

# ATI Research Note

## Making inroads into South Africa's unemployment conundrum?

*Cecil H. Morden*

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Unemployment over a sustained period is damaging, not only to one's sense of self-worth and dignity, but high levels of unemployment can also be a major contributing factor to social instability and the decay of the social fabric.

The significant level and also rate of unemployment in South Africa is casting a shadow over the political and economic advances since the dawn of our democracy in 1994. During the ten-year period between 2009 and 2018 the South African economy created 1 809 000 additional jobs (both formal and informal). However, during the same period, the number of unemployed rose by 1 857 000 and the number of discouraged work seekers increased by 1 660 000.

The reasons for this underperformance are many: from what some have described as ten wasted years, to the scourge of state capture, ever increasing levels of corruption (in both the public and private sectors), the wastage of scarce state resources, mismanagement and incompetence at all levels of government, but especially at local government level, problems at key State Owned Enterprises, an education system that is struggling to deliver on the promises of quality education, a public health system that is under severe strain, policy uncertainties, low levels of business confidence, and a decline in trust in many public institutions. The net result was a very disappointing average economic growth rate of just 1.55 percent per year between 2009 and 2018. The global financial crisis in 2008, which resulted in the worldwide great economic recession and contributed to the economic recession in South Africa in 2009, has also not been helpful.

Some argue that the high numbers of semi-skilled migrants from the rest of the African continent and some parts of Asia might exacerbate the unemployment crisis in South Africa, the perception being that such, mostly undocumented, migrants heighten the competition for the limited employment opportunities for local unskilled and semi-skilled workers. Reference is also made to many instances where foreign nationals have virtually taken over most of the informal trade in many townships across South Africa.

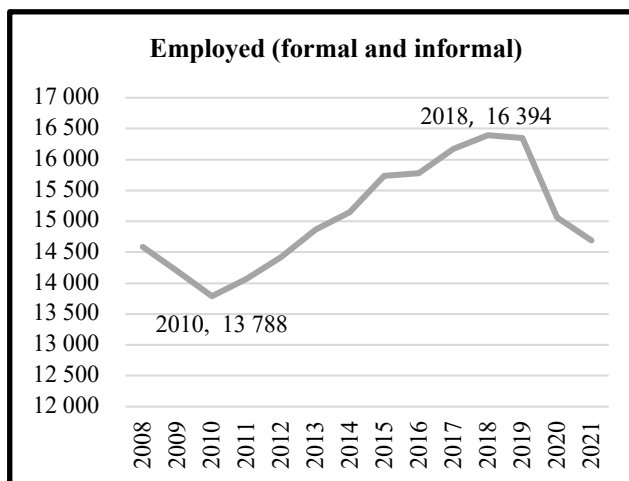
The realisation of the promise of a new dawn post 2017, following the election of President Cyril Ramaphosa as leader of the ANC and subsequently as President of the country, seems to have been kicked down the road. The economy grew by only 0.11 percent in 2019 and measures to help deal with the Covid-19 health pandemic resulted in a substantial contraction of the economy during 2020 (see Table 1 and Figures 1 to 4). Despite a relative robust economic recovery in 2021 the real level of GDP in 2021 (at 2015 prices) was still below the level achieved in 2018. On the jobs front the picture was even more depressing. The number of people in employment declined by 1 703 000 (a change of -3.59 percent per year) between 2019 and 2021. The net result was that the number employed (in both the formal and informal sectors) in 2021 stood at 14 691 000, only 106 000 more compared to the total employed in 2008, which stood at 14 585 000. Over the three-year period 2019 to 2021 the number of unemployed increased by 1 555 000 (or 7.86 percent per year) and the number of discouraged workers increased by 723 000 (or 7.94 percent per year). The average official unemployment rate for 2021 was 34.3 percent. This is an alarming picture and risks undermining the foundations of our emerging democracy.

