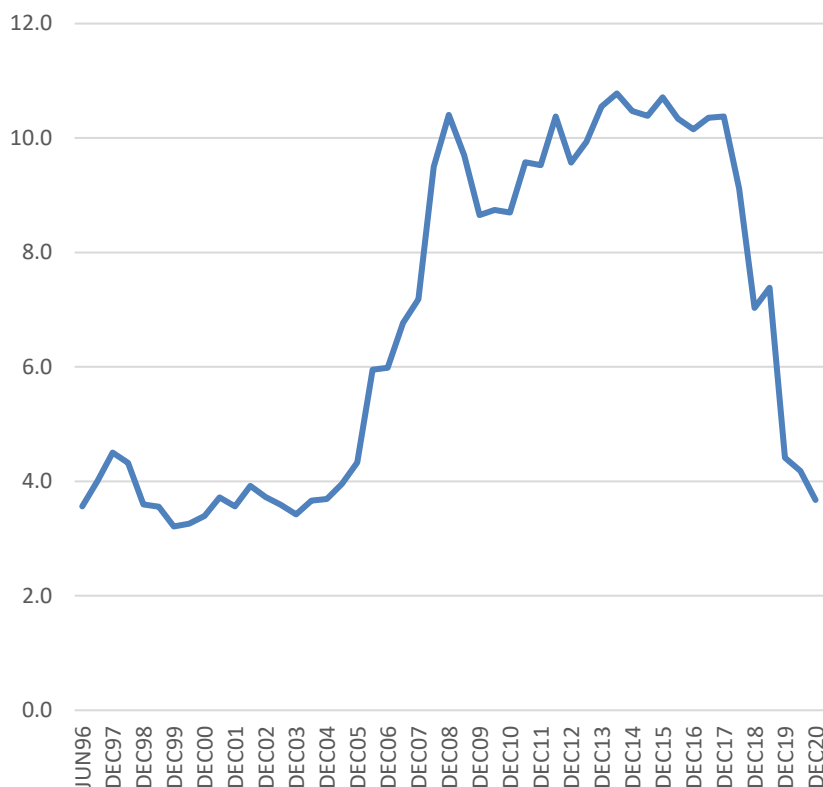
CESA welcomes commentary received from firms and invites all members to actively participate in sending commentary on either the survey or conditions in the workplace thereby increasing the relevance of these reports.

The survey is re-evaluated on a continuous basis to ensure that the questions asked are pertinent to current conditions in the industry. Several new questions were included in the current survey to improve the compilation of benchmark indicators.

3. Prevailing conditions in the Consulting Engineering Industry

3.1 Financial Indicators

Fee Income, Rbn, Real prices Annualised



Fee earnings for the last six months of 2020 contracted by 10.6 percent (in current prices) compared to the first six months of 2020, against an expected increase of 0.1 percent reported in the June 2020 survey.

Interestingly, medium sized firms managed to increase their fee income in the six month period, up by 5.9 percent. All of the other sized firms did however report relatively robust declines in the fee income, with large firms down 11.6 percent, while small and micro firms found their fee income 43.1 percent and 146 percent lower respectively, with the small firms the hardest hit by far.

There are mixed views on projected income for the next six-month period, with the large and small firms more upbeat, expecting income to increase, while medium sized firms and micro firms are more negative. All in all, the respondents expect fee income to be better in the next six-month period, expecting an increase of 9 percent on average.

A summary of fee earnings by firm size, as well as projected earnings for the last six months of 2020 is provided in the table below.

Table 4: Fee earnings, actual vs projected by firm size

Firm size category	Actual (June 2020 vs Dec 2019)	Projected for Dec 2020
Large	-11.6%	16%
Medium	5.9%	-19%
Small	-43.1%	1%
Micro	-14.6%	-16%
Total	-10.6%	9%

3.1.2 Outsourcing

On average firms **outsourced** a higher percentage of turnover to black owned enterprises compared to that of external enterprises or that of public sector requirements. The percentage of turnover outsourced to black owned enterprises almost doubled in the current survey compared to the first half of 2020.

There was a mix between the different sized firms outsourcing work in the current survey, with medium sized firms outsourcing the most to external enterprises, while micro firms outsourced the most to black owned enterprises. Overall outsourcing was up quite significantly, except for large firms, who saw somewhat of a decrease in outsourcing.

Figure 6: Matrix distribution of average percentage outsourced by firms, according to main purpose

Table 5: Average percentage of turnover outsourced, for consulting services only, by firm, size and purpose

	<i>External enterprises or individuals including sub-consultants, joint ventures and contract workers</i>	<i>Black owned enterprises</i>
A	23.3	16.3
B	29.1	25.5
C	20.7	23.2
D	21.1	41.3
Average % of industry turnover	24.0	29.1
Average % of industry turnover June 2020 Survey	16.4	14.6

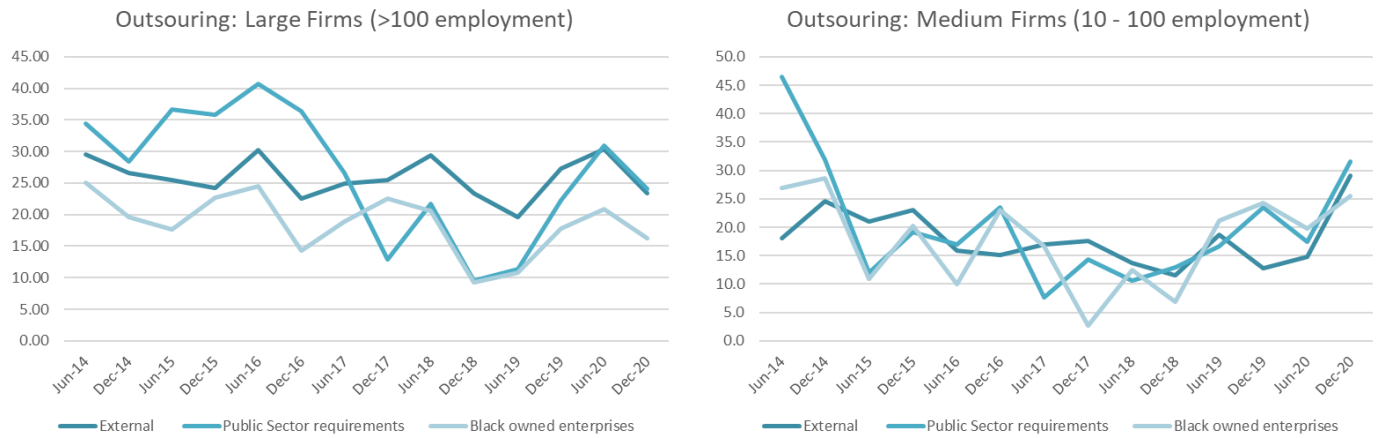


Figure 8: Outsourcing trend, large versus medium sized firms

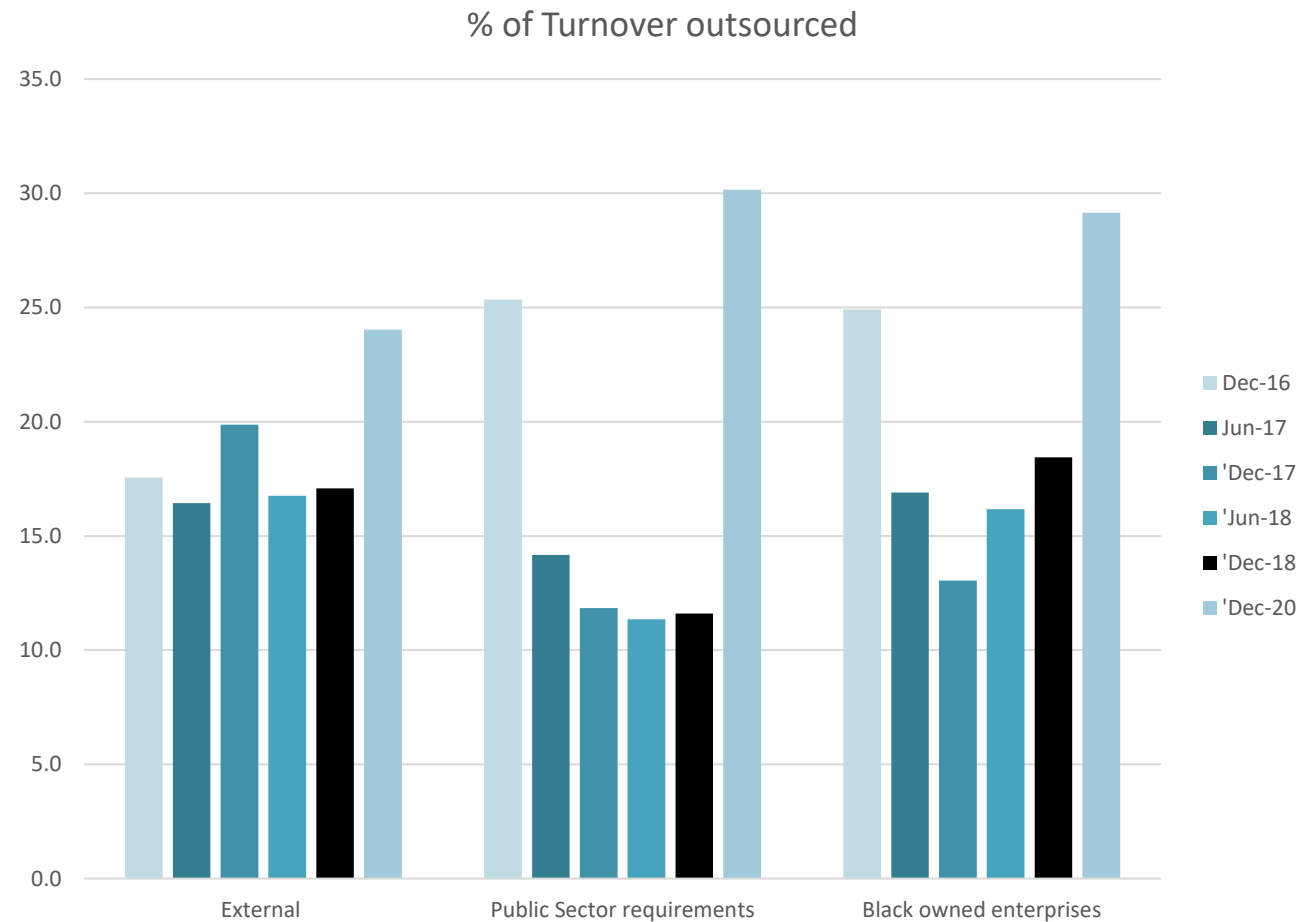


Figure 7: Percentage of turnover outsourced (average)

3.1.3 Return on Working Capital

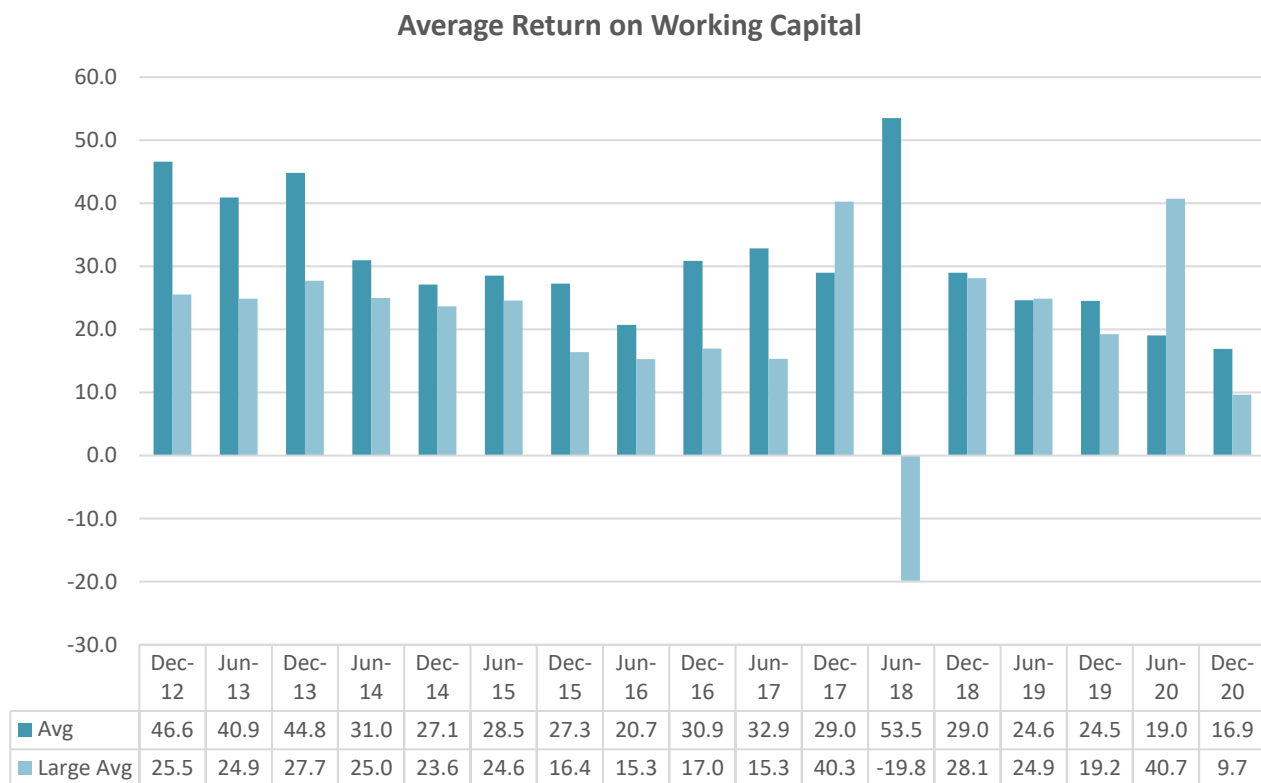


Figure 9: Average Return on Working Capital – Trend since December 2012

- The industry's **return on working capital**¹ (un-weighted average) moderated quite considerably again, to just 16.9 percent in the December 2020 survey. Having slowed to 19.0 percent the previous survey and is now below the average of between 30 and 40 percent in 2012 and 2013. There was a greater variance between the differently sized firms, with large firms reporting dismal figures of just 9.7 percent on average, who seem to have been harder hit, at least in terms of return on their assets.
- Medium sized firms were the only group that managed to grow their return on working capital in the latter part of 2020, up to 26.0 percent from 19.2 percent.

