



2024 UASA SOUTH AFRICAN EMPLOYMENT REPORT AND 2nd UASA/BMR EMPLOYMENT INDEX

GLOBAL AND LOCAL ECONOMY OVERVIEW:

Economic landscape, insights and
forecast for 2024

ECONOMIC INDICATORS:

Labour market analysis, trends and
expectations on GDP, growth and
sustainability

EMPLOYMENT INDEX:

Tracking the employment
performance of the South African
economy over time



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1. BACKGROUND



UASA in partnership with the Bureau of Market Research (BMR)

UASA is celebrating its 130th birthday this year. This is quite an achievement given that extremely few organizations survive that long. UASA's longevity indicates that it stayed relevant all these years, was well-managed and served its client base with distinction.

Since the South African Engine Drivers' and Fireman's Association was established in 1894 thus laying the foundation for UASA, the South African economy and labour market had many ups and downs. By 1894 the total South African GDP was less than R. Pound 100 million growing to R. Pound 132.9 million in 1912 and to R. Pound 1248.4 million by 1951. During 2023 the comparable GDP figure was nearly R6.3 trillion which means that the 2023 size of the economy was about 63 000 bigger than it was when UASA originated in 1894.

As was the case in 1894 the current South African economy is being faced with several challenges although there are also a lot of upside opportunities. This report aims to elaborate on such challenges and opportunities to provide pointers to what should be done to address the said challenges and to optimize such opportunities during the years to come.

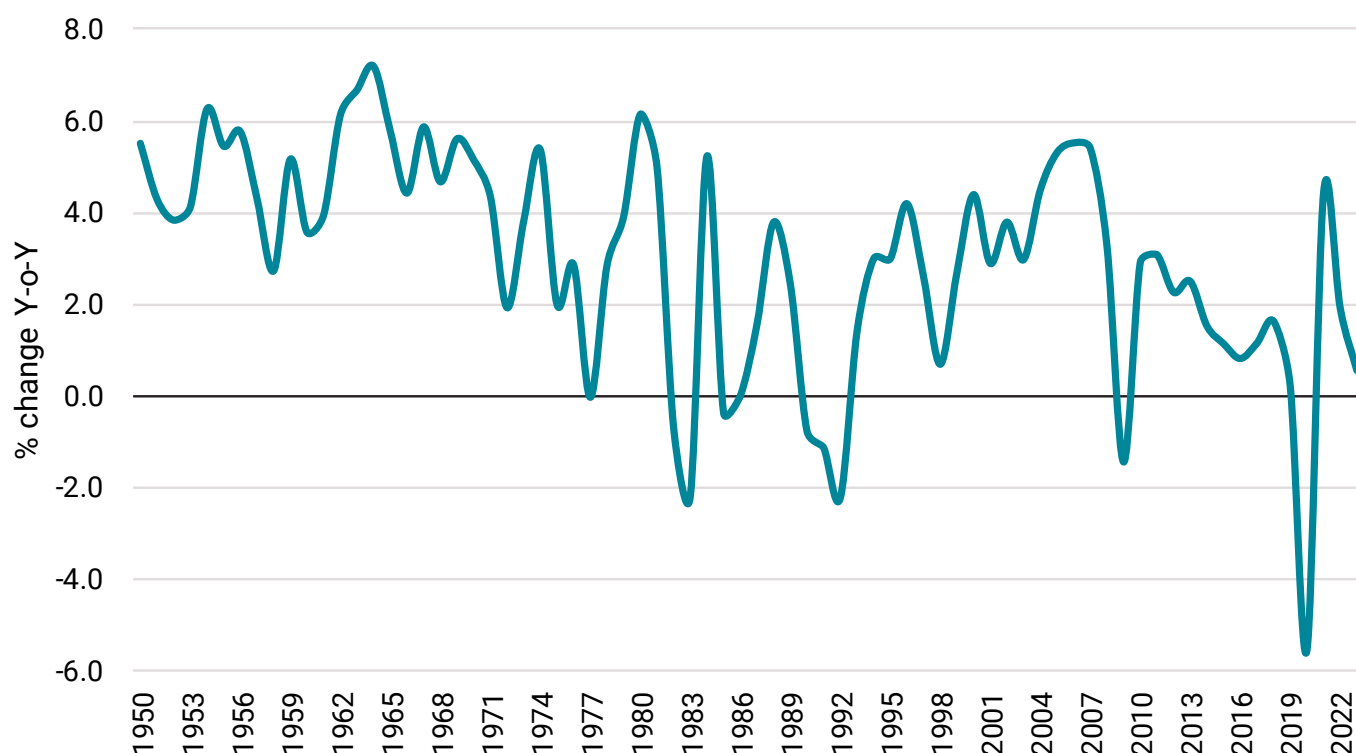
The focus of this report will first be on the current state of economic performance and the expected economic performance during the remainder of 2024, followed by an in-depth analysis of the historical, current and expected employment scene using the UASA/BMR Employment Index (EI). This index has been developed to track developments in the South African labour market. The analysis includes a focus on labour market issues underlying the current low levels of job creation and high levels of unemployment.

2. THE HISTORICAL, CURRENT AND EXPECTED FUTURE PERFORMANCE OF THE SOUTH AFRICAN ECONOMY

Historical performance of the South African economy

Given that UASA is celebrating its 130th birthday, it is fitting to have a look down memory lane at the historical performance of the economy since 1950 (see figure 1). During the past 73 years the economic growth trajectory of the South African economy has been very low and volatile, with fairly low real GDP growth rates currently being experienced. Besides the very volatile economic growth experienced between 1950 to 2023, several other endogenous and exogenous factors impacted the South African economy. These included a large percentage of the South African population being excluded from full participation in the economy, a large number of unaddressed structural imbalances, political and social instability, low levels of consumer and business confidence, corruption, crime, high levels of poverty and inequality, low levels of job creation and a host of other factors. This situation is not only reflective of the present economic landscape since 1950 but also was prevalent during the period 1894 to 1950 when UASA originated.

FIGURE 1: REAL GDP GROWTH (1950 - 2023)



Source: South African Reserve Bank (2024)

An overview of the global economy

When considering the economic landscape of 2024, it is firstly important to have a look at what is happening in the global economy before focusing on South Africa. According to the latest OECD Economic Outlook report (2024), there appear to be some early signs that the world economy is improving. The OECD forecasts that real global GDP growth will be 3.1% during 2024, with lower global consumer price inflation, higher levels of business confidence and higher real incomes. Although there is good reason to believe that the world economy will improve during 2024, a large number of uncertainties and downside risks remain.

An overview of the local economy

The question could be asked as to whether local economic performance will be better or worse than previously experienced. The latest consensus economic forecasts of the BMR/UNISA Economist of the Year competition are provided in table 1. The consensus forecast from this auspicious competition originates from the forecasts of 36 of South Africa's top economists who participate in the competition and adapt their forecasts monthly based on recent economic circumstances.

TABLE 1: ECONOMIC CONSENSUS FORECAST - APRIL 2024

ECONOMIC VARIABLE	CONSENSUS FORECAST
Average real annual GDP growth rate for 2024	1.0%
Average consumer inflation rate (CPI) for 2024	5.1%
Average prime interest rate in Q4 2024	11.3%
Average ZAR/USD exchange rate in Q4 2024 (ZAR)	R18.53
Average Brent Crude oil price in Q4 2024 (USD)	\$83.50
Average real annual household expenditure growth rate for 2024	1.2%
Average yield on long-term government bonds in Q4 2024	10.7%
Current Account Balance as % of GDP for 2024	-2.2%

Source: BMR/UNISA Economist of the Year Competition (2024)

The 2024 **economic growth** forecasts produced by the participating economists so far this year reflect some cautious optimism that 2024 will be a better year in terms of economic performance compared to 2023. A first indication of this is the consensus GDP forecast of 1% during 2024 which is higher than the 0.6% growth rate recorded for 2023 but still reflects an economy trapped in a low growth trajectory with a myriad of downside risks and structural imbalances impacting negatively on potential economic growth. The upcoming national elections bring about new downside risks compared to 2023, which will likely keep the economy trapped in a low growth trajectory. Furthermore, the International Monetary Fund recently stated that they expect a muted growth rate of 0.9% for

the South African economy during 2024.

As is the case with GDP growth, **household consumption expenditure** is also expected to perform better than in 2023 but remains low compared to past performances as well as the performance experienced in other developing countries. High levels of uncertainty regarding household consumption expenditure growth during 2024 are evident when considering the participating economists' expectations, with growth estimates ranging between 0% and 2.2%, with the consensus forecast being 1.2%. One of the main reasons for caution is the high levels of uncertainty regarding GDP growth during 2024 and the level to which this might impact employment and compensation growth during 2024.

The average rate of **consumer price inflation** in South Africa for 2024 is expected to be 5.1%, with the participating economists predicting inflation ranging between 4.1% and 5.9%, also showcasing high levels of uncertainty for economic outcomes. Recent inflation releases by Statistics South Africa showed that CPI growth in South Africa has remained sticky above 5%, which is impacting the South African Reserve Bank's Monetary Policy Committee interest rate decisions. It is evident from the participating economists' expectations for the average prime interest rate in the fourth quarter of 2024 that there is a general expectation that the repurchase, or repo rate, will only be lowered marginally with the consensus forecast of 11%, translating to a possible 75 basis point reduction during 2024.