**Table 1 Employment Trends, 2008 to 2021**

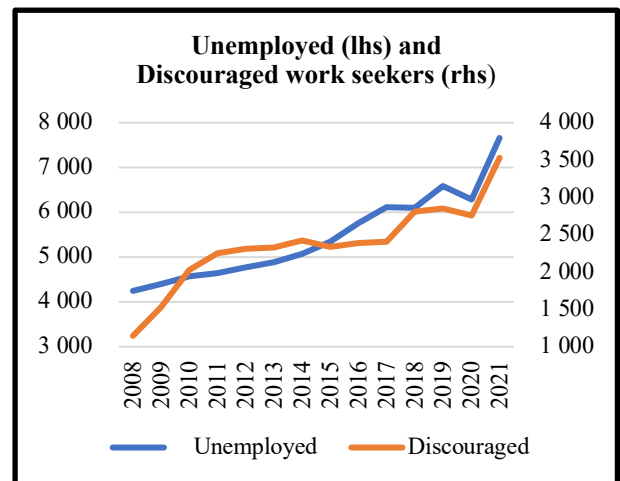
A. Level ('000)	Real GDP	Employed	Unemployed	Discouraged
2008	R3 916 817	14 585	4 246	1 146
2018	R4 568 670	16 394	6 103	2 806
2021	R4 489 975	14 691	7 658	3 529
B. Change ('000)				
2008 to 2018	R651 853	1 809	1 857	1 660
2018 to 2021	<b>- R78 695</b>	<b>- 1 703</b>	1 555	723
2008 to 2021	R573 158	106	3 412	2 383
C. Change (%)				
2008 to 2018	16.6	12.4	43.7	144.9
2018 to 2021	-1.7	-10.4	25.5	25.8
2008 to 2021	14.6	0.7	80.4	208.0
D. Change (% p.a.)				
2008 vs 2018	1.55	1.18	3.69	9.37
2018 vs 2021	-0.58	-3.59	7.86	7.94
2008 vs 2021	1.06	0.06	4.64	9.04

Source: Own calculations

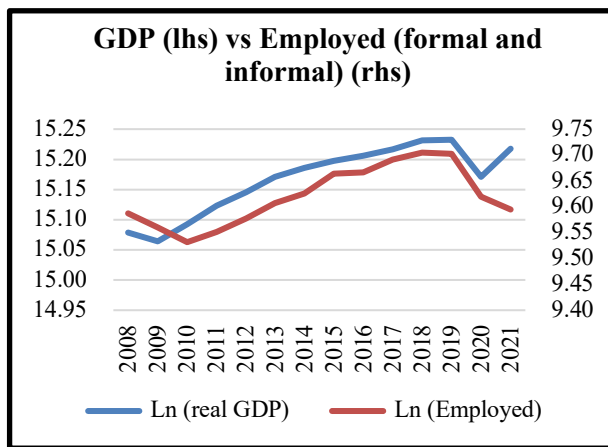
**Figure 1 Employed, 2008 to 2021**



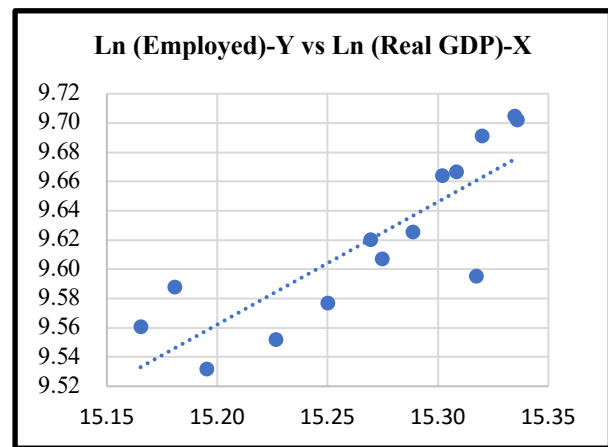
**Figure 2 Unemployed and discouraged work seekers, 2008 to 2021**



**Figure 3 GDP versus employed (formal and informal)**



**Figure 4 Logarithm of total employed versus real GDP annual data, 2008 to 2021**



The transparent nature of the State Capture (Zondo) Commission (with all its shocking revelations), and efforts to rebuild the capacities of key state institutions such as the National Prosecuting Authority (NPA) and the South African Revenue Service (SARS) might have begun the process of rebuilding trust in such government institutions. This should also help restore confidence and encourage increased levels of investment to support higher levels of economic growth.