Table 6: Return on Working Capital by firm size

Group	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19	Jun-20	Dec-20
A	40.3	-19.8	28.1	24.9	19.2	40.7	9.7
B	127.3	114.2	25.1	13.4	26.0	19.2	26.0
C	26.1	61.2	34.4	30.5	18.8	6.3	14.5
D	5.2	20.3	20.6	36.3	35.8	21.2	9.5
Grand Total	55.1	53.5	29.0	24.6	24.5	19.5	16.93

¹ Return on investment is defined as the company's annual profit after interest and tax, as a percentage of Net Working Capital (current assets – current liabilities) during the last completed financial year. Working capital is considered part of operating capital as it affects the day to day operating liquidity. An increase in working capital indicates the business has either increased current assets (i.e. accounts receivable or inventory), or has decreased its current liabilities (accounts payable).

3.1.4 Value of outstanding payments

Fees not yet invoiced for confirmed appointments as % of revenue

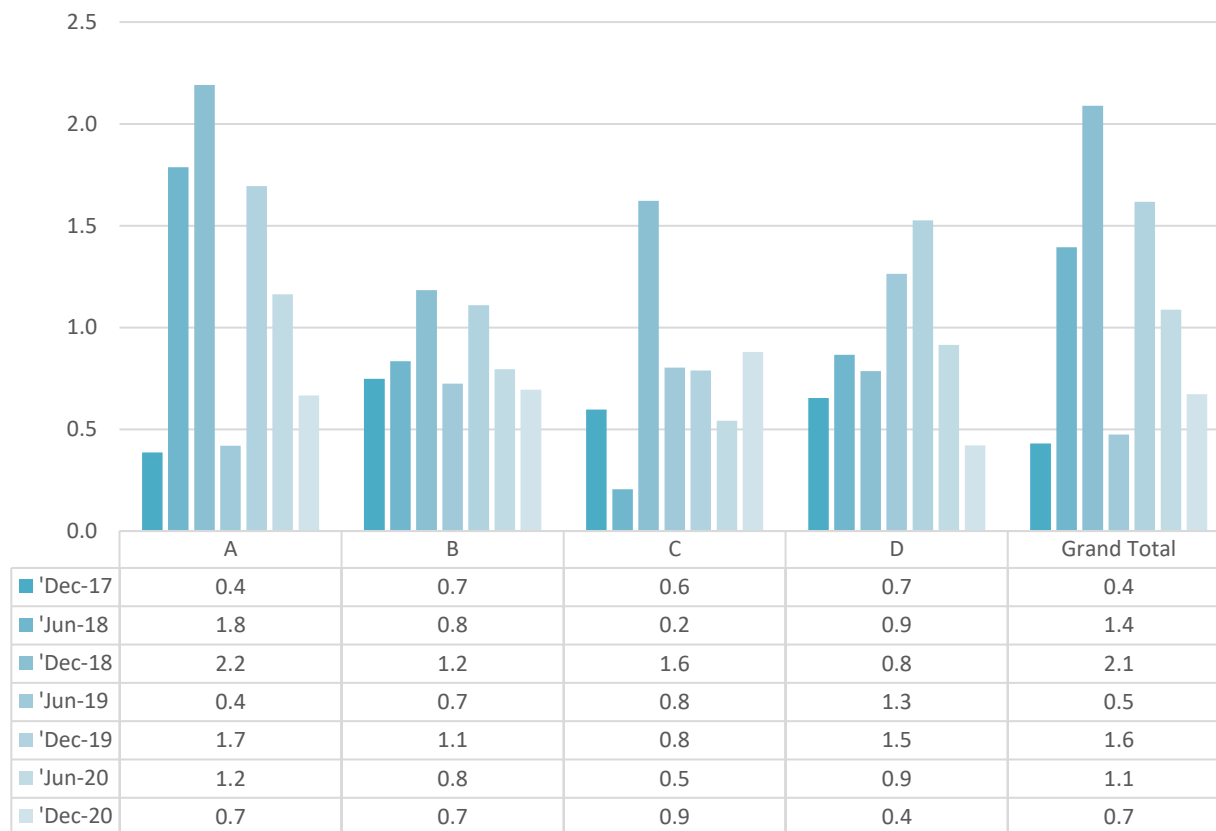


Figure 10: Order book: Income ratio

In terms of the ratio of fees not yet invoiced for confirmed appointments in order books in relation to current earnings, there was a deterioration in the current survey. Medium sized firms report the highest proportion of 0.9 (a bit less than their total income) but were the only group to report a ratio close to 1, with the large, small and micro firms all reporting much lower ratios. The micro firms reported a ratio of 0.4, which was the lowest. A decrease in the order book to income ratio suggests a deterioration in pipeline earnings, suggesting worse conditions in the next 6 to 12 months, which is to be expected given the pandemic and the economic fallout.

3.1.5 Profitability and late payments

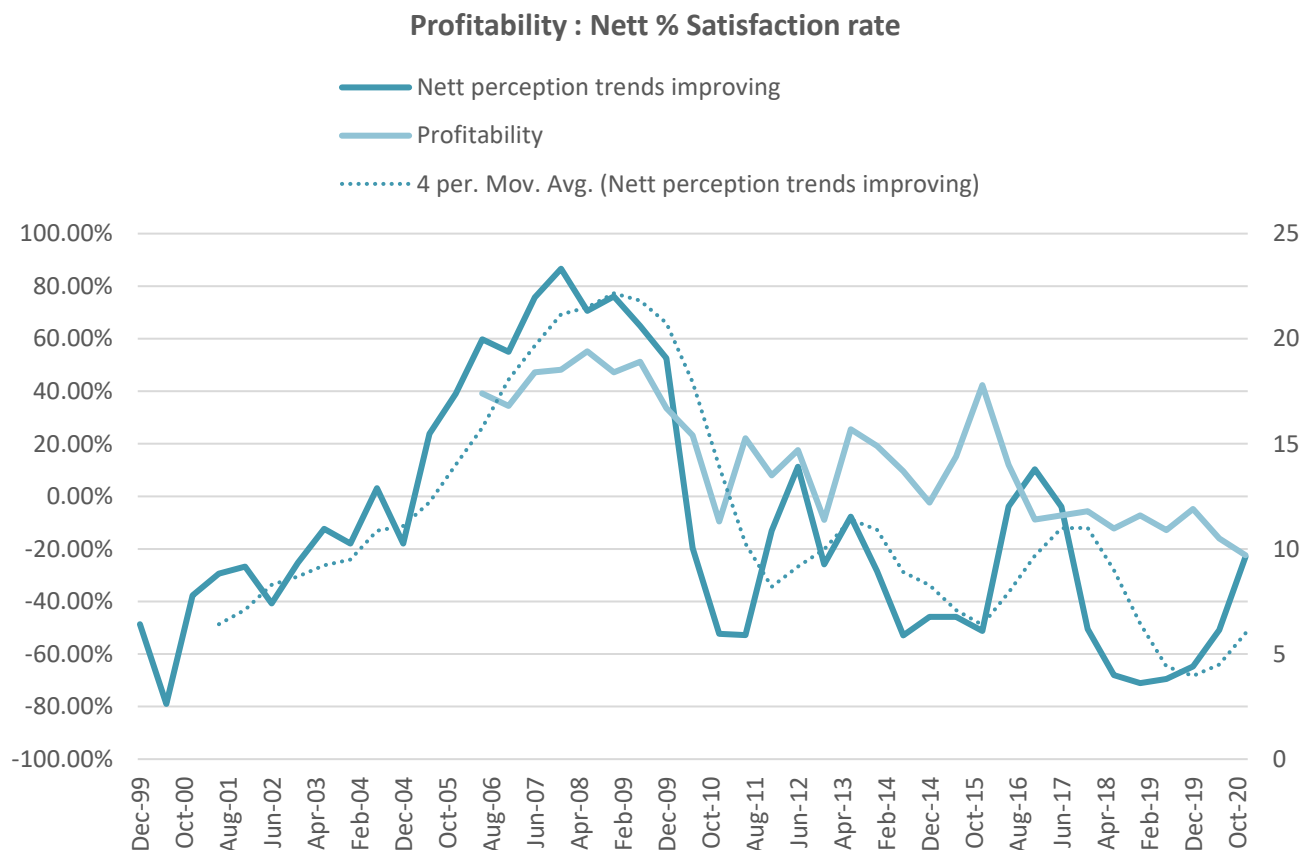


Figure 11: Profitability: Net % Satisfaction rate vs Average Profitability

Nett profitability deteriorated to an average of 9.7 percent in the last six months of 2020, down marginally from an average of 10.5 percent in the previous survey, and below the average of 12.7 percent in 2016. However margins have been relatively stable for the last 3 years, albeit at lower levels by historical terms. Allowing for fluctuations on a survey to survey basis, the trend has been consistently negative since 2015, when the downturn within the broader construction industry began, from a 'peak' nett profitability of 17.8 percent in the last six months of 2015. The net profit margin is the lowest it has been since the early 2000's.

What's very interesting is that the majority of engineers actually expect their profits to increase over the next 6 month period, which could be testament to how bad things actually were during the hard lockdown of April and May. A total of 52.1 percent of respondents expect their profits to improve, while 40.4 percent expect them to get worse, while 7.5 percent expect profits to be static. This could be a positive indication that some of the engineers may already have been working on some of the strategic infrastructure projects announced by the government. Whether these projects can be awarded will determine whether this potential pipeline activity can be converted into actual construction activity. This is however not widespread.

Another interesting development is that 70.0 percent of respondents are satisfied with their profit margins. This could be because of how bad the economic collapse has been, respondents are just happy to be at least currently working on something. **Some respondents even reported exceptional margins (3.5 percent), while 26.5 percent reported unsatisfactory margins.**

Table 7: Outstanding fees payable for work already completed and invoiced: July – December 2020

Firm size category	Total gross income	Outstanding fee income	Proportion of overall income
Large	1 536 444 277	1 246 159 357	81%
Medium	368 691 067	161 852 966	44%
Small	316 330 776	19 296 635	6%
Micro	41 668 490	9 744 585	23%
Total	2 263 134 610	1 437 053 543	63%

Overall, the large firms continue to have the highest proportion of their income outstanding after 90 days, which jumped significantly in the current survey, to 81.0 percent, higher than the 70 percent reported in the previous survey. Late payment has become a serious constraint as the overall industry is in such a dire state, with many stakeholders struggling to meet their financial obligations, which will be further exacerbated by the Covid-19 outbreak, and the economy shutting down to a large degree. Medium sized firms reported that 44.0 percent of their overall income was still outstanding. Small firms had a small proportion at just 6.0 percent, with micro firms reporting a ratio of 23.0 percent.

3.2 Human Resources

3.2.1 Employment

- Employment decreased by an average of just 0.2 percent in the latter half of 2020 to an estimated 18 813, compared to the previous six months of 2020, following the 5.0 percent decrease reported in the previous survey. This is a modest decline given the state of the overall economy but comes off the back of three half year periods of decreases. Surprisingly, the large firms increased their employment by just under 1 percent. All the other firms did however lay off staff in the last six months of 2020, with the biggest decreases in medium and micro enterprises of 5.8 percent and 4.6 percent respectively.
- If we look at the percentage of firms wanting to increase staff in the next half of the year, the numbers are mixed, but up considerably for engineers and technologists. A total of 54.9 percent of respondents wanted to increase their number of engineers, while 62 percent want to increase their technologists.

