

Final

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# CESA

Consulting Engineers South Africa

## **Bi-Annual Economic and Capacity Survey**

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# 1. Economic overview

## 1.1 International Developments

Globally we have seen an extremely modest recovery from the financial crisis in 2008/09. The IMF predict the global economy to grow at 3.5 percent in 2015 from 3.3 percent in 2014. Growth is then expected to increase again slightly to 3.7 percent in 2016. This is definitely below the 'growth potential' of the world economy. Growth in developed economies is looking the most modest, in that advanced economies are expected to grow by a mere 2.4 percent in 2015. This is mainly brought down by woes in the Euro Zone as well as Japan. Although coming off a lower base, emerging markets and developing economies are set to grow at a much faster rate than their developed counterparts. They are set to average 4.3 percent for 2015 and 4.7 percent for 2016 and the high levels of volatility that emerging markets currencies saw early 2014 following the Fed's decision to taper is believed to be over for now, at least until the Fed raises interest rates. A slowdown in the Chinese economy has had a negative effect on emerging markets worldwide, with China being one of the main buyers of emerging market exports. Sub-Saharan Africa is set to average to 4.9 and 5.2 percent in 2015 and 2016 respectively. The halving of the oil price has had a mixed effect on Sub-Saharan Africa. Big oil exporters like Nigeria have been negatively affected while countries that are oil importers have of course been positively affected.

- **Advanced Economies**
  - The USA, the world's single biggest economy is set to recover quite nicely over the next two years. Growth in 2015 is predicted to average around 3.6 percent while in 2016 it is expected to average 3.3 percent. The Fed has further communicated their monetary policy normalisation in that interest rates are set to rise in the latter half of 2015 which will have serious implications for the global economy, especially emerging markets.
  - Growth in the European Union is expected to be muted. This is worrying for the World economy as the combined Euro Zone is effectively the world's biggest economy. Growth is expected to be a mere 1.2 and 1.4 percent in 2015 and 2016 respectively. This is following fears of deflation (which can cripple an economy), which the ECB are trying to combat with their very own quantitative easing program that was recently implemented.
  - The United Kingdom is expected to grow at 2.7 and 2.4 percent in 2015 and 2016 respectively, seen as well below the country's current potential. Their manufacturing sector has also recently taken quite a hit.
  - Things are not looking good in Japan, as the world's third largest economy who has recently struggled with deflation, is set to only grow 0.6 percent in 2015 and 0.8 percent in 2016. On the positive side, inflation is expected to average 2.0 percent in 2015 and 2.6 percent in 2016. Hopefully the days of deflation crippling Japan's economy, are over.
  
- **Emerging Markets**
  - Brazil's outlook has been drastically downgraded as they were severely affected by the rollback of the Fed quantitative easing. They are expected to grow at a moderate 0.3 percent in 2015 and 1.5 percent in 2016.
  - The recent sanctions imposed against Russia as well as the counter sanctions that were imposed by Russia, and the declining oil price have drastically depreciated the Russian Ruble while putting upward pressure on inflation. This has led to a downgrading in the IMF's growth forecast to -3.0 and -1.0 percent in 2015 and 2016 respectively.
  - The outlook for India has however improved since their last election where Prime Minister Narendra Modi was appointed who has brought much positive reform to India. They are expected to grow at 6.3 and 6.5 percent in 2015 and 2016.
  - Growth in China is slowing and is predicted to grow at 6.8 percent in 2015 and 6.3 percent in 2016. This slowdown is worrying globally as China is the world's second largest economy.
  - Sub-Saharan Africa is likely to see growth of 4.9 percent in 2015 and 5.2 percent in 2016. This is quite a large downgrade by almost one percentage point in each year, and is mainly due to Nigeria (Africa's biggest economy) being hard hit by the decline in the oil price. The IMF cut Nigeria's growth forecast by 2.5 percent for 2015 which is quite substantial.

**Table 1: Global economic outlook**

	2013	2014	2015	2016
<b>World</b>	3,30%	3,30%	3,50%	3,70%
<b>Advanced Economies</b>	1,30%	1,80%	2,40%	2,40%
US	2,20%	2,40%	3,60%	3,30%
Eurozone	-0,50%	0,80%	1,20%	1,40%
UK	1,70%	2,60%	2,70%	2,40%
Japan	1,60%	0,10%	0,60%	0,80%
<b>Emerging markets</b>	4,70%	4,40%	4,30%	4,70%
Brazil	2,50%	0,10%	0,30%	1,50%
Russia	1,30%	0,60%	-3,00%	-1,00%
India	5,00%	5,80%	6,30%	6,50%
China	7,80%	7,40%	6,80%	6,30%
Sub-Saharan Africa	5,20%	4,80%	4,90%	5,20%
<b>SA</b>	<b>2,20%</b>	<b>1,40%</b>	<b>2,00%</b>	<b>2,40%</b>

### How are these global phenomena going to affect South Africa?

Conditions in the global economy will have several different consequences for South Africa.

- Muted growth in advanced economies has several consequences for most developing countries. The fact that growth in the USA is picking up is good news but this means they are likely to proceed with an interest rate hike sometime this year which will further de-stabilise our exchange rate and create new risks to the South African economy.
- The predicted slowdown in the Euro Area will mean less demand for South African goods which is having a substantial negative impact since Europe is one of our biggest trading partners. The effect of the ECB's massive stimulus program is going to mean that the Euro is going to depreciate further which will mean that South Africa will not be able to take much advantage of its currently weak exchange rate (limit currency competitiveness).
- The effect of a slowing Chinese economy will have similar consequences to a slowing Euro Area as China is one of our biggest trading partners and this trend continues for South Africa's major trading partners.
- The volatility in global monetary policy (for example the uncertainty surrounding the timing of an interest rate hike) is likely to generate much uncertainty in the world economy which can spill over to emerging markets and result in volatile capital flows and exchange rates.

### Commodity Trends and how the oil price is going to affect South Africa

The sharp decline in the oil price has been making headlines over the last few months. The price of Brent crude oil has more than halved over the last 6 months. In September 2014 the price of oil would cost you about \$100. Since then we have seen a sharp decline, bottoming out at about \$46 a barrel and now sitting at about \$56 a barrel. This major drop in the oil price has had a significantly positive effect on the South African economy. This has in turn seen a drop in the petrol price of almost R4.00 since August which has drastically increased consumer spending. This is because South Africa is a relatively oil intensive country. This has also led to a decrease in headline inflation which has further led to a postponement of an interest rate hike by the South African Reserve Bank, which will likely depress consumer spending to some degree. The low oil price has in fact saved our economy to some degree from the electricity shortages. That is however a glass half full approach as our economy could have grown by a lot more than it did.

Non-oil commodity prices have further declined since 2012. Coal prices further declined by 20 percent in 2014 and is expected to remain relatively flat. Platinum is however expected to recover somewhat supported by a supply deficit as well as strong demand for catalytic converters. Gold has again remained volatile but declined slightly in 2014.

## 1.2 Domestic Economy

The South African economy grew by only 1.4 percent in 2014 and Treasury expects the economy to grow by between 1 and 2 percent in 2015, 2.6 percent in 2016 and around 3.0 percent in 2017. National Treasury cites the reasons for a moderately improving growth outlook due to continued growth in much of Sub-Saharan Africa as well as better terms of trade and a lower inflationary environment over the short term. This is mainly due to the low oil prices we have seen. The Treasury clearly realizes that the electricity constraints will have a negative effect on exports and subsequently the economy. Globally, as mentioned, the economies of our major trading partners have seen very moderate growth of late (except for the United States), which include very moderate growth in the most of the Euro Zone as well as the slowing of China, and this is going to have a negative effect on the South African economy. The growth outlook has been downgraded from the last budget where growth was expected to average 3.2 percent in 2015 and 3.5 percent in 2016. Treasury argues that their downgrade was mainly due to the electricity crisis as well as a downgrade in global growth. Other areas for concern also include consumer and investor confidence.

Looking at consumption, which is currently the driver of our economy, it is estimated that final household consumption will increase by 2 percent in 2015 down from forecasts by the Treasury last year of 3.2 percent. Similarly the outlook for consumption in 2016 has been downgraded from 3.4 to 2.6 percent. Consumption in 2017 is expected to grow at 3 percent. These downgrades in consumption are evidence of the dire nature of our economy, as low oil prices have resulted in a low inflationary environment, supported by lower petrol prices which decreased by about R4 since August 2014. These phenomena would usually give a big boost to consumption (and they have) but the downside in this case outweighs the upside. High debt levels as well as low income growth are some of the other factors on the downside for consumption. It is further worrying that if we see an interest rate hike later this year, which we might, this will have dire effects on household consumption because of the high debt levels and subsequently have a negative impact on our economy because of its current reliance on consumption. Furthermore, personal income taxes were raised in the 2015 Budget by 1 percent while the fuel levy was increased by 30.5c/litre and the road accident levy by 50c/litre. This will add to pressures on consumer spending.

Growth prospects in terms of Gross fixed capital formation has been downgraded since the 2014 Budget Review. Investment growth was downgraded from 5.3 to 3.4 percent growth in 2015 and from 6.0 to 3.4 percent growth in 2016. Treasury expects GFCF to grow by 3.8 percent in 2017. Public sector investment is expected to be strong in the short run and then moderate over the medium term based on the plans of state owned entities such as Eskom and Transnet.

Growth outlook for exports as well as imports have also been revised downward. Exports are negatively affected by electricity constraints that are mitigating production. In terms of imports, the lower growth outlook is due to weak domestic demand as well as reduced imports of capital equipment.

**Table 2: Macro Economic forecast (Treasury)**

Calendar year	2011	2012	2013	2014	2015	2016	2017
Percentage change	Actual			Estimate	Forecast		
Final household consumption	4.9	3.4	2.9	1.2	2.0	2.6	3.0
Final government consumption	1.7	3.4	3.3	1.9	1.6	0.7	0.7
Gross fixed-capital formation	5.7	3.6	7.6	-0.6	2.2	3.4	3.8
Gross domestic expenditure	4.9	3.9	1.4	1.1	2.4	2.7	3.1
Exports	4.3	0.1	4.6	0.9	3.3	4.6	5.0
Imports	10.5	6.0	1.8	-0.3	4.6	5.3	5.5
<b>Real GDP growth</b>	<b>3.2</b>	<b>2.2</b>	<b>2.2</b>	<b>1.4</b>	<b>2.0</b>	<b>2.4</b>	<b>3.0</b>
GDP inflation	6.7	5.5	6.0	6.1	6.1	5.5	5.5
<b>GDP at current prices (R billion)</b>	<b>3 025.0</b>	<b>3 262.5</b>	<b>3 534.3</b>	<b>3 801.7</b>	<b>4 112.8</b>	<b>4 443.2</b>	<b>4 829.9</b>
CPI inflation	5.0	5.7	5.8	6.1	4.3	5.9	5.7
Current account balance (% of GDP)	-2.2	-5.0	-5.8	-5.8	-4.5	-4.9	-5.2

Source: Reserve Bank and National Treasury

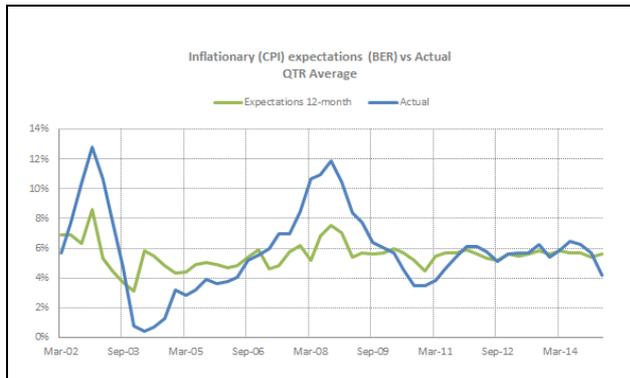
Due to negative terms of trade, the current account deficit further widened in 2014, but according to recent figures the current account deficit has narrowed slightly to 5.4 percent from 5.8 percent of GDP which was more than expected. The current account deficit is still however high and South Africa is currently experiencing twin deficits, which is a current account as well as a fiscal deficit, a position not favored by the rating agencies. The national savings rate remains at very low rates, adding to current pressures on the current account. Not all is gloom and doom however as inflation is the lowest it has been in four years registering at 3.9 percent in February 2015. This is positive for the South African economy as it means the postponement of an interest rate hike could be longer than expected. Turning to the real economy we saw mining and manufacturing as the hardest hit industry in 2014 with mostly negative growth rates. The striking in the platinum sector (which lasted 5 months) was partly to

blame for this as well as weak domestic and global demand and of course the electricity constraints in terms of mining. In manufacturing we too saw strikes in the metals, steel and engineering sector. Construction was mainly driven by investment by the public sector but private sector investment seems to be drying up.

