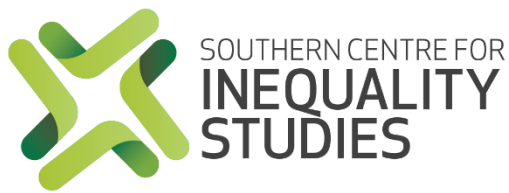


Rethinking Economic Policy for South Africa in the Age of Covid-19:
Innovative policy responses for the post-lockdown Phase

Understanding the Effects of the COVID-19 Pandemic on the South African Labour Market

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Understanding the Effects of the COVID-19 Pandemic on the South African Labour Market

by

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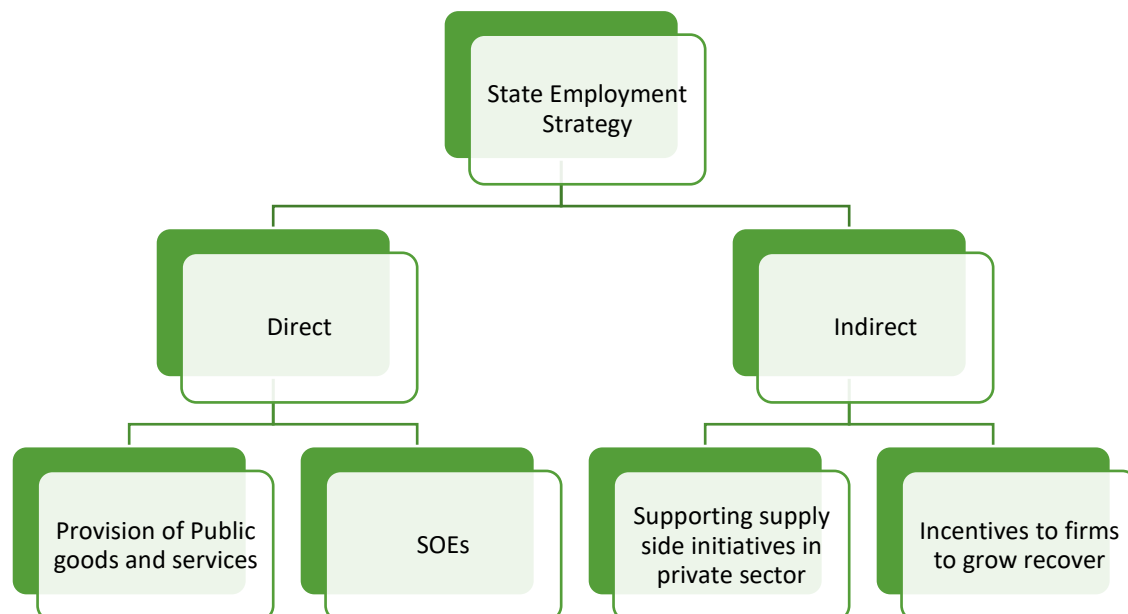
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Executive Summary

Unemployment in South Africa is a chronic problem which the Covid-19 pandemic has further exacerbated. Unemployment, by the broad definition, is around 50%. This is almost unprecedented in the developing world, and calls for radical action. In this paper we review South Africa’s post-apartheid employment trajectory, and provide a framework for thinking about employment policy.

The crisis has made urgent a number of chronic problems in the South African labour market, and raised a number of important questions. Which sectors will be affected the most by the pandemic over the medium term? Where have the most jobs been lost? Where should we look and how should we think about solutions? This paper aims to draw on an analysis of sectoral employment, and a range of literature to flag sectors that are of concern with regards to employment dynamics. This will be useful in identifying the sectors of the economy that are employment intensive in the post-Covid economic reconstruction, and identifying sectors that may require targeted support in response to the shock.

Figure 1: Thinking about employment policy



The severity of this problem is acknowledged widely, and the pandemic has bolstered the status of the National Economic Development and Labour Council (NEDLAC) in negotiating economic policy among organised labour, business and the state. Employment is such a central issue that South African president Cyril Ramaphosa asserted that “our success in responding to this unprecedented crisis will be measured by the speed of our labour market recovery,” (Ramaphosa, 2020).

Despite the depth and urgency of the employment crisis that South Africa finds itself in- and numerous employment strategies- unemployment levels have increased over the last ten years. This paper outlines the changes in the South African Labour market over the past decade, presenting a brief analysis of the Covid-19 effectuated employment impacts. Finally, we codify the various employment strategies in existing literature and policy to illustrate the different ways that a post-Covid employment reconstruction can be conceptualised.

Table 1: Typology of economic policy

	Developmental	Non-Developmental
Positive Employment Impact	A.) Complexity approach - Aimed at manufacturing sector - Emphasizes goods with relatively higher employment elasticity of growth	B.) Support for goods/sectors that have high employment-to-output.
Neutral/Negative Employment Impact	C.) Manufacturing-led growth model	D.) South Africa status quo?

South Africa is currently in block D, where employment and economic policy strategy has been neither developmental nor had a meaningful impact on employment. There is a range of reasons for this based on institutional, and political-economy constraints. Block C represents the standard approach that takes an industry level approach to industrialisation and development but is no longer employment intensive at the aggregated level. The aim is to reach a point at which employment is created within a development paradigm in block A. This will require addressing the current crisis by retaining, and regaining lost employment over the period of the pandemic. In material terms this requires supporting firms that have been drastically impacted, and foregrounding firms that have high employment-to-output ratios. Focusing incentives on firms that are employment intensive is an appropriate approach to the Covid-19 moment. While it is widely accepted that employment is lost in the short term, and regained in the long term (and at higher levels sometimes) as a result of creative destruction and innovative technical change, the job loss in the case of Covid-19 does not fit into this conception of short term job loss for eventual long term improvements in productivity, output and employment, because the exogenous shock is not related to technological advancements. The market will not respond in a time-efficient manner to the shock, in a way that accelerates damage incurred to aggregate demand and employment loss.

The ideal response to this shock in the immediate term falls into block B, until the efficient returns to this strategy have reached their aim of employment retention. Subsequently policy makers would be wise to shift the incentive tools available to the complexity approach in block A. Simply: the ideal

approach would be to move to point A once point B has been exhausted. The determinants of when point B has been exhausted requires further analytical work. The value of this codification is that it suggests a blueprint for crisis of this nature that may arise in the future.

However, the economic damage caused by COVID-19 and the lockdowns are uncertain, and it will take a several months, indeed years, to have a better understanding of where the damage has occurred and how severe it is. We need to keep a close eye on all aspects of the labour market so that policy responses can support those most in need. In the medium to long term, we will need a new social compact that ensures that the economic damage from Covid-19 is not borne disproportionately by the poor. Such a social compact will have to address policies that raise the incomes of the poor – both through labour market and fiscal measures. South Africa needs to start an urgent conversation not only about the costs of Covid-19 but also about how the economy is likely to transition and who will benefit from that transition.

If the solidarity and social commitment to ending divisions in our society is to be taken seriously beyond the pandemic, the manner in which these labour market trends will impact on inequality must be considered. There is no natural mechanism or economic law that reduces inequality. Reducing inequality relies on policies of redistribution either directly through structural changes leading to employment growth, higher wages or fiscally through taxation, with both requiring development policies that ensure that the benefits of growth accrue disproportionately to low-income groups. Given the conditions of the moment we find ourselves in, an increase in employment or wages is unlikely given the economic downturn and loss of employment. We are also in a highly constrained fiscal position, which limits the ability to pursue redistributive policies through the fiscus.

Introduction

Context and background

The impact of Covid-19 has had wide ranging impacts on societies and economies around the world. This is true for South Africa, with concerns over the economic implications amplified by an already straining pre-crisis economy. A major concern is around the effect on employment. South Africa has one of the highest unemployment rates in the world, and early indications suggest that the pandemic will exacerbate this. This level of unemployment is above that of the average in emerging markets, and is coupled with the highest level of inequality in the world.

The crisis has made urgent a number of chronic problems in the South African labour market, and raised a number of important questions. Which sectors will be affected the most by the pandemic over the medium term? Where have the most jobs been lost? Where should we look and how should we think about solutions? This paper aims to draw on an analysis of sectoral employment, and a range of literature to flag sectors that are of concern with regards to employment dynamics. This will be useful in identifying the sectors of the economy that are employment intensive in the post-Covid economic reconstruction, and identifying sectors that may require targeted support in response to the shock.

A focus on high-level employment dynamics can obscure important variation. Certain sectors can drive employment growth (Berry and Pleic 2009:7). making an industry-level analysis pertinent, when considering the need for labour intensive economic growth in a post-Covid economy. South Africa aspires to high employment growth, thus making information on industry specific dynamics useful for crafting policy.

Ensuring a higher level of employment is vital for a number of reasons. The first is that additional employment leads to income that provides a higher standard of living for households that either have no employment or rely on social grants. The second is that the unemployed portion of the workforce represents a massive source of potential value through their labour that is simply dormant. This is an important pool of potential economic value that would improve the general level of output, with a multiplicity of positive feedback loops, such as higher aggregate demand and resulting fiscal stability.

Finally, employment is important for the health of a society, as a source of meaning and dignity for the employed. The centrality of employment in economic value creation should not overshadow the importance employment in social terms. The unemployment problem is not simply one that represents lost economic value creating potential. It also represents serious social problems that emerge as a result.