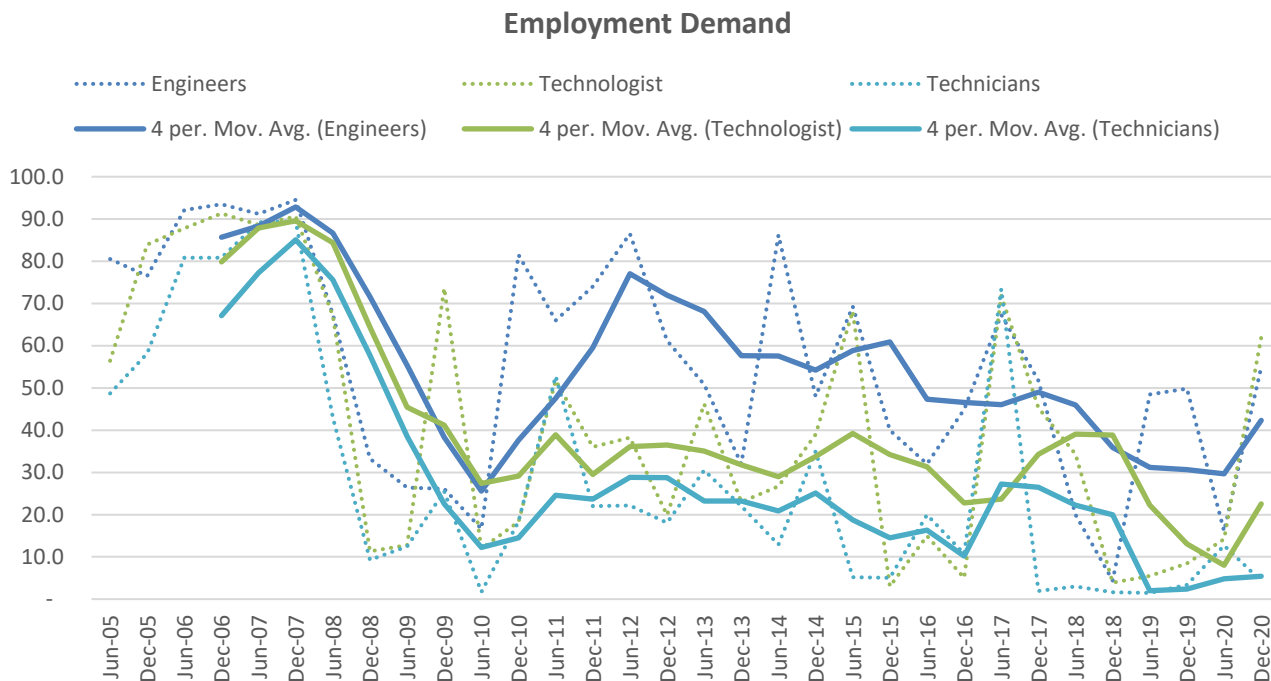


Figure 12: Employment Demand

Table 8: % of firms wanting to increase staff, by type of personnel

Type of personnel	% of firms wanting to increase staff December 2017	% of firms wanting to increase staff June 2018	% of firms wanting to increase staff December 2018	% of firms wanting to increase staff June 2019	% of firms wanting to increase staff December 2019	% of firms wanting to increase staff June 2020	% of firms wanting to increase staff December 2020
Engineers	51.7	20.0	4.4	48.5	49.8	16.1	54.9
Technologists	3.7	18.0	3.9	5.5	8.5	12.4	2.8
Technicians	45.3	34.3	1.6	10.4	3.3	14.2	62.0
Other technical staff	1.9	3.0	2.3	1.5	4.3	12.7	4.3
Support staff	2.3	0.0	7.5	2.4	1.6	11.3	0.9

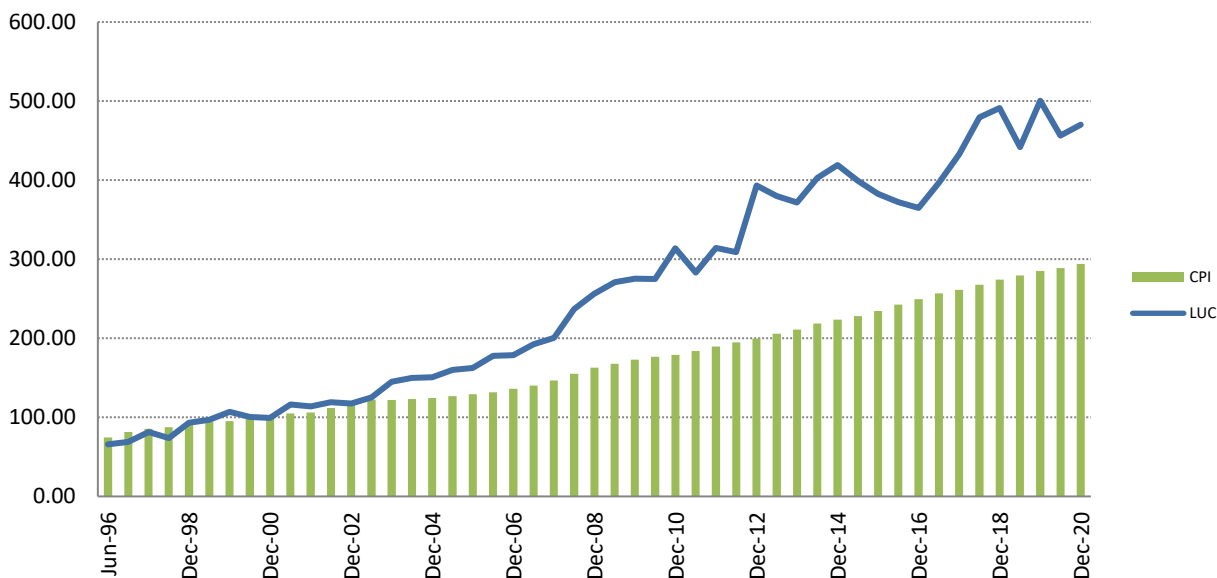
3.2.2 Salary and Wage bill

The salary and wage bill represent a significant contributor to the average cost of production in the consulting engineering profession.

- The contribution of the salary and wage bill to fee earnings generally averages between 63 percent and 66 percent and was 65 percent of total income in the current survey, so no major deviation from the trend.
- The contribution of the salary and wage bill was highest amongst large sized firms, averaged at 71 percent, which is quite high. This is while small and micro firms reported an average of 55 percent and 40 percent of total income respectively.

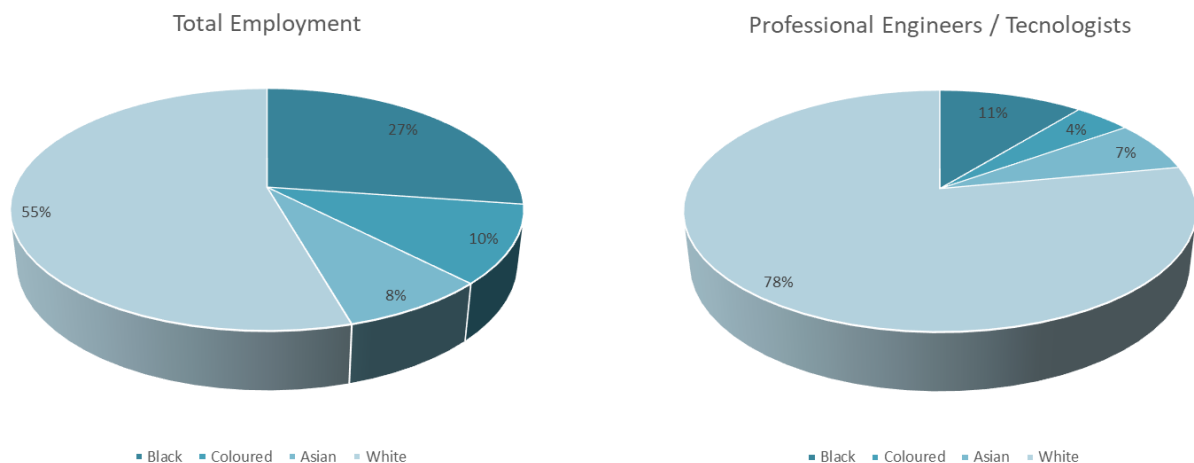
- Average labour cost per unit (measured by the average salary and wage bill divided by number of full and part time employees and hours worked), decreased by 6.9 percent in the December 2020 survey, following an increase of 3.3 percent in the previous survey, compared to the same period in 2020. Inflation averaged 3.1 percent in the last six months of 2020 (from an average of 3.4 percent in the first six months of 2020), and is expected to remain under 4 percent for 2020 and 2021, according to the Reserve Bank.

Change in CESA Labour costs vs CPI
Index 2000 = 100



3.2.3 Employment profile

An estimated 18 851 people are employed in the private consulting engineering industry, of which 63 percent are male and 37 percent female. Professional Engineers (pr.Eng) contributed 18.7 percent to total employment, strongly dominated by males (88.9%) with women representing 10.0 percent of professional engineers in the industry. Overall growth in employment has been seriously lacking over the last 2-3 years, from recent highs at around 24 300 employed, to the current 18 851.



3.3 Industry Profile of Executive Staff

The appointment of Black executive staff (including Black, Asian and Coloured staff), measured by the contribution of Black executive directors, non-executive directors, members and partners as a percentage of total executive staff, decreased considerably to 27.3 percent from 36.2 percent in the previous survey. A detailed breakdown is provided in Statistical Tables. **The appointment of women at an executive level, (including all races) decreased slightly to 9.8 percent from 11.0 percent.**

3.4 Capacity Utilisation

Capacity Utilisation Rate

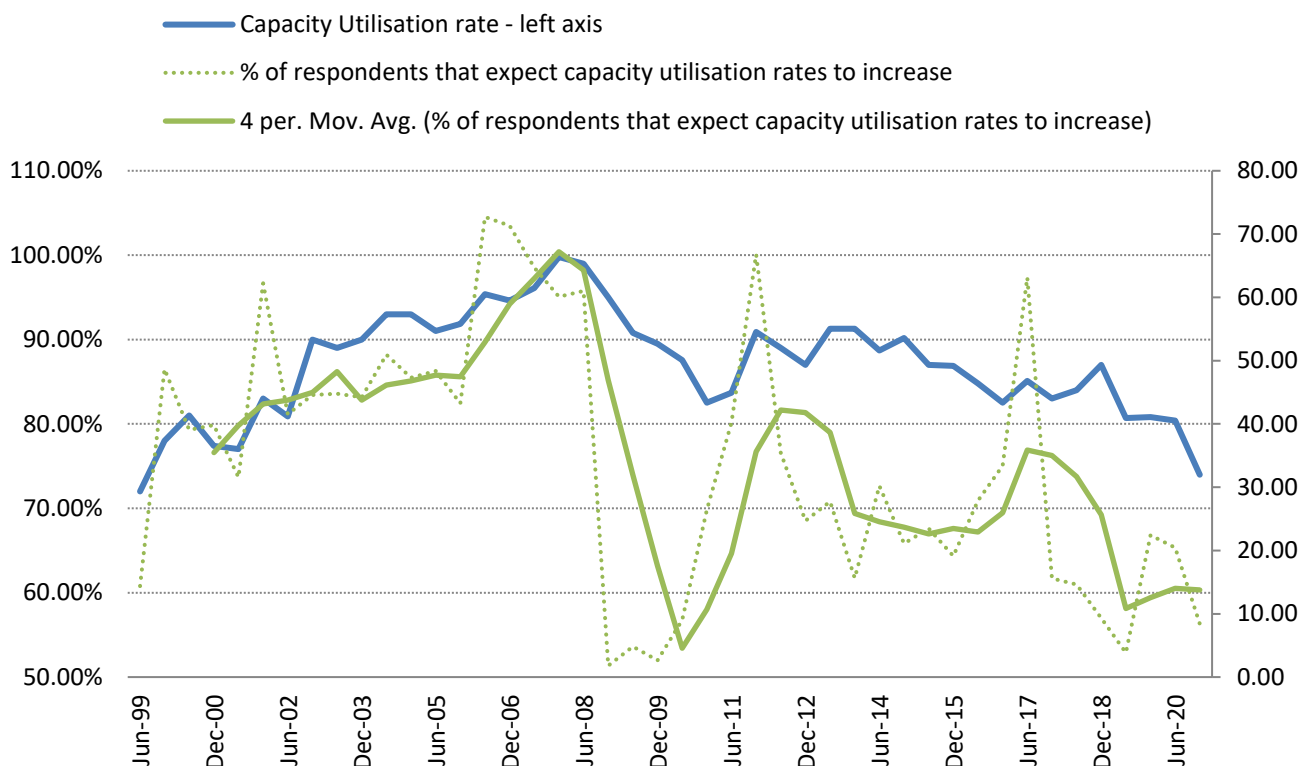


Figure 13: Capacity Utilisation Rate

Capacity utilisation of technical staff has steadily decreased since 2013, and dropped to its lowest point since 1999 to just 74 percent, down from 80 percent in the previous survey, and respondents don't expect it to get better.. The vast majority of firms (87.9 percent) continue to expect capacity utilization levels to remain static over the next period. A total of 8.4 percent of firms expect an increase, while 3.7 percent of firms expect capacity to decrease, which means some firms expect the current conditions to worsen further.

Micro firms reported the lowest capacity utilisation in the latter half of 2020 at 66.8 percent, which is quite low. Medium sized firms reported the highest at 82.7 percent, but a significant 19 percent of medium sized firms expect capacity to worsen in the next survey period. Large firms reported capacity utilisation of 74.8 percent, with 100 percent of large firm respondents expecting capacity to remain static over the survey period.