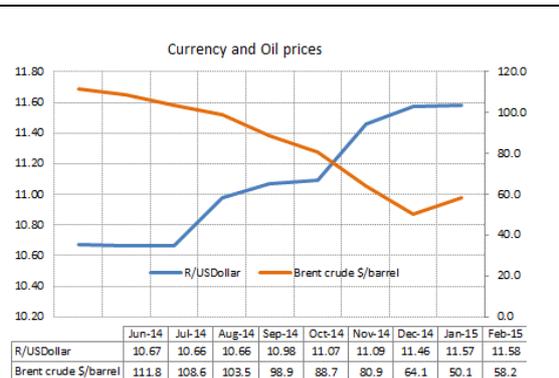
**Table 3: GDP growth by sector**

Percentage	2012	2013					2014			
	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Year <sup>1</sup>
Agriculture, forestry and fishing	0.6	-2.9	-1.1	3.6	6.9	1.5	3.3	5.3	8.2	4.6
Mining and quarrying	-2.9	14.3	-4.5	12.3	17.2	4.0	-23.0	-3.1	1.6	-1.4
Manufacturing	1.9	-7.8	11.7	-6.6	12.3	0.7	-6.4	-4.0	-3.4	0.1
Electricity and water	-0.1	-4.8	3.0	1.9	-6.0	-0.6	0.2	-0.5	-1.1	-1.1
Construction	2.1	-0.8	5.1	0.6	3.6	2.7	3.7	2.1	2.2	2.9
Wholesale and retail trade; hotels and restaurants	3.6	0.9	2.2	0.3	1.8	1.9	1.5	-0.2	3.4	1.3
Transport and communication	2.5	2.0	1.6	2.6	1.6	2.0	1.4	3.9	2.2	2.1
Finance, real estate and business services	3.0	4.8	5.0	2.8	2.6	3.0	1.4	1.2	2.4	2.3
Personal services	2.1	1.2	2.7	1.2	1.2	1.8	1.5	1.5	1.3	1.5
General government	3.6	1.3	2.8	2.8	4.6	3.1	2.3	3.9	2.2	3.3
<b>GDP</b>	<b>2.2</b>	<b>1.4</b>	<b>3.7</b>	<b>1.2</b>	<b>5.1</b>	<b>2.2</b>	<b>-1.6</b>	<b>0.5</b>	<b>1.4</b>	<b>1.5</b>

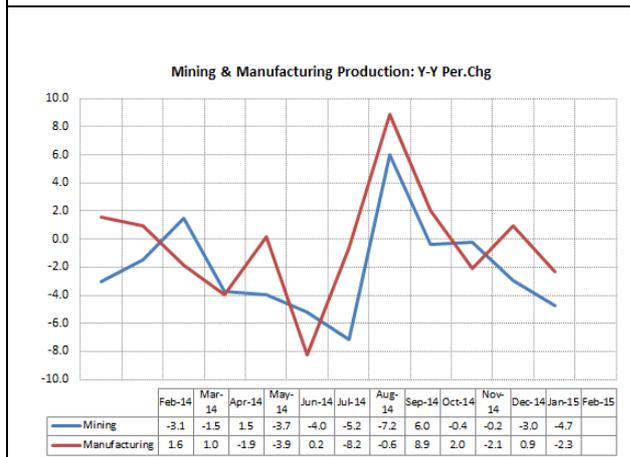
1. Year-to-date growth trend  
Source: Reserve Bank



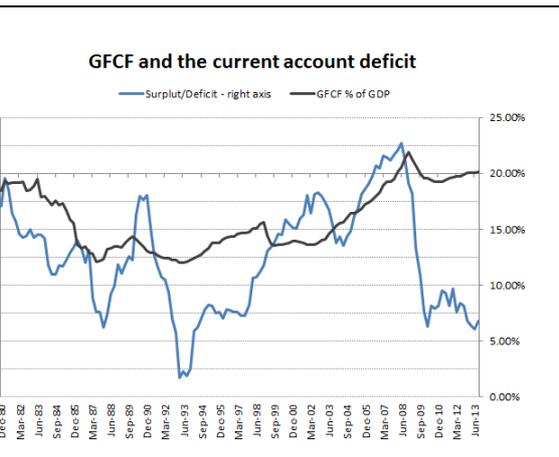
**Figure 1: CPI Expectations**



**Figure 2: Currency and Oil prices**



**Figure 3: Mining and Manufacturing**



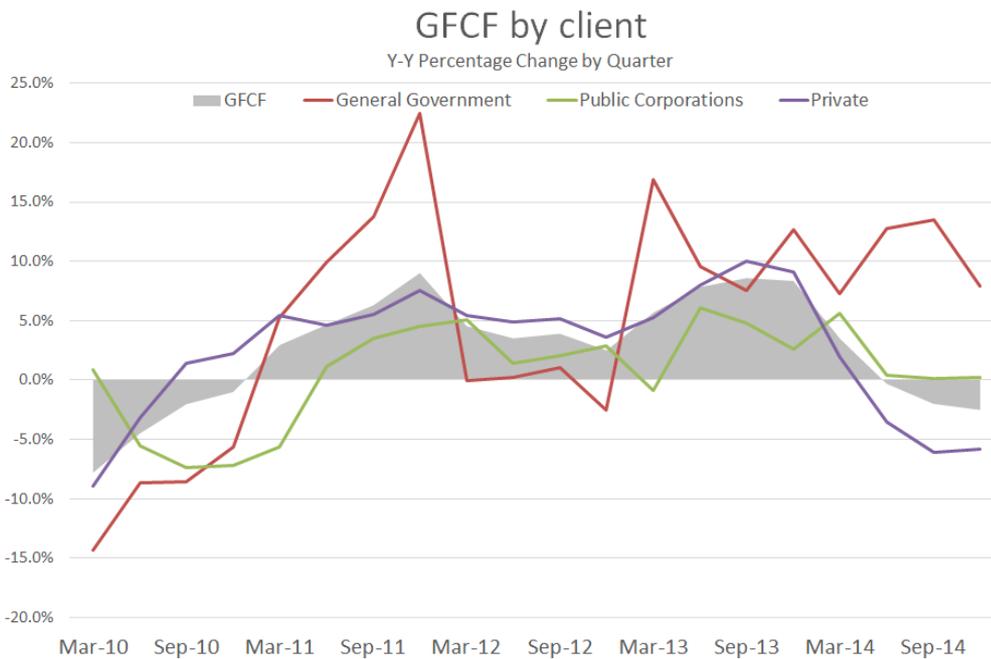
**Figure 4: GFCF and the current account deficit**

**Table 4: Macro economic growth projections (Industry Insight)**

Macro-Economic Forecasts	2012	2013	2014	2015	2016	2017
GDP	2.2%	2.2%	1.5%	1.6%	1.3%	2.3%
Household consumption	3.4%	2.9%	1.4%	4.1%	2.0%	3.1%
Government consumption	3.4%	3.3%	1.9%	2.0%	0.7%	0.7%
Gross Fixed capital formation	3.6%	7.6%	-0.4%	3.3%	1.3%	1.0%
US/ZAR	8.21	9.70	10.80	11.88	12.47	11.85
Imports	6.0%	1.8%	6.0%	6.2%	6.0%	6.4%
Exports	0.1%	4.6%	4.5%	3.0%	5.5%	6.5%
Prime Lending rate	8.50	8.50	9.75	10.50	10.00	9.00
CPI Inflation	5.70	5.80	6.20	3.80	5.50	5.60
Current Account Deficit	-5.2	-5.9	-5.5	-5.1	-5.3	-6.3

Source: Industry Insight

### 1.4 Gross fixed capital formation



**Figure 5: GFCF by Client Type**

Gross fixed capital formation fell by 0,4 percent y-y in 2014, following an increase of 7.6 percent in 2013, and was the first year since 2010 that experienced a contraction in fixed investment, following robust growth in investment in the build up to the Soccer World Cup in 2010. In spite of government recording the second year of double digit growth (11,6 percent in 2013 and 10,3 percent in 2014), investment by the private sector contracted by 3,4 percent in 2014 compared with an increase of 8 percent in 2013. Growth by SOE’s slowed to just 1,6 percent from 3,1 percent in 2013. It is clear that government on its own cannot provide sufficient stimulus to encourage positive growth in fixed investment. Without the participation by the private sector, investment growth will remain muted, possibly negative. The outlook for stronger investment growth by government, in the near term weakened following budget cuts in the 2015 Budget, where infrastructure allocations were largely reduced due to growing financial constraints.

According to the South African Reserve Bank, a total of R349bn was spent on construction in 2014, including investment in residential and non-residential buildings and construction works. This would also include purchases of machinery and equipment, often imported, used in the construction process such as the installation of turbines. Government invested R95,0 bn, compared with R88bn by SOE’s and R164 bn by the private sector.

Gross fixed capital formation (GFCF) as a percentage of GDP averaged at 20,7 percent in 2014, compared to an average of 21,1 percent in 2013. The NDP has set a target of 30 percent contribution of GFCF to GDP by 2030.

**Table 5: GFCF Residential, Non-Residential and Construction works, by client 2014 Current prices**

2014	Government	SOE's	Private	Total
Residential	570	32	54,895	55,497
Non-residential	10,951	3,335	48,209	62,495
Civil works	84,088	85,438	61,285	230,811
<b>Total</b>	<b>95,609</b>	<b>88,805</b>	<b>164,389</b>	<b>348,803</b>

Source: South African Reserve Bank

**Table 6: GFCF by client type, 2010 prices**

	Rm, 2005 prices, seasonally adj annualised				Annual Percentage Change				GFCF % of GDP
	General Government	Public Corporations	Private Business enterprises	Total	General Government	Public Corporations	Private Business enterprises	Total	
2007	84,800	70,900	367,606	523,306	22.9%	35.3%	8.6%	13.8%	19.2%
2008	91,122	98,074	401,211	590,407	7.5%	38.3%	9.1%	12.8%	21.0%
2009	84,155	117,410	349,422	550,987	-7.6%	19.7%	-12.9%	-6.7%	20.4%
2010	76,204	111,710	341,517	529,431	-9.4%	-4.9%	-2.3%	-3.9%	19.4%
2011	85,918	112,575	361,245	559,738	12.7%	0.8%	5.8%	5.7%	19.5%
2012	85,599	115,799	378,518	579,916	-0.4%	2.9%	4.8%	3.6%	19.9%
2013	95,537	119,428	409,162	624,127	11.6%	3.1%	8.1%	7.6%	21.1%
2014	105382	121281	395052	621,715	10.3%	1.6%	-3.4%	-0.4%	20.7%

Source: South African Reserve Bank, Quarterly Bulletin

## 2. CESA Survey: Background

A total of 86 questionnaires were returned via both the on-line and hard copy system, compared with 107 returned in the previous survey. The sample for the current survey represents a fee income of R3,0 bn, and 8144 employees for the period July – December 2014.

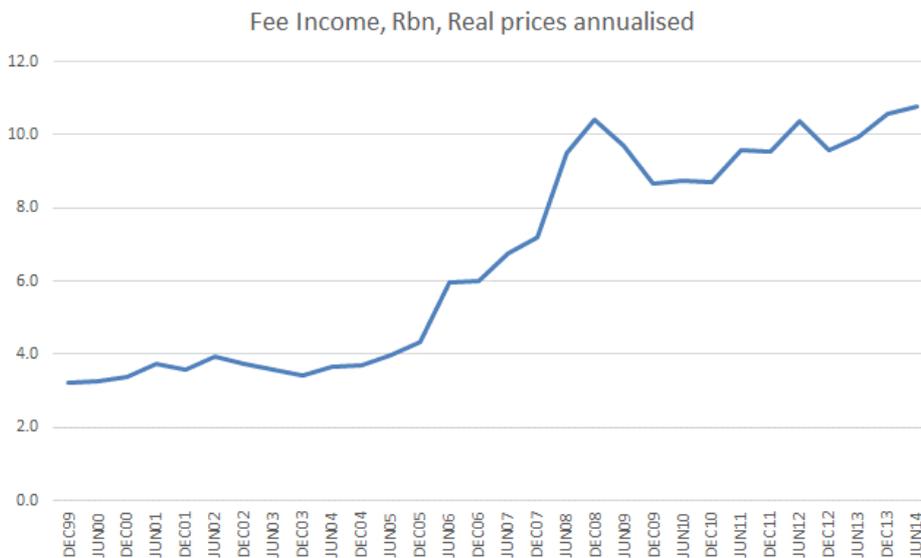
The analysis of the questionnaires completed by active firms in the consulting engineering profession provides a proxy for current and expected working conditions for the profession, which can be measured on a regular basis.

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

The survey is re-evaluated on a continuous basis, to ensure that the questions asked are pertinent and relevant 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 earnings disappointed for the second consecutive survey, during the last six months of 2014. According to respondents earnings ended marginally lower (-0,7 percent), against an expected increase of 23 percent.** This follows the 6 percent nominal increase reported during the first six months of 2014.

Fee income stabilized at R24 bn, annualised, current prices as at December 2014.

**Figure 6: Fee income Rbn Annualised**

Respondents expect earnings to increase by 5 percent in nominal terms during the first six months of 2015.

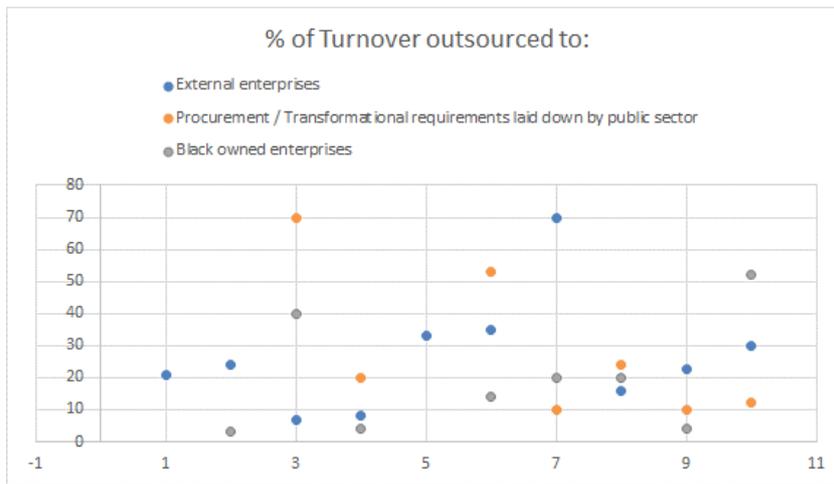
A summary of fee earnings by firm size, as well as projected earnings for the last six months of 2014 is provided in the table below.