Sefalafala (2020) notes that “Unemployment signifies a regime of exclusion in which people are cast outside the boundaries of a hegemonic regime of meaning making. The unemployed often suffer stigma, a diminished sense of confidence and a sense of displacement and worthlessness” (Sefalafala, 2020, p. 3). Further, high and sustained levels of inequality may lead to political instability is heightened in especially unequal societies. The potential deterioration of political and economic institutions resulting from unemployment induced political instability would undermine conditions for economic growth (Stiglitz, 2016, p. 288).

The severity of this problem is acknowledged widely, and the pandemic has bolstered the status of the National Economic Development and Labour Council (NEDLAC) in negotiating economic policy among organised labour, business and the state. Employment is such a central issue that South African president Cyril Ramaphosa asserted that “our success in responding to this unprecedented crisis will be measured by the speed of our labour market recovery,” (Ramaphosa, 2020).

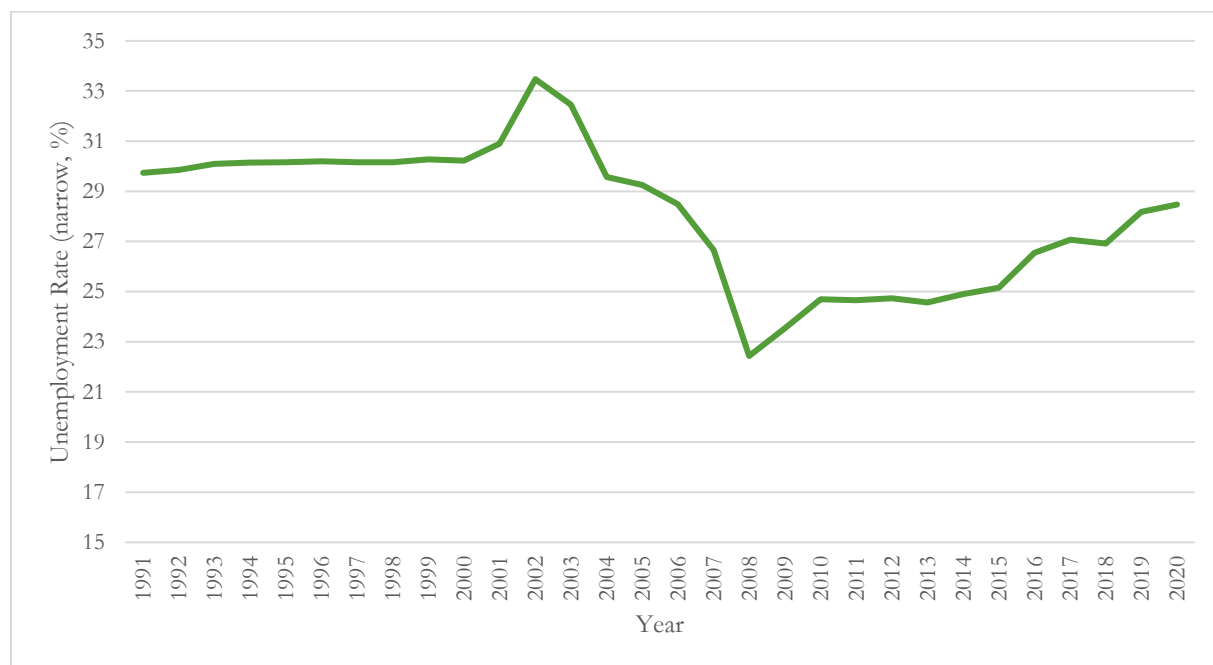
Despite the depth and urgency of the employment crisis that South Africa finds itself in- and numerous employment strategies- unemployment levels have increased over the last ten years. This paper will outline the changes in the South African Labour market over the past decade, presenting a brief analysis of the Covid-19 effectuated employment impacts. Finally, we will codify the various employment strategies in existing literature and policy to illustrate the different ways that a post-Covid employment reconstruction can be conceptualised.

Overview of the SA labour market

Long-term trends and recent data

It is uncontentional that the “triple challenge” of poverty, inequality and unemployment has, at its heart, the South African labour market. Unemployment is a persistent feature of the South African economy, and while it has been worsened significantly by the COVID-19 pandemic and the lockdowns, unemployment has been persistently high for several decades. As illustrated in Figure 2, unemployment according to the narrow definition has remained above 20% in the post-apartheid period. During the resource boom of the early 2000s – a period when the South African economy grew rapidly – unemployment declined from 33% to 23%, but it has risen steadily in the last decade, again reaching 30% by 2020.

Figure 2: Unemployment in post-apartheid South Africa (modelled ILO estimate)



Source: World Bank Data Portal

We do not include the Q2 unemployment rate in Figure 2 – the definitional issues around this calculation obscure the true employment picture. The debate about the definitional issues has highlighted the need to move towards using the expanded definition of unemployment in South Africa due to the large number of permanently discouraged work seekers. By our calculation, the expanded unemployment rate in Q2 2020 is now above 50%. Another way to look at this is provided in Figure 3, which shows total employment between Q1 2008 and Q2 2020. The loss of 2.2 million jobs in Q2 2020 is clearly evident – this decline reverses all net employment growth since 2010.

The extent of the contemporary, pre-Covid-19 problem is evident if we examine some key labour market statistics over the past decade. We use, as reference, the period before the global financial crisis in 2008 (Q1 2008). We compare this to the latest QLFS data. Between Q1 2008 and Q1 2020, the labour force grew by 4.6 million people, while employment grew by 1.95 million. Most strikingly is that, over this period, the unemployed grew by 2.7 million, and there were an additional 1.7 million people who became discouraged work seekers. This means that by March 2020 there were 9.99 million people who were either unemployed or had given up looking for work altogether (Statistics South Africa, 2020).

Table 2: Labour force characteristics

	Q1 2008	Q1 2020
	Thousand	Thousand
Both sexes		
Population 15-64 yrs	31 544	38 874
Labour Force	18 808	23 452
Employed	14 438	16 383
Formal sector (Non-agricultural)	9 934	11 282
Informal sector (Non-agricultural)	2 433	2 921
Agriculture	838	865
Private households	1 233	1 316
Unemployed	4 371	7 070
Not economically active	12 736	15 422
Discouraged work-seekers	1 202	2 918
Other(not economically active)	11 534	12 504
Rates (%)		
Unemployment rate	23.2	30.1
Employed / population ratio (Absorption)	45.8	42.1
Labour force participation rate	59.6	60.3

Source: (Statistics South Africa, 2020)

There is, of course, no definitive single answer to the puzzle of South Africa’s persistently high unemployment. However, it is uncontentional that one of the leading causes has been the country’s poor growth performance which has characterised the post-apartheid period, with the exception of the commodity boom years of the early 2000s.

“Two of the most important lessons gradually learned by the government during the first decade of freedom were that investment dynamics often were not national – rather they were frequently regional and local – and that the manufacturing sector was not ever likely to be a major supplier of jobs in South Africa, though it remained an important dynamo for growth.” (Hirsch, 2005, p. 148)

This continues to be the case. Between March 2008 and March 2020, the manufacturing industry shed 405,000 jobs. The only sectors to add significantly to employment are finance (737,000 new jobs) and community and social services (1.05 million new jobs).

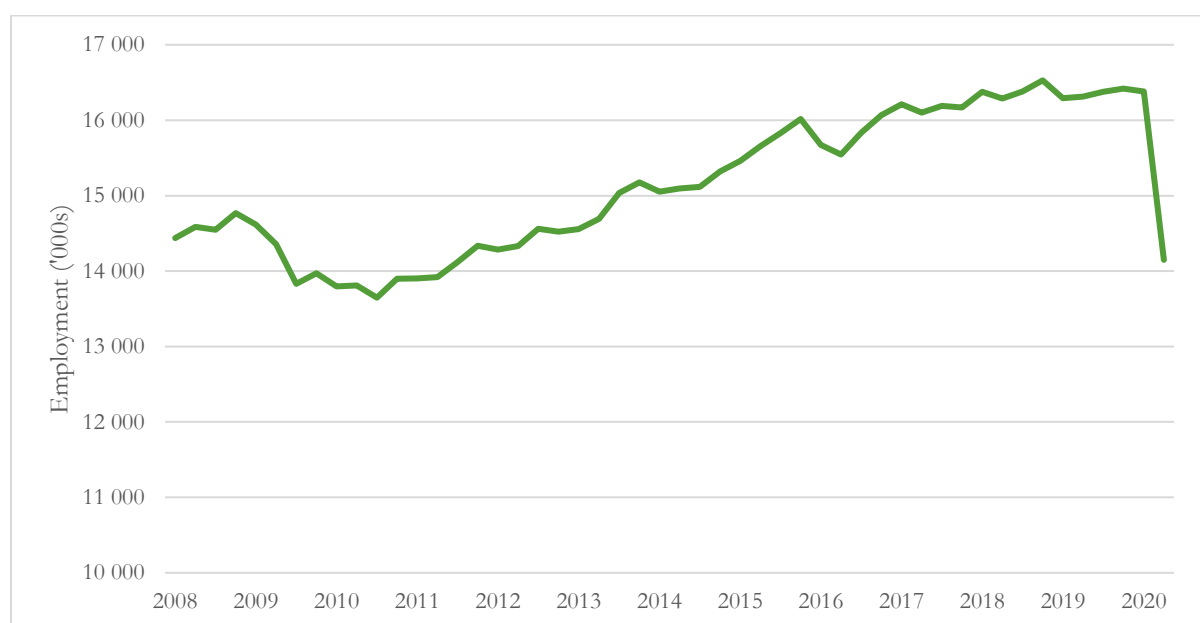
Bhorat (2005) argues that the post-apartheid labour market has been deeply affected by the long-run effects of both structural shifts and technological change locally (Bhorat, 2005, p. 6). Structural shifts are evidenced in the shift from the primary extractive industries to the services industry. The microelectronics revolution and increases in the capital-labour ratios are the reflection of the technological changes. Bhorat explains that this has resulted in increased demand for highly skilled workers, at the same time as large-scale attrition at the bottom-end of the labour market. This is all underpinned by a low growth rate of 1,39% between 2009-2019, which negatively impacted on the ability of the economy to create employment.