High levels of uncertainty are also notable in the participating economists' expectations for the average **ZAR/USD exchange rate** for Q4 of 2024. While the consensus forecast was R18.53, the forecasts ranged between R17.30 and R20.00 per USD. Given the current and expected economic, social, and political volatilities anticipated for this year (including current and geopolitical conflicts and more than half the world population voting), the ZAR/USD exchange rate might be in for a rollercoaster ride during 2024. It is anticipated that these same

international factors will also impact the Dollar value of **Brent Crude oil** during Q4 of 2024. The participating economists submitted wide-ranging forecasts, ranging between \$70.00 and \$85.00 per barrel, with a consensus forecast of \$83.50 per barrel.

The consensus forecast for **long-term government bond yields** was 10.7%, with participating economists' expectations ranging between 9.2% and 12.3%. The reasons for this wide range of forecasts may be due to uncertainties regarding the future performance of the economy, the various views on the level to which negative sentiment will impact the supply of funds to the government, the uncertainty regarding inflation and interest rate adjustments, as well as varying levels of concern about the government's ability to service its debt over the long-term, given the existing high government debt-to-GDP ratio. As was the case during the past ten years during which there was a sharp increase in government bond yields, it is believed that this trajectory will continue for some time.

Although there were widely differing expectations for the **current account balance** as a percentage of GDP for 2024, all such forecasts indicated a negative current

account balance. This shows that there is a consensus that South Africa will likely be a net importer during 2024. This has a wide range of implications in the sense that, because of weaker demand for the Rand, it can be expected that the Rand's strength will diminish during the year. It also reflects on a struggling local economy with sub-optimal competitiveness in goods (including commodities) and services in international markets.

The main aspects which are expected to contribute to possible high levels of volatility in the South African economy include:

- Uncertainties concerning global economic growth are evident, impacted by the current and foreseen geopolitical conflicts, widespread national elections and possible lower-than-expected growth due to depressed aggregate demand in some of the major international economies.
- The impact of foreseen escalating geopolitical conflicts on the supply (and thus international prices) of Brent Crude oil.
- The trajectory of international and local inflation will not only impact international and local economic growth but also impact the Federal Reserve and consequently SARB interest rate decisions.
- The growing number of structural constraints and imbalances, as well as downside risks (such as load shedding and the investment sentiment fallout from grey listing) impacting the South African economy.
- The impact of the national elections which could potentially be facilitative, neutral, or negative for the performance of the South African economy.



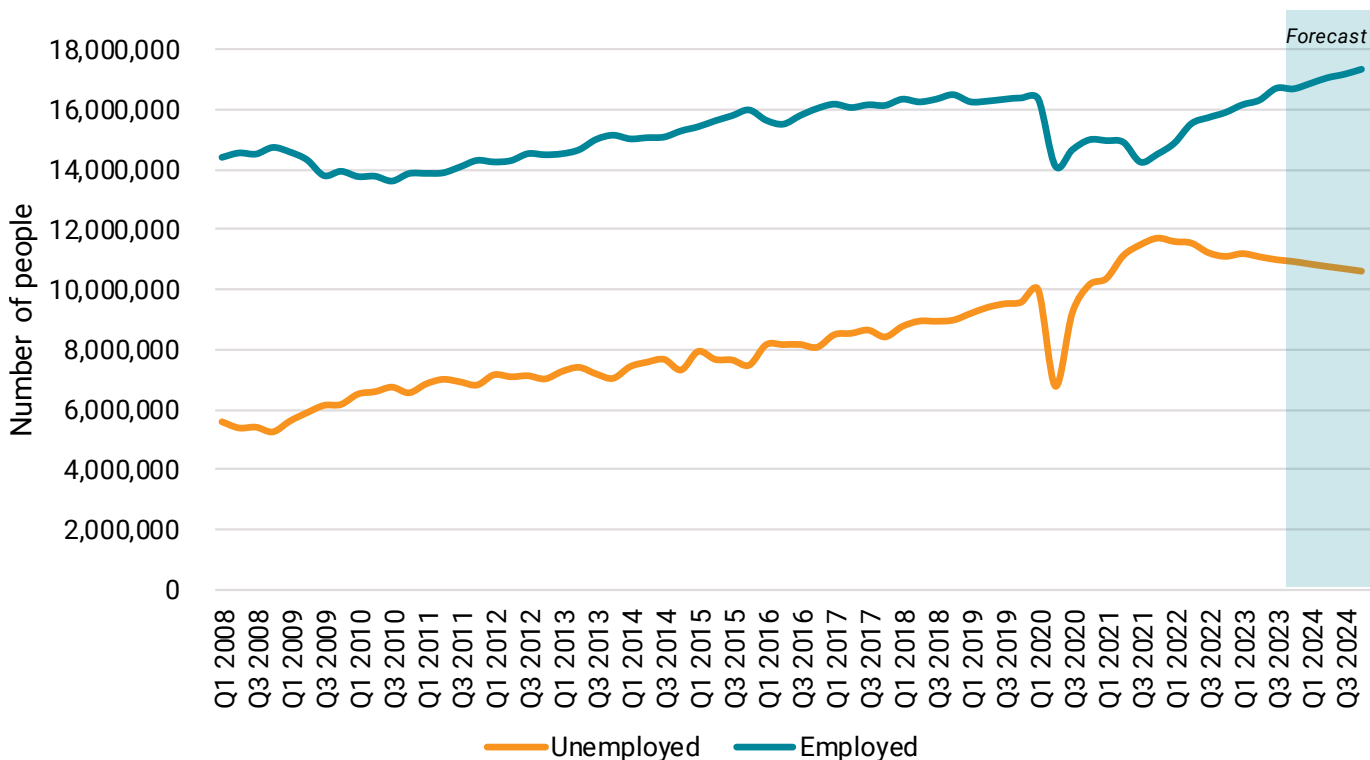
3. LABOUR MARKET TRENDS AND EXPECTATIONS: Q1 2008 TO Q4 2024

This section provides insights on trends within the South African labour market covering the period Q1 2008 to Q4 2023 (forecasted to Q4 2024), to arrive at an in-depth understanding and uncover some of the key dynamics within the South African labour market.

When it comes to the employment dynamics of any labour market, it is important to recognize that labour demand is never static - it is continuously changing. Jobs which are in high demand or supply at present will not necessarily be in high demand or supply in future. Furthermore, employment and unemployment magnitudes are continuously changing, driven by a host of macro-, meso- and microeconomic factors.

This is evident from figure 2 where the number of employed and unemployed using the expanded definition is illustrated. It appears from the analysis that over the period 2008 to 2023, the number of employed did not show large-scale increases, with COVID-19 wiping out all the employment gains of 2008 to 2020. Although there was not a large-scale increase in the number of employed during the period 2008 to 2023, there was a significant increase in the number of unemployed.