### **Making sense of the dismal employment and unemployment trends**

On the supply side a quality educational system able to provide the pipeline of skilled workers as required by the economy is necessary and high rates of real economic growth is the key determinant of the demand for workers. Over the period 2009 to 2021, it is estimated that (on average) a one percentage change in real economic growth resulted in an average change of between 0.75 and 0.85 percentage points in employment. *Assuming the upper figure (coefficient) of 0.85, it would require sustainable (green) economic growth of 5 percent per annum for a period of ten years in order to create the 7 658 000 jobs (over the ten-year period) that would eliminate the total unemployment recorded in 2021.* However, given the natural increase in the labour force the level of unemployment would still be at least around 3 150 000 at the end of this ten-year period (about 12.5 percent of the updated labour force); although still high, this would be a significant improvement on the current crisis. To make any dent in the rising number of discouraged work seekers (not counted as part of the labour force – i.e., not economically active) would require even faster economic growth and significant efforts to upskill many of these discouraged work seekers.

Although a theoretical construct, and indeed aspirational, especially given the subpar economic growth recorded since 2008, international examples of a number of emerging economies suggest that an annual growth rate of 5 percent per year over a decade should not be beyond the bounds of possibilities. The candid observation about South Africa by Martin Plaut and Paul Holden in 2012 that: “The country remains solvent and on a path towards

steady if unspectacular growth, but the scourge of mass unemployment remains unresolved”,<sup>1</sup> still haunts us (even more so) a decade thereafter. Yet, it does not have to be an inevitable trajectory for the years ahead.

### Sectoral analysis

For macroeconomic statistical purposes the economy is broadly divided into nine sectors: (1) Agriculture, Forestry & Fisheries; (2) Mining & Quarrying; (3) Manufacturing; (4) Utilities (electricity, gas & water); (5) Construction; (6) Trade (wholesale, retail & accommodation); (7) Transport, Storage, & Communication; (8) Finance; and (9) Community & Social Services (Government & NGOs).

The four largest sectors in terms of their share of employment are Community and Social Services, Trade, Finance and Manufacturing. Over the period 2008 to 2021 these respective sectors on average accounted for 30.3, 21.1, 14.1 and 11.8 percent of total employment. Construction and Agriculture are the two most employment-intensive sectors, respectively employing 8.9 and 7.9 employees for every R1 million of their sectoral output over the period 2008 to 2021. They however accounted for only 8.3 and 5.2 percent of total employment during this period (see Table 2).

**Table 2 Percentage share of employed and number of employees per sectoral output**

	Average 2008 to 2021		2021	
	Employees per sectoral output (Rmn)	% of Employed	Employees per sectoral output (Rmn)	% of Employed
Agriculture	7.90	5.2	6.49	5.7
Mining	1.81	2.6	1.73	2.6
Manufacturing	3.28	11.8	2.69	9.6
Utilities	1.03	0.8	0.99	0.7
Construction	8.97	8.3	10.34	7.8
Trade	6.02	21.1	5.61	20
Transport	2.63	6.0	2.83	6.4
Finance	2.33	14.1	2.27	16.3
Community (2)	4.71	30.3	4.25	30.9