3.5 Competition in tendering

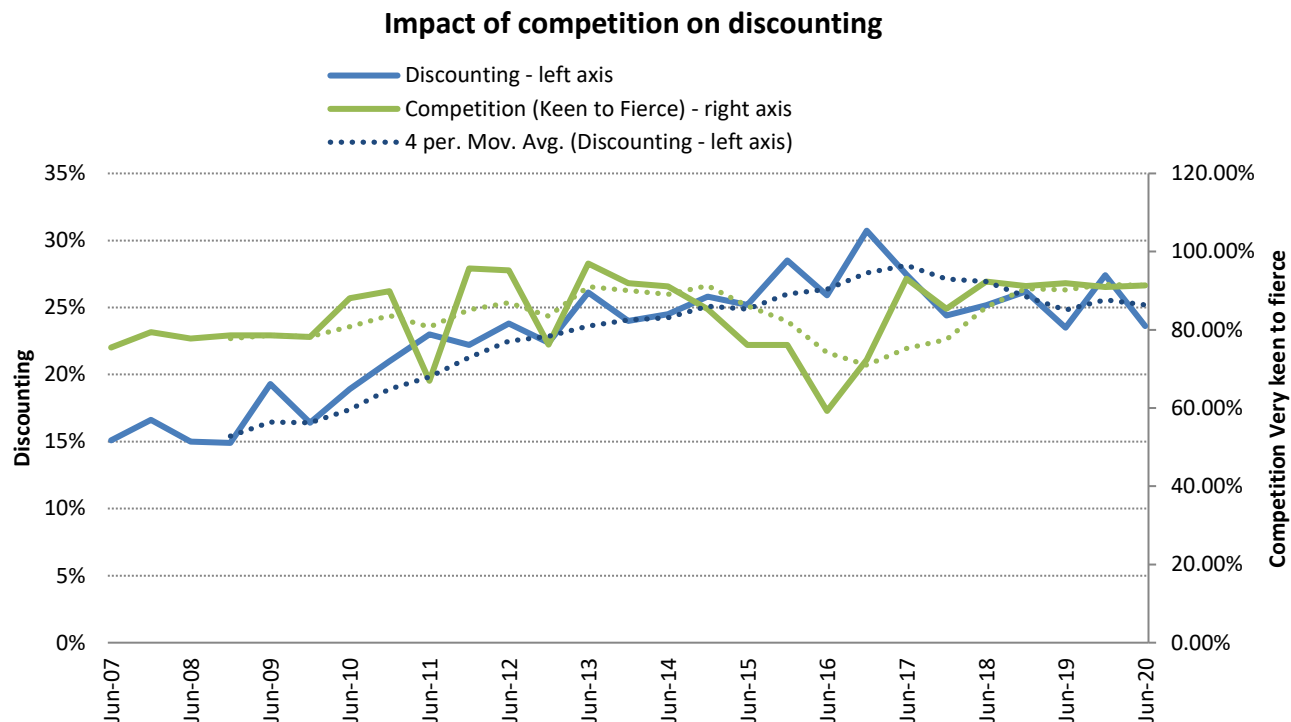


Figure 14: Competition and Discounting

Competition in tendering generally eases during a time when the availability of work increases and intensifies during periods of work shortages. An easing of competition will generally lead to an increase in prices, while price inflation is capped during periods of work shortages due to the fact that an increasing number of firms tender on the same project. The tendering process is costly and time consuming, and higher levels of competition significantly increase the risk for the engineering firm.

In line with a very competitive environment, an increasing number of firms continue to report on very keen fierce competition. In this survey 92.9 percent reported on very keen to fierce competition, in line with the previous survey. This is as the mega projects have dried up, and large firms are fighting with some of the medium sized firms for work, to some degree. This is however significantly up from an average of 65.8 percent in 2016, for example, and intensified by the pandemic and lockdowns.

This shows in the data, in that large firms again reported much higher levels of competition than the smaller firms, with 91.4 percent of large firms reporting fierce competition. This is compared to only 45 percent of medium firms reporting fierce competition, which is the 2nd highest. Small and micro firms report the lowest levels of competition out of the respondents.

Higher levels of competition is supported by higher tendencies to discount hence the clear correlation between the level of discounting and competition. As competition started to intensify after 2009, the propensity to discount also started to accelerate. The average discounting rate did however moderate slightly again in the current survey, as well as the previous Dec 2019 survey, to an average of 22.0 percent in the current survey. Large size firms again reported the highest level of discounting at 40.0 percent (larger firms also reported the most intense competition), followed by medium and small firms at 23.0 percent. *Discounted rates are benchmarked against the 2015 ECSA Guideline fee scales.*

Firm Size Category	Capacity Utilisation of existing technical staff during the past 6 months	% of Respondents that expect capacity utilisation of technical staff to increase over the next 6 months	Average discount being offered by respondents in tendering situation to clients, benchmarked against the ECSA guideline fee scales	% of Respondents that reported Very Keen to FIERCE Competition for work during the first six months
Large	74.8%	0.0%	40.0%	91.4%
Medium	76.0%	32.3%	23.5%	45.5%
Small	82.7%	53.9%	23.6%	18.4%
Micro	66.8%	25.7%	13.2%	30.1%
Industry Average	74.7%	8.4%	22.0%	92.9%

3.6 Pricing

No specific escalation index is available for the consulting engineering industry. After exploring many different avenues it was proposed to calculate a CESA Cost index that is based on a “labour unit cost” and extracted directly from the CESA BECS Survey. This should accommodate at least between 60% and 65% of the firms’ costs and should therefore, in theory, be a reliable indicator of escalation. The CPI is currently used to deflate all financial information, until such time CESA officially applies the CESA Labour cost index as an industry price deflator.

The index is based on the sample of total number of employees versus the salaries and wages paid during the period under review.

According to CESA’s labour cost indicator, the average unit cost of labour (smoothed over a two-survey period to remove short term volatility) for the industry, decreased by 1.7 percent since the first six months of 2020, and is off the back of a 2.5 percent increase in the previous survey.

Figure 15: CESA Labour Cost Indicator (LCI)

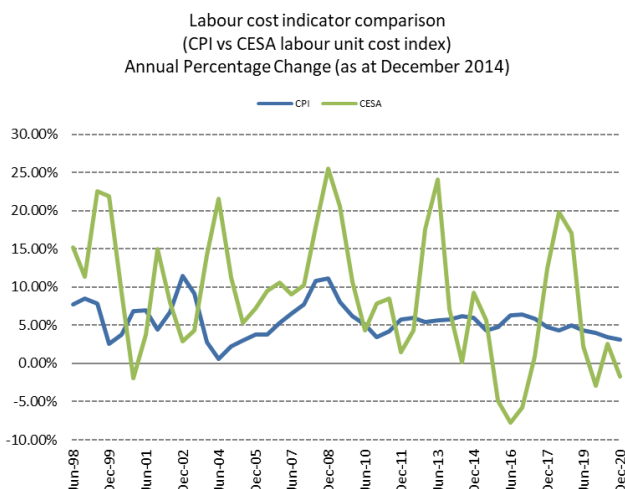
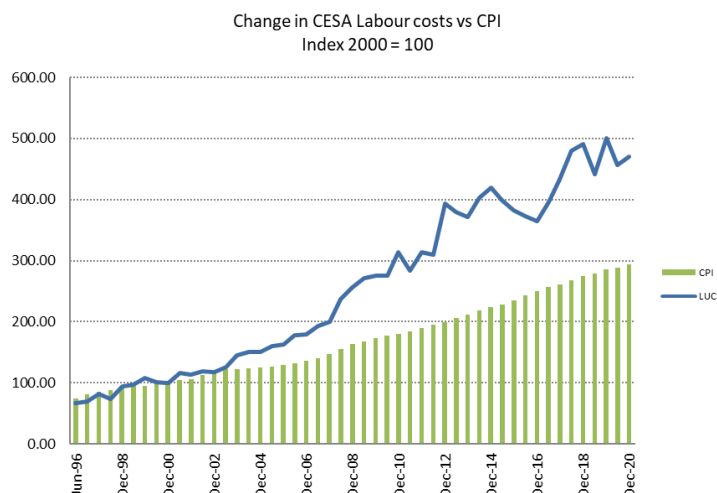


Figure 16: Change in CESA LCI vs CPI



4. Industry Outlook

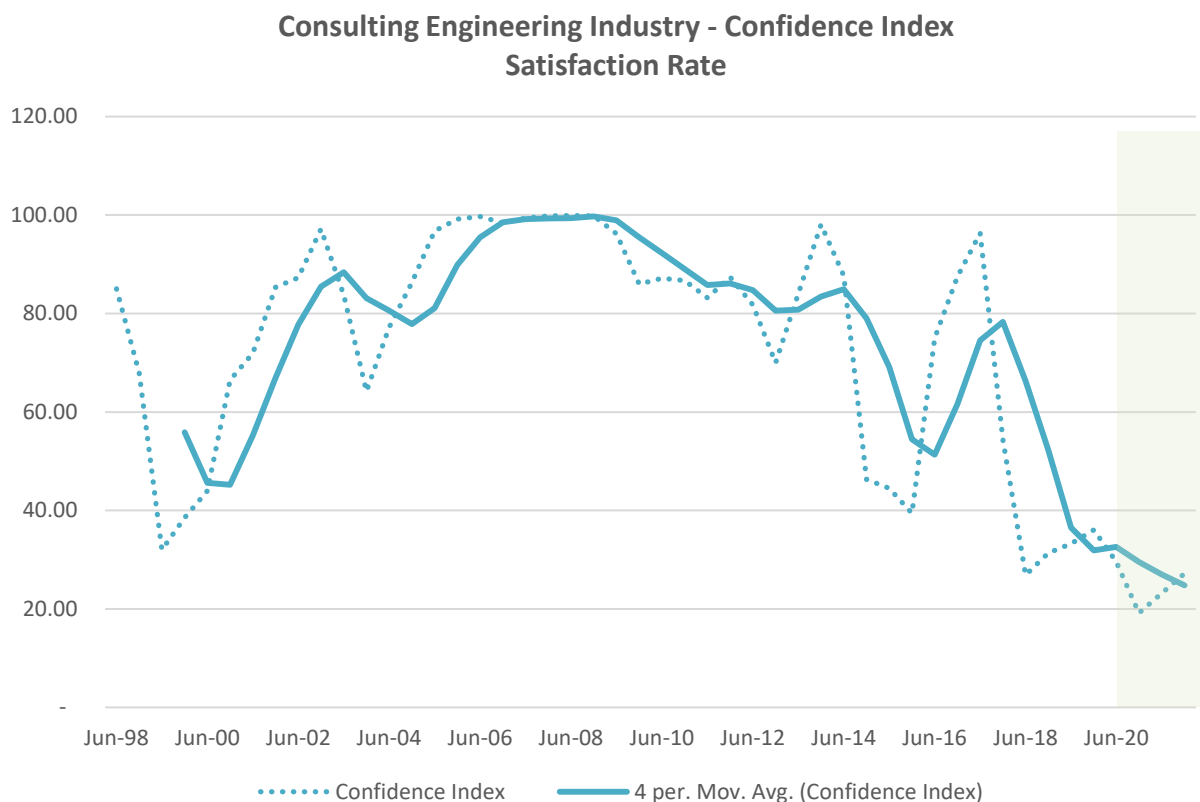


Figure 17: Confidence Index

Explanatory note: The confidence index, as an indicator of members' assessments regarding current and future prospects with regard to market developments and is a "weighted" index. The response of each company is weighted according to its total employment, including full and part time staff, and the index represents the net percentage of members satisfied with business conditions.² The confidence index is used as a leading indicator to determine a short to medium term outlook for the consulting engineering industry.

The consulting engineering confidence index dropped to a new all time low level of 19.2 points, from what was a previous all time low of 29.6 points in the prior 6-month period. This is the most negative consulting engineers have ever been, although the outlook is slightly better when looking at confidence for the next 6 and 12 months. This is a marked decline in just a 6-month period, in percentage terms, this is a decrease of 46.9 percent which is significant.

In line with other metrics on competition for example, the large firms are by far the least confident in the current state of the consulting engineering industry, with an index value of just 14.1 points for the large firms, while medium and smaller firms are more confident was the confident index at 35.2 points and 46.7 points respectively.

The outlook for the following 6 to 12 months is more positive, but only marginally for the next 6-month period at just 23.2 points (would only be up from the current 19.2 points), and improves slightly for Dec-2021 survey to 27.2 points.

² The net percentage reflects only those members that expect conditions to be satisfactory, quite busy or very busy.