FIGURE 2: THE NUMBER OF EMPLOYED AND UNEMPLOYED, 2008 TO 2024



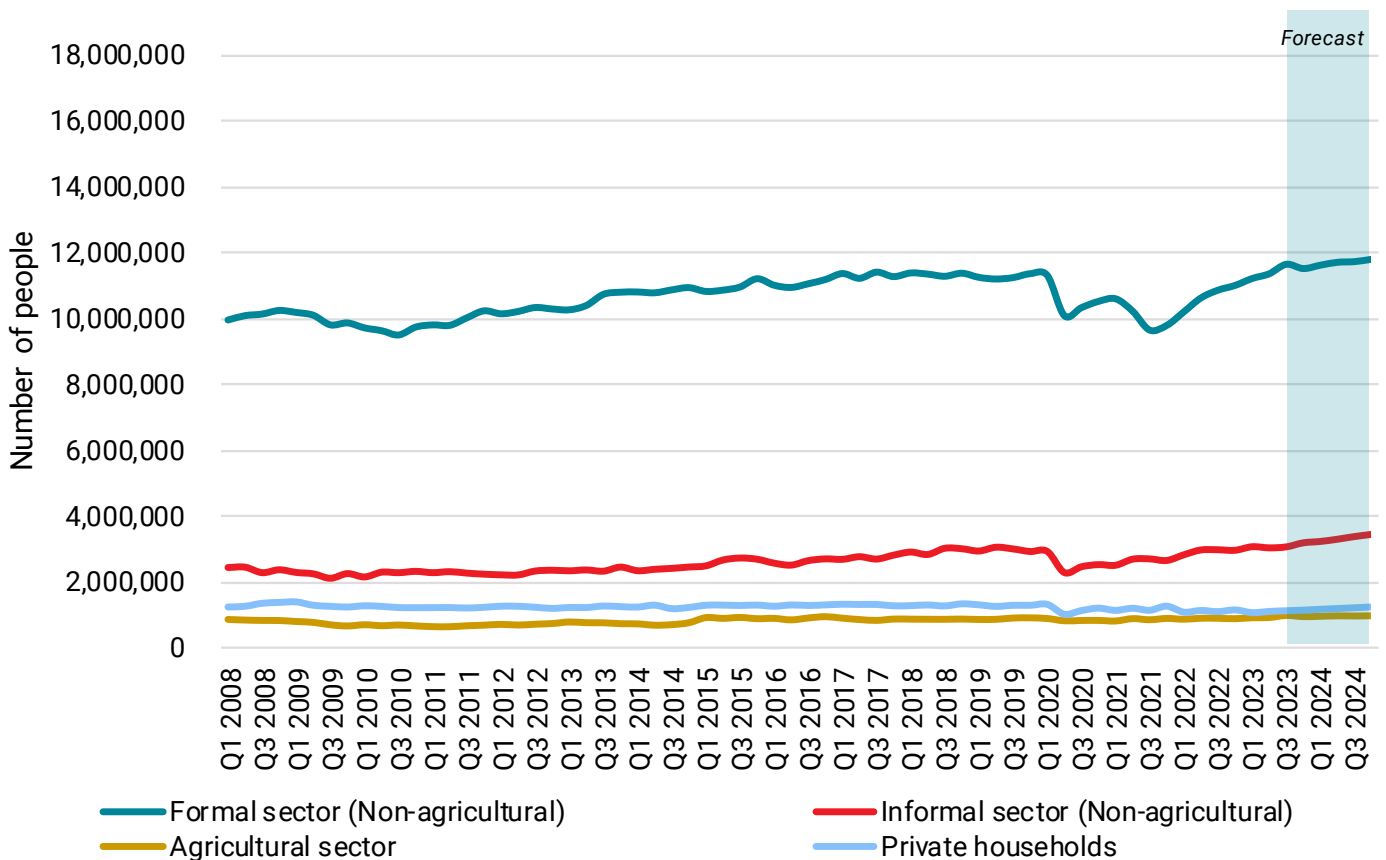
Source: Stats SA (2023) and BMR 2024 projections.

This was driven primarily by low economic growth rates, a relatively low utility for labour, low levels of business confidence and low levels of business growth due to a relatively business-unfriendly environment.

Figure 3 indicates the trendlines for growth in the different employment sectors. It appears that only the formal (non-agricultural) and informal (non-agricultural) employment sectors recorded growth since 2008. However, the actual average annual growth levels for these two sectors during this period were very low. Notably, employment in the formal (non-agricultural) sector only grew by 15.1% over the 15 years (2008 - 2023), while the informal (non-agricultural) sector grew by 31.9% during this period.

The informal (non-agricultural) sector is to a large extent regarded to be a survivalist sector with millions of people who cannot find jobs in the formal sector of the economy finding employment here. Most developing countries have seen a sharp increase in the informal sector as a preferred job option in addition to the formal sector. Given the limited growth over 15 years, it is clear that South Africa's informal sector dynamics are largely different from such countries. A possible reason for this is that more than 20 million South Africans are receiving social grants, dissuading many potentially economically active people from becoming involved in survivalist activities in the informal sector.

FIGURE 3: THE NUMBER OF EMPLOYED IN DIFFERENT EMPLOYMENT SECTORS, 2008 TO 2024

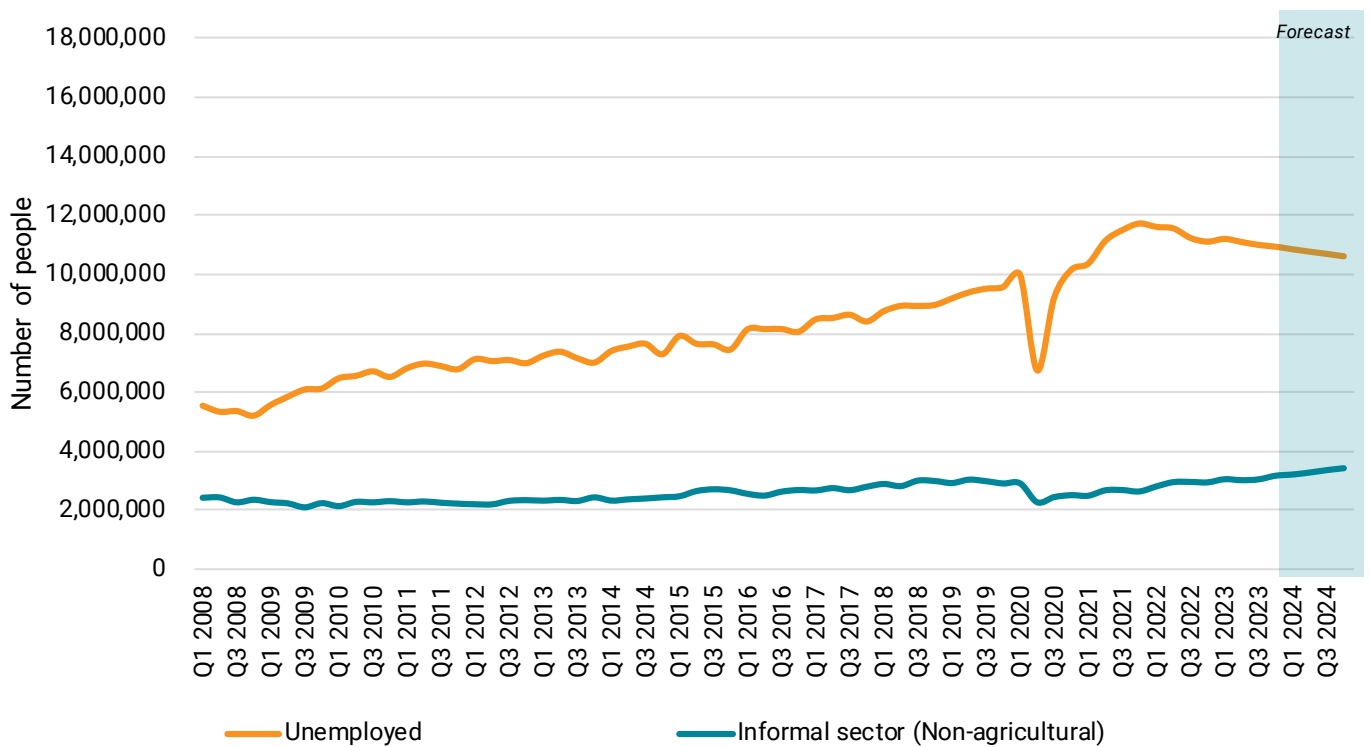


Source: Stats SA (2023) and BMR 2024 projections.

A large percentage of the informal sector did not join the informal sector by choice as 'budding' entrepreneurs, but rather as survivalists waiting for formal, agricultural or household employment sector jobs to become available. For this reason, the number of workers in the informal sector combined with the unemployed (extended definition) serves as a proxy for the actual level of unemployment. The growth trends for unemployment

and employment in the informal (non-agricultural) sector during the period Q1 2008 to Q4 2023, forecasted to Q4 2024, are illustrated in figure 4. It is evident from the analysis that both unemployment and informal (non-agricultural) sector employment increased during this period. Jointly these sectors showed an increase from 8 016 712 people during Q1 2008 to 14 038 463 people in Q4 2023.