Effect of lockdown on employment

The economic shock from the pandemic and the lockdown is causing a reconfiguration in the labour market. Many people have lost jobs, but many will find new ones, too. This has been a common dynamic in labour markets since the industrial revolution. But the new jobs might pay less, or be more precarious, or more dangerous. Given the structural nature of the shock, the changes to the labour market will not be random, and may affect certain groups more than others. Low to medium skilled workers are more likely to be employed in lower paying, more precarious forms of work. And there is increasing evidence that the sectors hardest hit will be those that employ a large proportion of women (Casale and Posel, 2020).

While we must treat the latest data with caution, the most recent quarterly labour force statistics do give some insight into the extent of the turmoil in the labour market. Between March and June 2020, total employment declined by 2.2 million people, as illustrated in Figure 3: Employment in South Africa 2008-2020.

Figure 3: Employment in South Africa 2008-2020



Source: (Statistics South Africa, 2020)

As with previous economic crises (Rogan, 2016), the informal economy in South Africa has been particularly hard hit. Formal-sector employment declined by 10.8%, while informal sector employment declined by 21.9%. While definitional issues mean that the narrow unemployment rate declined to approximately 23%, by our estimates the expanded unemployment rate is now 53%. Unemployment is fast becoming the dominant economic problem. Table 3 includes the latest results from the quarterly labour forces survey (QLFS), which gives an indication about the significance of the COVID-19 pandemic and the lockdown on the labour market. These data have prompted furious debate, and at the time of writing it is too early to use them as a definitive measure of the current state of the labour market. Much like the GDP data, they reflect a significant economic shock, but the more permanent effects will become visible in subsequent quarters.

Table 3: Impact of Covid-19 and lockdown on SA labour market

	Q1 2020	Q2 2020
	Thousand	Thousand
Both sexes		
Population 15-64 yrs	38 874	39 021
Labour Force	23 452	18 443
Employed	16 383	14 148
Formal sector (Non-agricultural)	11 282	10 064
Informal sector (Non-agricultural)	2 921	2 280
Agriculture	865	799
Private households	1 316	1 005

Unemployed	7 070	4 295
Not economically active	15 422	20 578
Discouraged work-seekers	2 918	2 471
Other(not economically active)	12 504	18 107
Rates (%)		
Unemployment rate	30.1	23.3
Employed / population ratio (Absorption)	42.1	36.3
Labour force participation rate	60.3	47.3

Source: (Statistics South Africa, 2020)

Table 4: Employment changes by industry

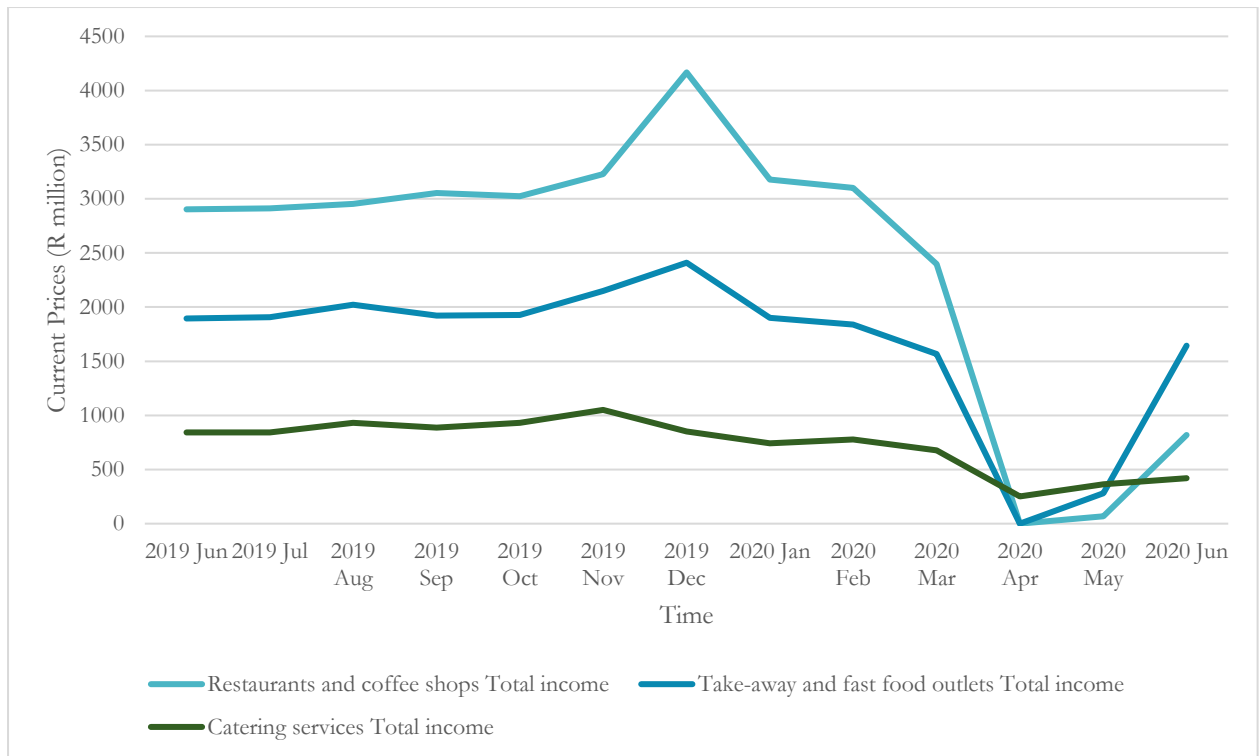
	Q1 2008	Q1 2020	Q2 2020	Change Q1 2008 - Q1 2020	%	Change Q1 2020 - Q2 2020	%
	Thousand	Thousand	Thousand				
All employment	14 438	16 383	14 148	1 945	13%	-2 234	-14%
Agriculture	838	865	799	27	3%	-66	-8%
Mining	353	436	373	83	24%	-63	-14%
Manufacturing	2 111	1 706	1 456	-405	-19%	-250	-15%
Utilities	102	116	113	13	13%	-3	-2%
Construction	1 181	1 343	1 066	163	14%	-278	-21%
Trade	3 319	3 320	2 946	1	0%	-373	-11%
Transport	808	995	885	187	23%	-110	-11%
Finance	1 780	2 517	2 234	737	41%	-283	-11%
Community and social services	2 714	3 759	3 244	1 045	38%	-515	-14%
Private households	1 233	1 316	1 005	83	7%	-311	-24%

Source: (Statistics South Africa, 2020)

Before the data was available, we predicted that the changes to the labour market will not be random, and may affect certain groups more than others (Francis, Ramburuth-Hurt and Valodia, 2020). Low to medium skilled workers are more likely to be employed in lower paying, more precarious forms of work. An SA-TIED (2020) paper uses a social accounting multiplier model, based on input-output tables and endogenizing more linked economic actors than just industries, to estimate the potential effect of the pandemic on industries with assumptions on the extent of the decline given their interactions. The found that the negative impact on employment is proportionately bigger for lower educated workers (Arndt *et al.*, 2020, p. 11). Results from the first two waves of the NIDS-CRAM survey found that women had been disproportionately affected and accounted for 2 million of the 3 million jobs lost by mid-April 2020 (Casale and Posel, 2020).