**Table 7: Fee earnings, actual vs projected by firm size**

Firm size category	Actual (June 2014 vs December 2013)	Projected for December 2014	Actual(December 2014 vs June 2014)	Projected for June 2015
Large	11%	25%	-6.6%	4%
Medium	-15%	3%	50.0%	10%
Small	-1%	-12%	9.0%	-8%
Micro	-24%	-19%	28.1%	-19%
Total	6%	20%	-0.7%	5%

**3.1.2 Outsourcing**

- On average firms **outsourced** a higher percentage of turnover due to procurement and transformation requirements as prescribed by public sector clients, compared to outsourcing to external enterprises or black owned enterprises
- On average larger firms outsourced 26 percent to external enterprises, 28 percent for procurement purposes laid down by the public sector and 19 percent to black owned enterprises. The percentage outsourced to black owned enterprises was much lower in this survey.

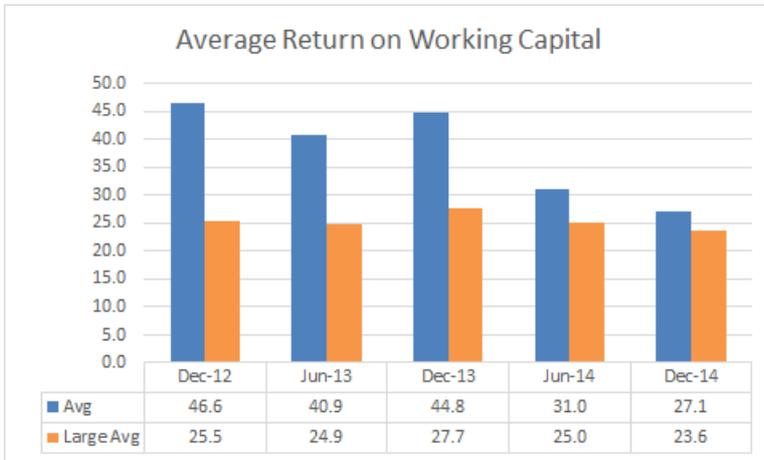


**Figure 7: Matrix distribution of average percentage outsourced by larger firms, according to main purpose**

**Table 8: Average percentage of turnover outsourced, for consulting services only, by firm, size and purpose**

	External enterprises or individuals including sub-consultants, joint ventures and contract workers	Procurement / Transformational requirements as laid down by the public sector clients	Black owned enterprises
A	26.66	28.43	19.63
B	24.63	31.92	28.63
C	15.95	26.64	29.83
D	17.84	24.40	10.41
Average % of industry turnover	<b>26%</b>	<b>29%</b>	<b>21%</b>

**3.1.3 Return on Working Capital**



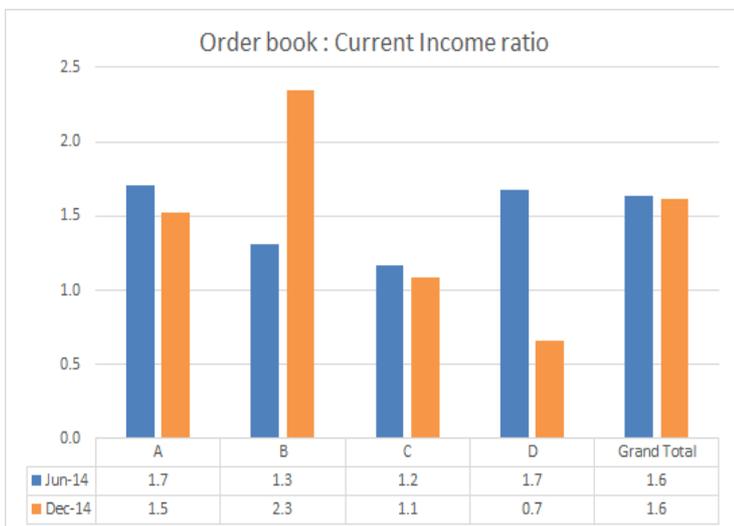
- The industry’s **return on working capital**<sup>1</sup> (un-weighted average) continued to moderate averaging 27,0 percent from 31,0 percent and 44,8 percent in the previous two surveys. Majority of firms reported a ROI of between 20% and 100%, with a few reporting negative rates.
- Larger firms by comparison, reported lower but more stable rates, averaging between 23,0 percent and 27,0 percent.

**Figure 8: Average Return on Working Capital – Trend since December 2012**

**Table 9: Return on Working Capital by firm size**

Group	Dec-13	Jun-14	Dec-14
A	27.7	25.0	23.6
B	66.4	33.2	31.1
C	24.5	38.6	22.8
D	33.9	25.5	28.2
<b>Grand Total</b>	<b>44.8</b>	<b>31.0</b>	<b>27.1</b>

**3.1.4 Value of outstanding payments**



**Figure 9: Order book: Income ration**

The overall value of outstanding payments, not yet invoiced, for confirmed appointments in firms order books increased by 2 percent in the last six months of 2014 compared with the first six months, following a reported increase of 7 percent in the previous survey. The ratio between prevailing order books and current earnings stabilised at 1:6 in the last two surveys, from 1:3 in the December 2013 survey.

The outlook for medium size firms based on their order book values has improved since the last survey. The order book to income ratio improved from 1:3 in the June 2014 survey to 2:3. This means the value of outstanding income for confirmed appointments are more than double their current income.

For larger firms, the ratio moderated slightly to 1:5 in the current survey from 1:7 in the June 2014 survey. Larger firms expect only a marginal increase in earnings during the first six months of 2015, (3 percent), compared with an expected 27 increase in earnings by medium size firms. Smaller and micro enterprises expect much weaker conditions in the first half of 2015, with earnings expected to contract by an average of 18 percent.

<sup>1</sup>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 (ie accounts receivable or inventory), or has decreased its current liabilities (accounts payable).

### 3.1.5 Profitability and late payments

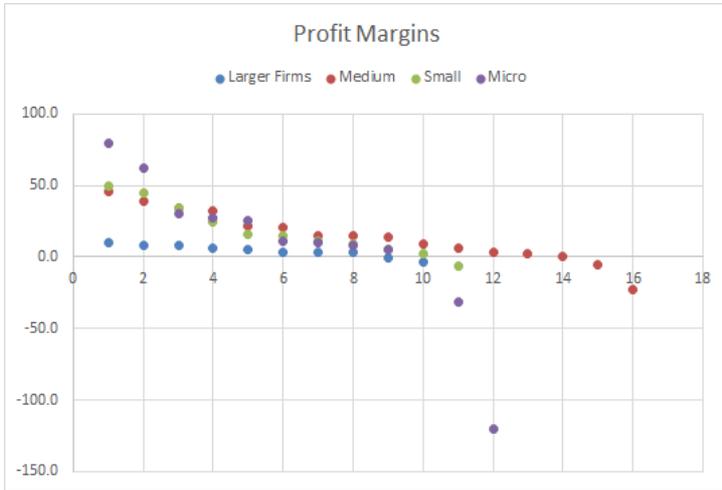


Figure 10: Profit Margin



Figure 11: % of earnings outstanding for > 90 days

- Foreign clients represented 60 percent of earnings outstanding for longer than 90 days (21 percent in June 2014), followed by 16 percent owed by central government, 11 percent by the private sector, 8 percent was contributed by local municipalities while provincial and SOE's each contributed 2 percent.
- Larger firms were more exposed to poor payment from foreign clients, and as a result reported an average outstanding payment >90 days of 46,4 percent of earnings. Medium size firms reported an average of 6,6 percent, small firms 13,6 percent and micro firms 3,3 percent.
- As a percentage of earnings, private clients owed 13.5 percent for longer than 90 days, followed by 17, 2 percent by local authorities and 6,0 percent by State owed enterprises and 37 percent by central government.

Profitability moderated to 12,2, percent in the current survey, from (revised) 13,7 percent in the previous survey.

The average profit margin for firms employing more than 100 people fell from 11 percent in the first six months to just 4,3 percent in the current survey. Medium size firms managed to maintain profit margins at around 14 percent, while smaller firms increased margins from 11 percent in the previous survey to 18 percent

Contrary to previous surveys majority of larger firms (60 percent) now expect margins to recede in coming months, while about 25 percent of medium size firms expect margins to improve. The majority of medium size firms expect margins to remain static.

Not surprising, majority of larger firms (60 percent) are dissatisfied with prevailing margins, compared with only 25 percent of medium firms reporting unsatisfactory levels.

Payment is becoming a more serious issue. Approximately 24 percent of fee earnings were outstanding for longer than 90 days, compared with (revised) 17,4 percent in the previous survey, including income outstanding earnings from foreign clients, compared to 22 percent and 9,9 percent in the previous two surveys. This translates to an estimated R5bn outstanding in fee earnings. A breakdown by firm size is provided in the two tables below.

### 3.2 Human Resources

#### 3.2.1 Employment

- Employment contracted for the third consecutive survey, down 2 percent in the last six months compared with the first six months of 2014, following the 1 percent and 3 percent contraction reported in the previous two surveys. Employment is estimated to have declined by 3 percent y-y (since 2013) to 22,921.
- The number of firms looking for engineers moderated to 48 percent, from 82 percent, in the previous survey. Smoothed over a 4-survey period, the trend is still considerably lower, negatively affecting the outlook for employment. Over the years the strongest demand has been for engineers, but there has been a marginal increase in the number of firms looking to employ technologists and technicians.
- A total of 64 percent of firms reported difficulties in recruiting male engineers and 73 percent reported problems recruiting female engineers.
- A higher percentage (between 87 percent and 90 percent) reported difficulties in recruiting previously disadvantaged male and/or female engineers. It would seem the issue on recruiting female engineers is becoming more profound, although bursaries are still mainly in favour of male recipients.

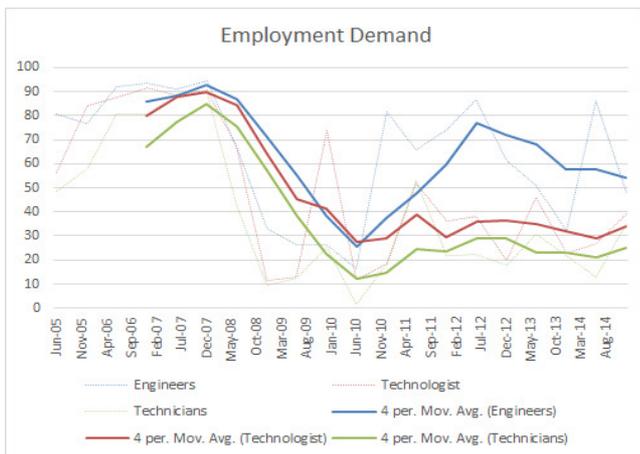


Figure 13: Employment Demand

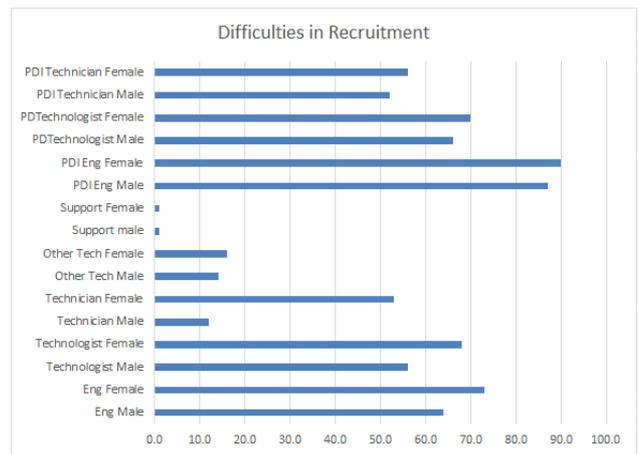


Figure 12: Difficulties in recruitment

Table 10: % of firms wanting to increase staff, by type of personnel

Type of personnel	% of firms wanting to increase staff December 2011	% of firms wanting to increase staff June 2012	% of firms wanting to increase staff December 2012	% of firms wanting to increase staff June 2013	% of firms wanting to increase staff December 2013	% of firms wanting to increase staff June 2014	% of firms wanting to increase staff December 2014
Engineers	74.0	86.5	61.2	50.8	32.0	86.2	48.0
Technologists	36.0	38.2	19.9	46.2	23.0	26.7	39.0
Technicians	22.0	22.2	18.1	30.5	22.0	12.9	35.0
Other technical staff	4.8	17.5	12.5	20.9	36.0	3.4	13.0
Support Staff	6.9	6.6	7.5	24.0	28.0	2.1	3.8

### 3.2.2 Salary and Wage bill

- The contribution of the salary and wage bill to fee earnings stabilised at an average rate of 66 percent (compared to 60 percent in the December 2013 survey), and is a significant contributor to the average cost of production in the consulting engineering industry.
- The contribution of the salary and wage bill was similar between the various size firms.