FIGURE 4: THE NUMBER OF UNEMPLOYED AND INFORMAL SECTOR WORKERS, 2008 TO 2024



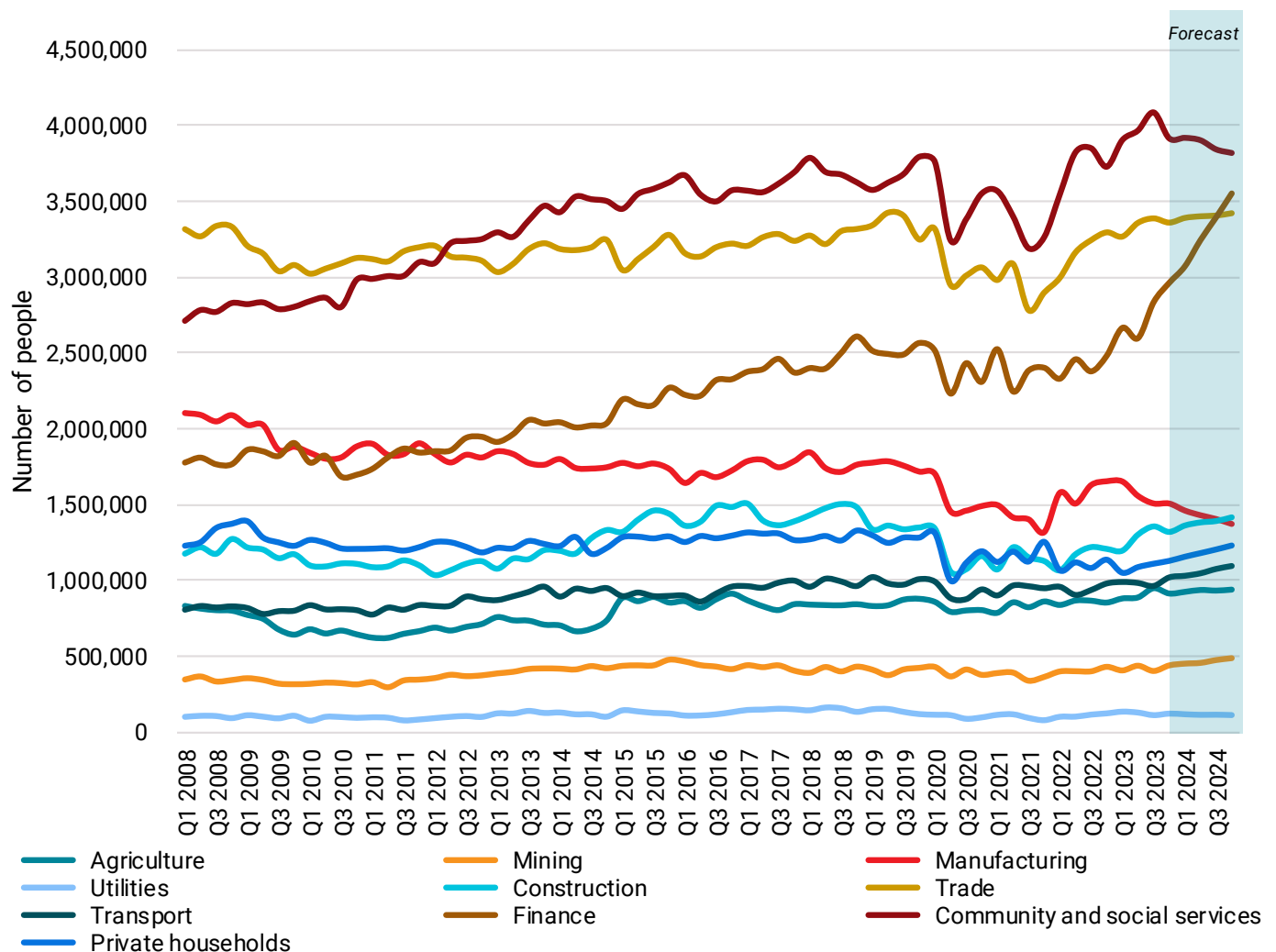
Source: Stats SA (2023) and BMR 2024 projections.

Figure 5 provides a breakdown by economic sector of the growth in the number of employed during the period Q1 2008 to Q4 2023 (forecasted to Q4 2024). From the analysis, it appears that the sectoral results are volatile and non-synchronous. While some of the trendlines are relatively smooth, others are very volatile. Likewise, while some are showing a growing number of employed, some reflect a declining trend. Before proceeding to disaggregate the figures into the primary, secondary and tertiary sector clusters (see figures 6 to 8), the question

could be asked as to what this figure reveals about the employment dynamics of the South African labour market. Two important conclusions can be drawn in this regard, namely:

- Employment is not driven by employment creation and maintenance plans, which would strengthen growth and smooth out volatilities.
- Sectoral employment growth trends are low due to low sectoral gross value-added trajectories.

FIGURE 5: THE NUMBER OF EMPLOYED BY ECONOMIC SECTOR, 2008 TO 2024



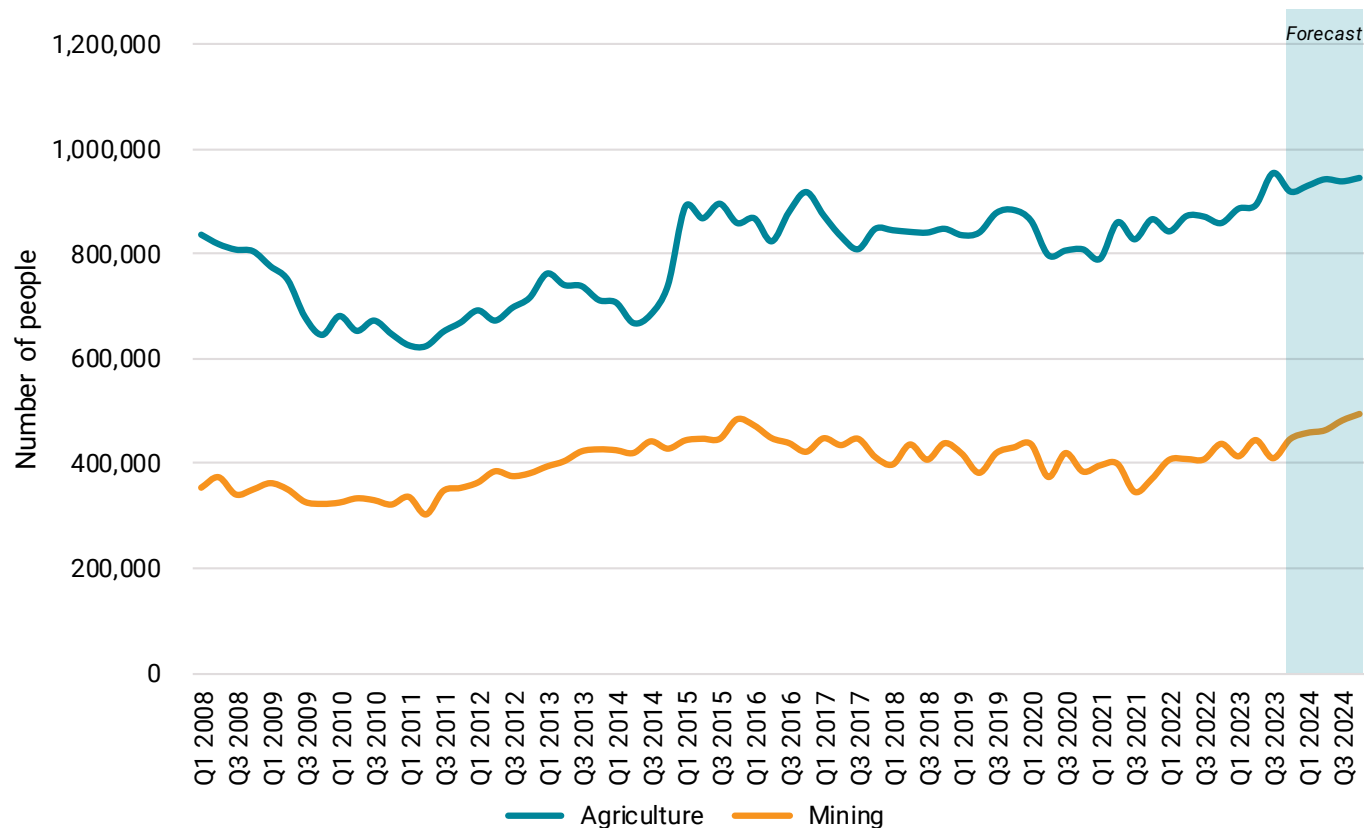
Source: Stats SA (2023) and BMR 2024 projections.

In figure 6 the number of employed in the **primary sector** (agriculture and mining) during the period Q1 2008 to Q4 2023 (forecasted to Q4 2024) is illustrated. It is evident from the analysis that the number of people employed in these two primary sub-sectors remain very low. Additionally, throughout the course of the 15 years, employment in the mining industry increased by a respectable but still insufficient 19.5%, while employment in the agriculture sector only increased by 9.8%.

There are many reasons for the weak employment growth performance in these two sectors which include inter alia:

- Low gross sectoral value-added growth.
- Low levels of business confidence.
- A business-unfriendly environment.
- Very low investment due to political statements indicating possible future expropriation or nationalisation of businesses in these sectors.
- Very volatile trajectories in the prices and demand for agricultural and mining goods.
- Very high crime levels impacting both these sectors.