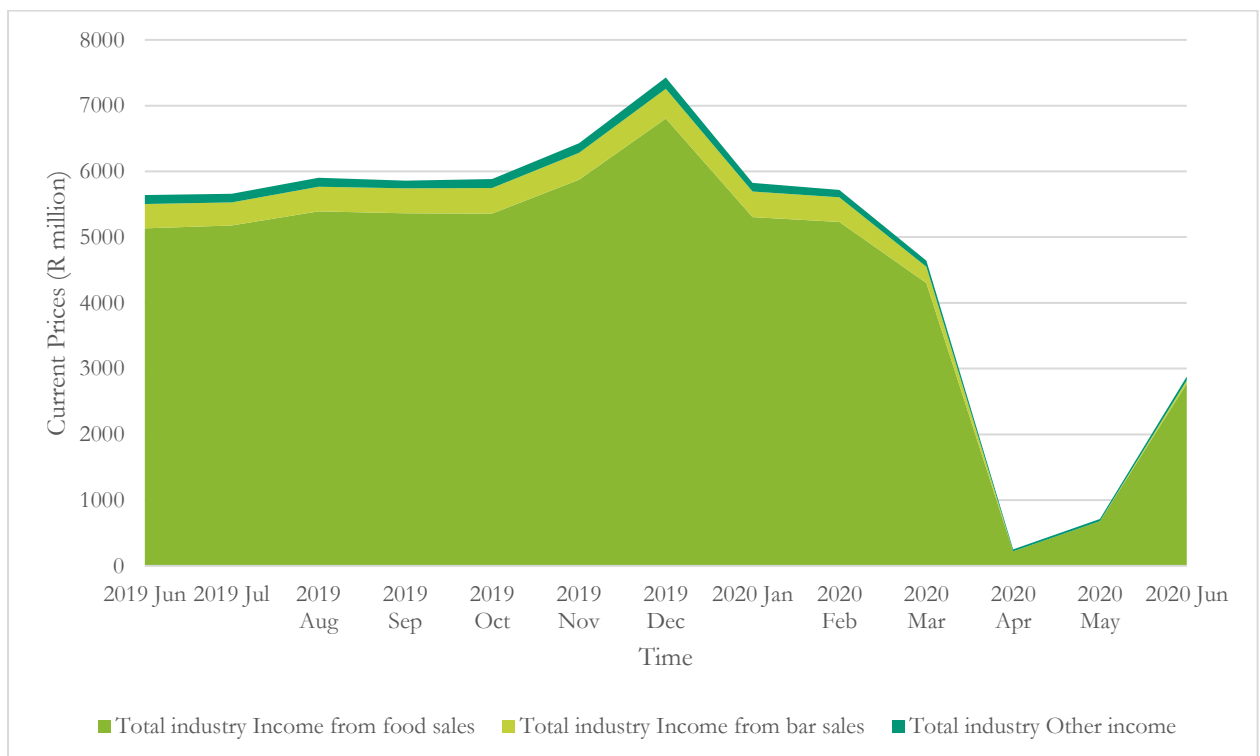
One industry that suffered in particular was the Restaurants, catering and take-away sector, as shown below seen below. The industry suffered a precipitous decline from mid-February 2020, and has yet to recover to pre-crisis levels.

Figure 4: Total Income - Restaurants, Catering and Take-Away



Source: (Quantec 2020)

Figure 5: Total Income: Food, Bar and Other Sales



Source: (Quantec 2020)

More broadly, income support was offered through the state-administered Unemployment insurance fund during the height of the pandemic. Media reports suggest that the Unemployment Insurance Fund's (UIF) Covid-19 Temporary Employment Relief Scheme (TERS) received 456, 698 valid applications representing 4, 447 722 employees to whom would cumulatively receive R28 billion for those workers in distress with compensation between 38% and 60% for lost earning (Fray, 2020). Despite this support, Statistics South Africa (Stats SA) recorded annualised decrease of final household consumption by half at the height of the lockdown (Statistics South Africa, no date, p. 5).

Coming changes in the South African labour market

But a focus on the unemployment rate alone means we miss many other important changes which might be occurring in the labour market. Here we highlight four areas of the labour market which will require scrutiny in the coming months as South Africa attempts to recover from the Covid-19 pandemic: the informal economy, turbulence in the labour market, gender and work and increasing capital intensity.

Before the pandemic, there were about 5 million people working in the informal economy. The orthodox view in development economics on the effect of economic crises is that informal employment acts as a shock absorber for the formal economy; when someone loses a formal job, they take up informal work. The argument is that there are no barriers to entry to informal work, so workers will simply move into this part of the economy and undertake some informal activity. In South Africa, the evidence is that this is largely not the case. This is due to the very low absorption rate of labour of both the formal and informal sectors. Different to other developing countries, South Africa has both very high unemployment *and* relatively low informal employment. About 30% of workers in South Africa are informally employed, while the global average is more than 60%.

There is good reason to believe that the informal economy, rather than being a shock absorber, could well have proportionately larger employment losses in South Africa. For example, following the 2008 crisis Mike Rogan found that both the formal and informal sectors contracted (by 4% and 7% respectively), suggesting that the informal economy does not absorb those who lose their formal jobs (Rogan, 2016). In the current crisis this is exacerbated by the design of the lockdown and physical distancing protocols which have had a particularly severe impact on the informal economy. It is therefore important to understand what effect the lockdown, and behavioural changes in response to the virus, has had on the informal economy and informal employment. Early evidence from the QLFS suggests that the informal economy has once again been hardest hit. The informal sector shed almost 22% of its workforce between Q1 and Q2 2020, compared to 10% for the formal sector (Statistics South

Africa, 2020). Any economic policy responses must take the informal economy into account, and provide support where possible.

The second area which we need to watch is the nature of job churn. This requires looking deeper than the headline figures and into the nature of job changes. The economic shock from the pandemic and the lockdown will cause a reconfiguration in the labour market: many people will lose jobs, but many will find new ones, too. This has been a common dynamic in labour markets since the industrial revolution. But the new jobs might pay less, be more precarious, or more dangerous. Given the structural nature of the shock, the changes to the labour market will not be random, and may affect certain groups more than others. Low to medium skilled workers are more likely to be employed in lower paying more precarious forms of work; and there is a concern that the sectors hardest hit are also those that employ a large proportion of women. Evidence from other countries suggests that, unlike in previous recessions where men lose proportionately more jobs, the current crisis is affecting women disproportionately. It is a salient task to focus on which kind of jobs will be lost, who will be most affected, and where opportunities exist to create employment opportunities.

The third aspect is gender and work. Women in the South African labour market continue to suffer higher unemployment, lower wages, and more precarious working conditions than men. Indeed, women earn less than men, in general, even when they do the same job. As we noted above, there is growing evidence that the current crisis will affect women disproportionately in the labour market. There is also uncertainty about how the lockdown has affected the distribution of unpaid work in the household – a burden which falls disproportionately and unfairly on women. It is critical that our policy interventions are developed with these gender considerations from the beginning to ensure that we address, rather than exacerbate, gender inequalities in our labour market.

The fourth important labour market issue to consider is capital intensity in the economy. South Africa has seen a general trend toward capital intensive production. While the substitutability between capital and labour will depend on the specific sector, we will see an acceleration of this general trend due to physical distancing requirements in our offices and factories that will make automation more attractive for firms. Physical capital, technology and labour can be combined in different proportions by a firm to increase or maintain the same amount of production. But in a country like South Africa, with very high unemployment, increasing capital intensity will further increase unemployment, and undermine the prospects of labour-intensive growth. This change will not be instantaneous but will likely unfold over the next months and years. An increasing capital-to-labour ratio in production is an important consideration not only because of its effect on unemployment, but also on how the increasing shift towards capital intensity will increase existing inequalities. One way this will occur is through the rising portion of value that is generated by capital that will be claimed by the relatively small number of

owners of capital. This is a common driver of long-term inequality that persists if it is not countered by redistributive policies.

Labour intensity in the SA economy

As we have argued above, chronic unemployment is an enduring feature of the South African economy. In order to better understand why this is the case, and to think about policy solutions, we now turn to a discussion about labour intensity and the employment elasticity of economic growth. This is important, because as we argue in this paper, South Africa's employment strategy, to the extent that one exists at all, is premised on a growth-employment relationship which is difficult to observe empirically.

Employment Elasticity of Growth

One of the valid critiques of employment elasticities of growth is that there is a two-way relationship between labour used in an economy and the growth of an economy, given that the uptake of labour influences both the demand and supply sides of an economy. *Okuns Law* is the statistical relationship between unemployment and output:

$$\Delta Un = \alpha - \beta \times \Delta Y$$

α is an intercept coefficient and β is the elasticity of unemployment rate with respect to output. The ratio α/β is the minimum level of output growth needed to reduce the unemployment rate given labour force and labour productivity.

An *et al.*, (2019) explain that Okhun's Law has mixed empirical results, holding in only half of developing countries in a recent IMF study, and refer to the work of Ball, Leigh and Loungani, (2017) who found in a larger sample of countries that labour markets are less responsive to changes in output in emerging economies than in advanced economies. An *et al.* (2019) found employment growth decelerations to generally be associated with reductions in GDP growth, although employment growth accelerations were not associated with increases in GDP growth. This alludes to the discussion on 'jobless growth' which is pervasive in the South African policy discourse.

In a number of cross-country studies employment elasticity has been typically positive (Kapsos, 2005; Crivelli, Furceri and Toujas-Bernate, 2012) and there is definitive evidence of correlation. However, if an argument for causality is to be made, as described by Slimane, (2015) the employment elasticity can

be calculated in the theoretical context of a demand side approach (Moren and Wandal, 2019, p. 3). This is supported by Borat (2005) who emphasizes that demand for labour is a derived demand for labour, as growth in jobs is causally linked to the growth in output. In other words “poor economic growth will ultimately (controlling for factor ratios) deliver a poor growth in employment (Bhorat, 2005, p. 8).

Cross-country International studies of employment elasticity of growth

There are a number of international employment elasticity of growth studies. One consistent finding has been that this elasticity varies considerably. Moren and Wandal (2019) undertook a cross country comparison of employment elasticities of growth of 168 countries between the years 2000- 2017. Their findings showed that the employment elasticity of growth varies greatly across countries, population subgroups and time (Moren and Wandal, 2019, p. 12). They found that the elasticity was higher in developing countries compared to developed, in contrast to a study by the IMF that found the highest estimated elasticities typically being in economically developed regions (Crivelli, Furceri and Toujas-Bernate, 2012).