Although there was a relatively robust statistical relationship between changes in aggregate real output and changes in the aggregate levels of employment over the period under consideration, on a sectoral basis such robust relationships were only observed in three sectors: Finance, Community and Social Services, and Transportation, Storage and Communication (see Table 3). The statistical (regression) result for the Agriculture sector was reasonable although not very robust. For the other five sectors the regression results were statistically weak. This means that it is considerably more difficult to estimate changes in the number of people that will be employed in these five sectors as a result of changes in real output levels in these sectors. Employment in the manufacturing sector has been on a consistent decline and there are no indications that this decline will be halted, while

<sup>1</sup> Martin Plaut and Paul Holden. 2012. *Who Rules South Arica? Pulling the strings in the battle for power*. Jonathan Ball Publishers, p. 348.

employment in the mining sector has been virtually stagnant, despite modest real output growth.

**Table 3 Regression analysis: Employed vs Real Output (GDP/GVA) per Sector, 2008 to 2021, n = 14**

	Adjusted R-square	F-test	Coefficient	T- statistic
Total vs Real GVA (B)	0.676	28.11	0.839	5.30
Agriculture	0.305	6.70	0.486	2.59
Mining	-0.015	0.81	0.722	0.90
Manufacturing	0.014	1.18	0.746	1.09
Utilities	0.007	1.09	-0.746	-1.04
Construction	0.138	3.08	0.459	1.76
Trade	0.028	1.37	0.172	1.17
Transport	0.660	26.24	0.856	5.12
Finance	0.887	103.27	1.304	10.16
Community (1)	0.842	79.48	1.259	8.40
Community (2)	0.758	41.81	0.868	6.47
Total vs Real GDP (M) (Annual) (n = 14)	0.682	28.91	0.839	5.38
Total vs Real GDP (M) Q: saa (n = 56)	0.676	115.73	0.818	10.76

Community (2) = including domestic workers

Q: saa = quarterly, seasonally adjusted annualised

B = basic prices,

M = market prices

Employment levels in the Trade (including Accommodation & Tourism) and Construction sectors should recover in response to revived output growth. Real output and employment in the Construction sector declined substantially between 2018 and 2021, respectively by -8.6 and -8.0 percent per year (see Table 4).