FIGURE 6: THE NUMBER OF EMPLOYED IN THE PRIMARY SECTORS OF THE ECONOMY, 2008 TO 2024

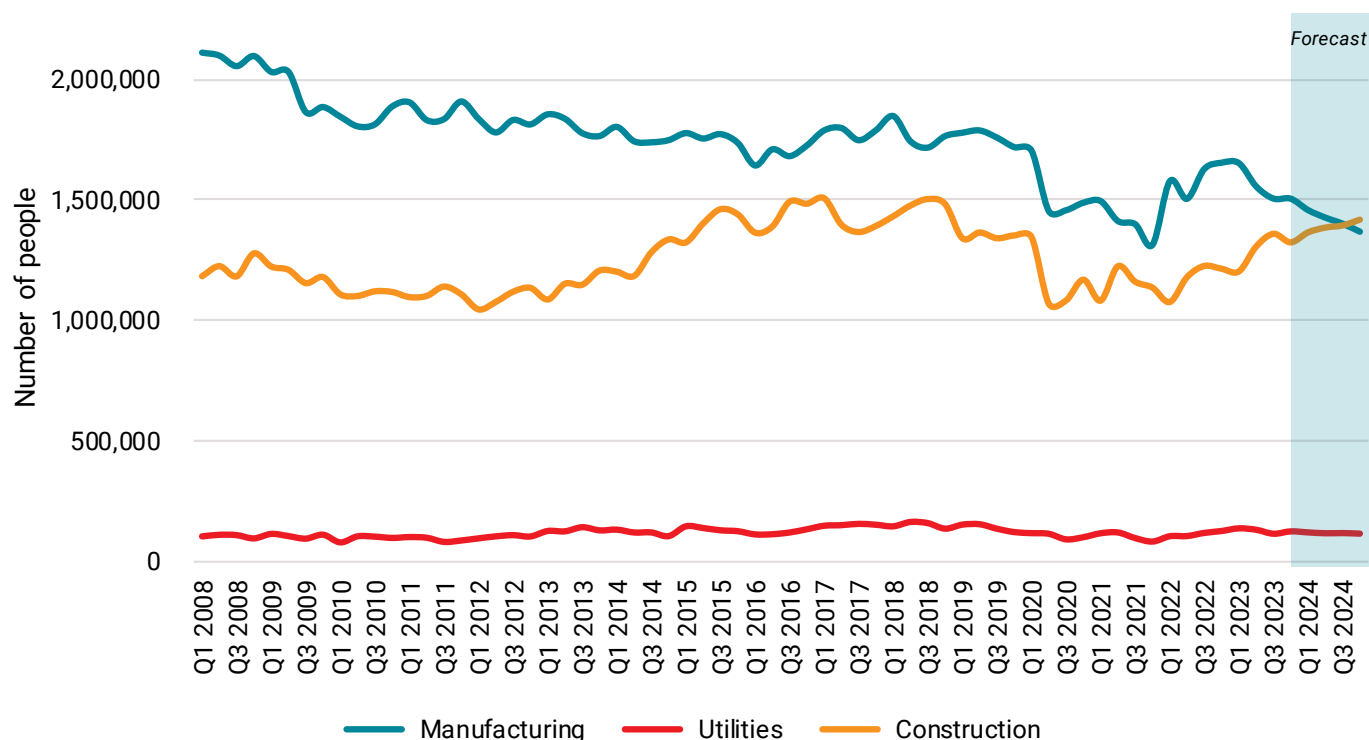


Source: Stats SA (2023) and BMR 2024 projections.

It is evident from figure 7 that employment growth trends in the **secondary sector** during the period Q1 2008 to Q4 2023 (forecasted to Q4 2024) were even more volatile and uncertain than was the case for employment in the primary sectors of the economy. The strong decline in manufacturing employment is especially evident from the analysis. Over the past few decades, there has been much discussion on whether South Africa is de-industrialising. Considering the analysis presented in figure 7, as well as the negative real growth in the manufacturing sector's real output during this period, there appears to be some

truth in this statement. The fact that several of the biggest automotive manufacturers in the world have recently hinted that they may be withdrawing their investments from South Africa exacerbates this problem. In the case of both the construction and the utilities sectors, very low growth in employment was recorded during the period Q1 to Q4 2023, resulting from reasons including COVID-19 in the case of the construction sector as well as low economic growth and weak governance in the case of both these sectors.

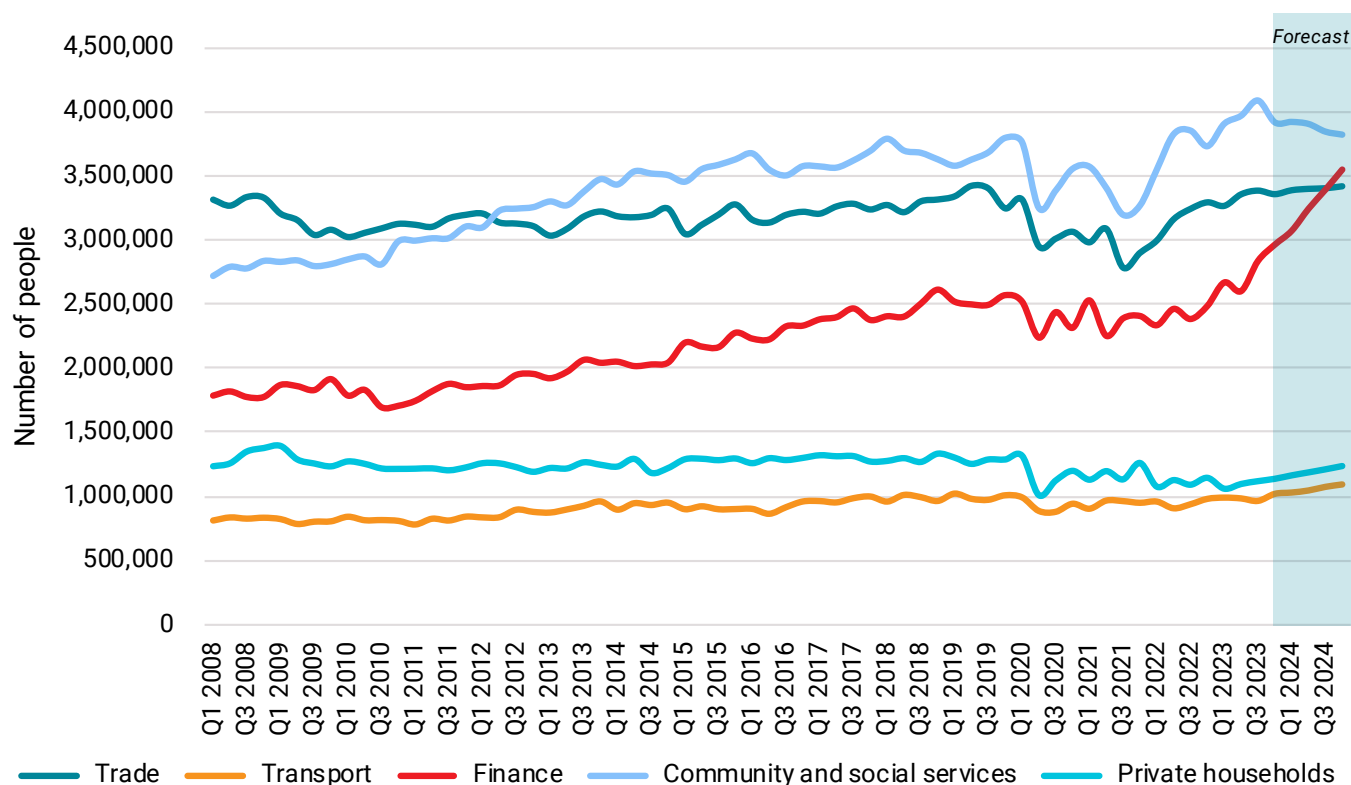
FIGURE 7: THE NUMBER OF EMPLOYED IN THE SECONDARY SECTORS OF THE ECONOMY, 2008 TO 2024



Source: Stats SA (2023) and BMR 2024 projections.

The **tertiary sector** displayed a mixed bag of employment growth results. While employment growth in the transport, the trade and the private household sectors stagnated, there was much stronger (but still less than optimal) growth for the community and social services as well as the financial services sectors.

FIGURE 8: THE NUMBER OF EMPLOYED IN THE TERTIARY SECTORS OF THE ECONOMY, 2008 TO 2024



Source: Stats SA (2023) and BMR 2024 projections.

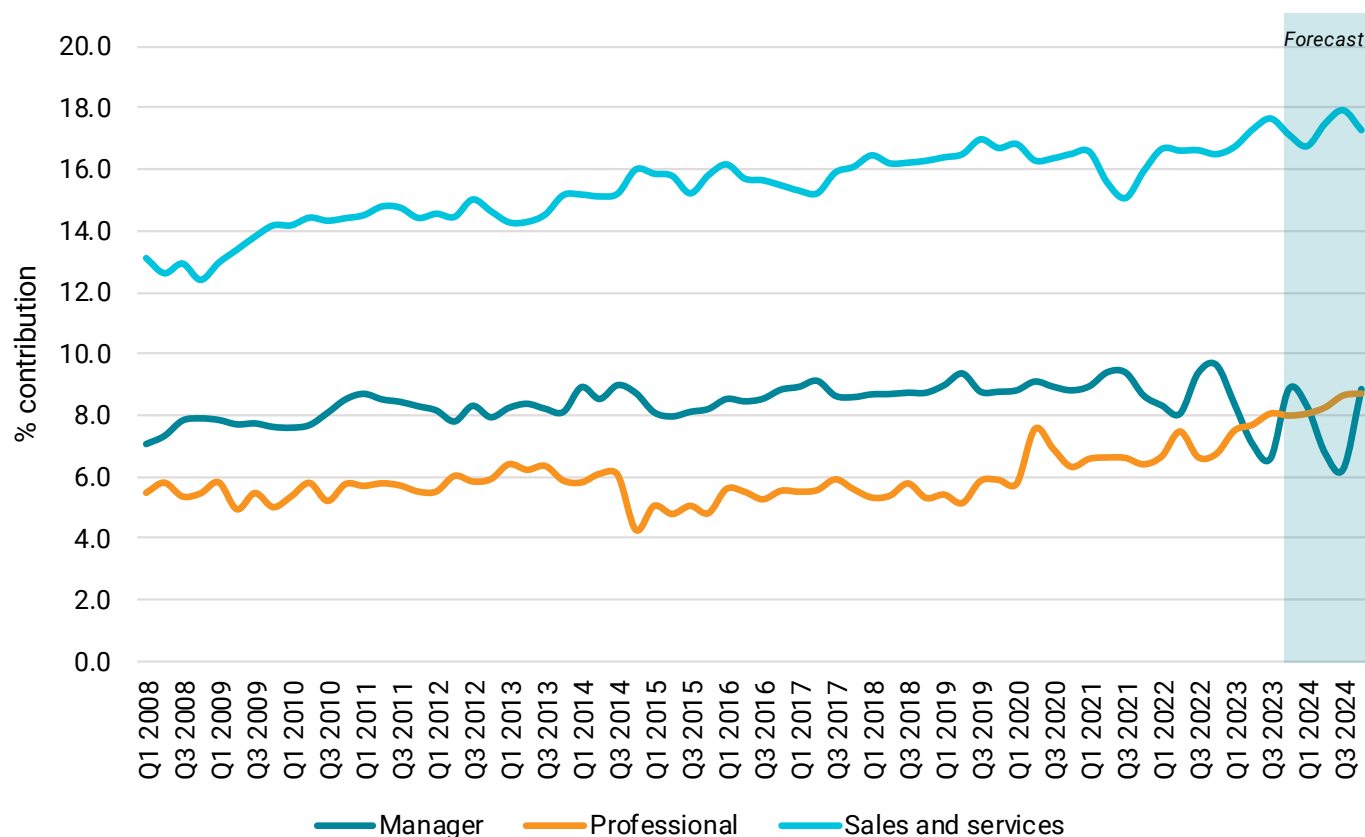
The fact that of the ten economic sub-sectors in South Africa, the employment growth of only two sectors experienced positive growth levels over the period Q1 2008 to Q4 2023, is of great concern.