The group from the IMF that also undertook a cross country study of 167 countries between 1991-2009 also found that elasticities varied greatly across regions, income groups, and production sectors (Crivelli, Furceri, and Toujas-Bernat , 2012). Kapsos (2005) similarly undertook a comprehensive cross-country comparison with the ILO comparing elasticities of 139 countries in an earlier period between 1991-2003, analysing patterns across country’s population subgroups. Despite the extent of variation in elasticity between countries, he found a positive and reasonably stable global elasticity for all of the years.

Pleic and Berry, (2009) argue that a high or low employment elasticity of growth is not virtuous in and of itself. In one case where there is extreme underutilization of labour the employment elasticity of growth is a good indicator of the quality of growth. In another case where all of those in the labour force who want to work are employed and the working age population is increasing slowly, low employment elasticity is both inevitable and desirable (Pleic and Berry, 2009, p. 6). South Africa represents the former case where a high employment elasticity is desirable. This is an important question. A low general employment elasticity of growth is not necessarily a problem if a given country experiences high economic growth of, say 6-8% annually. However, when a country experiences moderate to no economic growth annually, the employment elasticity of growth becomes incredibly important in ensuring a good quality of economic growth for sufficient employment levels, as economic growth

alone will not drive enough employment creation. A higher elasticity also means that if higher levels of growth do come and the elasticity is maintained, then unemployment levels will drop correspondingly.

Increasing the employment elasticity of growth

It should also be noted that the employment elasticity of growth is not an exogenous force that is decided solely by market or technological forces. It is a socially determined parameter. Labour market and development policy can have a direct impact on the relationship between growth and employment. In a brief overview of existing literature Kapsos, (2005, pp. 20–21) identifies a number of macroeconomic variables that influences labour productivity and employment growth. Employment intensity is potentially determined by the share of services in real GDP, real labour costs, labour market institutions and exchange rate volatility. “The variables fall into the following six broad categories: labour supply/demographics, economic structure, macroeconomic volatility and uncertainty, extent of economic openness, health, and tax policy and labour regulation,” (Kapsos, 2005, p. 22). Kapsos undergoes a regression analysis of these variable and growth-employment elasticities to estimate their effects on the elasticity.

Gender and the employment elasticity of growth

The African Development Bank (2018) has noted increasing claims of jobless growth on the continent, with young females bearing the brunt of this. Cross country studies by Moren and Wandal (2019) and Kapsos (2005) showed that the elasticity for females in both developed and developing countries is relatively higher than their male counterparts, although the relationship is stronger in developed countries. If we assume that the inverse of job growth is job loss, and that the elasticity represents the job shedding that will occur as a result of the pandemic, then it is females who will lose their jobs disproportionately to males. This is exacerbated by the fact that the services industry is dominated by women (CITE) and is one of the industries hardest by the economic calamity of Covid-19.

The fact that females tend to have higher elasticities than males, could be an indication of a so called “catching-up effect”, as females historically had and still have a harder time getting employed than males (Strauss, Isaacs and Capaldo, 2017). For example, one of the largest gender differences in the elasticity can be found in northern Africa and according to the ILO, “this region is particularly marked by gender inequality in the labour market,” (Moren and Wandal, 2019, p. 23).

Labour and Capital

The average capital labour ratio has been increasing in South Africa – indicating a shift to capital intensive production. This too, tends to increase the level of inequality in a society. The rising capital intensity in production as represented by the capital labour ratio over time as below.

In the production of goods and services, firms use a combination of labour, machinery and equipment (capital), land and entrepreneurship; the factors of production. The proportion of labour versus capital that firms in an economy use matters for job creation and unemployment. South Africa has seen a general trend toward capital intensive production. The country is likely to see an acceleration of this due to physical distancing requirements in offices and factories that will make automation more attractive for firms.

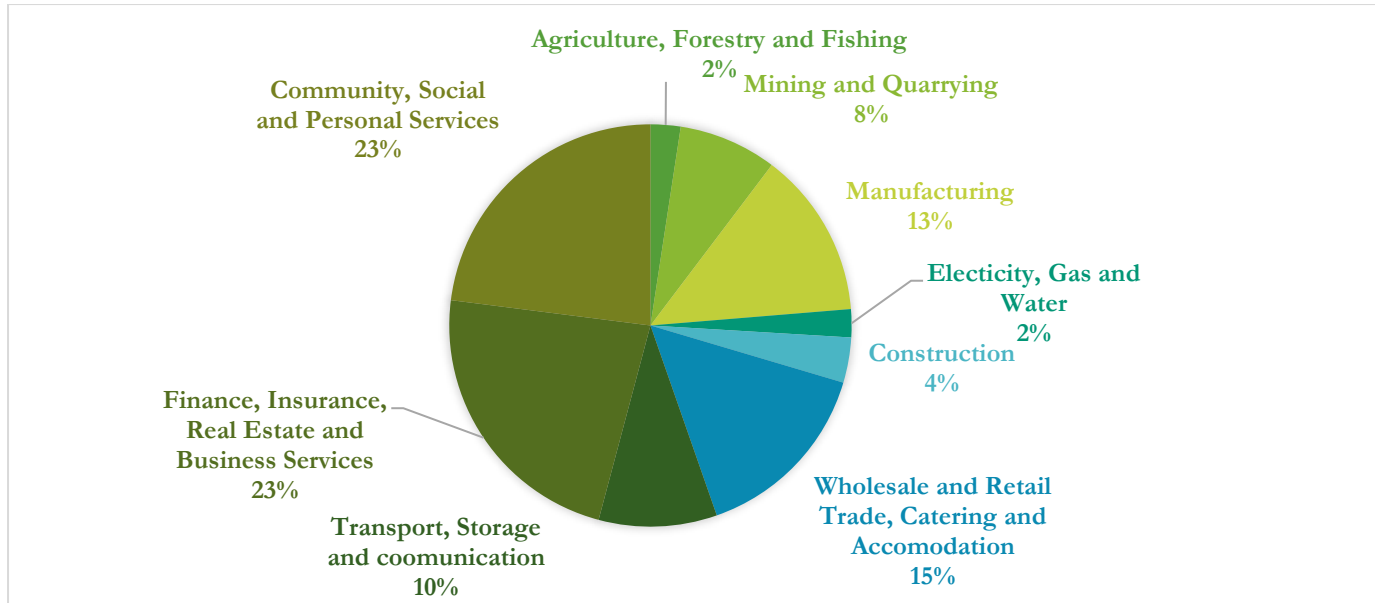
Physical capital, technology and labour can be combined in different proportions by a firm to increase or maintain the same amount of production. But in a country like South Africa, with very high unemployment, increasing capital intensity will further increase unemployment, and undermine the prospects of labour-intensive growth. This change will not be instantaneous. It's more likely to unfold over the next months and years.

An increasing capital-to-labour ratio in production is an important consideration for two reasons. The first is its effect on unemployment. Secondly, a shift towards capital intensity will increase existing inequalities. One way this will occur is through the rising portion of value that is generated by capital that will be claimed by the relatively small number of owners of capital. This is a common driver of long-term inequality that persists if it is not countered by redistributive policies.

Sectoral analysis

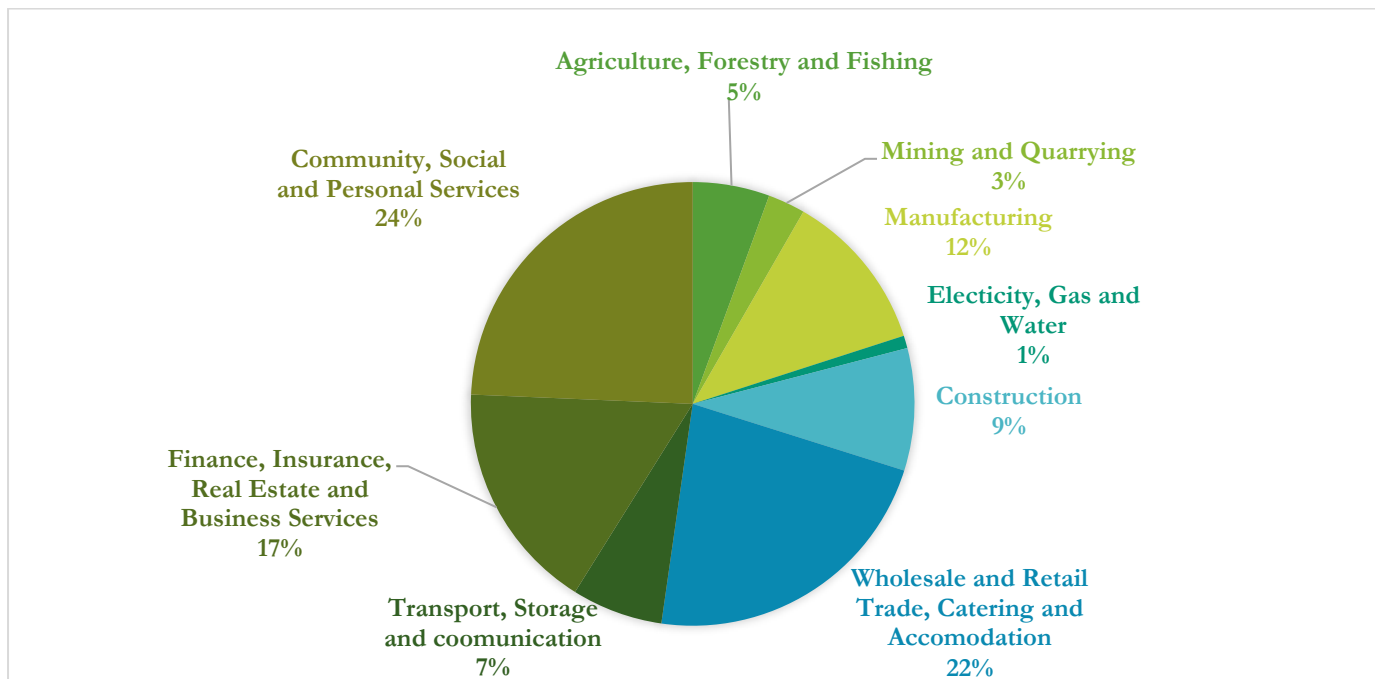
In the next section, we present a brief sectoral overview of output and employment in South Africa. This is a prelude to forthcoming work which estimates the employment elasticities of growth on a sectoral basis in South Africa. Figure 6 presents the share of gross-value added by industry in 2019, while Figure 7 highlights the employment share of industry in 2019.