### 3.2.3 Training

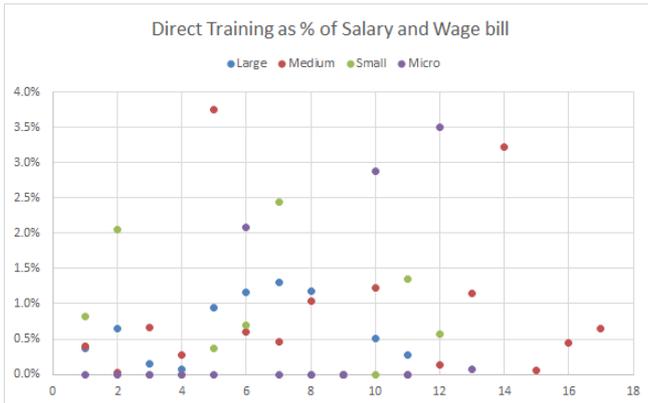


Figure 14: Training Matrix



Figure 15: Training

Expenditure on training, and in particular bursaries, is of a seasonal nature and responses can therefore be distorted in terms of timing when the bi-annual survey is conducted. Training expenses, which include the costs directly associated with training as well as the cost of salaries but excluding the 1% CETA skills development levy, averaged 7,8 percent of the total estimated salary bill. This data is not entirely reliable, as many firms generally do not complete this section of the questionnaire. Majority of the firms report only on “direct training costs”.

Direct training costs, an easier measurement of firms contribution to training, averaged 0,4 percent of the salary and wage bill, on par with the previous survey, but lower when compared to the December 2013 survey (1.6 percent). Larger firms spent on average 0.6percent of their salary and wage bill on direct training, ranging from 0.1% to 1.4%. Only 2 percent of the firms spent more than 1 percent of their salary and wage bill on direct training. Over the years, firms have spent a smaller portion of their salary and wage bill on training, deteriorating from between 2 and 2,5 percent to less than 1 percent.

### 3.3 Industry profile of Executive Staff

The appointment of Black executive staff (including Black, Asian and Coloured), measured by the contribution of black executive directors, non-executive directors, members and partners as a percentage of total executive staff, **increased to 38,4 percent from 36,0 percent and 35,8 percent** in the previous two surveys. The appointment of Black executive staff has steadily increased from 28,1 percent in the June 2012 survey. This shows real significant progress in terms of industry transformation. A detailed breakdown is provided in Statistical Tables.

**Women (including all races) appointed at an executive level represented 10,1 percent of total executives, from 8,8 percent and 7,5 percent in the two previous surveys.** Of the total women employed in the consulting engineering industry, 1,2 percent are appointed at an executive level (on par with the previous survey), compared to between 5 percent and 8 percent amongst male employees.

### 3.5 Capacity Utilisation

#### Capacity Utilisation Rate

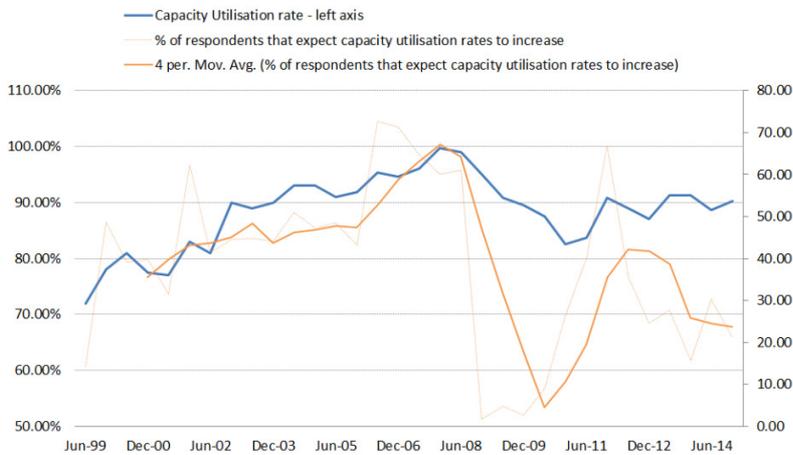


Figure 16: Capacity Utilisation Rate

After reaching 82 percent following the completions of the build up to the 2010 Soccer World Cup, capacity utilisation of technical staff improved to an average of 90 percent, since 2011, with no real change reported on a survey to survey basis.

Since 2009, majority of respondents largely expect utilisation rates to remain unchanged, and although there was an increase in the number of firms that expected levels to improve between 2010 and 2011, this was reversed with currently only 21 percent expecting higher utilization rates in the next 6 months.

### 3.6 Competition in tendering

#### Impact of competition on discounting

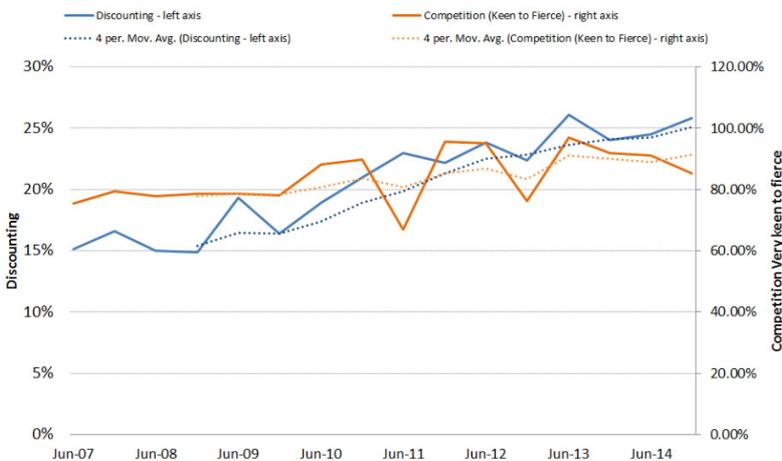


Figure 17: Competition and Discounting

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 increases the risk for the engineering firm.

Firms continue to mostly report on keen to fierce competition, but did report some level of moderation from a peak of 96 percent in June 2013 to 85 percent by December 2014. This is still above the average of around 80 percent reported during 2007/08. Furthermore since 2010, between 50 and 70 percent of firms reported competition as fierce. (Refer to chart).

This in itself suggests much tougher working conditions, and supports the notion by firms to discount more aggressively.

There is a clear correlation between the level of discounting and competition. As competition started to intensify after 2009, the propensity to discount also started to accelerate. It is interesting to note however, that in this particular survey, discounting increased to an average of 25,8 percent, while fewer firms (but still more than 80 percent) experienced keen to fierce competition.

The average discount being offered to clients increased marginally from 15 percent in 2007 to 25,8 percent by December 2014, the highest level since the inception of this question into the survey. Discounting has gradually increased in line with the tougher tendering conditions experienced by firms. Discounted rates are benchmarked against the ECSA Guideline fee scales.

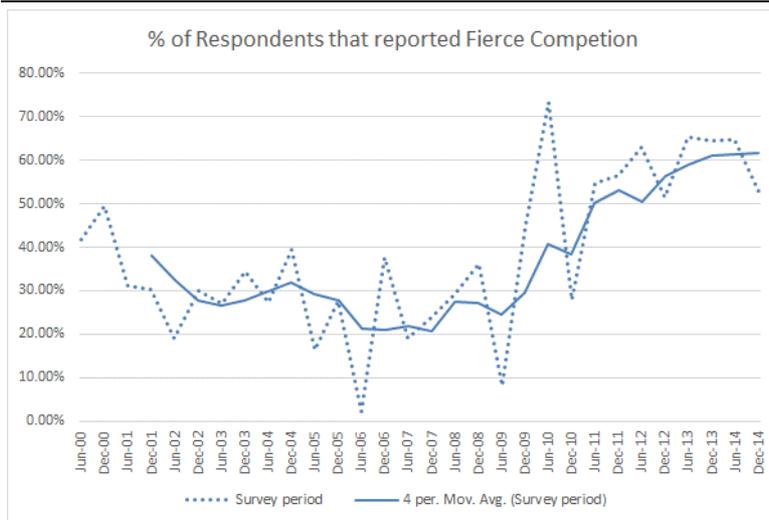


Figure 18: Fierce Competition

By comparison larger firms tend to discount more aggressively, an average of 40,0 percent in the last two surveys, compared to 35 percent in the June 2013 survey, and between 25% and 30%, in the previous surveys. 63 percent of larger firms reported fierce competition, the highest amongst all firm groups.

Medium size firms discounted at an average rate of 27,7 percent, from 20,9 percent in the December 2013 survey, against 36 percent that reported fierce completion.

Table 11: Capacity and Discounting by Firm size category

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 FIERCE Competition for work during the last six months
Large	79.8	14.3	38.13	63.1
Medium	96.4	40.5	27.69	36.7
Small	92.7	62.3	18.50	6.3
Micro	91.1	15.1	21.50	45.3
<b>Industry Average</b>	<b>90.2 (Weighted)</b>	<b>21.0 (Weighted)</b>	<b>25.8(Weighted)</b>	<b>52.7 (Weighted)</b>

### 3.7 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 for the industry, increased by an average of 9,3 percent y-y in the last six months of 2014, compared to no change in the first six months of 2014. The average annual increase in labour costs accelerated from 10,9 percent in 2012 to 15,6 percent in 2013, but moderated to an average of 4,8 percent in 2014. The impact of higher salaries and wages is profound on the engineering business considering that between 55% and 66% of earnings are paid towards the salary and wage bill.

While changes in the general cost of living (as measured by the Statistics South Africa’s Consumer Price Index) are clearly not indicative of labour cost changes in the consulting engineering industry, the CPI may have a strong influence in the determination of ECSA Guideline Fees, which has shown an average increase of 6,2 percent in the first half of 2014, and 5,9 percent in the second half of 2014. Consumer inflation has breached the Reserve Bank’s upper inflationary target in March 2014 and averaged 6,2 percent for 2014, expected to moderate to between 4 and 5 percent in 2015, pending further development in the currency, oil price and other regulated prices such as electricity and water. External factors are largely to blame for the recent slowdown in inflation, mostly related to the lower oil price.

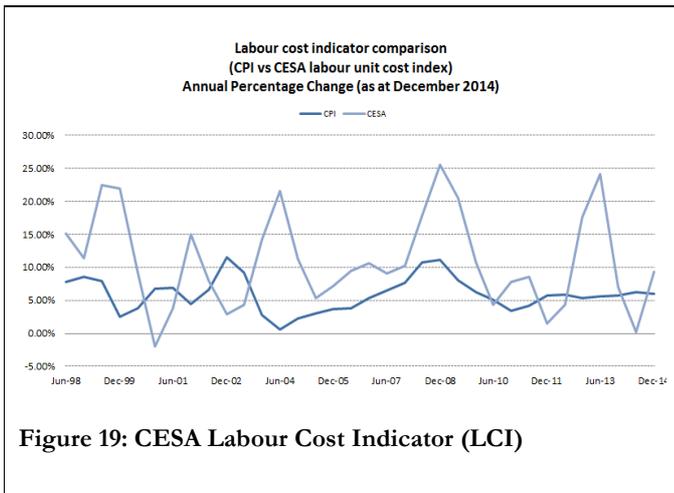


Figure 19: CESA Labour Cost Indicator (LCI)

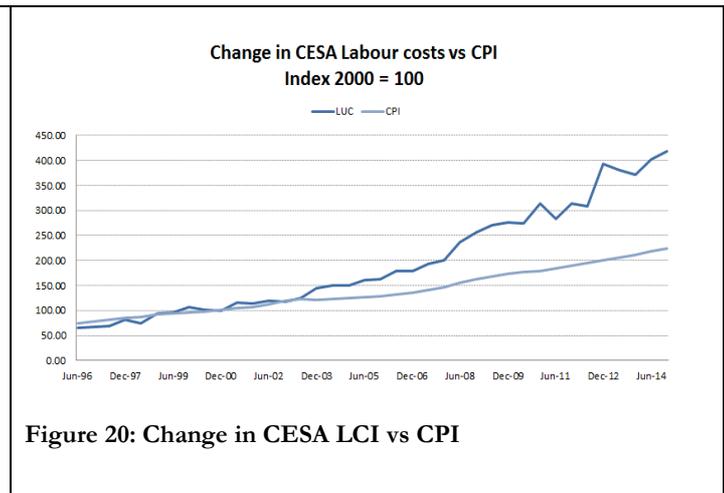


Figure 20: Change in CESA LCI vs CPI

### 4. Industry Outlook

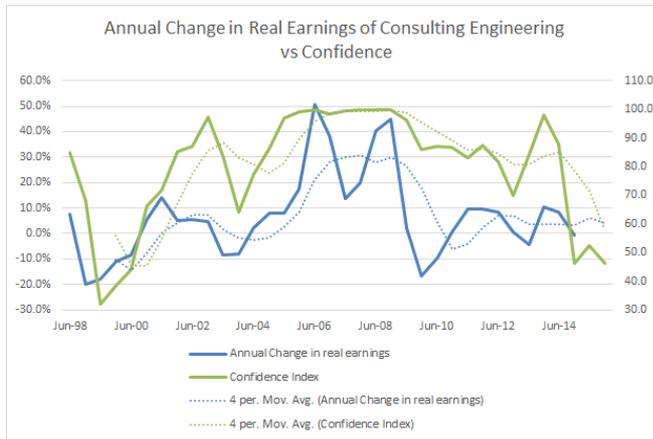


Figure 21: Change in Real Earnings

Explanatory note: The confidence index, as an indicator of members’ assessments regarding current and future prospects with regard to market developments, it 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.<sup>2</sup> To ensure that possible distortions emanating from ad hoc replies do not occur, only those members that have submitted returns during the last two consecutive surveys are used. The confidence index is used as a leading indicator to determine a short to medium term outlook for the consulting engineering industry.