It appears from a trend analysis of the percentage contribution of various occupational categories to total employment that, while some occupational categories' contributions have decreased over the period Q1 2008 to Q4 2023, some categories have recorded increased levels of importance in terms of employment creation. There has been strong growth in higher-end occupations such as managers, professionals and sales and service workers as illustrated in figure 9. These sectors'

contribution to employment increased during the past 15 years, specifically:

- Sales and services occupations: Increased from 12.6% in Q1 2008 to 17.1% in Q4 2023, and the contribution is expected to increase to 17.3% during Q4 2024.
- Managerial occupations: Increased from 7.1% in Q1 2008 to 8.9% in Q4 2023, and the contribution is expected to be at the same in Q4 2024.
- Professional occupations: Increased from 5.5% in Q1 2008 to 8.0% in Q4 2023, and the contribution is expected to increase to 8.7% during Q4 2024.

FIGURE 9: INCREASING PERCENTAGE CONTRIBUTIONS TO EMPLOYMENT IN SELECTED OCCUPATIONAL CATEGORIES, Q1 2008 - Q4 2024

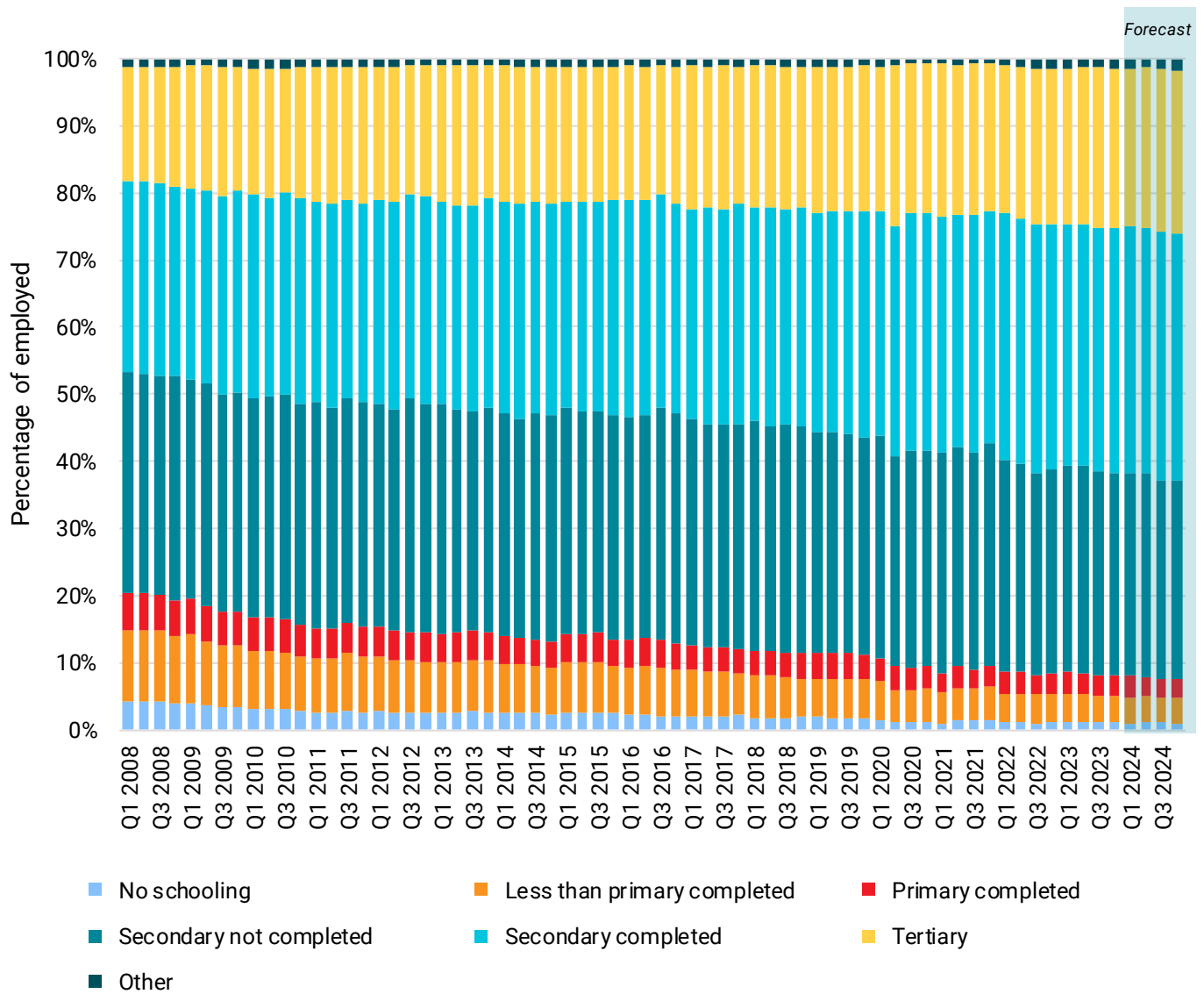


Source: Stats SA (2023) and BMR 2024 projections.

The proportion of highly qualified people represented in the employed corps has increased significantly. It appears from figure 10 that the share of the employed with a matric qualification as their highest qualification increased from 28.5% in Q1 2008 to 36.4% in Q4 2023. At the same time the share of the employed with a tertiary qualification as their highest qualification increased from 17.0% in Q1 2008 to 23.7% in Q4 2023. This implies that the share of the employed with a matric qualification or higher increased from 45.5% of the employed in Q1 2008

to 60.1% during Q4 2023. This indicates that the level of qualification needed to secure employment is steadily rising in the South African labour market. This trend is primarily due to the ongoing complexity of the workplace brought about by new technologies, with Fourth Industrial Revolution (4IR) technologies playing a significant role in the need for more qualified workers to do jobs well. Section 5 will examine the relationship between emerging technologies and the future of employment.

FIGURE 10: HIGHEST EDUCATIONAL LEVELS OF THE EMPLOYED, Q1 2008 - Q4 2024



Source: Stats SA (2023) and BMR 2024 projections.

4. EMPLOYMENT INSIGHTS FROM THE UASA/BMR EMPLOYMENT INDEX (EI)

The UASA/BMR Employment Index (EI) was developed to track the employment performance of the South African economy over time. This index provides views in terms of an overall employment index as well as various sub-indices.

The overall UASA/BMR EI is a function of five employment sub-indices, namely:

- Employment growth, as a labour demand indicator.
- Production elasticity of employment, as an indicator of the strength of the relationship between GDP growth and employment creation.
- Growth in unemployment (expanded definition), as an indicator of the growth in the number of economically active people who are jobless.
- The quality of labour supply (as proxied by highest educational status), as an indicator of growth in the value of human capital locked in the economic active population.
- Compensation growth, as an indicator of employment-related income growth.

An example of the interaction between the sub-indices that determines the overall UASA/BMR EI is when there is positive employment growth accompanied by a strengthening of GDP-employment elasticities, which ultimately gives rise to a reduction in unemployment. If this is accompanied by growth in the quality of the labour supplied in terms of improved educational outcomes of the economically active population, while there is also positive compensation growth, the overall employment index will increase. Should the various sub-indices be in negative territory, the overall UASA/BMR EI will decline. In reality, variations in the overall employment index will probably be attributed to a mixed bag of employment sub-index performances. The current large number of downside risks to economic growth such as load shedding, grey listing, the national elections and low investor confidence might, for example, may give rise to greater negative trends in the overall employment index in the near future.