Figure 6: Gross Value Add by Industry in 2019



Source: Quantec EasyData

Figure 7: Employment by Industry in 2019



Source: Post-Apartheid Labour Market Series

Comparing these two measures gives a high-level and intuitive overview of the ratio of labour to output in these sectors. Wholesale and retail trade, for example, accounts for 22% of total employment but 15% of total output. Conversely, finance, insurance, real estate and business services accounts for 17% of employment and 23% of output. But these high-level cross-sectional figures obscure important temporal dynamics, which we discuss in more detail below.

GVA and Employment Changes

Figure 8: GVA and Employment by industry

Year/Quarter	Apr-09	Apr-19	Absolute Change	% Change between periods 2009Q4-2019Q4
Mining and Quarrying				
GVA (R millions, constant 2010 prices)	221296	227400	6104	2,76
Employment	301831,9	432326,70	130494,80	43,23
Manufacturing				
GVA (R millions, constant 2010 prices)	346281	380805	34524	9,97
Employment	1812610	1744231,7	-68378,3	-3,77
Electricity, gas and water				
GVA (R millions, constant 2010 prices)	66821	63852	-2969	-4,44
Employment	102252	119712,1	17460,1	17,08
Construction				
GVA (R millions, constant 2010 prices)	96620	101882	5262	5,45
Employment	1137872,1	1361611,8	223739,7	19,66
Wholesale and retail trade, catering and accommodation				

GVA (R millions, constant 2010 prices)	355857	430922	75065	21,09
Employment	2966634,6	3297264,5	330629,9	11,14
Transport, storage and communication				
GVA (R millions, constant 2010 prices)	226355	266440	40085	17,71
Employment	773756,1	1021041,1	247285	31,96
Finance, insurance, real estate and business services				
GVA (R millions, constant 2010 prices)	519744	661317	141573	27,24
Employment	1835835,5	2601391,5	765556	41,70

Source: Quantec EasyData

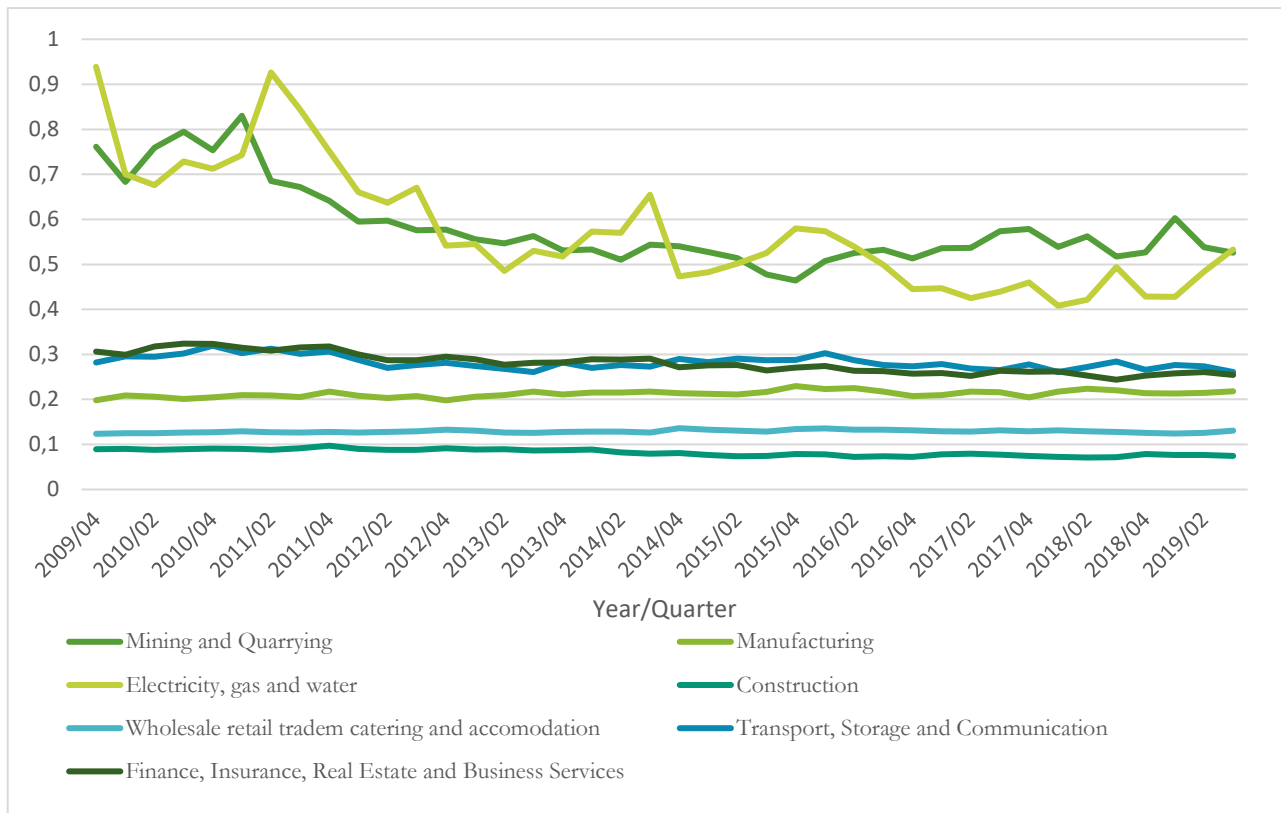
The electricity, water and gas industry is the only industry to show a decrease in GVA over the period. The electricity, water and gas industry shows dynamics that are contrary to standard economic theory. The answers to this are likely to lie in the role of political economy and institutional economic theory. The rest of the industries in our study represent a standard positive relationship between employment and growth, albeit, the strength of these relationships varies.

For the 10-year period of study the average quarter-on-quarter changes in employment are increasing at a faster rate than the average quarter-on-quarter increases in GVA in the finance, insurance, real estate and business industry; the transport, storage and communication industry; the construction industry; the electricity, gas and water industry; and the mining and quarrying industry.

Over the period, the average quarter-on-quarter changes in GVA are increasing at a faster rate than the average quarter-on-quarter increases in employment in the wholesale retail trade, catering and accommodation industry; and the manufacturing industry.

Figure 9 presents a comparative view of GVA-to-employment across the industries. It is interesting to note how this has declined significantly for mining and quarrying, and electricity, gas and water. Conversely, manufacturing has seen a marginal increase in the GVA:Employment ratio. Further work is underway to examine these changes and relationships in a statistically robust fashion.

Figure 9: GVA-to-Employment ratio



Source: Quantec EasyData

Jobless growth

The data we have presented here are consistent with those of (Bhorat, 2005, p. 6) in the finding that although the sectoral, skills, gender, and income brackets of those employed may vary, aggregate ‘jobless growth’ is an empirically incorrect notion in South Africa’s economy. The only industry in which the notion of jobless growth holds is the manufacturing sector. Looking at absolute jobs created in the last two years as a comparison to the two years prior. The question is not about whether jobs are being created alongside economic growth or not. The question is what is the elasticity, in other words, how responsive is job creation to economic growth? The discourse around jobless growth has come from the perspective that the level of job creation relative to economic growth has been too low, given the massive level of unemployment that exists and that the labour absorption rate is too low.

The Re-Industrialisation Argument

There is a strong tendency to argue for the ‘re-industrialisation’ of the South African economy. This strategy is argued to be important for both a shift up the technological curve, which is important for

movements towards becoming developed country; and for employment intensive economic development. The latter part of this theory will clearly not hold under the structural conditions of the South African economy in the past 10 years. This is seen clearly in the data presented above on the manufacturing industry.

Developing an employment-led Covid response

What are the different ways of thinking about labour market policy?

An employment policy is generally part of a larger strategy for economic growth. As such, some of the particular goals of employment policies can be lost in the larger developmental framework. It is therefore worth discussing what the aims of an employment policy are (or should be) and what levers are available to effect changes. An employment policy should target full employment of the labour force, and it should do so in a manner which does not discriminate unfairly. Secondly, it should deliver low income inequality, high incomes and decent work. Third, it should offer avenues for skills development and productivity growth.

A number of tools are available to do this. The first is widely used but indirect – economic growth. While economic growth does often deliver employment growth, the links between growth and employment are often fuzzy and not well-understood, and this is reflected in vague economic policies which do not delineate the various mechanism by which economic growth can lead to employment growth.