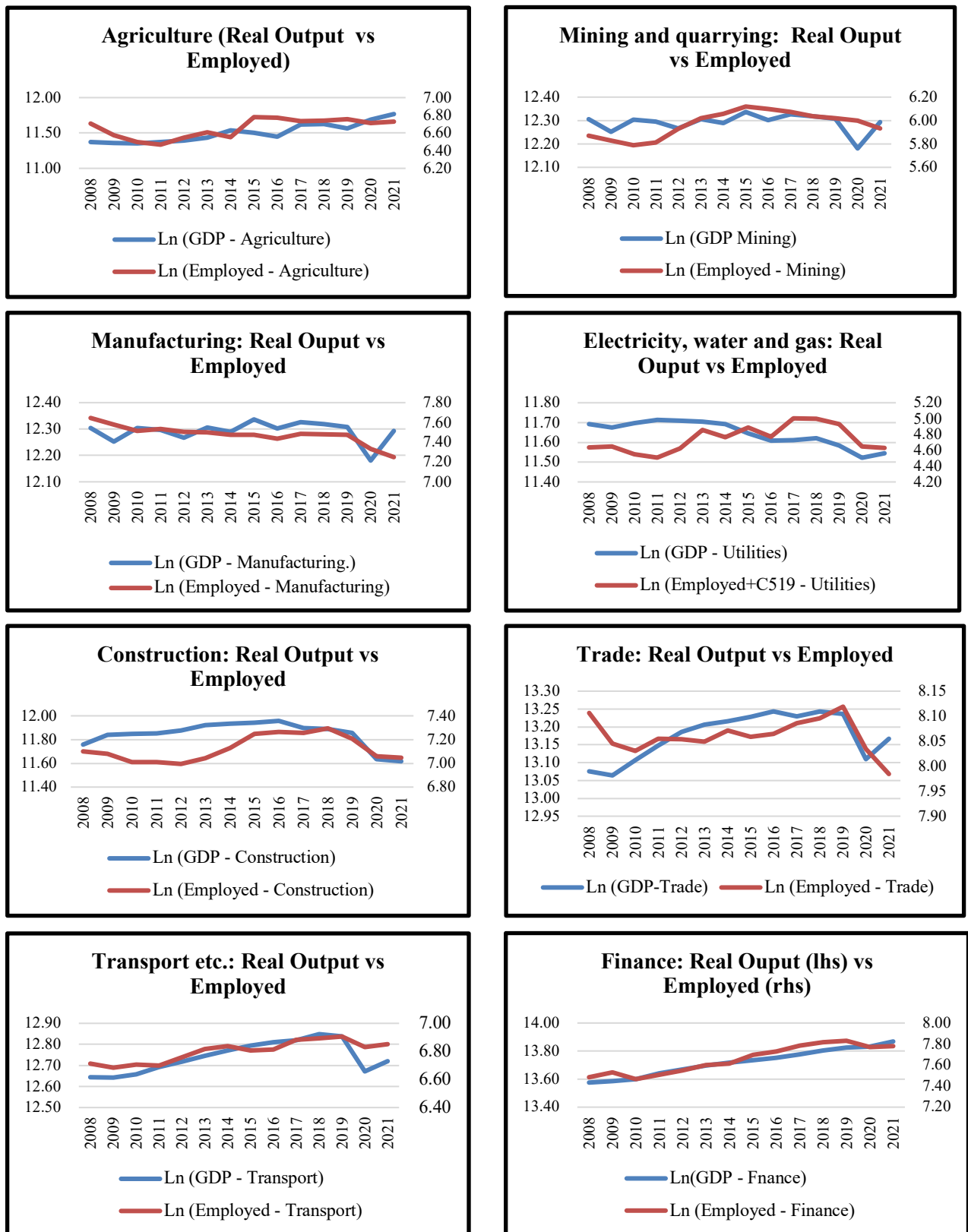
**Table 4 Annual percentage change per year, Real GDP and Employment, 2008 to 2021**

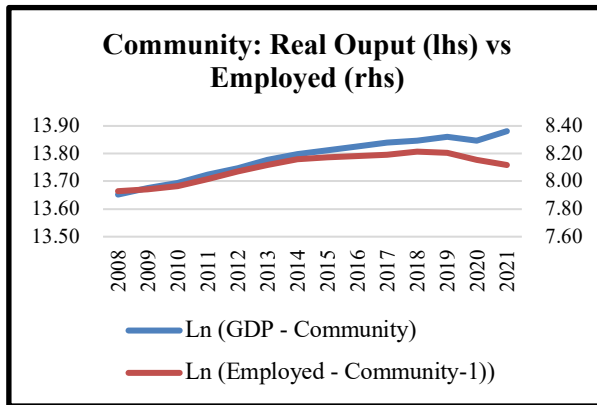
Sector	2008 vs 2018		2018 vs 2021	
	Real GDP	Employed	Real GDP	Employed
Agriculture	2.5	0.2	4.8	-0.3
Mining	0.1	0.6	-0.9	-3.5
Manufacturing	0.2	-3.9	-2.6	-7.3
Utilities	-0.7	-0.1	-2.5	-11.6
Construction	1.3	-0.6	-8.6	-8.0
Trade	1.7	-1.2	-2.5	-3.6
Transport	2.1	1.4	-4.2	-1.3
Finance	2.3	3.0	2.2	-1.2
Community	2.0	1.9	1.2	-3.2
Private Households		-1.0		-3.1
<b>Total</b>	<b>1.5</b>	<b>0.1</b>	<b>-0.5</b>	<b>-3.6</b>

Real output of the utilities sector contracted between 2011 and 2020 whilst employment numbers increased between 2011 and 2015 and declined thereafter. Substantial investments

in renewable energy by independent power producers might be a game changer for this sector.