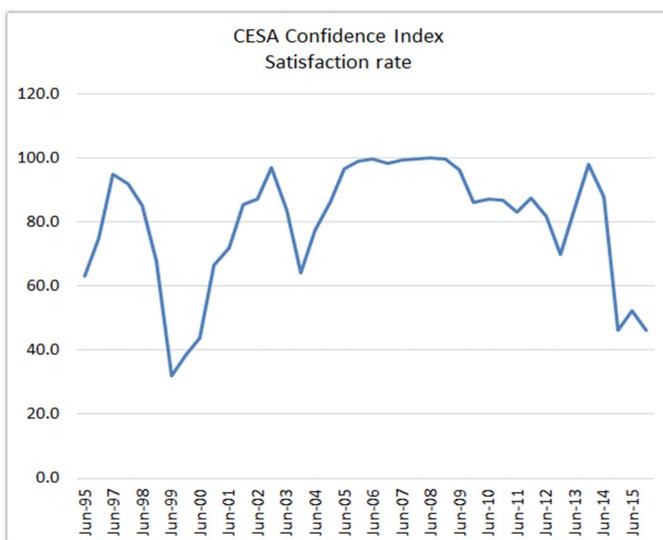


Figure 22: Confidence Index

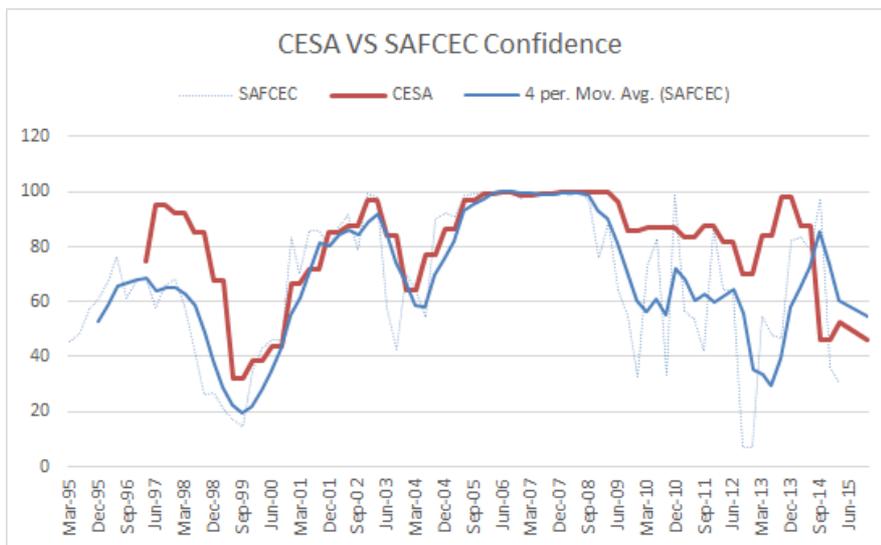
After a more optimistic 2013, conditions in the first six months of 2014 appeared to have been less satisfactory. The level of satisfaction amongst firms was revised lower in the first half of 2014 and again, this time more aggressively, in the second half of 2014, with little hope of an improvement in the next 12 months. Confidence fell from 87 percent satisfied in the first six months of 2014 (against an expected 96 percent), and averaging around 50 percent for 2015. This is the weakest level since the 1998/99 financial crisis. There was a notable shift in the opinions expressed by larger firms in this survey. In the June 2014 survey, larger firms were unanimous in their views that the outlook for business conditions is satisfactory over the next 12 months, but this changed to just 22 percent of larger firms expressing satisfactory outlook for the next 12 months. Larger firms expressed more depressed working conditions compared to medium and smaller size firms.

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

**Table 12: Confidence as at December 2014, by firm size category (% of respondents that experienced satisfactory business conditions)**

Firm size category	Last six months of 2014	Next 6 months	Next 12 months
Large	22.3%	29.0%	15.6%
Medium	81.0%	84.9%	84.9%
Small	91.2%	91.2%	100.0%
Micro	58.5%	54.7%	67.9%

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



**Figure 23: CESA vs SAFCEC Confidence**

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 slow roll out of government projects. This creates the disconnect between opinions expressed by engineers and contractors, where projects are in planning stages, supporting earnings in the consulting engineering industry, but implementation is slow.

An increased number of contractors reported that business conditions were just average, resulting in an improvement in the index during mid-2014, however, conditions deteriorated during the second half of 2014 and into the first quarter of 2015, resulting in contractor’s satisfaction rate deteriorating to levels that are largely negative, described as poor to very poor. For the first time since 2008/09 opinions expressed by contractors and engineers are more in line, albeit converging at a concerning low rate, depicting depressed working conditions both in terms of planning and contracting.

Confidence in the consulting engineering sector generally lags business sentiment. Business confidence started to deteriorate in 2007, falling to a level of below 50, (which means business is mostly pessimistic regarding business conditions), alongside higher interest rates and inflation during that time. In the seven years that followed, business confidence fell to a level as low as 23 by 2011, and although it has shown some improvement since then, it continues to fluctuate around the level of 50. This continues to depict negative market sentiment which does not bode well for private sector fixed investment. Business confidence is negatively impacted by electricity supply interruptions, poor economic growth, prospects of renewed labour strike action (this time including the public sector), and the expectation of monetary policy tightening. As noted before confidence levels have deteriorated since 2007 (when it was at a level of 69) and until it recovers back to a level of at least 60, the outlook for increased private sector investment will remain subdued. The private sector is an important client to the consulting engineering industry, and contributed nearly 40 percent to total earnings in the last six months of 2014.

**Table 13: 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-05	96.8	12.2%	25.4%
Dec-05	99.3	2.5%	14.9%
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	-3.6%	-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%
<b>Dec-14</b>	<b>46.3</b>	<b>-47.2%</b>	<b>-52.8%</b>
Jun-15 (forecast)	52.3	12.9%	-40.4%
Dec-15 (forecast)	46.3	-11.4%	0.0%

## 5. 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.

- The Department of Water and Sanitation has recently announced the appointment of 34 Cuban engineers, which caused an outrage amongst local engineering firms. Skills are now being imported at a price that could have employed double the number of locally, equally if not better qualified, professionals. Of further concern is the fact that Cuban engineering skills are not recognized by the Engineering Council of South Africa, because they are not part of the Washington Accord that governs international engineering qualifications. With significant spare capacity available locally, the use of imported skills needs to be addressed.
- 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. 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.

## 6. Market Profile

### 6.1 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, structural services and electrical services, contributing 45 percent, 9,8 percent and 5,1 percent in earnings during the last 6 months of 2014. The contribution of project management accelerated to 11,5 percent, from 6,8 percent December 2013 survey. The contribution by mechanical building services increased to 8,0 percent, the highest level since 1999.

With the recent amendment to Standard Building regulations, which provides more focus on health and safety issues, it may be necessary to amend forthcoming surveys to include this as a discipline offered by the engineering services sector.

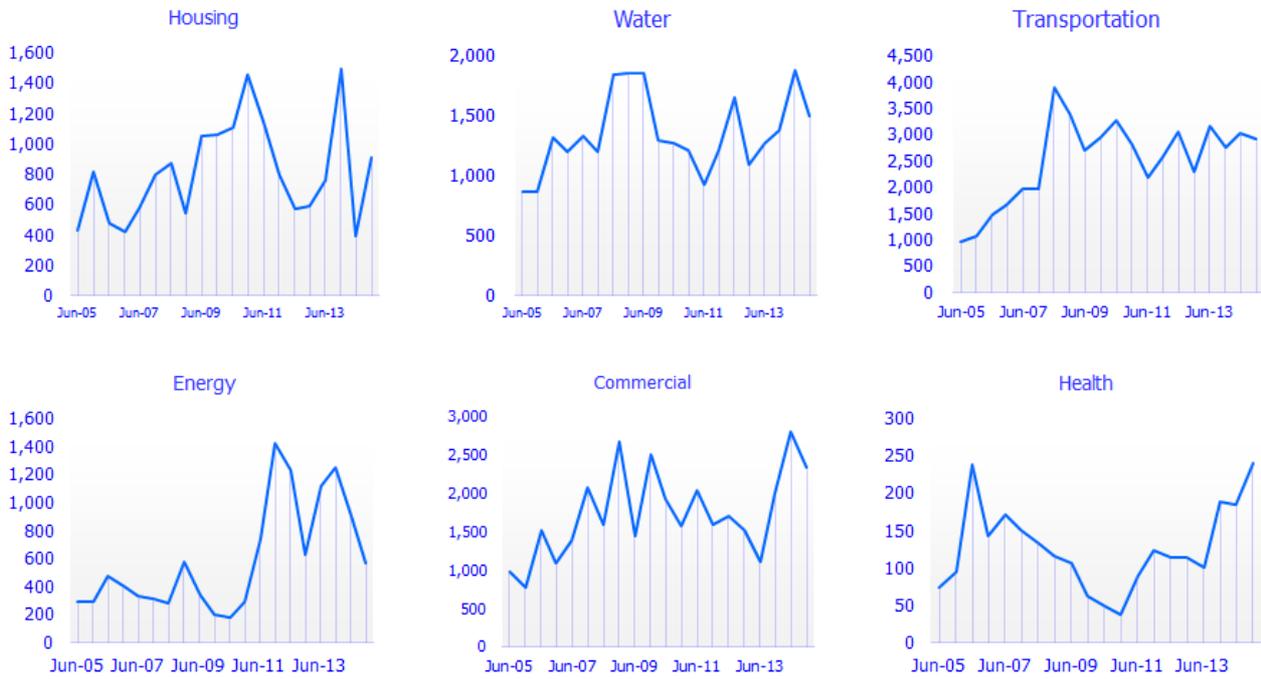
Details of the various sub-disciplines are provided for under Statistical Tables.

## 6.2 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 water services, transportation and commercial, with a growing emphasis on housing.

The two most prominent sectors were Transportation, with a more moderate contribution of 27 percent compared to 28 percent in the June 2014 survey, and the Commercial sector which contributed 22,0 percent compared with 26,0 percent in the previous survey. The contribution by the mining sector improved to 5,7 percent, from 3,8 percent in the previous survey, while water fell to 14 percent from 17 percent. The energy sector contributed 5,5 percent, while earnings in the housing sector increased its contribution to 8,7 percent.

The charts below depict trends in rand terms.

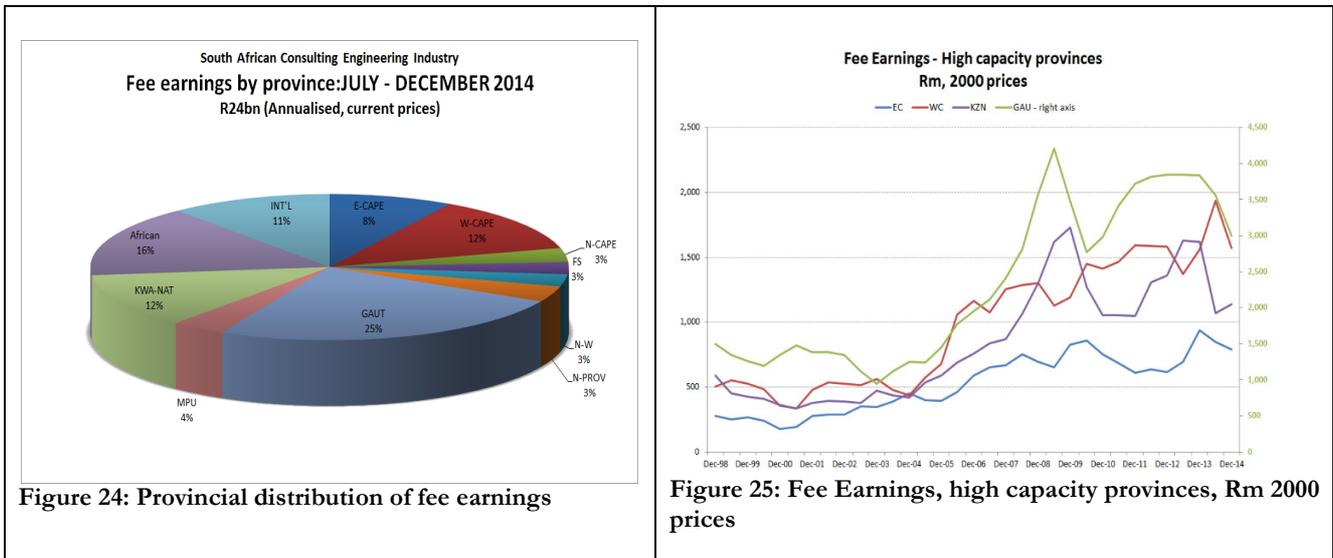


The table below provides a snapshot of earnings by sector categorized between large, medium, small and micro firms.