Table 9: Confidence as at June 2020 by firm size category (% of respondents that experienced satisfactory business conditions)

Firm size category	First six months of 2019	Next 6 months	Next 12 months
Large	14.1%	14.1%	14.1%
Medium	35.2%	53.8%	74.7%
Small	46.7%	54.6%	69.8%
Micro	24.5%	47.1%	55.9%
Industry Average	35.6%	50.8%	62.8%

Annual Change in Real Earnings of Consulting Engineering vs Confidence

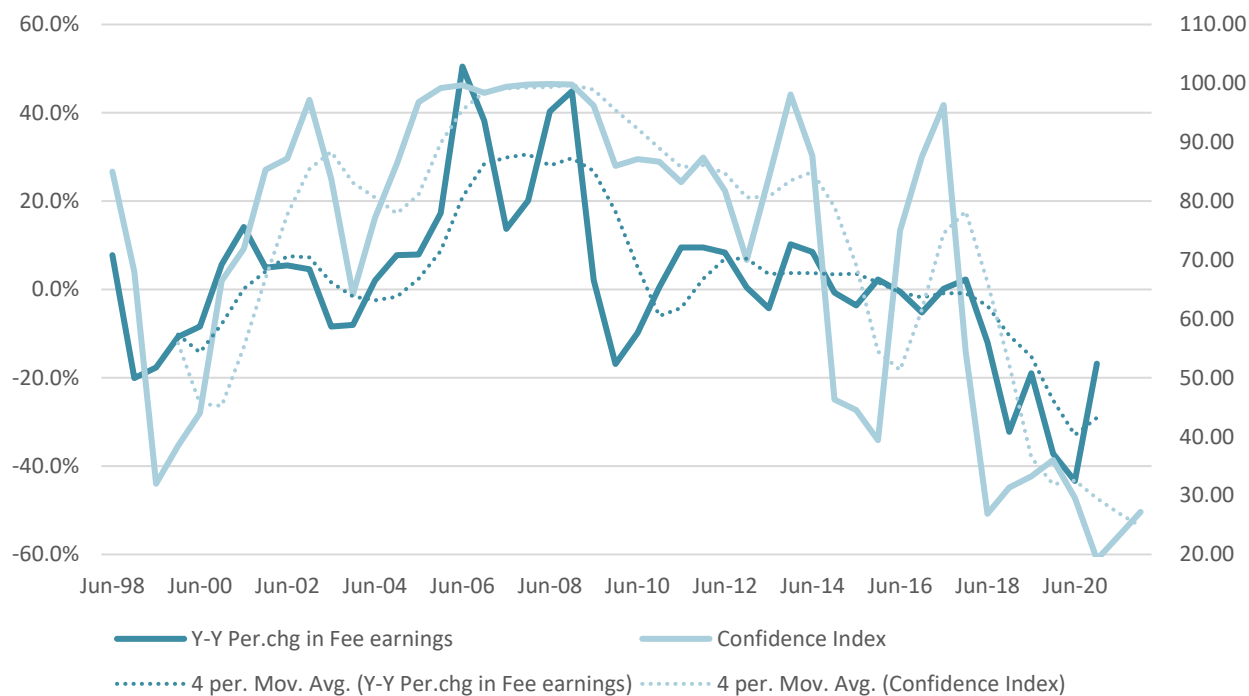


Table 10: CESA Confidence index: % respondents satisfied with working conditions

Survey Period	CESA Confidence Index	% Change on previous survey	% Change on survey same time last year
Dec-06	98.4	-1.30	-0.8
Jun-07	99.4	1.0%	-0.3%
Dec-07	99.8	0.4%	1.4%
Jun-08	99.9	0.1%	0.5%
Dec-08	99.8	-0.1%	0.0%
Jun-09	96.2	-3.6%	-3.7%
Dec-09	86.0	-10.6%	-13.8%
Jun-10	87.1	1.3%	-9.4%
Dec-10	86.7	-0.5%	0.8%
Jun-11	83.2	-4.0%	-4.5%
Dec-11	87.4	5.0%	0.8%
Jun-12	81.8	-6.4%	-1.7%
Dec-12	70.0	-14.4%	-19.9%
Jun-13	84.0	20.0%	2.7%
Dec-13	98.1	16.8%	40.1%
Jun-14	87.7	-10.6%	4.4%
Dec-14	46.3	-47.2%	-52.8%
Jun-15	44.5	-3.9%	-49.3%
Dec-15	39.4	-11.5%	-14.9%
Jun-16	75.0	90.4%	68.5%
Dec-16	87.5	16.7%	122.1%
Jun-17	96.3	10.1%	28.4%
Dec-17	54.4	-43.5%	-37.8%
Jun-18	26.8	-50.6%	-72.1%
Dec-18	31.3	16.6%	-42.4%
Jun-19	33.2	6.1%	23.8%
Dec-19	36.1	8.4%	15.0%
Jun-20	29.6	-17.9%	-11.1%
Dec-20	19.2	-35.3%	-46.9%
Jun-21 (forecast)	23.2	21.0%	-21.7%
Dec-21 (forecast)	27.2	17.5%	42.1%

So how do the business environment perceptions in the consulting engineering industry compare with the contracting industry and business in general?

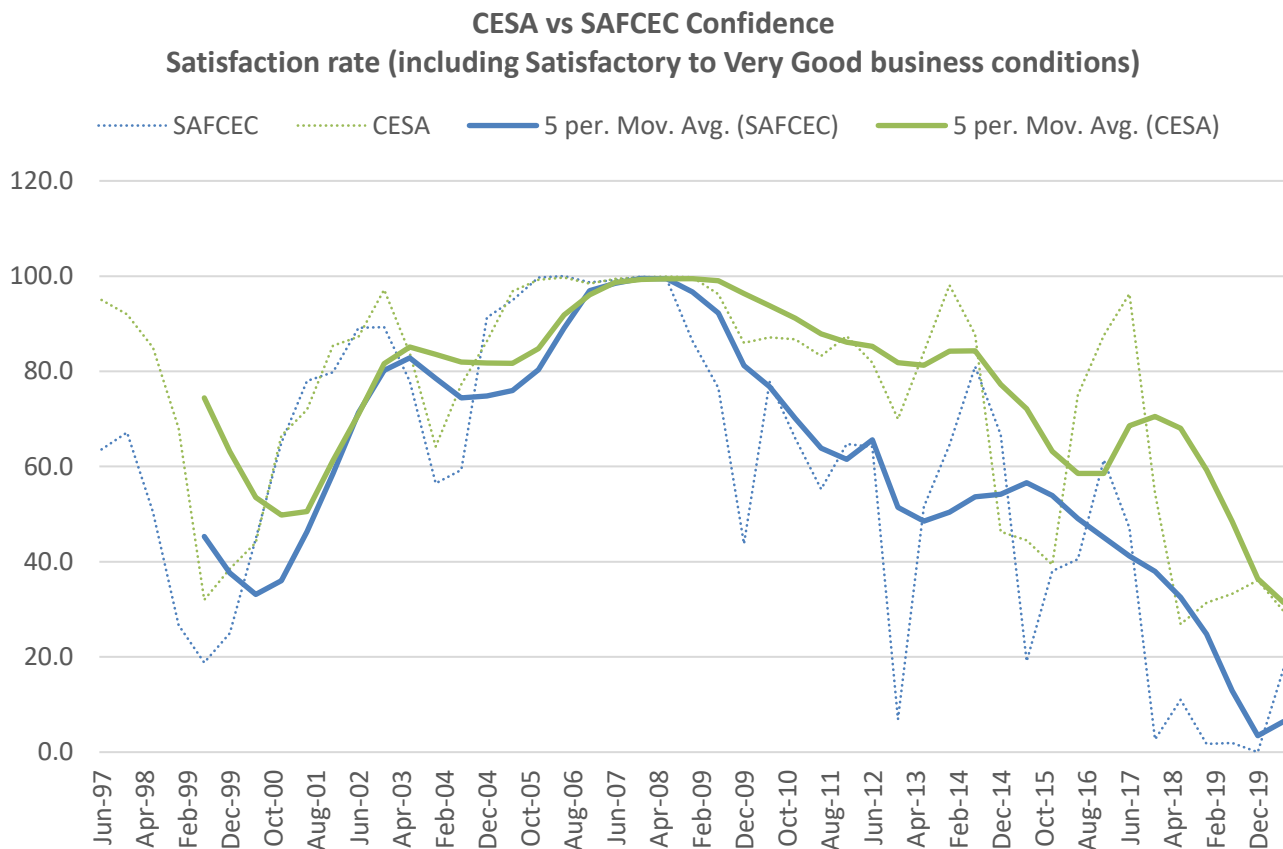


Figure 18: CESA vs SAFCEC

The relationship between confidence levels of engineers and civil contractors deteriorated from 2009 onwards as the business environment, in terms of consulting engineering, did not seem to deteriorate at the same pace as that experienced by the civil construction industry. Contractors have for some time reported on the slow pace by which contracts are awarded, as well as the extremely slow roll out of government projects, especially in the last survey. This creates disconnect between opinions expressed by engineers and contractors, where projects are in planning stages, supporting earnings in the consulting engineering industry, but implementation is extremely slow, negatively affecting turnover in the construction sector. Despite a bit on a divergence in the series from around 2009, the trend has mostly been in the same direction, which has deteriorated further, as the SAFCEC confidence index went back down to rock bottom in the 4th quarter of 2020, after it made a good recovery in the first quarter, before the pandemic hit. The CESA confidence index, although at a higher overall level than the SAFCEC confidence index, is also at an all time low point, albeit, not rock bottom.

Broader confidence indices in the economy have actually been a bit better than expected in the latter quarters of 2020, after reaching rock bottom levels early in the year when hard lockdown hit. Confidence, although better than expected in the 3rd and 4th quarters of 2020, does however remain at extremely low levels historically, with very little confidence in all sectors of the economy.

5. Market Profile

5.1 Sub-disciplines of fee income earned

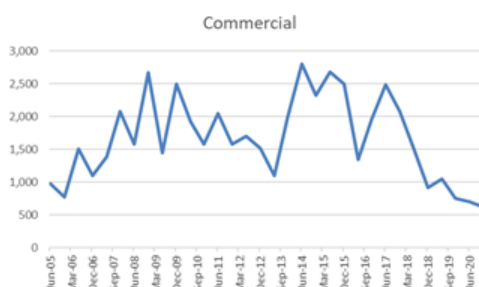
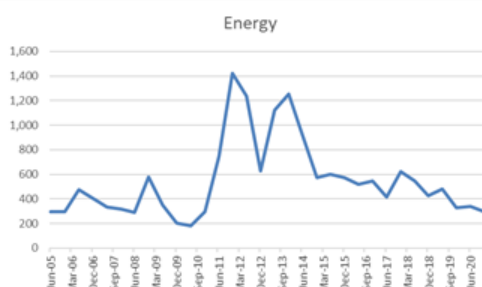
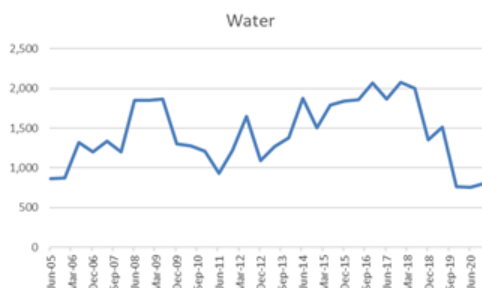
The South African consulting engineering industry is represented by many different sub-disciplines. The most common disciplines within larger firms include civil and structural services, contributing 50.3 percent and 11.8 percent in earnings during the last six months of 2020. The contribution of electrical work increased to 9.6 percent (compared to the 5 year average of just 6 percent). The growing contribution of the civil sector as a percentage of earnings is encouraging for the civil engineering contracting industry as this will have a direct impact on pipeline work in the civil industry, although this has not been observed yet. Project management jumped to 10.2 percent from 7.7 percent in the previous year.

Details of the various sub-disciplines are provided for under Statistical Tables.

5.2 Economic Sectors

The economic sectors include all infrastructure associated within that sector including expenditure related to soft issues such as feasibility studies or environmental assessments. From this, three key sectors evolved namely transportation, commercial and water services. Interestingly, it is in the health, education and tourism/leisure categories who saw the biggest declines over the last six month period, which makes sense given the governments disinvestment from those sectors, as well as the effect of the pandemic on tourism.

The charts below depict trends in rand terms.



The table below provides a snapshot of earnings by sector categorized between large, medium, small and micro firms.