**Figure 5 Sectoral output versus employment**





### Occupations (type of work)

Statistics South Africa classify the employed into ten broad different types of occupations (jobs). They are, in declining order of their share of employment: (1) elementary workers; (2) sales and services; (3) crafts and related trades; (4) clerks; (5) managers; (6) technicians;<sup>2</sup> (7) plant & machine operators; (8) professionals; (9) domestic workers and (10) skilled agricultural workers (see Table 5).

**Table 5 Share of employed by occupation**

Occupation	Average share (%) 2008 to 2021	Share (%) in 2021
Managers	8.4	9.1
Professionals	5.7	6.6
Technicians (& related professionals)	9.9	8.9
Clerks	10.6	10.0
Sales and services	15.2	15.8
Skilled agriculture	0.5	0.4
Craft and related trade	12.1	10.7
Plant and machine operators	8.4	8.5
Elementary workers	22.6	24.0
Domestic workers	6.5	6.0

Of the ten groups of occupations, managers, sales and services, and elementary workers report the most robust statistical relationship between changes in the overall level of real GDP and changes in the number of employed (see Table 6). Higher levels of economic growth will result in higher levels of employment in these occupations. Professionals, clerks, and plant and machine operators report more modest positive statistical relationships between changes in the overall level of real GDP and changes in the number of employed. The regression results for technicians and skilled agricultural workers were negative. The decline in the number of technicians (and related professionals) since 2013 seems to be particularly worrisome. In the case of crafts and related trades, and domestic workers, the statistical results are not significant.

<sup>2</sup> The tasks performed by **Technicians (and associated professionals)** usually include undertaking and carrying out technical work connected with research and the application of concepts and operational methods in the fields of physical science including engineering and technology, life science including the medical profession, and social science and humanities. International Labour Organization. 2012. *International Standard Classification of Occupations (ISOC-08)*, Volume 1, p.169.



**Table 6 Regression analysis: Employed vs real output (GDP & GVA) per occupation (2008 to 2021, n=14)**

	Adjusted R-square	F-test	Coefficient	T- statistic
Managers	0.8774	94.02	1.68	9.70
Professionals	0.3897	9.30	1.02	3.05
Technician (& related professions)	0.2887	6.28	-0.76	-2.51
Clerks	0.3711	8.67	0.64	2.94
Sales and services	0.8653	84.53	2.01	9.19
Skilled agriculture	0.5312	15.73	-2.49	-3.97
Craft and related trade	-0.0567	0.30	0.22	0.55
Plant and machine operators	0.3771	8.87	0.50	2.98
Elementary worker	0.7335	36.79	1.33	6.07
Domestic workers	-0.0769	0.07	-0.07	-0.27

### Summary

*In order to make any meaningful dent into the high level of unemployment in South Africa, the economy should grow by at least 5 percent per year for a continuous period of at least ten years. Even if this rate of sustained economic growth is achieved it will not fully address the complexities with respect to the increasing numbers of discouraged workers. Concentrated efforts to upskill many of the discouraged workers and equip them with more relevant hard skills and important soft skills to help them (re-)enter the formal work environment will be required. At the same time the quality and relevance of the educational outcomes at both the basic and higher educational levels should be improved and continuously (re-)assessed.*

As the economy grows, it is more likely that new jobs will be created in the Finance, Community and Social Services, and Transportation, Storage and Communication sectors. The Construction and Agriculture sectors should also be able to generate additional jobs, though at a slower rate. New jobs in the other four sectors will be more modest although the Trade (and accommodation, which includes much of Tourism) sector should be able to perform much better than during the recent past.

Based on a statistical analysis of recent historical data the managerial, sales and services, and elementary occupational categories are likely to add most of the new jobs as the economy recovers. The occupational categories for professionals, clerks, and plant and machine operators should also add new jobs. The opportunities for new jobs in the occupational categories for crafts and related trades, domestic workers, technicians and skilled agricultural workers might be very limited or are less clear.