**Table 14: Distribution of fee earnings by economic sector, by firm size: December 2014**

	Water	Transportation	Energy	Mining	Education	Health	Tourism	Housing	Commercial	Agriculture	Eco other	Total
Large	13.9%	29.4%	5.9%	6.6%	0.8%	2.0%	0.5%	9.0%	22.6%	0.7%	8.5%	100.0%
Medium	15.4%	16.9%	4.2%	1.6%	3.9%	3.9%	0.5%	5.8%	21.9%	0.0%	25.9%	100.0%
Small	21.8%	39.1%	0.1%	0.6%	1.3%	3.8%	0.4%	8.0%	18.2%	2.0%	4.6%	100.0%
Micro	17.9%	28.7%	2.7%	0.0%	4.5%	2.6%	2.0%	17.3%	9.5%	2.2%	12.5%	100.0%
Total	14.4%	27.9%	5.5%	5.7%	1.3%	2.3%	0.5%	8.7%	22.2%	0.6%	11.0%	100.0%

### 6.3 Geographic Location



Gauteng contributed only 24 percent of earnings, the lowest level since the inception of this survey. Gauteng contributed around 40 percent during 2011/12. The contribution by the Western Cape also moderated, to 12,4 percent from between 15 and 17 percent a few years back, while KwaZulu-Natal and Eastern Cape increased its contributions to 12 percent and 8 percent respectively. Earnings outside of South Africa played a more prominent role, and contributed 15,8 percent in terms of Africa and 11 percent internationally. At 15 percent for earnings in Africa, this is the second highest level since 2002 when it reached 18 percent.

Smoothed over a two survey period, fee earnings fell in Gauteng (-20 percent), Eastern Cape (-15,8 percent) and Kwazulu Natal (-29,5 percent). Earnings ended flat in Western Cape, with single digit growth reported in Mpumalanga. All other provinces reported double digit growth, the strongest in Limpopo (up 76 percent), and Northern Cape (46 percent). Earnings in Africa nearly doubled (up by 93 percent), while International earnings increased by 229 percent to R1,1 bn.

### 6.4 Clients

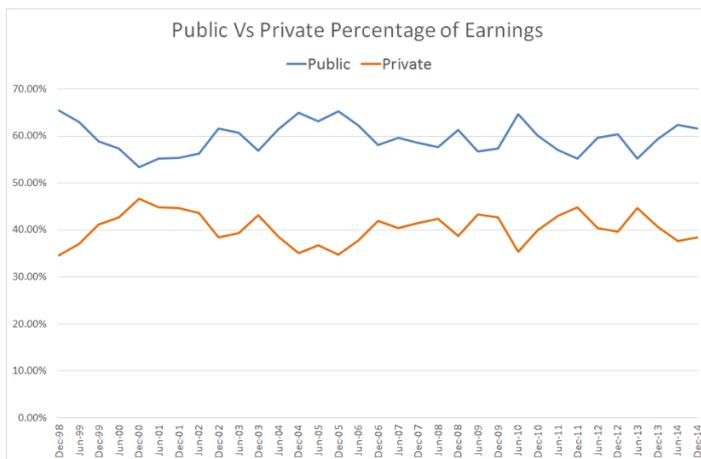


Figure 26: Public vs Private Percentage of Earnings

The contribution to fee earnings by the private sector stabilized at around 38 percent, with no significant movement shown in the longer trend. The public sector is the main client to the industry and contributed more than 60 percent of earnings. The public sector includes central government, provincial and local governments as well as Public Corporations (or State Owned Enterprises).

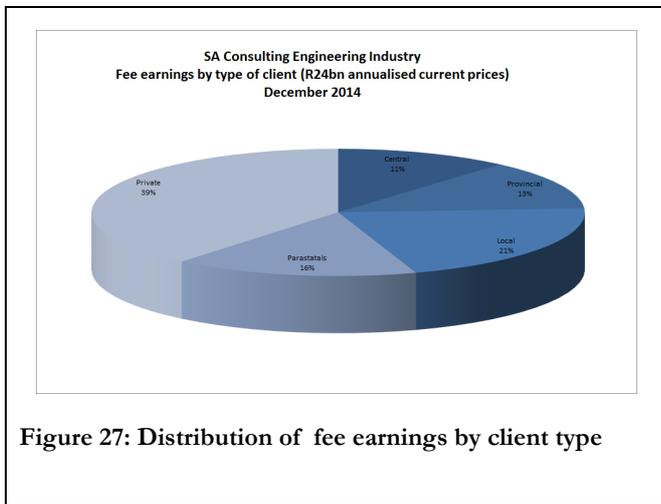
The contribution by central government is more erratic as these would generally include larger type contracts. In the current survey central government contributed 11 percent to earnings compared with 5 percent in the previous survey. This is still lower than the average of 18 percent in 2013.

The contribution by provincial government increased in 2014, averaging 13 percent from 8 percent in 2013, while local government increased to an average of 24 percent from 17 percent in 2013. Earnings from SOE's contributed an average 16 percent in 2014, slightly lower than the 18 percent average reported in 2013.

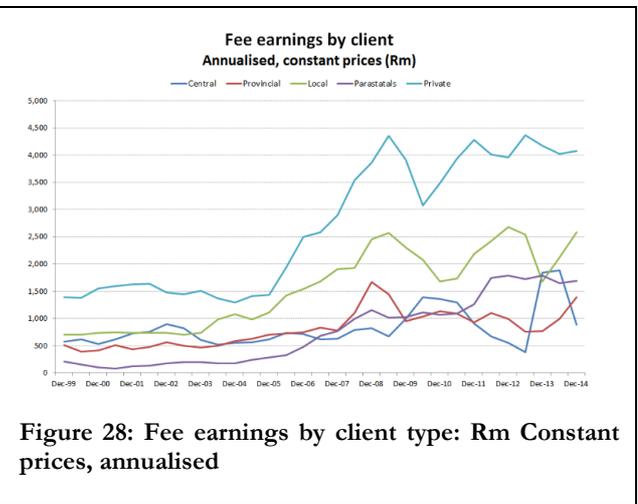
A breakdown of earnings by client type and firm size is provided in the table below.

**Table 15: Fee earnings distribution by client by firm size**

	Central	Provincial	Local	Parastatals	Private	Total
Large	5.2%	12.0%	20.3%	21.4%	41.2%	100.0%
Medium	26.4%	12.0%	17.0%	7.1%	37.4%	100.0%
Small	5.0%	15.8%	38.8%	8.7%	31.7%	100.0%
Micro	2.4%	24.0%	43.1%	5.9%	24.5%	100.0%
Total	11.4%	12.6%	20.9%	16.0%	39.1%	100.0%
Average 2013	17.5%	7.5%	16.5%	17.6%	40.8%	100.0%
Average 2014	8.4%	13.0%	24.2%	15.9%	38.4%	100.0%



**Figure 27: Distribution of fee earnings by client type**



**Figure 28: Fee earnings by client type: Rm Constant prices, annualised**

## 7. Professional Indemnity Insurance

The industry spends approximately between R200 million and R400 million on premiums for professional indemnity insurance, or roughly 1.1 percent of gross fee earnings. Majority of firms (64 percent) spend less than 1% of their income on insurance, but a few did report between 3 percent and 11 percent. Most of the larger firms reported a level of between 0,4 percent and 0.8 percent.

**Table 16: Average annual premium and limit of indemnity as percentage of gross fee income, by firm size category**

Firm size category	Average annual premium as percentage of gross fee income	Average Limit of Indemnity as % of gross fee income	Average deductible on PI as % of limit of indemnity
<b>A</b>	0.7	23.6	2.0
<b>B</b>	1.6	48.6	2.1
<b>C</b>	1.2	124.5	2.6
<b>D</b>	0.8	135.5	2.0
<b>Average</b>	<b>1.1</b>	<b>81.4</b>	<b>2.2</b>

Majority of firms (72%) reported a low risk exposure, while only 2 percent of the respondents reported to have a high risk exposure. Only a few firms reported on the value of claims paid by insurers as a percentage of premiums paid, so the results from this section of the survey is deemed unreliable and not suitable for analytical purposes.

Approximately 25 percent of the responding firms, reported claims over the last five years, averaging 2,6 claims per firm, on par with results from the June 2014 survey. On average (based on limited responses), of the 35 claims reported by participating firms, 2 (or 5 percent) were not refunded, and compares well with the previous survey. This is lower compared to the December 2013 survey, when an average of 13 percent of claims were reported not to have been refunded.

The industry's average limit of indemnity (LOI) as a percentage of gross fee income over the 12 month period increased substantially compared to previous surveys, mainly due to participation of larger firms that affected the average. The limit of indemnity averaged between 2 percent and 48 percent for larger firms, an average of 23 percent. It is much higher for medium and smaller size firms, averaging 48 and 124 percent respectively.

The industry average in terms of deductibles as a percentage of the indemnity limit averaged 2,2 percent in the December 2014 survey, from an average of 2,8 percent and 3,6 percent in the previous two surveys. Larger firms averaged mostly between 1 percent and 3 percent, while majority of medium firms were below 2 percent.

## 8. Quality Management System

A quality management system (QMS) is a control that is implemented at various stages of production process or service delivery stages. All firms are required to have a QMS as a condition of CESA membership. Majority of firms reported to have a QMS system in place (99 percent), an improvement from 96 percent in the previous survey.

Having a QMS in place is now compulsory for all CESA members, who recognize the importance of good efficient quality control. CESA recommends the ISO: 9001:2008 frame work, recognizing this framework as being comprehensive and internationally recognized.

Members can, provided the correct procedures are followed, claim a portion of the skills development levy for quality management training. For more information on statutory requirements for members, please refer to the practice note released by CESA.

Members are obliged to use accredited agents should they wish to obtain an ISO 9001:2008 certificate. Details of certification bodies used by Members consenting to make this information available, is published on the CESA website.

On average 39 percent of the firms certified a slight improvement on the previous survey's 32 percent. Majority of the small to micro firms are not ISO 9001:2008 certified, compared to most of the larger firms (employing more than 100 people) and around 50 percent of the medium firms. An ISO certification is not a condition of membership at this stage.

# Statistical Tables

**Table 17: General financial indicators**

Survey period	Employment <sup>3</sup>	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
Jun-06	14,068	3,096	7,835	5,954	50.5%	131.6	3.8%
Dec-06	14,912	3,350	8,149	5,983	38.2%	136.2	5.4%
Jun-07	15,807	3,613	9,493	6,771	13.7%	140.2	6.5%
Dec-07	16,755	3,542	10,537	7,183	20.1%	146.7	7.7%
Jun-08	18,347	4,940	14,752	9,499	40.3%	155.3	10.8%
Dec-08	19,081	5,516	16,965	10,407	44.9%	163.0	11.1%
Jun-09	19,596	5,141	16,287	9,700	2.1%	167.9	8.1%
Dec-09	19,342	5,019	14,984	8,653	-16.9%	173.2	6.2%
Jun-10	19,632	4,723	15,433	8,746	-9.8%	176.5	5.1%
Dec-10	19,357	5,220	15,588	8,699	0.5%	179.2	3.5%
Jun-11	19,937	5,650	17,614	9,576	9.5%	183.9	4.2%
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	6,945	23,439	10,474	-0.7%	223.8	5.9%

**Table 18: 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)
Jun-06	9.9%	52.5%	50.5%	3.80%
Dec-06	6.3%	49.1%	38.2%	5.40%
Jun-07	12.4%	16.7%	13.7%	6.50%
Dec-07	12.4%	5.7%	20.1%	7.70%
Jun-08	16.1%	36.7%	40.3%	10.80%
Dec-08	13.9%	55.7%	44.9%	11.10%
Jun-09	6.8%	4.1%	2.1%	8.10%
Dec-09	1.4%	-9.0%	-16.9%	6.20%
Jun-10	0.2%	-8.1%	-9.8%	5.10%
Dec-10	0.1%	4.0%	0.5%	3.50%
Jun-11	1.6%	19.6%	9.5%	4.20%
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%	11.6%	-0.7%	5.90%

\* Revised

<sup>3</sup> Revised June 2007

**Table 19: Sub-disciplines: December 2013 – December 2014 Percentage share**

Sub-discipline	Dec-13	Jun-14	Dec-14	Change in market share Last 6 months	Change in market share Last 12 months
Agricultural	0.5%	2.4%	1.5%	-0.9%	1.0%
Architecture	1.0%	1.0%	1.2%	0.2%	0.2%
Mechanical building Services	5.1%	2.3%	8.2%	5.9%	3.1%
Civil	49.4%	40.0%	45.0%	4.9%	-4.4%
Electrical / Electronic	7.6%	10.1%	5.1%	-5.0%	-2.5%
Environmental	2.2%	3.7%	6.1%	2.4%	3.9%
Facilities Management (New)	0.0%	0.3%	0.1%	-0.2%	0.1%
Geotechnical	1.2%	1.3%	1.4%	0.1%	0.2%
Industrial Process / Chemical	0.1%	1.8%	3.6%	1.7%	3.5%
GIS	0.7%	0.6%	0.3%	-0.3%	-0.4%
Hydraulics (New)	1.0%	1.0%	1.1%	0.0%	0.1%
Information Systems / Technology	0.7%	0.0%	1.5%	1.5%	0.8%
Marine	2.8%	0.0%	0.0%	0.0%	-2.8%
Mechanical	2.2%	7.0%	2.1%	-4.9%	-0.1%
Mining	0.1%	0.9%	0.7%	-0.2%	0.7%
Project Management	6.8%	10.3%	11.5%	1.2%	4.7%
Quantity Surveying	0.2%	0.4%	0.3%	0.0%	0.1%
Structural	14.5%	13.2%	9.8%	-3.4%	-4.6%
Town planning	3.8%	3.5%	0.5%	-3.0%	-3.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>0.0%</b>