Table 11: Distribution of fee earnings by economic sector, by firm size

	GAU	KZN	WC	EC	NC	MPU	FS	LIM	NW	AFRICA	INT	Total
A	37%	6%	27%	5%	3%	1%	3%	1%	1%	15%	1%	100%
B	23%	24%	25%	2%	10%	2%	7%	2%	1%	3%	2%	100%
C	29%	4%	10%	0%	19%	4%	4%	4%	12%	4%	10%	100%
D	47%	8%	22%	9%	0%	7%	7%	1%	0%	0%	0%	100%
Grand Total	34%	10%	26%	4%	5%	1%	4%	2%	1%	11%	2%	100%

Table 12: Distribution of fee earnings by province, by firm size

	WATER	Transportation	Energy	Mining	Education	Health	Tourism	Housing	Commercial	Agriculture	Eco other	Total
A	18%	18%	9%	14%	4%	2%	2%	2%	18%	0%	13%	100%
B	32%	36%	3%	0%	7%	1%	0%	6%	12%	1%	3%	100%
C	30%	23%	15%	1%	1%	4%	0%	3%	12%	7%	4%	100%
D	24%	25%	4%	1%	4%	2%	0%	9%	14%	0%	17%	100%
Grand Total	22%	22%	8%	10%	4%	2%	1%	3%	17%	0%	11%	100%

5.3 Geographic Location

Provincial Distribution of earnings

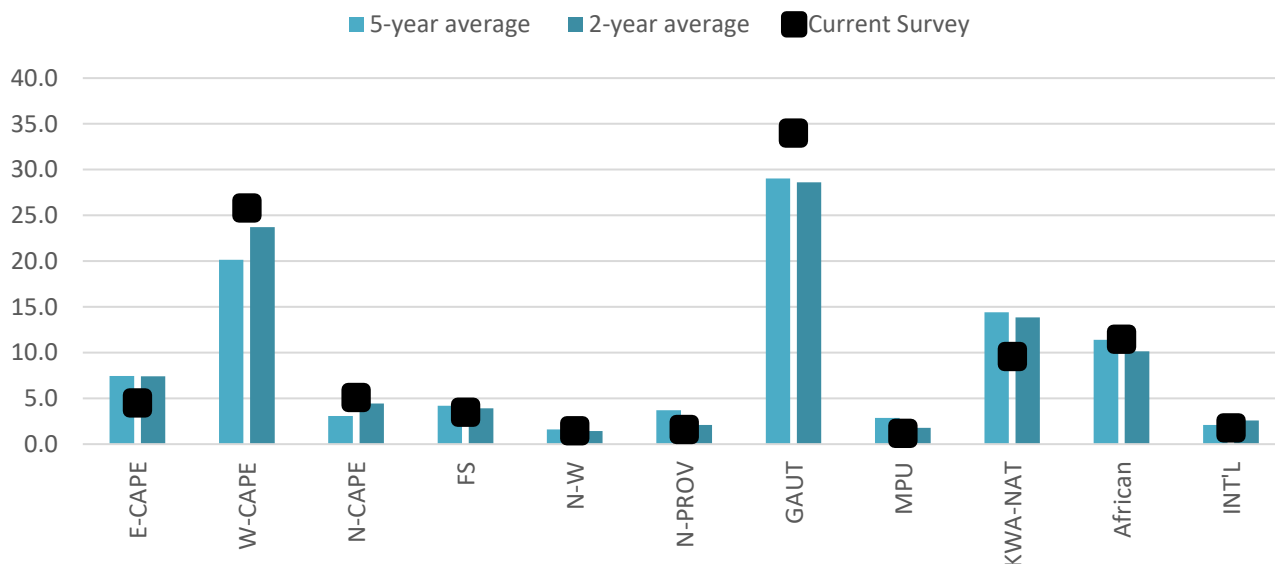


Figure 19: Provincial Distribution of earnings

The biggest movements, in terms of provincial exposure, were increases in some of the bigger provinces, such as Gauteng increasing its share of the respondent's income by 6.2 percent, which is quite a big increase to 34.0 percent of revenue on average. The Western Cape also made up a bigger proportion of respondent's fee income, increasing to 25.8 percent from 22.3 percent. There was a big decrease in KwaZulu Natal, which now only makes up 9.6 percent of income, compared to 16.5 percent in the previous survey.

5.4 Clients

The contribution to fee earnings by the private sector remained high in the current survey at 42 percent, compared to 44 percent in the previous survey. This is more or less in line with the longer term averages, but has increased over the last 10 years or so, with the private sector playing a bigger role in the construction industry, as the state disinvested from the broader industry over time. It is however quite surprising, given the economic collapse, as government were expected to make up a bigger share.

The contribution by SOE's remained flat at low levels of just 14 percent, which has come down considerably over the years. There is a general consensus that there has been significantly less work coming out of the SOE's over the past few years, as they have become more and more inefficient, with corruption and other factors hindering their performance significantly and catching up with the entities, aggravated by strains on government fiscus thereby limiting support coming from government. This also shows in the latest gross fixed capital formation data.

The public sector is generally regarded as the most important client to the industry, but due to the increased contribution by the private sector in the last few surveys, the combined representation of the public sector (including central, provincial, local government and SOE's) decreased slightly to 57.9 percent from 60.0 percent in the previous survey. The role of the public sector however remains critical to the engineering profession and particular for medium and smaller firms. A breakdown of earnings by client type and firm size is provided in the table below.

Client Distribution based on fee earnings

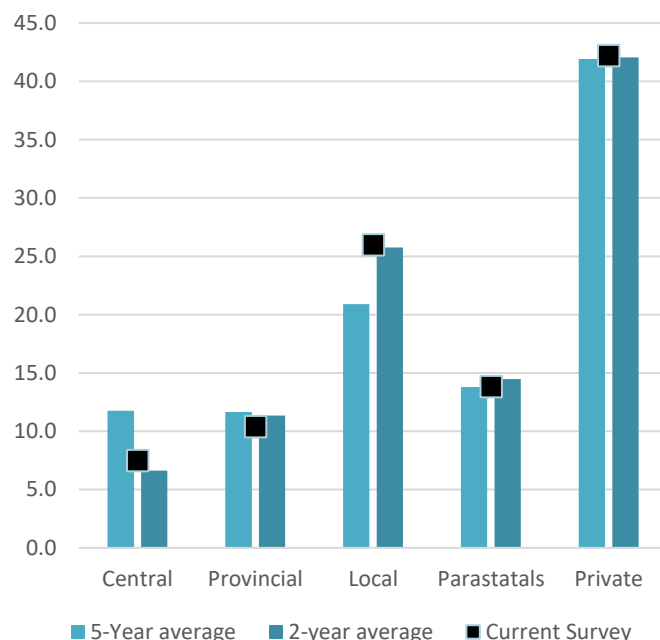


Figure 20: Distribution of earnings by client type

Table 13: Fee earnings distribution by client by firm size

	Central	Provincial	Local	Parastatals	Private	Total
Large	9%	5%	26%	12%	48%	100.0%
Medium	0%	34%	21%	23%	21%	100.0%
Small	1%	8%	47%	5%	39%	100.0%
Micro	18%	4%	31%	15%	31%	100.0%
Total	8%	10%	26%	14%	42%	100.0%
Average 2-Year	6.6%	11.4%	25.8%	14.5%	42.1%	100.0%
Average 5-year	11.8%	11.6%	20.9%	13.8%	41.9%	100.0%

6. Industry challenges as noted by respondents

Many of the challenges were noted before but as they are still applicable are included again in this report. No **additional** challenges were raised by respondents in the December 2020 survey.

- Many commented that they are currently in survival mode.
- Regulation issues, including the procurement of consulting engineering services, remain one of the biggest challenges faced by the industry. Procurement is currently based on price and broad-based black economic empowerment (BBBEE) points, with functionality or quality having a minimum threshold, thus being largely price driven. This is affecting tender prices, as firms sometimes tender below cost in view of the diminished availability of projects.
- Unrealistic tendering fees remain a concern for members, while the extended time it takes in which to finalise a proposal is affecting profitability in the industry.
- The quality of technical personnel is argued by some firms to have deteriorated, putting greater risk on the built environment sector. Skills shortage is regarded as one the most significant institutional challenges faced by the private and the public sector. CESA has offered their services to government to procure and implement projects.
- Fraud and corruption is affecting the ethos of our society, with a lot of talk and little action accompanying the growing evidence of corruption. CESA is aware that members are under pressure from contractors and corrupt officials, to certify payment for work not completed. This is regarded as an extremely serious matter for CESA and as such will be relentless in holding those in power accountable.
- Unlocking greater private sector participation is seen as a critical element to fast track delivery which will support engineering fees and as such engineering development in the industry. Transnet for example has recently called for private sector investment to support their capital investment programme. Private sector participation in this context refers to involvement on a more technical level (and not as a client), to improve municipal capacity and efficiency. Government must create an environment for the private sector so that it can play a much bigger role in infrastructure delivery. Many of the projects highlighted in the NDP can be carried out by the private sector through public-private partnerships.
- Service delivery, especially at municipal level remains a critical burning issue. The consulting engineering industry is threatened by incapacitated local and provincial governments. As major clients to the industry, it is important that these institutions become more effective, more proactive in identifying needs and priorities and more efficient in project implementation and – management.
- The involvement of non-CESA members in government tenders and procurement continues to threaten the standard and performance of the industry. Non-CESA members do not seem to comply with the same standards and principles as those firms that are members of CESA. Whether this is linked to complaints of “below cost” tendering during 2009, is not certain, but CESA members should be better informed about engaging in below cost tendering.
- Firms from across South African borders are tendering at rates that are not competitive for local firms. Complaints have been received of some of these firms not producing proper drawings and not attending site visits. Clients, unfortunately, are not always properly experienced or educated to conduct proper procurement assessments and unknowingly award contracts to these “unscrupulous” firms. While these occurrences may be limited to smaller rural areas, it remains an unacceptable practice.
- Lack of attention to maintain infrastructure poses a serious problem for the industry. Not only is it much more costly to build new infrastructure, but dilapidated infrastructure hampers economic growth potential. The cost of resurfacing a road after seven years at current prices, is estimated at R175 000 per kilometer, compared to R3 million per kilometer to rebuild, less than 6% of the construction price. In many cases, infrastructure is left to deteriorate to such a state, that maintenance becomes almost impossible.
- A further challenge to the industry is to find a way to standardize the procurement procedures applied by the different government departments. Procurement procedures should be standard for the country, or at least for the specific tier of government.
- Adapting to a low growth environment as outlook for infrastructure spending is hampered by poor economic growth, lower than expected revenue by government, international economic instability and price volatility, and low private sector confidence.
- Requirement as set out in the Construction Sector Charter inhibit small firms to competitively tender on government projects, requiring them as such to be more reliant on private sector work. In this survey small and micro enterprises earned between 44 percent and 62 percent from the private sector.

Statistical Tables

Table 14: General financial indicators

Survey period	Employment ³	Salaries / Wages 2000 prices (Annualised)	Fee Income, R mill (Annualised)			Cost Deflator	
			Current prices	Constant 2000 prices	Y/Y real % change	CPI Index 2000 = 100	CPI y/y % Change
Dec-11	19.618	6.002	18.054	9.527	9.5%	189.5	5.8%
Jun-12	20.796	6.124	20.221	10.380	8.4%	194.8	5.9%
Dec-12	19.964	6.316	19.109	9.569	0.4%	199.7	5.4%
Jun-13	24.356	6.557	20.446	9.935	-4.3%	205.8	5.6%
Dec-13	23.625	6.226	22.286	10.552	10.3%	211.2	5.8%
Jun-14	23.389	7.006	23.557	10.799	8.5%	218.2	6.2%
Dec-14	22.921	6.808	23.439	10.474	-0.7%	223.8	5.9%
Jun-15	23.838	6.857	23.697	10.389	-3.6%	228.1	4.4%
Dec-15	24.315	6.748	25.119	10.712	2.3%	234.5	4.8%
Jun-16	24.072	6.511	25.068	10.335	-0.5%	242.6	6.3%
Dec-16	23.349	6.699	25.319	10.150	-5.2%	249.4	6.4%
Jun-17	24.283	6.522	26.585	10.352	0.2%	256.8	5.9%
Dec-17	21.369	6.226	27.117	10.377	2.2%	261.3	4.8%
Jun-18	23.934	6.288	24.405	9.113	-12.0%	267.8	4.3%
Dec-18	21.540	4.851	19.280	7.030	-32.3%	274.3	5.0%
Jun-19	21.002	5.109	20.687	7.384	5.0%	279.4	4.3%
Dec-19	19.843	2.756	12.584	4.414	-40.2%	285.1	4.0%
Jun-20	18.851	2.859	12.081	4.182	-5.27%	288.9	3.4%
Dec-20	18.813	2.498	10.800	3.674	-12.2%	294.0	3.1%

Table 15: Consulting Engineering Profession: Financial indicators: Annual Percentage Change (Real)

Survey period	Employment	Salary and Wage bill	Fee income	Cost escalation based on CPI index (Stats Sa)
Dec-11	1.4%	15.0%	9.5%	5.80%
Jun-12	4.3%	8.4%	8.4%	5.90%
Dec-12	1.8%	5.2%	0.4%	5.40%
Jun-13	17.1%	7.1%	-4.3%	5.60%
Dec-13	18.3%	-1.4%	10.3%	5.80%
Jun-14	-4.0%	7.0%	8.7%	6.20%
Dec-14	-2.9%	9.4%	-0.7%	5.90%
Jun-15	1.9%	-2.1%	-3.6%	4.4%
Dec-15	6.1%	-0.9%	2.3%	4.8%
Jun-16	1.0%	-5.0%	-0.5%	6.3%
Dec-16	-3.9%	-0.7%	-5.2%	6.4%
Jun-17	0.9%	0.2%	0.2%	5.9%
Dec-17	-8.5%	-7.1%	2.2%	4.8%
Jun-18	-1.4%	-3.6%	-12.0%	4.3%
Dec-18	0.8%	-22.1%	-32.3%	5.0%
Jun-19	-12.3%	-18.7%	-18.7%	4.3%
Dec-19	-7.9%	-38.1%	-37.2%	4.0%
Jun-20	-10.7%	-43.4%	-43.3%	3.4%
Dec-20	-0.2%	-16.8%	-8.6%	3.1%