**Employment growth
sub-index**

**Production elasticity of
employment sub-index**

**Growth in unemployment
sub-index**

**The quality of labour supply
sub-index**

**Compensation growth
sub-index**

**Overall Employment
Index**

EMPLOYMENT GROWTH SUB-INDEX

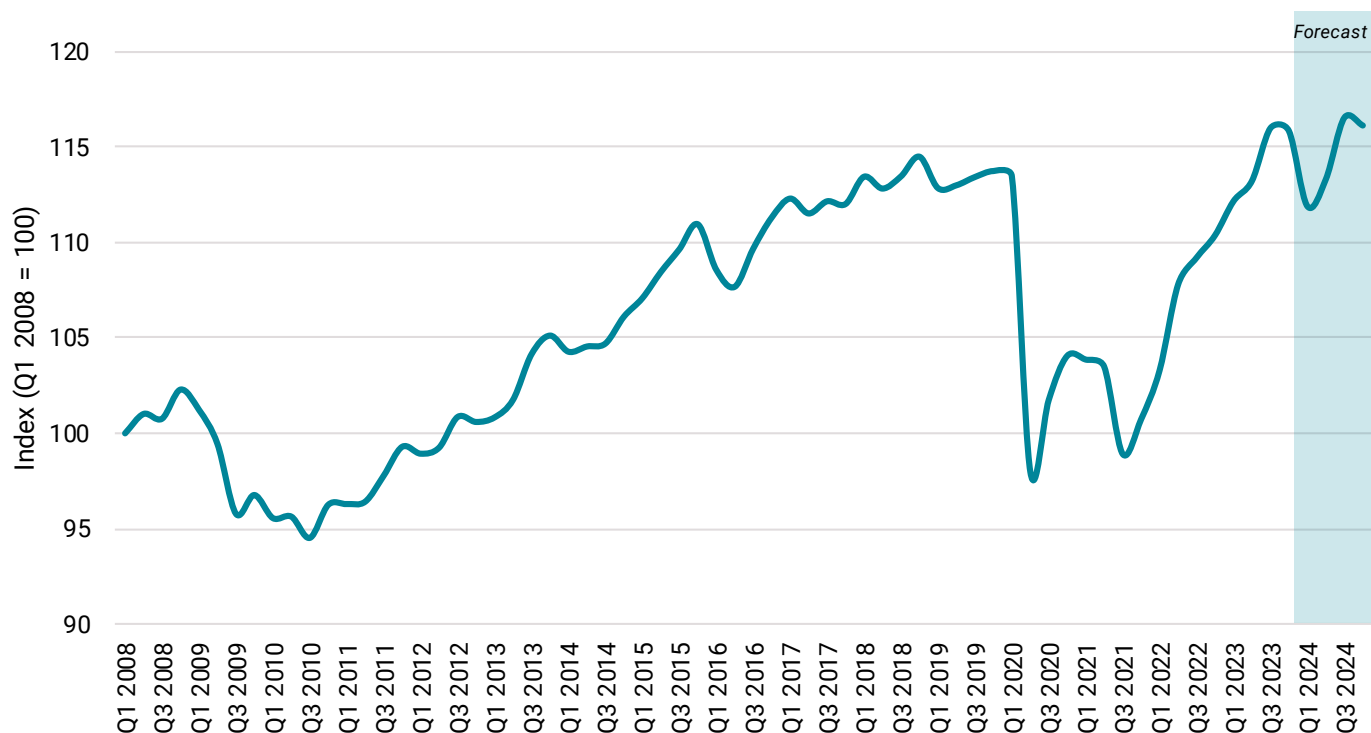
This sub-index is based on the number of employed people in South Africa, with Q1 2008 serving as the base period (set at 100 index points). For the subsequent quarters (Q2 2008 to Q4 2023, forecasted to Q4 2024) the number of people employed during the quarter was divided by the number of people that was employed during Q1 2008. The end goal was to determine whether an increase or decrease in terms of the number of employed people has been recorded since Q1 2008.

Figure 11 shows that the sub-index recorded an increase from 100 index points in Q1 2008 to 116 index points by Q4 2023. The strongest consistent growth in the employment growth sub-index during this period was from Q3 2010 (index value of 95 index points) to Q4 2018 (index value of 114 index points), representing a 20% increase in the number of people in employment. However, this period

was followed by a period of economic stagnation between Q1 2019 to Q1 2020, giving rise to zero employment growth. Hereafter the COVID-19 pandemic impacted employment negatively during Q2 2020 to Q3 2021, when the employment growth sub-index declined from 113 to 98 index points, thus implying a loss of 14% in jobs. Since then, there has been some recovery in employment, but this recovery remains very volatile as is evident from the analysis in figure 11.

With reference to 2024, it appears from figure 11 that some job losses occurring during Q1 2024 and Q2 2024 are expected, followed by some employment gains during the last two quarters of the year. It is expected that the number of people employed by the end of 2024 will only be slightly higher compared to the end of 2023.

FIGURE 11: EMPLOYMENT GROWTH SUB-INDEX RESULTS, Q1 2008 TO Q4 2024



Source: BMR (2024).

PRODUCTION ELASTICITY OF EMPLOYMENT SUB-INDEX

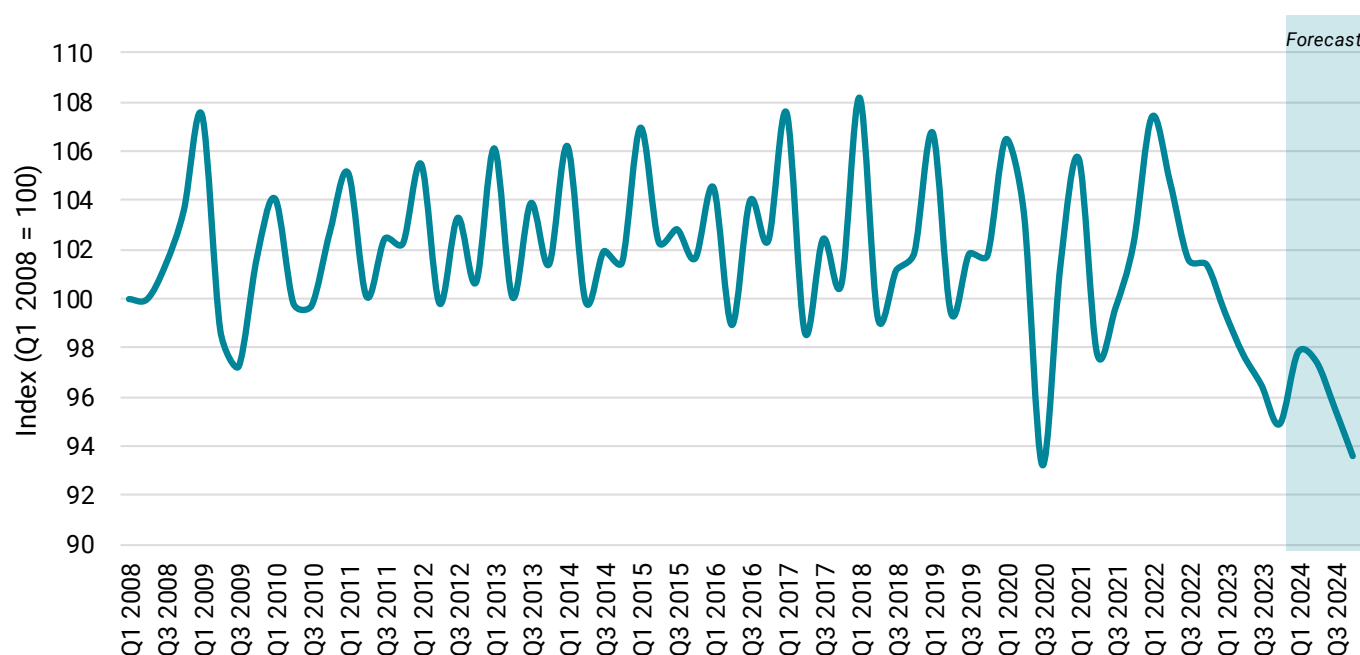
The term **employment elasticity** refers to the percentage change in the number of employed people for every 1 percent change in economic growth, with Q1 2008 serving as base period (set at 100 index points). For the subsequent quarters, the employment elasticity rate of the quarter was divided by the Q1 2008 employment elasticity rate to finally determine whether an increase or decrease has been recorded since Q1 2008.

Figure 12 illustrates that the employment elasticity rate has been extremely volatile and without clear trends from Q1 2008 to Q4 2023. Of great concern is the consistent decline in the production elasticity of employment from Q1 2022, indicating a weakening elasticity between GDP growth and employment growth. This, however, is not currently a desirable situation for South Africa.

Furthermore, the long-run production elasticity of employment over this period was determined as 0.4, which implies that for every 1% economic growth, there was on average only 0.4% employment growth during this period.