**Table 20: Sub-disciplines: June 2013 – December 2014, Annualized R mill, Real 2000prices**

Sub-discipline	Jun-13	Dec-13	Dec-14	Change Dec-14/Jun-14	Change Dec-14/Dec-13
Agricultural	74	53	259	159	-38.4%
Architecture	26	108	110	124	13.1%
Mechanical building Services	350	541	247	859	247.5%
Civil	5,636	5,213	4,314	4,710	9.2%
Electrical / Electronic	730	805	1,091	539	-50.6%
Environmental	195	234	399	637	59.7%
Facilities Management (New)	43	1	32	13	-58.5%
Geotechnical	94	125	137	142	3.2%
Industrial Process / Chemical	52	11	198	373	88.2%
GIS	41	70	62	28	-55.2%
Hydraulics (New)	117	100	111	113	1.8%
Information Systems / Technology	0	74	1	158	11623.8%
Marine	171	297	3	0	-100.0%
Mechanical	182	236	759	221	-70.9%
Mining	7	7	102	77	-24.8%
Project Management	768	719	1,107	1,203	8.7%
Quantity Surveying	95	25	41	36	-11.7%
Structural	1,036	1,527	1,427	1,031	-27.7%
Town planning	320	405	380	51	-86.5%
<b>Total</b>	<b>9,935</b>	<b>10,552</b>	<b>10,779</b>	<b>10,474</b>	<b>-2.8%</b>

**Table 21: Provincial Turnover, R mill, Real 2000 prices (Annualized)**

Province	Survey period							
	Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
EC	680	543	727	507	884	992	702	880
WC	1 532	1 658	1 516	1,646	1,093	2,026	1,847	1,299
NC	201	210	197	153	179	211	248	325
FS	354	343	467	287	238	232	270	283
NW	201	133	104	134	169	264	259	283
LIM	249	295	280	230	169	179	248	367
GAU	3 811	3 639	3 986	3,703	3,984	3,693	3,434	2,577
MPU	306	438	301	679	427	264	346	388
KZN	1 044	1 048	<b>1 567</b>	<b>1,148</b>	<b>2,106</b>	1,129	<b>1,015</b>	<b>1,267</b>
AFRICAN	1 006	1 058	1 007	813	507	1,087	1,425	1,655
INT'L	192	162	239	268	179	475	1,004	1,152
<b>Total</b>	9 576	9 527	10 380	9,569	9,935	10,552	10,799	10,474

**Table 22: Y-Y Change (Trend – SMOOTHED over two consecutive surveys, to remove short term volatility)**

Province	Survey period							
	Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
EC	-20.4%	-18.7%	-7.1%	0.9%	9.6%	52.1%	21.6%	-15.8%
WC	1.3%	12.9%	8.2%	-0.9%	-13.7%	-1.3%	41.3%	0.7%
NC	98.5%	14.4%	-2.8%	-14.7%	-18.4%	11.3%	38.3%	46.9%
FS	17.5%	-16.1%	3.8%	8.1%	-35.1%	-37.6%	-4.5%	17.4%
NW	10.6%	-15.7%	-43.3%	-28.9%	27.7%	82.0%	72.5%	25.1%
LIM	-12.9%	24.0%	28.2%	-6.3%	-30.8%	-31.7%	7.2%	76.4%
GAU	23.1%	24.8%	11.6%	3.2%	0.8%	-0.2%	-7.4%	-21.8%
MPU	23.7%	28.6%	17.7%	31.6%	49.7%	-29.5%	-45.0%	6.0%
KZN	-17.1%	-0.6%	24.2%	29.8%	24.4%	19.1%	-34.2%	-29.5%
AFRICAN	-2.6%	1.8%	5.7%	-11.8%	-36.1%	-12.4%	90.1%	93.1%
INT'L	-6.2%	-13.8%	2.3%	43.3%	11.5%	29.0%	230.7%	229.6%
<b>Total</b>	5.0%	9.5%	9.0%	4.5%	-2.1%	2.6%	9.4%	3.7%

**Table 23: Market share (% of fee earnings)**

Province	Survey period							
	Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
EC	7.10	5.70	7.00	5.30	8.90	9.40	6.50	8.40
WC	16.00	17.40	14.60	17.20	11.00	19.20	17.10	12.40
NC	2.10	2.20	1.90	1.60	1.80	2.00	2.30	3.10
FS	3.70	3.60	4.50	3.00	2.40	2.20	2.50	2.70
NW	2.10	1.40	1.00	1.40	1.70	2.50	2.40	2.70
LIM	2.60	3.10	2.70	2.40	1.70	1.70	2.30	3.50
GAU	39.80	38.20	38.40	38.70	40.10	35.00	31.80	24.60
MPU	3.20	4.60	2.90	7.10	4.30	2.50	3.20	3.70
KZN	10.90	11.00	<b>15.10</b>	12.00	21.20	10.70	<b>9.40</b>	<b>12.10</b>
AFRICAN	10.50	11.10	9.70	8.50	5.10	10.30	13.20	15.80
INT'L	2.00	1.70	2.30	2.80	1.80	4.50	9.30	11.00
<b>Total</b>	100.0%	100.0%	100%	100%	100%	100%	100%	100%

**Table 24: Fee income earned by type of client, R mill, Real 2000 prices (Annualized)**

Client	Survey period							
	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	
Central	505	841	268	497	3,176	582	1,194	
Provincial	715	1 484	507	994	538	1,455	1,320	
Local	2 477	2 367	2,986	2,086	1,266	2,975	2,189	
State Owned	1 362	2 128	1,455	1,987	1,593	1,703	1,676	
Private	4 468	3 560	4,354	4,371	3,978	4,064	4,095	
<b>Total</b>	9 527	10 380	9,569	9,935	10,552	10,779	10,474	

**Table 25: Percentage market share by client**

Client	Survey period						
	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
Central	5.3%	8.1%	2.8%	5.0%	30.1%	5.4%	11.4%
Provincial	7.5%	14.3%	5.3%	10.0%	5.1%	13.5%	12.6%
Local	26.0%	22.8%	31.2%	21.0%	12.0%	27.6%	20.9%
State Owned	14.3%	20.5%	15.2%	20.0%	15.1%	15.8%	16.0%
Private	46.9%	34.3%	45.5%	44.0%	37.7%	37.7%	39.1%
<b>Total</b>	<b>100.0%</b>						

**Table 26: Percentage of fee income earned by economic sector**

Economic sector	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Change in the last 6 months
Water (Full water cycle)	15.9%	11.4%	13%	13.1%	17.4%	14.4%	-3.0%
Transportation (land, air, road, rail, ports)	29.4%	24.0%	32%	26.2%	28.1%	27.9%	-0.2%
Energy (electricity, gas, hydro)	11.9%	6.6%	11%	11.9%	8.5%	5.5%	-3.0%
Mining / Quarrying	5.6%	18.5%	17%	5.3%	3.8%	5.7%	1.9%
Education	1.2%	1.2%	1%	2.2%	2.3%	1.3%	-1.0%
Health	1.1%	1.2%	1%	1.8%	1.7%	2.3%	0.6%
Tourism/Leisure	0.7%	0.8%	1%	1.2%	0.4%	0.5%	0.1%
Housing (residential inc. land)	5.5%	6.1%	8%	14.2%	3.7%	8.7%	5.0%
Commercial <sup>4</sup>	16.4%	15.8%	11%	18.9%	26.0%	22.2%	-3.8%
Agriculture / Forestry / Fishing	1.3%	1.1%	3%	0.7%	1.4%	0.6%	-0.8%
Other	11.0%	13.4%	3%	4.5%	6.8%	11.0%	4.1%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100%</b>	<b>100%</b>	-

**Table 27: Fee income earned by economic sector, Rm, Real 2000 prices, Annualized**

Economic sector	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Real % Change Dec-14/Dec-13
Water (Full water cycle)	1 650	1,090	1,271	1,381	1,877	1,505	9.0%
Transportation (land, air, road, rail, ports)	3 052	2,293	3,164	2,760	3,027	2,920	5.8%
Energy (electricity, gas, hydro)	1 235	628	1,123	1,255	911	571	-54.5%
Mining / Quarrying	581	1,768	1,656	564	406	594	5.3%
Education	125	114	86	237	250	140	-40.7%
Health	114	115	102	189	185	241	27.9%
Tourism/Leisure	73	76	69	126	40	54	-57.4%
Housing (residential inc. land)	571	588	762	1,501	397	908	-39.5%
Commercial	1 702	1,513	1,104	1,996	2,799	2,325	16.5%
Agriculture / Forestry / Fishing	135	105	286	70	150	67	-4.2%
Other	1 142	1,280	311	474	737	1,150	142.7%
<b>Total</b>	<b>10 380</b>	<b>9,569</b>	<b>9,935</b>	<b>10,552</b>	<b>10,779</b>	<b>10,474</b>	-0.7%

<sup>4</sup> Commercial includes: Manufacturing, industrial buildings, communication, financial, facilities management

**Table 28: 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
Dec-00	R 63.08	100.00	-1.9%	3.7%
Jun-01	R 73.80	107.80	3.8%	
Dec-01	R 72.23	115.00	15.0%	9.4%
Jun-02	R75.56	116.39	8.0%	
Dec-02	R74.67	118.31	2.9%	5.4%
Jun-03	R79.51	121.42	4.3%	
Dec-03	R92.14	135.18	14.3%	9.3%
Jun-04 * Revised	R95.22	147.56	21.5%	
Dec-04	R95.75	150.40	11.3%	16.4%
Jun-05	R101.62	155.44	5.3%	
Dec-05	R 103.07	161.20	7.2%	6.3%
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%

**Table 29: Fee income outstanding for more than 90 days (including foreign fee income earnings)**

Income distribution	Fee income outstanding for more than 90 days as % of total annualized fee income (total fee income = gross fee income + fee income outstanding)				
	Jul-Dec 2012 %	Jan-Jun 2013 %	Jul-Dec 2013 %	Jan-Jun 2014 %	July - Dec 2014 %
Central government	6.4%	6.6%	11.8%	2.8%	37.0%
Provincial government	9.5%	44.7%	6.1%	8.3%	10.2%
Local government	7.0%	5.4%	7.4%	14.2%	17.4%
State owned enterprises	8.5%	7.0%	4.2%	13.1%	6.2%
Private Sector	5.5%	11.2%	6.7%	16.8%	13.5%
Foreign (all EX-RSA)	8.3%	9.9%	56.0%	7.4%	44.0%
<b>Total</b>	8.3%	9.9%	22%	17.4%	24.0%

**\* Note:**

*In the July – December 2001 survey the questionnaire was changed to exclude non-payment for periods less than 60 days, which leads to distortions when comparing previous survey's results.*

*In the July – December 2002 survey the questionnaire was changed to include non-payments by foreign clients (irrespective of client classification). The total percentage of fee income outstanding therefore includes non-payments by foreign clients, previously excluded.*

**Table 30: Contribution to education and training (excluding 1% CETA Levy)**

Survey	Bursaries % of salary bill	Bursaries R mill current prices	Training % of Salary bill <sup>5</sup>	Training R mill current prices
Jun-01	0,8%	R14	2,0%	R 36.6
Dec-01	0,5%	R9	1,5%	R 25.7
Jun-02	0,5%	R10	1,3%	R 25.7
Dec-02	0,9%	R19	0,7% <sup>6</sup>	R 14.6
Jun-03	0,6%	R13	1,5%	R 31.7
Dec-03	0,5%	R11	1,3%	R 28.0
Jun-04	0,6%	R13	1,3%	R30.0
Dec-04	0,5%	R12	1,8%	R44.6
Jun-05	0,6%	R15	1,3%	R33.7
Dec-05	0,7%	R19	1,5%	R44.2
Jun-06	0,9%	R35	1,2%	R48.5
Dec-06	0,6%	R29	1,1%	R49.7
Jun-07	0,9%	R44	1,0%	R52.2
Dec-07	0,6%	R32	1,3%	R67.0
Jun-08	1.1%	R82	1.4%	R107.4
Dec-08	0.5%	R40	0.8%	R70.1
Jun-09	0.6%	R52	0.8%	R68.2
Dec-09	0.4%	R37	1.0%	R88.9
Jun-10	0.9%	R72	0.9%	R74.2
Dec-10	0.4%	R37	1.3%	R121.6
Jun-11	0.5%	R 53	0.3%	R31.2
Dec-11	0.3%	R34	1.9%	R212
Jun-12	0.8%	R95	1.2%	R148
Dec-12	0.4%	R50	0.5%	R63
Jun-13	0.6%	R81	1.0%	R134
Dec-13	1.6%	R210	0.6%	R78
Jun-14	0.5%	R76	0.4%	R61
Dec-14	0.3%	R46	0.4%	R62

<sup>5</sup>Training now includes all training, in-house and external. Comparisons with previous surveys not compatible. – excludes costs related to salaries

<sup>6</sup> Revised: Removed outlier questionnaire erroneously included in previous sample.