³ Revised June 2007

Table 16: Sub-disciplines: Percentage share of earnings

Sub-discipline	Dec-19	Jun-20	Dec-20	5-year average	2-year average	Deviation 5-year	Deviation 2-year	Deviation last six months
Agricultural	0.6%	0.6%	0.9%	0.7%	0.7%	-0.1%	-0.1%	0.3%
Architecture	1.7%	1.7%	1.7%	0.8%	1.5%	0.2%	0.2%	0.0%
Mechanical building Services	4.0%	1.5%	1.3%	3.4%	2.5%	-1.0%	-1.0%	-0.2%
Civil	50.4%	45.9%	54.6%	52.8%	50.7%	-4.8%	-4.8%	8.7%
Electrical / Electronic	8.2%	9.6%	9.6%	6.6%	9.0%	0.6%	0.6%	0.0%
Environmental	1.9%	1.2%	0.3%	2.8%	1.3%	-0.1%	-0.1%	-0.9%
Facilities Management (New)	0.5%	0.4%	0.8%	0.5%	0.6%	-0.1%	-0.1%	0.4%
Geotechnical	1.3%	1.6%	0.3%	1.2%	1.0%	0.5%	0.5%	-1.3%
Industrial Process / Chemical	0.1%	2.4%	0.0%	1.0%	0.7%	1.7%	1.7%	-2.4%
GIS	0.2%	0.2%	0.0%	0.5%	0.2%	-0.1%	-0.1%	-0.2%
Hydraulics (New)	1.4%	1.4%	0.4%	0.8%	1.2%	0.3%	0.3%	-1.0%
Information Systems / Technology	0.1%	1.4%	0.4%	1.3%	0.5%	0.9%	0.9%	-1.0%
Marine	0.3%	0.3%	0.5%	0.5%	0.3%	0.0%	0.0%	0.2%
Mechanical	1.4%	3.2%	2.0%	2.4%	2.0%	1.2%	1.2%	-1.2%
Mining	1.8%	0.7%	2.3%	2.2%	3.3%	-2.6%	-2.6%	1.6%
Project Management	10.2%	11.1%	9.4%	7.6%	9.0%	2.1%	2.1%	-1.7%
Quantity Surveying	2.4%	3.8%	3.8%	1.1%	2.5%	1.3%	1.3%	0.0%
Structural	12.8%	12.4%	11.3%	13.0%	11.9%	0.5%	0.5%	-1.1%
Town planning	0.7%	0.7%	0.5%	0.7%	1.2%	-0.4%	-0.4%	-0.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%			

Table 17: Sub-disciplines. Fee income R mill. Real 2000 prices

Sub-discipline	DEC19	JUN20	DEC	Change last six months	Change last 12 months
Agricultural	26	25	48	-22%	-73%
Architecture	74	72	2.006	4%	-10%
Mechanical building Services	176	61	353	-12%	-3%
Civil	2.224	1.920	11	-78%	-87%
Electrical / Electronic	363	401	29	58%	28%
Environmental	84	50	11	-83%	-81%
Facilities Management (New)	23	19	0	-100%	-100%
Geotechnical	59	66	0	-100%	-100%
Industrial Process / Chemical	6	100	15	-76%	-76%
GIS	8	7	13	-78%	424%
Hydraulics (New)	62	60	18	55%	30%
Information Systems / Technology	2	58	73	-45%	20%
Marine	14	12	85	179%	8%
Mechanical	61	133	344	-26%	-23%
Mining	79	31	140	-12%	34%
Project Management	449	462	415	-20%	-27%
Quantity Surveying	105	158	17	-45%	-49%
Structural	566	518	48	-22%	-73%
Town planning	33	30	2.006	4%	-10%
Total	4.414.22	4.181.77	3.672	-12%	-17%

Table 18: Provincial Distribution. R mill. Real 2000 prices (Annualized. two survey average)

Province	Survey period							
	Jun-17	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19	Jun-20	Dec-20
EC	704	751	650	683	893	296	280	214
WC	1.884	1.819	1 738	2 119	1 757	1 015	974	940
NC	197	171	155	179	532	132	118	146
FS	590	560	379	365	347	154	159	146
NW	145	176	158	128	103	71	62	54
LIM	321	295	768	814	170	110	97	71
GAU	3.602	3.332	2 688	3 194	1 972	1 148	1.155	1.206
MPU	279	295	315	240	89	132	102	57
KZN	1.387	1.617	1 425	967	923	742	716	521
AFRICAN	1.128	1.197	1 234	1 400	554	393	462	476
INT'L	114	150	235	168	44	221	173	96
Total	10.352	10.364	9 745	10 256	7 384	4 414	4.298	3.928

Table 19: Provincial Distribution Y-Y percentage Change*(Trend – SMOOTHED over two consecutive surveys. to remove short term volatility)*

Province	Survey period							
	Jun-17	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19	Jun-20	Dec-20
EC	-17.6%	-16.8%	-8.7%	-9.1%	19.0%	18.1%	-60.0%	-220%
WC	22.1%	13.2%	-2.6%	16.5%	26.3%	-13.5%	-39.9%	280%
NC	-4.2%	-44.4%	-35.7%	4.9%	7.3%	118.0%	-64.7%	210%
FS	58.9%	27.4%	-33.5%	-34.8%	21.6%	-5.4%	-51.1%	0%
NW	-42.9%	-23.8%	10.4%	-27.3%	-18.3%	-13.3%	-35.8%	-13%
LIM	29.0%	-18.5%	87.8%	175.6%	-74.1%	-80.0%	-36.1%	-90%
GAU	56.1%	26.9%	-22.2%	-4.1%	35.1%	-34.6%	-47.8%	800%
MPU	-34.3%	-43.5%	-9.4%	-18.8%	-62.7%	-52.6%	-13.9%	-181%
KZN	-49.3%	-18.7%	16.2%	-40.2%	-44.8%	7.8%	-2.2%	-722%
AFRICAN	-9.9%	15.4%	4.8%	16.9%	12.0%	-60.5%	-47.2%	257%
INT'L	-66.8%	-30.0%	27.7%	11.5%	-91.7%	-16.6%	335.7%	-321%
Total	-2.6%	1.2%	-4.9%	-1.0%	1.0%	-26.9%	-40.4%	-220%

Table 20: Provincial Distribution percentage share of earnings

Province	Survey period								5-year average	2-year average
	Jun-17	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19	Jun-20	Dec-20		
EC	6.8	7.7	5.5	7.8	12.3	6.7	6.3	4.5	7.4	7.4
WC	18.2	16.9	18.9	22.4	23.7	23.0	22.3	25.8	20.1	23.7
NC	1.9	1.4	1.8	1.7	7.1	3.0	2.5	5.1	3.1	4.5
FS	5.7	5.1	2.5	4.6	4.6	3.5	3.9	3.5	4.2	3.9
NW	1.4	2.0	1.2	1.3	1.5	1.6	1.3	1.5	1.6	1.4
LIM	3.1	2.6	13.9	2.1	2.6	2.5	2.0	1.6	3.7	2.1
GAU	34.8	29.5	25.4	36.8	26.5	26.0	27.8	34.0	29.1	28.6
MPU	2.7	3.0	3.5	1.2	1.7	3.0	1.7	1.2	2.9	1.8
KZN	13.4	17.8	11.0	7.9	12.3	16.8	16.5	9.6	14.4	13.8
AFRICAN	10.9	12.2	13.2	14.1	7.3	8.9	12.7	11.5	11.4	10.1
INT'L	1.1	1.8	3.1	0.2	0.5	5.0	3.0	1.8	2.1	2.6
Total	100%	100%	100%	100%	100%	100%	100%	100%		

Table 21: Client Distribution Fee income earned. R mill. Real 2000 prices (Annualized)

Client	Survey period						
	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19	Jun-20	Dec-20
Central	1 038	2 369	2 165	591	265	209	276
Provincial	1 764	1 002	506	738	486	585	382
Local	1 868	1 094	710	2 068	1 104	1.004	955
State Owned	1 557	456	689	1 034	618	669	509
Private	4 151	4 192	2 953	3 027	1 942	1.715	1.552
Total	10 377	9 113	7 023	7 458	4 414	4.182	3.673

Table 22: Client distribution Percentage share of earnings

Client	Survey period						Dec-20	5-year average	2-year average
	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19	Jun-20			
Central	10.0	26.0	30.8	8.0	6.0	5.0	7.5	11.8	6.6
Provincial	17.0	11.0	7.2	10.0	11.0	14.0	10.4	11.6	11.4
Local	18.0	12.0	10.1	28.0	25.0	24.0	26.0	20.9	25.8
State Owned	15.0	5.0	9.8	14.0	14.0	16.0	13.9	13.8	14.5
Private	40.0	46.0	42.0	41.0	44.0	41.0	42.2	41.9	42.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0		

Table 23: Economic sector Percentage share of earnings

Economic sector	Dec-19	Jun-20	Dec-20	5-year average	2-year average	Deviation 5-year	Deviation 2-year	Deviation last six months
Water (Full water cycle)	17%	18%	22%	19.6%	19.5%	2.4%	2.5%	3.9%
Transportation (land. air. road. rail. ports)	25%	25%	8%	29.4%	24.2%	-7.4%	-2.2%	-2.8%
Energy (electricity. gas. hydro)	7%	8%	10%	6.2%	7.5%	1.8%	0.5%	-0.1%
Mining / Quarrying	7%	6%	4%	8.1%	8.5%	1.9%	1.5%	4.0%
Education	3%	2%	2%	1.7%	2.6%	2.3%	1.4%	2.4%
Health	3%	5%	1%	1.9%	3.7%	0.1%	-1.7%	-2.6%
Tourism/Leisure	1%	0%	3%	0.3%	0.6%	0.7%	0.4%	0.6%
Housing (residential inc. land)	4%	4%	17%	6.3%	5.3%	-3.3%	-2.3%	-1.4%
Commercial ⁴	17%	17%	0%	17.1%	16.2%	-0.1%	0.8%	0.3%
Agriculture / Forestry / Fishing	0%	0%	11%	0.5%	0.3%	-0.5%	-0.3%	-0.4%
Other	14%	15%	22%	8.9%	11.7%	2.1%	-0.7%	-4.1%
Total	100%	100%	100%					

⁴ Commercial includes: Manufacturing, industrial buildings, communication, financial, facilities management

Table 24: Economic Sector Rm. Real 2000 prices. Annualized

Economic sector	Dec-18	Jun-19	Dec-19	Jun-20	Dec-20	Per. Change last 6 months	Per. Change Last 12 months
Water (Full water cycle)	1 406	1 515	766	755	808	7.0%	5.5%
Transportation (land. air. road. rail. ports)	2 305	1 843	1 110	1.036	808	-22.0%	-27.2%
Energy (electricity. gas. hydro)	434	478	328	337	294	-12.9%	-10.5%
Mining / Quarrying	653	787	319	252	367	46.1%	15.3%
Education	59	108	141	66	147	121.8%	4.6%
Health	79	412	116	192	73	-61.7%	-36.6%
Tourism/Leisure	9	3	44	15	37	150.0%	-16.2%
Housing (residential inc. land)	412	683	195	186	110	-40.7%	-43.5%
Commercial	962	1 043	751	699	624	-10.7%	-16.8%
Agriculture / Forestry / Fishing	39	44	16	15	0	-100.0%	-100.0%
Other	671	466	629	629	404	-35.8%	-35.8%
Total	7 030	7 384	4 414	4.182	3.674	-12.2%	-16.8%

Table 25: Proposed CESA Labour unit cost index

Survey period	Labour Unit cost (LUC) per hour	Index (2000 = 100) Smoothed	Year on Year percentage change in Index	Annual Average Annual Increase
Jun-06	R 112.97	170.14	9.5%	
Dec-06	R113.40	178.28	10.6%	10.0%
Jun-07	R122.3	185.61	9.1%	
Dec-07	R127.21	196.49	10.2%	9.7%
Jun-08	R150.43	218.65	17.8%	
Dec-08	R162.80	246.68	25.5%	21.7%
Jun-09	R171.98 r	263.65 r	20.6% r	
Dec-09	R174.77	273.07	10.7%	15.6%
Jun-10	R174.50	275.06	4.3%	
Dec-10	R199.3	294.37	7.8%	6.1%
Jun-11	R179.8	298.5	8.5%	
Dec-11	R199.5	298.7	1.5%	5.0%
Jun-12	R196.2	311.6	4.4%	
Dec-12	R249.8	351.2	17.6%	10.9%
Jun-13	R241.3	386.7	24.1%	
Dec-13	R236.1	375.9	7.0%	15.6%
Jun-14	R255.8	387.4	0.2%	
Dec-14	R266.1	411.0	9.3%	4.8%
Jun-15	R253.5	409.2	5.6%	
Dec-15	R243.08	391.06	-4.9%	0.4%
Jun-16	R236.34	377.56	-7.7%	
Dec-16	R231.78	368.66	-5.7%	-6.7%
Jun-17	R251.81	380.84	0.9%	
Dec-17	R 274.81	432.84	12.5%	6.68%
Jun-18	R 304.36	479.39	19.8%	
Dec-18	R 311.95	491.35	17.0%	18.40%
Jun-19	R 280.5	441.83	2.3%	
Dec-19	R 317.74	500.47	-2.9%	-0.32%
Jun-20	R 289.76	456.39	2.5%	
Dec-20	R 298.39	469.98	-1.7%	0.42%