Then there are a number of more direct policy measures. The first is macroeconomic policy for full employment (expansionary monetary and fiscal policy). Secondly, there are policies which specifically target employment creation, such as public works programmes. Regardless of the particular policy instruments used to drive employment creation, successful employment creation requires coordinated progress in other areas of the economy. For example, no employment policy, no matter how well it is conceptualised or targeted, will be able to grow jobs in a shrinking economy. Sefalafala (2020) cites Marre's conception of six types of job creation strategy: macro-economic growth to reduce unemployment, industrial restructuring to achieve competitiveness across sectors, skills development to overcome the skills shortage, facilitating the informal economy to promote its flourishing, easing the business environment by removing unnecessary constraints on small enterprises to formalise, and public works projects to create job opportunities (Maree, 2007).

Targeting sectors hit hardest by the pandemic to avoid a permanent decrease in parts of the economy worst effected

One immediate approach to the employment crisis is to target all of the sectors of the economy that have been worst affected by the pandemic. While levels of production and consumption have negatively impacted a wide range of firms across sectors, there are certain sectors that, due to physical-distancing regulation are especially vulnerable to closure or are forced to lay-off workers. The strategic importance of this initial short-term response is important to avoid a structural or permanent loss of production and employment in entire sectors of the economy that have shown productive capacity in the past. In other words, an initial response is important not for employment creation, but for avoiding employment loss. In order to determine these subsectors, one should use a combination of an estimation of employment levels at different stages of the lockdown) using estimates based on government regulation, along with the most recent data from available on employment from various surveys.

Targeting labour intensive sectors

Some commentators (Sithole, 2020) argue that an industrial approach should be taken, with special focus on industries that have a higher percentage of contribution to the proportion of employment than they do to their percentage contribution of GDP.

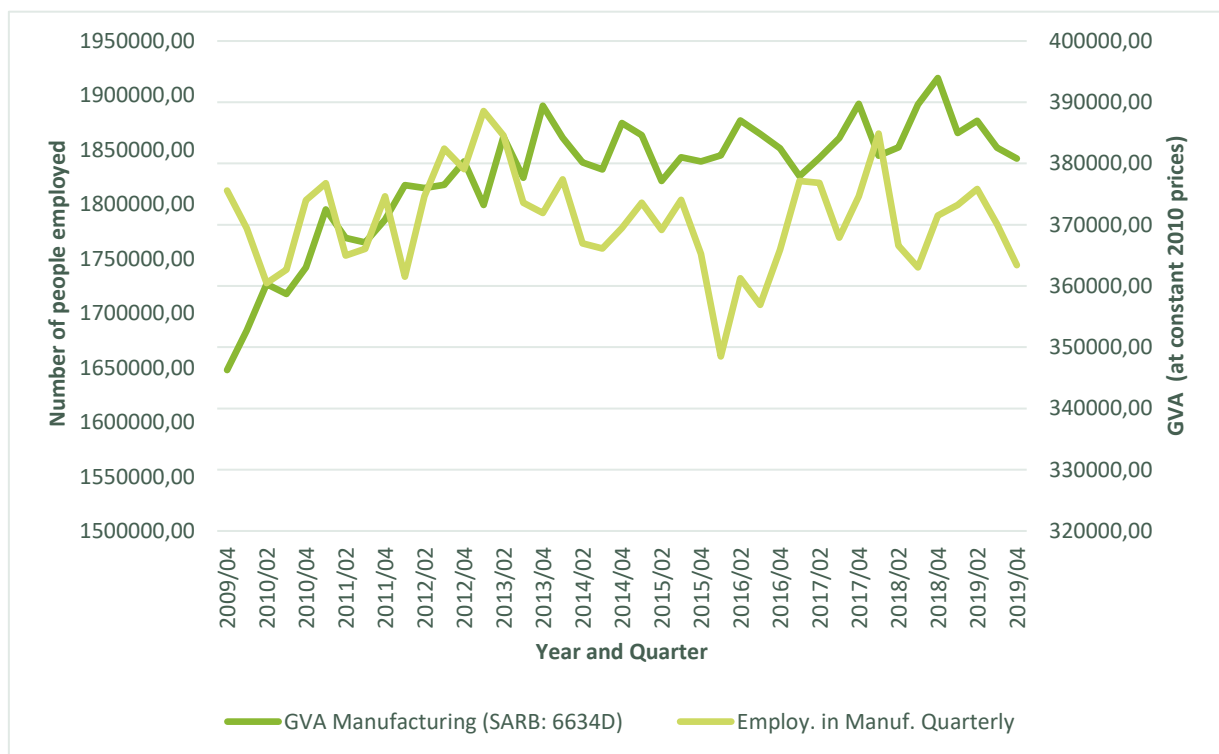
While this might be a decent strategy for absorbing labour in the short term, the sectors selected are not necessarily those that would further economic development, nor are they necessarily the sectors worst effected by the pandemic. For example, the trade sector is not a long-term growth driver, as it is in the sphere of consumption and exchange, not the sphere of value creating production. The approach is not cognoscente of path dependency of economic development, however is useful in highlighting the need for an immediate response that is temporary.

Another approach is to match the long-run supply constraint of human development with employment strategies such as employing teaching assistants (Makaluza, Mpeta and Carel, 2020). This is employment in the public sector that would be taken up through direct state employment.

Targeting sectors with a high elasticity of employment to GVA growth

The employment elasticity of growth represents the relationship between growth and employment in a given country, giving an indication of the employment quality of growth. Pleic and Berry, (2009, p. 7) use employment elasticity of growth in arguing that certain sectors can drive employment growth. One may argue that this makes an industry level analysis pertinent, when considering how the need for labour intensive economic growth in a post-Covid-19 economy. Borat *et al.*, (2014) estimated employment elasticities a sample of South African industries between 1997 and 2012. They found that in six of the industries examined, the observed employment growth was less than GDP growth. The sectors that were least responsive to GDP growth were manufacturing (0.22), agriculture (0.37), and transport (0.42). Our findings are consistent with those of Borat (2005) showing that although the sectoral, skills, gender, and income bracket details of increase in absolute numbers of those employed may vary, aggregate ‘jobless growth’ is an empirically incorrect notion in South Africa’s economy. The only industry in which the notion of jobless growth holds is the manufacturing sector.

Figure 10: GVA and Employment in the manufacturing sector



Source: Quantec EasyData

Looking at absolute jobs created in the last decade, the question is not about whether jobs are being created alongside economic growth or not. The question is what is the elasticity, in other words, how responsive is job creation to economic growth? The discourse around jobless growth has come from the perspective that the level of job creation relative to economic growth has been too low, given the massive level of unemployment that exists and that the labour absorption rate is too low.

Complexity economics

Analysis using aggregate models is useful, but contains assumptions that may not be useful in tackling the growth-unemployment problems of the sectors that show little to no employment elasticity to growth. It is not wise to assume that on average firms, entrepreneurs and government will have perfect information and act rationally based on perfect information, especially within the unprecedented context of Covid-19. An aggregated industry level approach will not work because the relationships are not linear, they are interwoven with multiple feedback loops that will arise out of both the economic shock and governments response to that shock. In addition to ideas of equilibria based on linear systems in such conditions being farfetched, the shock may result in permanent or structural changes to sectors that will create new equilibria in the medium term, but we do not know where those will be just yet. In times of uncertainty incomplete knowledge, it may be appropriate to adopt approaches that embrace complexity theories.

Given the highly interconnected nature of South Africa's economy to international markets an industrial policy strategy that encourages exports is necessary for an improvement in employment and the interrelated Balance of Payments challenges South Africa is likely to face. The standard Development theory, such as the Lewis Model, argues that an effective strategy is developing the manufacturing sector as it is the source of technological catch up or development, and it is employment intensive. This model has been supported in broad historical term by the Asian development model that saw major growth in both the manufacturing sector and in employment (Bhorat *et al.*, 2017).

What we have seen in South Africa is a de-industrialisation, with 'jobless growth' in the manufacturing sector generally. The distinction between Sub-Saharan Africa and the South-East Asian experience includes factors such as regional proximity to China, the size of the manufacturing sectors, the entrenchment of comparative advantage related to the globalisation and the fact that manufacturing is relatively more productive. Bhorat *et al.*, (2017) build on this, arguing that the Asian countries had greater complexity characterised by higher levels of productive knowledge (or capabilities). This argument follows that the positive link between economic complexity and the number of manufacturing products a country produces meant that the diversity of productive knowledge among a wide range of proximate goods created integrated chains of manufacturing production. This expanded the range of exports in the region. Simply, the Asian success can also be put down the combination of capabilities and embedded knowledge in the manufacturing sector within an increasing chain of products that were connected and expanded based on 'nearby' productive opportunities which ultimately increased the scope and scale of exports.

The complexity approach to the manufacturing sector relates to employment through the argument that growing the manufacturing sector is necessary to creating jobs, but that this should not be done through industry wide approaches but rather through selectively targeting products that increase the complexity of manufacturing activities and therefore the economy. It is not a departure from arguments of industrial led economic development, but rather a strategic approach to targeting incentives at new productive opportunities that diversify the range of manufactured products.

The nexus of economic and labour market policy

Table 5 presents a typology of economic policy with regard to employment interventions. At the highest level, policies are either developmental (in that they seek to advance the economic capabilities of the state) or non-developmental. Within these, there are policies which have a positive impact on employment, and those with a neutral or negative impact.