**Table 31: Employment profile of the consulting engineering industry: Percentage contribution: July – December 2014**

Job Category	Black	Coloured	Asian	White	Total
Professional Engineer Pr.Eng	7.0%	2.4%	4.4%	86.2%	100.00%
Professional Architects	20.0%	0.0%	0.0%	80.0%	100.00%
Professional Quantity Surveyors	0.0%	0.0%	7.7%	92.3%	100.00%
Professional Other	11.2%	2.8%	5.6%	80.5%	100.00%
Technologists Pr TEchENg	12.1%	5.7%	6.1%	76.1%	100.00%
Technicians PrTechni	27.3%	9.1%	3.0%	60.6%	100.00%
Unregistered technical staff: Engineer	16.2%	3.6%	6.1%	74.1%	100.00%
Unregistered technical staff: Technologist	28.8%	9.0%	4.7%	57.5%	100.00%
Unregistered technical staff: Technician	49.2%	12.7%	4.0%	34.1%	100.00%
Unregistered technical staff: Other	42.7%	5.7%	6.2%	45.4%	100.00%
Technical Assistants	40.2%	9.7%	5.5%	44.6%	100.00%
Draughts Persons	11.5%	14.4%	3.5%	70.6%	100.00%
Laboratory / Survey Assistants	88.7%	0.4%	7.0%	3.9%	100.00%
Administration / Support staff	38.9%	11.0%	6.1%	44.0%	100.00%
Total	31.0%	7.5%	5.4%	56.1%	100.00%

**Table 32: Employment profile of the consulting engineering industry: Percentage contribution: July – December Change in contribution since June 2014**

Job Category	Black	Coloured	Asian	White
Professional Engineer Pr.Eng	1.5%	-0.2%	0.4%	-1.7%
Professional Architects	3.3%	0.0%	-16.7%	13.3%
Professional Quantity Surveyors	-12.5%	0.0%	-4.8%	17.3%
Professional Other	-0.9%	0.4%	-1.7%	2.2%
Technologists Pr TEchENg	2.3%	0.4%	-1.2%	-1.5%
Technicians PrTechni	-11.1%	5.0%	-1.1%	7.2%
Unregistered technical staff: Engineer	-1.2%	-1.4%	-2.0%	4.6%
Unregistered technical staff: Technologist	-4.3%	0.3%	-1.1%	5.0%
Unregistered technical staff: Technician	1.6%	-0.4%	-0.4%	-0.9%
Unregistered technical staff: Other	4.2%	1.1%	2.9%	-8.3%
Technical Assistants	-6.8%	-1.8%	1.1%	7.5%
Draughts Persons	1.2%	1.5%	-0.6%	-2.1%
Laboratory / Survey Assistants	-6.0%	-1.4%	4.4%	3.0%
Administration / Support staff	5.9%	5.9%	-5.6%	-6.2%
Total	0.9%	1.1%	-1.8%	-0.2%

**Table 33: 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	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
<b>(PTY) LTD</b>	Executive Directors	Pr.Eng	11.2%	12.3%	13.7%	12.1%	15.5%	16.3%	14.0%
		PrTechEng	23.7%	33.3%	23.8%	41.9%	37.5%	33.3%	33.3%
		Other	45.9%	46.5%	60.5%	60.0%	68.6%	73.0%	61.8%
	<b>TOTAL</b>	<b>20.8%</b>	<b>19.7%</b>	<b>22.6%</b>	<b>26.3%</b>	<b>29.8%</b>	<b>29.2%</b>	<b>27.3%</b>	
	Non-Executive Directors	Pr.Eng	100.0%	66.7%	50.0%	60.0%	16.7%	100.0%	33.3%
		PrTechEng	50.0%	50.0%	100.0%	100.0%	60.0%	#DIV/0!	66.7%
		Other	86.2%	89.0%	84.2%	100.0%	87.5%	78.6%	86.7%
	<b>TOTAL</b>	<b>85.7%</b>	<b>79.6%</b>	<b>75.0%</b>	<b>90.0%</b>	<b>58.0%</b>	<b>82%</b>	<b>55.0%</b>	
<b>CC</b>	Members	Pr.Eng	32.5%	36.7%	71.4%	80.0%	75.0%	77.8%	81.8%
		PrTechEng	35.7%	36.4%	40.0%	60.0%	60.0%	42.9%	50.0%
		Other	55.6%	33.3%	85.7%	83.3%	50.0%	80.0%	87.5%
	<b>TOTAL</b>	<b>36.5%</b>	<b>36.0%</b>	<b>62.5%</b>	<b>70.9%</b>	<b>65.0%</b>	<b>66.7%</b>	<b>78.2%</b>	
<b>Partnership</b>	Partners	Pr.Eng	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%
		PrTechEng	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		Other	50.0%	50.0%	50.0%	50.0%	66.7%	75.0%	75.0%
	<b>TOTAL</b>	<b>14.3%</b>	<b>20.0%</b>	<b>11.1%</b>	<b>12.5%</b>	<b>25.0%</b>	<b>30.0%</b>	<b>54.5%</b>	
<b>Total</b>			<b>27.8%</b>	<b>28.1%</b>	<b>30.2%</b>	<b>35.5%</b>	<b>35.8%</b>	<b>36.0%</b>	<b>38.4%</b>

**Table 34: 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-99	38.5	20.31%	-43.4%
Jun-00	44.0	14.29%	37.5%
Dec-00	66.5	51.05%	72.6%
Jun-01	71.9	8.23%	63.5%
Dec-01	85.4	18.67%	28.4%
Jun-02	87.3	2.24%	21.3%
Dec-02	97.2	11.34%	13.8%
Jun-03	83.8	-13.76%	-3.9%
Dec-03	64.2	-23.38%	-33.9%
Jun-04	77.2	20.25%	-7.9%
Dec-04	86.3	11.77%	34.4%
Jun-05	96.8	12.2%	25.4%
Dec-05	99.3	2.5%	14.9%
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 (forecast)	52.3	12.9%	-40.4%
Dec-15 (forecast)	46.3	-11.4%	0.0%

**Table 35: Employment Breakdown, by race, gender and job category July – December 2014**

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	163	22	186	59	4	63	100	15	115	2,165	111	2,276	2,488	152	2,640
Professional Architects	4	0	4	0	0	0	0	0	0	7	7	15	11	7	19
Professional Quantity Surveyors	0	0	0	0	0	0	0	4	4	37	7	45	37	11	48
Professional Other	67	22	89	19	4	22	15	30	45	501	141	642	602	197	798
Technologists Pr TEchENg	111	7	119	52	4	56	56	4	59	705	41	746	925	56	980
Technicians PrTechni	63	4	67	22	0	22	7	0	7	145	4	149	238	7	245
Unregistered technical staff: Engineer	460	130	590	108	22	130	145	78	223	2,328	364	2,692	3,041	594	3,635
Unregistered technical staff: Technologist	182	67	249	56	22	78	30	11	41	431	67	498	698	167	865
Unregistered technical staff: Technician	813	323	1,136	201	93	293	82	11	93	694	93	787	1,790	520	2,310
Unregistered technical staff: Other	705	267	973	63	67	130	93	48	141	724	312	1,036	1,586	694	2,280
Technical Assistants	379	193	572	100	37	137	52	26	78	338	297	635	869	553	1,422
Draughts Persons	108	41	149	152	33	186	37	7	45	524	386	910	821	468	1,288
Laboratory / Survey Assistants	757	89	847	4	0	4	59	7	67	30	7	37	850	104	954
Administration / Support staff	757	1,359	2,116	137	460	598	85	245	330	757	1,634	2,391	1,738	3,698	5,436
<b>Total</b>	4,571	2,525	7,096	973	746	1,719	761	486	1,248	9,387	3,472	12,859	15,692	7,229	<b>22,921</b>
<b>% of total</b>	19.9%	11.0%	31.0%	4.2%	3.3%	7.5%	3.3%	2.1%	5.4%	41.0%	15.1%	56.1%	68.5%	31.5%	100.0%

**Table 36: Employment Breakdown, by race, gender and job category: July - December 2014: 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	0.7%	0.1%	0.8%	0.3%	0.0%	0.3%	0.4%	0.1%	0.5%	9.4%	0.5%	9.9%	10.9%	0.7%	11.5%
Professional Architects	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Professional Quantity Surveyors	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.2%	0.2%	0.0%	0.2%
Professional Other	0.3%	0.1%	0.4%	0.1%	0.0%	0.1%	0.1%	0.1%	0.2%	2.2%	0.6%	2.8%	2.6%	0.9%	3.5%
Technologists Pr TEchENG	0.5%	0.0%	0.5%	0.2%	0.0%	0.2%	0.2%	0.0%	0.3%	3.1%	0.2%	3.3%	4.0%	0.2%	4.3%
Technicians PrTechni	0.3%	0.0%	0.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.6%	0.0%	0.6%	1.0%	0.0%	1.1%
Unregistered technical staff: Engineer	2.0%	0.6%	2.6%	0.5%	0.1%	0.6%	0.6%	0.3%	1.0%	10.2%	1.6%	11.7%	13.3%	2.6%	15.9%
Unregistered technical staff: Technologist	0.8%	0.3%	1.1%	0.2%	0.1%	0.3%	0.1%	0.0%	0.2%	1.9%	0.3%	2.2%	3.0%	0.7%	3.8%
Unregistered technical staff: Technician	3.5%	1.4%	5.0%	0.9%	0.4%	1.3%	0.4%	0.0%	0.4%	3.0%	0.4%	3.4%	7.8%	2.3%	10.1%
Unregistered technical staff: Other	3.1%	1.2%	4.2%	0.3%	0.3%	0.6%	0.4%	0.2%	0.6%	3.2%	1.4%	4.5%	6.9%	3.0%	9.9%
Technical Assistants	1.7%	0.8%	2.5%	0.4%	0.2%	0.6%	0.2%	0.1%	0.3%	1.5%	1.3%	2.8%	3.8%	2.4%	6.2%
Draughts Persons	0.5%	0.2%	0.6%	0.7%	0.1%	0.8%	0.2%	0.0%	0.2%	2.3%	1.7%	4.0%	3.6%	2.0%	5.6%
Laboratory / Survey Assistants	3.3%	0.4%	3.7%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%	0.1%	0.0%	0.2%	3.7%	0.5%	4.2%
Administration / Support staff	3.3%	5.9%	9.2%	0.6%	2.0%	2.6%	0.4%	1.1%	1.4%	3.3%	7.1%	10.4%	7.6%	16.1%	23.7%
Total	19.9%	11.0%	31.0%	4.2%	3.3%	7.5%	3.3%	2.1%	5.4%	41.0%	15.1%	56.1%	68.5%	31.5%	100.0%

**Table 37: Executive Staff profile: Employment, company type, race &gender: July – December 2014**

Comp any Type	Owner category	Professional	Black			Coloured			Asian			White			Total		
		Category	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
(PTY) LTD	Executive Director	PrEng	15	7	22	11	0	11	19	0	19	319	0	319	364	7	371
		PrTechEng	19	0	19	11	0	11	4	0	4	67	0	67	100	0	100
		Other	45	7	52	11	0	11	11	4	15	41	7	48	108	19	126
	Non-Executive Director	PrEng	15	0	15	7	0	7	4	4	7	59	0	59	85	4	89
		PrTechEng	7	0	7	0	0	0	0	0	0	0	4	4	7	4	11
		Other	15	30	45	0	4	4	0	0	0	7	0	7	22	33	56
CC	Member	PrEng	19	0	19	11	0	11	4	0	4	33	0	7	67	0	41
		PrTechEng	4	0	4	4	0	4	0	0	0	4	4	7	11	4	15
		Other	19	7	26	0	0	0	0	0	0	4	11	4	22	19	30
Partnership	Partner	PrEng	4	0	4	0	0	0	0	0	0	15	0	15	19	0	19
		PrTechEng	7	0	7	0	0	0	0	0	0	0	0	0	7	0	7
		Other	4	0	4	7	0	7	0	0	0	7	0	4	19	0	15
<b>GRAND TOTAL</b>			171	52	223	63	4	67	41	7	48	557	26	542	832	89	880
% distribution of executive staff			19.4%	5.9%	25.3%	7.2%	0.4%	7.6%	4.6%	0.8%	5.5%	63.3%	3.0%	61.6%	94.5%	10.1%	100.0%
% directorship only			13.0%	2.5%	15.5%	5.6%	0.0%	5.6%	5.6%	0.6%	6.2%	71.4%	1.2%	72.7%	95.7%	4.3%	100.0%
<b>Total employment</b>			<b>4,571</b>	<b>2,525</b>	<b>7,096</b>	<b>973</b>	<b>746</b>	<b>1,719</b>	<b>761</b>	<b>486</b>	<b>1,248</b>	<b>9,387</b>	<b>3,472</b>	<b>12,859</b>	<b>15,692</b>	<b>7,229</b>	<b>22,921</b>
<b>Executive Staff as % of total employment</b>			<b>3.7%</b>	<b>2.1%</b>	<b>3.1%</b>	<b>6.5%</b>	<b>0.5%</b>	<b>3.9%</b>	<b>5.4%</b>	<b>1.5%</b>	<b>3.9%</b>	<b>5.9%</b>	<b>0.7%</b>	<b>4.2%</b>	<b>5.3%</b>	<b>1.2%</b>	<b>3.8%</b>

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**End of report**

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