Table 26: CESA Confidence index: % respondents satisfied with working conditions

Survey Period	CESA Confidence Index	% Change on previous survey	% Change on survey same time last year
Jun-06	99.7	0.5%	3.0%
Dec-06	98.4	-1.30	-0.8
Jun-07	99.4	1.0%	-0.3%
Dec-07	99.8	0.4%	1.4%
Jun-08	99.9	0.1%	0.5%
Dec-08	99.8	-0.1%	0.0%
Jun-09	96.2	-3.61%	-3.7%
Dec-09	86.0	-10.6%	-13.8%
Jun-10	87.1	1.3%	-9.4%
Dec-10	86.7	-0.5%	0.8%
Jun-11	83.2	-4.0%	-4.5%
Dec-11	87.4	5.0%	0.8%
Jun-12	81.8	-6.4%	-1.7%
Dec-12	70.0	-14.4%	-19.9%
Jun-13	84.0	20.0%	2.7%
Dec-13	98.1	16.8%	40.1%
Jun-14	87.7	-10.6%	4.4%
Dec-14	46.3	-47.2%	-52.8%
Jun-15	44.5	-3.9%	-49.3%
Dec-15	39.4	-11.5%	-14.9%
Jun-16	75.0	90.4%	68.5%
Dec-16	87.5	16.7%	122.1%
Jun-17	96.3	10.1%	28.4%
Dec-17	55.4	-43.5%	-37.8%
Jun-18	26.9	-50.6%	-72.1%
Dec-18	31.4	16.6%	-42.4%
Jun-19	33.3	6.1%	23.8%
Dec-19	36.1	8.4%	15.0%
Jun-20	29.6	-17.9%	-11.1%
Dec-20	19.2	-35.3%	-46.9%
Jun-21 (forecast)	23.2	21.0%	-21.7%
Dec-21 (forecast)	27.22	17.5%	42.1%

Table 27: Employment profile of the consulting engineering industry: Percentage contribution: Jul – Dec 2020

Job Category	Black	Coloured	Asian	White	Total	% Share by type
Professional Engineer Pr.Eng	9.2%	3.1%	6.2%	81.5%	100.00%	3%
Professional Architects	0.0%	12.5%	6.3%	81.3%	100.00%	8%
Professional Quantity Surveyors	17.9%	1.8%	12.5%	67.9%	100.00%	1%
Professional Other	21.3%	7.5%	10.0%	61.3%	100.00%	11%
Technologists Pr TEChENg	14.9%	7.0%	8.3%	69.8%	100.00%	5%
Technicians PrTechni	26.3%	13.2%	2.6%	57.9%	100.00%	8%
Unregistered technical staff: Engineer	18.6%	9.6%	13.8%	58.0%	100.00%	8%
Unregistered technical staff: Technologist	36.1%	11.8%	10.7%	41.4%	100.00%	2%
Unregistered technical staff: Technician	49.2%	16.5%	8.5%	25.8%	100.00%	8%
Unregistered technical staff: Other	28.9%	10.3%	11.2%	49.6%	100.00%	0%
Technical Assistants	46.0%	16.0%	10.0%	28.0%	100.00%	25%
Draughts Persons	16.5%	18.0%	2.7%	62.8%	100.00%	3%
Laboratory / Survey Assistants	83.3%	0.0%	0.0%	16.7%	100.00%	8%
Administration / Support staff	42.7%	12.8%	6.0%	38.5%	100.00%	1%
Total	27.3%	10.4%	7.9%	54.4%	100.00%	100.00%

Table 28: Employment profile of the consulting engineering industry: Change in contribution Jul-Dec 2019 vs Jan-Jun 2020

Job Category	Black	Coloured	Asian	White
Professional Engineer Pr.Eng	0.8%	0.6%	1.7%	-3.1%
Professional Architects	-25.0%	12.5%	6.3%	6.3%
Professional Quantity Surveyors	2.1%	-0.8%	-0.7%	-0.6%
Professional Other	8.3%	3.2%	5.7%	-17.2%
Technologists Pr TEChENg	-3.5%	2.2%	-0.9%	2.2%
Technicians PrTechni	0.2%	0.5%	-4.6%	3.8%
Unregistered technical staff: Engineer	-6.9%	1.4%	2.1%	3.4%
Unregistered technical staff: Technologist	-6.4%	-2.2%	1.7%	6.9%
Unregistered technical staff: Technician	-8.3%	-0.6%	2.3%	6.5%
Unregistered technical staff: Other	-5.8%	-0.4%	4.3%	1.9%
Technical Assistants	-8.0%	4.7%	6.0%	-2.6%
Draughts Persons	-2.6%	3.0%	-1.0%	0.6%
Laboratory / Survey Assistants	66.7%	0.0%	-16.7%	-50.0%
Administration / Support staff	-3.4%	0.2%	0.8%	2.4%
Total	-4.1%	0.6%	1.2%	2.3%

Table 29: Executive Staff profile - contribution by BLACK people, as percentage of TOTAL Executive Staff, by company type (Black include Black, Asian and Coloured)

Company Type	Owner category	Professional Category	Jun-16	Dec-16	Jun-17	Dec-17	Dec-18	Dec-19	Dec-20
(PTY) LTD	Executive Directors	Pr.Eng	21.5%	18.4%	13.7%	17.8%	20.3%	21.1%	25.0%
		PrTechEng	31.8%	33.3%	44.8%	50.0%	58.3%	47.4%	48.0%
		Other	60.0%	50.0%	56.1%	105.9%	64.0%	53.8%	75.0%
		TOTAL	32.0%	29.7%	29.7%	15.3%	42.9%	43.5%	41.4%
	Non-Executive Directors	Pr.Eng	71.4%	100.0%	40.0%	64.2%	0.0%	44.4%	100.0%
		PrTechEng	57.1%	100.0%	0.0%	79.4%	100.0%	47.1%	100.0%
		Other	70.0%	100.0%	76.2%	21.4%	33.3%	0.0%	100.0%
		TOTAL	67.6%	100.0%	64.3%	78.5%	71.4%	25.0%	100.0%
CC	Members	Pr.Eng	81.8%	60.0%	23.1%	51.2%	57.1%	0.0%	40.0%
		PrTechEng	0%	100.0%	75.0%	41.5%	33.3%	0.0%	0.0%
		Other	85.7%	66.7%	77.8%	17.8%	100.0%	0.0%	0.0%
		TOTAL	75.0%	66.7%	50.0%	50.0%	0.0%	#DIV/0!	20.0%
Partnership	Partners	Pr.Eng	0.0%	33.3%	50.0%	105.9%	45.7%	36.2%	0.0%
		PrTechEng	0.0%	100.0%	100.0%	15.3%	20.3%	21.1%	0.0%
		Other	50.0%	50.0%	50.0%	64.2%	58.3%	47.4%	0.0%
		TOTAL	20.0%	57.1%	62.5%	79.4%	64.0%	53.8%	0.0%
Total			40.8%	45.7%	37.4%	21.4%	42.9%	43.5%	44.77%

Table 30: Employment Breakdown, by race, gender and job category July – December 2020

Job category	Black			Coloured			Asian			White			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Professional Engineer Pr.Eng	269	55	324	98	12	110	189	31	220	2,579	293	2,873	3,136	391	3,527
Professional Architects	0	0	0	12	0	12	6	0	6	43	37	79	61	37	98
Professional Quantity Surveyors	24	37	61	6	0	6	31	12	43	128	104	232	189	153	342
Professional Other	73	31	104	18	18	37	12	37	49	141	159	300	244	244	489
Technologists Pr TEchENG	177	43	220	79	24	104	98	24	122	978	55	1,033	1,333	147	1,479
Technicians PrTechni	49	12	61	24	6	31	0	6	6	86	49	134	159	73	232
Unregistered technical staff: Engineer	238	141	379	116	79	196	153	128	281	874	306	1,180	1,381	654	2,035
Unregistered technical staff: Technologist	269	104	373	73	49	122	79	31	110	367	61	428	789	244	1,033
Unregistered technical staff: Technician	538	244	782	208	55	263	116	18	134	361	49	410	1,222	367	1,589
Unregistered technical staff: Other	220	189	410	79	67	147	92	67	159	422	281	703	813	605	1,418
Technical Assistants	73	67	141	31	18	49	0	31	31	43	43	86	147	159	306
Draughts Persons	183	79	263	202	86	287	31	12	43	630	373	1,002	1,045	550	1,595
Laboratory / Survey Assistants	0	31	31	0	0	0	0	0	0	0	6	6	0	37	37
Administration / Support staff	685	1,308	1,993	134	465	599	67	214	281	397	1,400	1,797	1,284	3,386	4,670
Total	2,800	2,341	5,141	1,082	880	1,962	874	611	1,485	7,048	3,215	10,263	11,803	7,048	18,851

Table 31: Employment Breakdown, by race, gender and job category July – December 2020: Percentage share

Job category	Black			Coloured			Asian			White			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Professional Engineer Pr.Eng	1.4%	0.3%	1.7%	0.5%	0.1%	0.6%	1.0%	0.2%	1.2%	13.7%	1.6%	15.2%	16.6%	2.1%	18.7%
Professional Architects	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.3%	0.2%	0.5%
Professional Quantity Surveyors	0.1%	0.2%	0.3%	0.0%	0.0%	0.0%	0.2%	0.1%	0.2%	0.7%	0.6%	1.2%	1.0%	0.8%	1.8%
Professional Other	0.4%	0.2%	0.6%	0.1%	0.1%	0.2%	0.1%	0.2%	0.3%	0.7%	0.8%	1.6%	1.3%	1.3%	2.6%
Technologists Pr TEChENg	0.9%	0.2%	1.2%	0.4%	0.1%	0.6%	0.5%	0.1%	0.6%	5.2%	0.3%	5.5%	7.1%	0.8%	7.8%
Technicians PrTechni	0.3%	0.1%	0.3%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.5%	0.3%	0.7%	0.8%	0.4%	1.2%
Unregistered technical staff: Engineer	1.3%	0.7%	2.0%	0.6%	0.4%	1.0%	0.8%	0.7%	1.5%	4.6%	1.6%	6.3%	7.3%	3.5%	10.8%
Unregistered technical staff: Technologist	1.4%	0.6%	2.0%	0.4%	0.3%	0.6%	0.4%	0.2%	0.6%	1.9%	0.3%	2.3%	4.2%	1.3%	5.5%
Unregistered technical staff: Technician	2.9%	1.3%	4.2%	1.1%	0.3%	1.4%	0.6%	0.1%	0.7%	1.9%	0.3%	2.2%	6.5%	1.9%	8.4%
Unregistered technical staff: Other	1.2%	1.0%	2.2%	0.4%	0.4%	0.8%	0.5%	0.4%	0.8%	2.2%	1.5%	3.7%	4.3%	3.2%	7.5%
Technical Assistants	0.4%	0.4%	0.7%	0.2%	0.1%	0.3%	0.0%	0.2%	0.2%	0.2%	0.2%	0.5%	0.8%	0.8%	1.6%
Draughts Persons	1.0%	0.4%	1.4%	1.1%	0.5%	1.5%	0.2%	0.1%	0.2%	3.3%	2.0%	5.3%	5.5%	2.9%	8.5%
Laboratory / Survey Assistants	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
Administration / Support staff	3.6%	6.9%	10.6%	0.7%	2.5%	3.2%	0.4%	1.1%	1.5%	2.1%	7.4%	9.5%	6.8%	18.0%	24.8%
Total	14.9%	12.4%	27.3%	5.7%	4.7%	10.4%	4.6%	3.2%	7.9%	37.4%	17.1%	54.4%	62.6%	37.4%	100.0%

Table 32: Executive Staff profile: Employment, company type, race & gender: July – December 2020

Comp any Type	Owner category	Profession al	Black			Coloured			Asian			White			Total		
		Category	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Femal e	Total	Male	Female	Total
(PTY) LTD	Executive Director	PrEng	10	1	11	6	0	6	4	0	4	63	0	63	83	1	84
		PrTechEng	4	1	5	3	0	3	4	0	4	13	0	13	24	1	25
		Other	12	6	18	5	1	6	1	2	3	6	3	9	24	12	36
	Non- Executive Director	PrEng	4	0	4	0	1	1	0	0	0	0	0	0	4	1	5
		PrTechEng	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1
		Other	2	3	5	0	1	1	2	1	3	0	0	0	4	5	9
CC	Member	PrEng	2	0	2	0	0	0	0	0	0	3	0	3	5	0	5
		PrTechEng	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1
		Other	0	0	0	0	0	0	0	0	0	3	1	4	3	1	4
Partnership	Partner	PrEng	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		PrTechEng	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL			201	61	34	11	45	14	3	17	12	3	15	91	4	95	151
% distribution of executive staff			19.8%	6.4%	26.2%	8.1%	1.7%	9.9%	7.0%	1.7%	8.7%	52.9%	2.3%	55.2%	87.8%	12.2%	100.0%
% directorship only			17.9%	5.5%	23.4%	9.7%	0.7%	10.3%	6.2%	1.4%	7.6%	56.6%	2.1%	58.6%	90.3%	9.7%	100.0%
Total employment			2,800	2,341	5,141	1,082	880	1,962	874	611	1,485	7,048	3,215	10,263	11,803	7,048	18,851
Executive Staff as % of total employment			7.4%	2.9%	5.4%	7.9%	2.1%	5.3%	8.4%	3.0%	6.2%	7.9%	0.8%	5.7%	7.8%	1.8%	5.6%

End of report

For further information please contact

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