In this paper we draw on this definition of development as engaging in a process which increases the total value added of goods produced in the economy specifically by increasing the size and scope of the secondary sector in which industrialisation is bolstered.

Our definition does not focus on the economic growth of the economy alone, but concentrates on the quality of growth coming from the secondary sector in ways that are productive and increase capabilities in the long-run. The primary challenge we have highlighted is that on aggregate, South Africa's secondary sector has seen an aggregate industry decrease in employment over the last 10 years, pointing to the increasing use of capital-intensive production methods. This means that a surface level analysis of the need to develop the economy for long term development is at odds with the need to create employment.

The approach taken by Borat *et al.*, (2019) and Borat *et al.*, (2017) drawing theoretically on work done by Hausmann and Chauvin, (2015) and Hausmann, (2013) offers a 'complexity' framework from which the industrial development and employment knot may be disentangled. Succinctly put, Borat *et al.* explain that "Growing the manufacturing sector and building complexity will generate employment opportunities. The interconnectedness of the products and industries suggests that focus should be placed on growing the productive network as opposed to only targeting industries that are employment-intensive. The overall growth of the network is set to generate employment in both capital- and labour-intensive industries," (Borat *et al.*, 2019, p. 74).

This is the most compelling approach to industrial development that marries increasing economic growth with increasing employment. This approach is attractive because it expands the number of value-creating firms into new products, that in turn creates additional demand on existing firms in the South African economy producing the inputs into the new product. The positive implications on output and employment expands to an increasing number of sites of production.

This approach is aligned with the most recent push for ‘localisation’, and its emphasis on connectedness within the local economy cannot be understated. This cross-supply-chain outlook differs from the traditional industrialisation approach because it aims to target specific goods that may vary across sectors within the manufacturing industry. Its appeal in employment terms is that after discerning the goods that would increase the complexity of a given subsector, one can rank the products identified by their employment elasticity in targeting specific products that both increase complexity and have a relatively higher employment elasticity to growth. Further targeting of products can be done that aims at products that may specifically target employment for women and the youth. A methodological approach is outlined for this by Bhorat et al. (2019).

In relation to the Covid-19 related economic shock, the complexity approach will not suffice in solving the short-term employment loss problem as the timeline for effecting this approach is medium term. For an appropriate immediate response, the initial mechanism used by the state is necessary in direct employment and indirect support is necessary through offering incentives to firms that are employment intensive, and firms that have been the worst affected by the pandemic.

Below is a topology of the existing policy approaches to indirect state employment creation using incentives for firms. It is organised by whether a given policy is developmental or not, and whether a given policy would have a positive impact on employment or not. State policy can create employment through two main mechanisms. This is depicted in Figure 11. The initial mechanism is direct state employment in government departments that deliver public goods through, for example, Community Works Programmes and Public Works Programs. The state can also create employment directly through state-owned enterprises that may have commercial interests. The second mechanism is through offering incentives to firms to expand production (access to markets and finance, and adjusting regulation, etc), incentives that reduce the costs of hiring (reducing skills, learning costs, searching costs etc.), and directly increasing demand in certain goods through public procurement.

Figure 11: Employment growth and economic policy

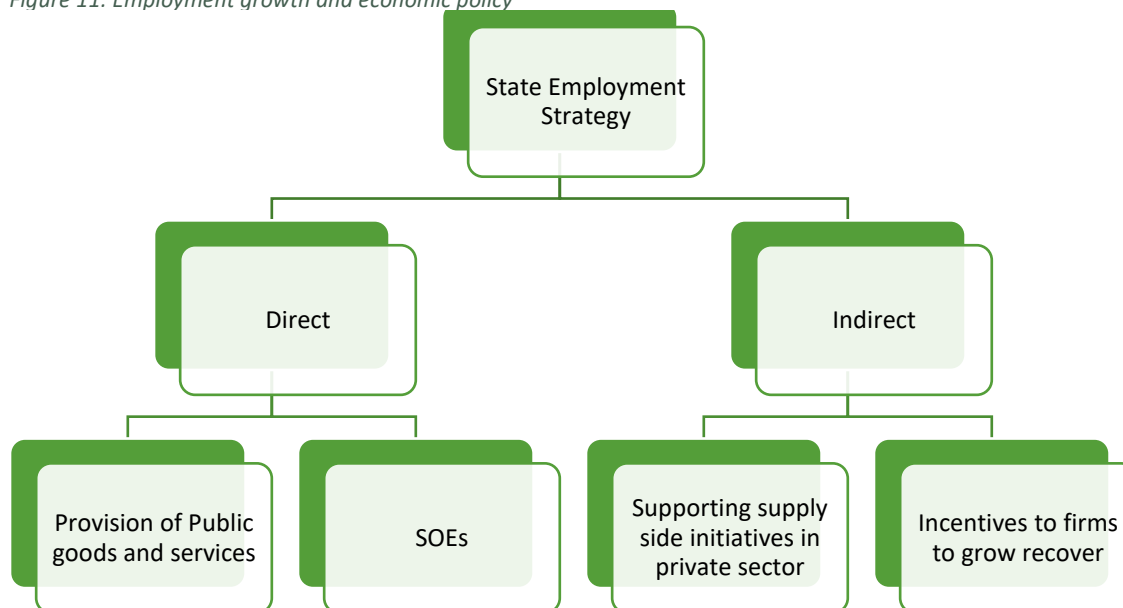


Table 5: Typology of economic policy

	Developmental	Non-Developmental
Positive Employment Impact	E.) Complexity approach - Aimed at manufacturing sector - Emphasizes goods with relatively higher employment elasticity of growth	F.) Support for goods/sectors that have high employment-to-output.
Neutral/Negative Employment Impact	G.) Manufacturing-led growth model	H.) South Africa status quo?

South Africa is currently in block D, where employment and economic policy strategy has been neither developmental nor had a meaningful impact on employment. There is a range of reasons for this based on institutional, and political-economy constraints. Block C represents the standard approach that takes an industry level approach to industrialisation and development but is no longer employment intensive at the aggregated level. The aim is to reach a point at which employment is created within a development paradigm in block A. This will require addressing the current crisis by retaining, and regaining lost employment over the period of the pandemic. In material terms this requires supporting firms that have been drastically impacted, and foregrounding firms that have high employment-to-output ratios. Focusing incentives on firms that are employment intensive is an appropriate approach to the Covid-19 moment. The Schumpeterian arguments about creative destruction do not fall away in this conception. While it is widely accepted that employment is lost in the short term, and regained in the long term (and at higher levels sometimes) as a result of creative destruction and innovative technical change, the job loss in the case of Covid-19 does not fit into this conception of short term job loss for eventual long

term improvements in productivity, output and employment, because the exogenous shock is not related to technological advancements. The market will not respond in a time-efficient manner to the shock, in a way that accelerates damage incurred to aggregate demand and employment loss.

The ideal response to this shock in the immediate term falls into block B, until the efficient returns to this strategy have reached their aim of employment retention. Subsequently policy makers would be wise to shift the incentive tools available to the complexity approach in block A. Simply: the ideal approach would be to move to point A once point B has been exhausted. The determinants of when point B has been exhausted requires further analytical work. The value of this codification is that it suggests a blueprint for crisis of this nature that may arise in the future.

Employment policies – a critical analysis

We conducted a systematic review of employment policies offered by stakeholders in South Africa in response to the Covid-19 pandemic and the economic fallout from the lockdown. These included economic policies from:

- The ANC - Reconstruction, Growth And Transformation: Building A New, Inclusive Economy
- Business for South Africa
- Cosatu
- The presidential economic stimulus (PES).

The selected economic policies note the importance of employment; however, all policy documents emphasise different supply and demand side interventions which they argue will lead to the greatest increase economic growth and subsequently in employment. The question: *how do we create jobs* is not as simple as we wish it were. There is a complex intersection of social, political, macroeconomic, microeconomic, and global economic factors at play. Furthermore, policy documents are rarely implemented with perfect accuracy. They lack foresight, are malleable to shifting material conditions and to not order the importance of their stated aims. Neither do they signal serious intention to implement. Analysis of policy documents is therefore incredibly limited; however, they offer insights into the logic of the organisations from which they come which is useful in developing ideas around solving problems.

Conclusions and further work

The economic damage caused by COVID-19 and the lockdowns are uncertain, and it will take a several months, indeed years, to have a better understanding of where the damage has occurred and how severe

it is. We need to keep a close eye on all aspects of the labour market so that policy responses can support those most in need. In the medium to long term, we will need a new social compact that ensures that the economic damage from Covid-19 is not borne disproportionately by the poor. Such a social compact will have to address policies that raise the incomes of the poor – both through labour market and fiscal measures. South Africa needs to start an urgent conversation not only about the costs of Covid-19 but also about how the economy is likely to transition and who will benefit from that transition.

If the solidarity and social commitment to ending divisions in our society is to be taken seriously beyond the pandemic, the manner in which these labour market trends will impact on inequality must be considered. There is no natural mechanism or economic law that reduces inequality. Reducing inequality relies on policies of redistribution either directly through structural changes leading to employment growth, higher wages or fiscally through taxation, with both requiring development policies that ensure that the benefits of growth accrue disproportionately to low-income groups. Given the conditions of the moment we find ourselves in, an increase in employment or wages is unlikely given the economic downturn and loss of employment. We are also in a highly constrained fiscal position, which limits the ability to pursue redistributive policies through the fiscus.

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