The National Development Plan 2030 stipulated that should South Africa be able to sustain a GDP growth rate of about 5% per annum during the period 2012 and 2030, this will give rise to a significant reduction in unemployment, poverty, and inequality in South Africa. However, given the weakening production of elasticity of employment, South Africa would need sustained GDP growth rates well above 5% to effect such positive changes to unemployment, poverty, and inequality in South Africa.

FIGURE 12: PRODUCTION ELASTICITY OF EMPLOYMENT SUB-INDEX RESULTS, Q1 2008 TO Q4 2024



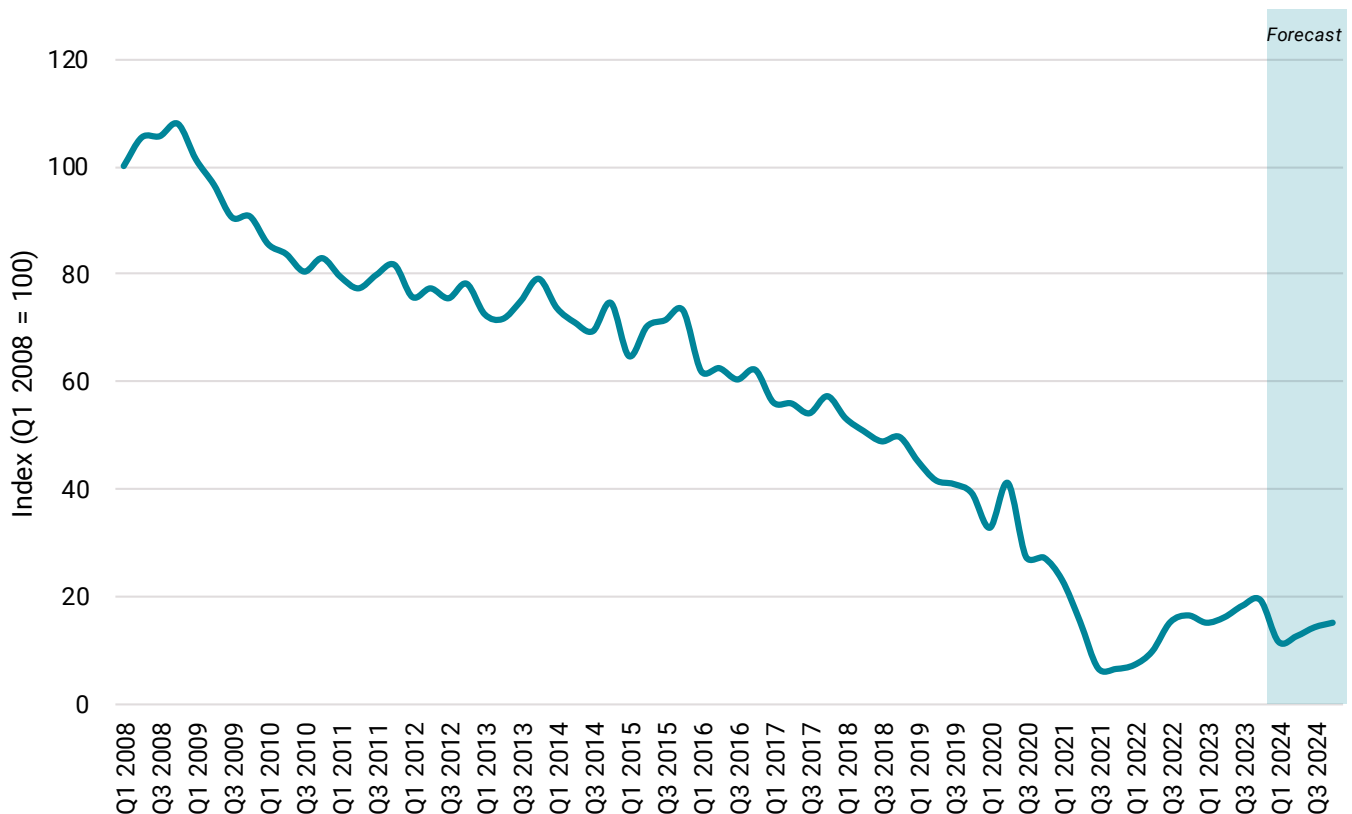
Source: BMR (2024).

GROWTH IN UNEMPLOYMENT SUB-INDEX

This sub-index measures the ability of the South African economy to absorb unemployed people. The expanded definition of unemployment is used as this includes discouraged work seekers, thereby providing a true reflection of the ability of the economy to absorb unemployed people. Q1 2008 serves as the base period (set at 100 index points), while for the subsequent quarters the number of unemployed during the quarter was divided by the Q1 2008 number of unemployed to

determine whether the ability of the economy to absorb the unemployed increased or decreased since Q1 2008. It appears from figure 13 that during this period there was only some improvement recorded in Q1 2008 to Q1 2009, whereafter the ability of the economy to absorb the unemployed deteriorated. This is expected to continue during 2024, which will add to worse poverty and income inequality. This finding also confirms the declining production elasticity of employment shown in figure 12.

FIGURE 13: ABILITY TO ADDRESS UNEMPLOYMENT SUB-INDEX RESULTS, Q1 2008 TO Q4 2024



Source: BMR (2024).

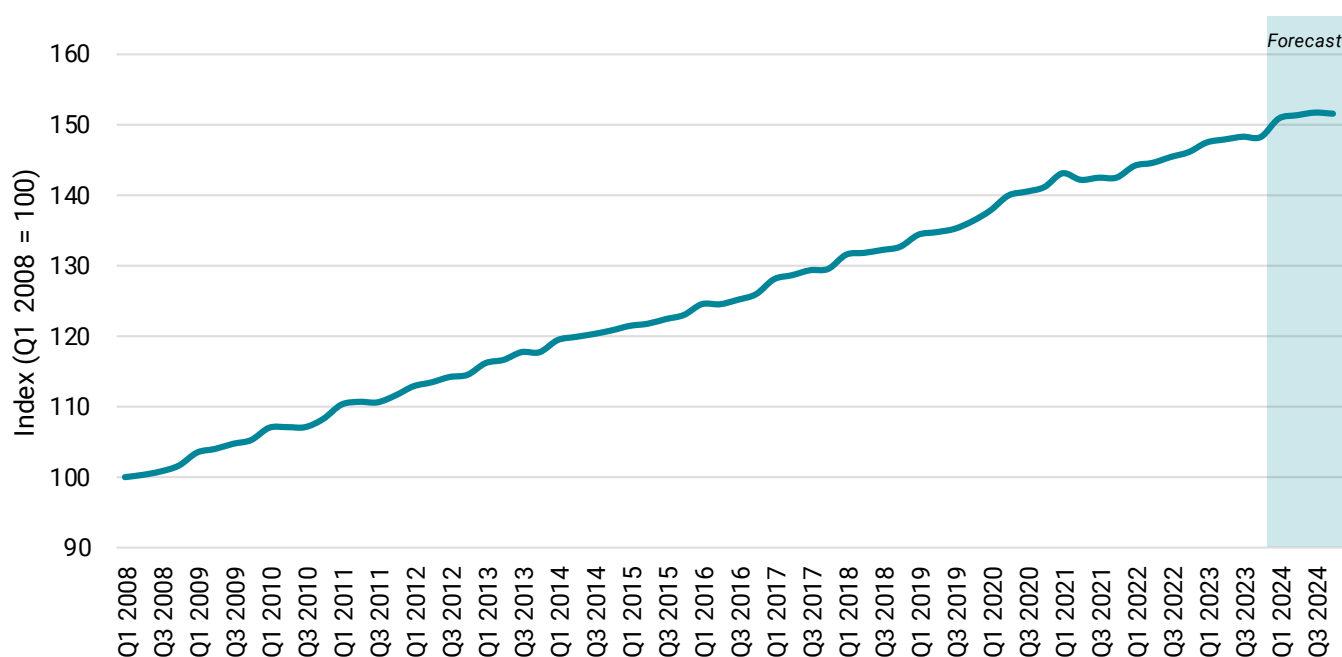
THE QUALITY OF LABOUR SUPPLY SUB-INDEX

This sub-index is calculated by assigning higher scores to higher levels of education of the working-age population. The reasoning behind this is that as more people become better educated over time the quality of labour sub-index score will increase (and vice versa). Q1 2008 serves as the base period (set at 100 index points), while for the subsequent quarters (Q2 2008 to Q4 2023, forecasted to Q4 2024) the quality of education scores during these quarters were compared to the Q1 2008 score to determine whether the quality of labour increased or decreased.

The results illustrated in figure 14 show that the educational quality of the South African working-age population improved during the period Q1 2008 to Q4 2023, and that it is expected to continue to improve in

2024. The content relevance of such educational quality and the relatively low growth in educational attainment when compared to other emerging economies such as China, Vietnam, Indonesia, Malaysia and India, remain of great concern. The implication of this is that an increasing number of people have a matric or higher qualification, but that the quality and content relevance of such education is of such a nature that it only to a limited extent translates into formal employment and entrepreneurship gains. Furthermore, the relative absence of cognitive development, entrepreneurship, technical skills, financial literacy, and labour market-related skills, ensures that there is a low level of elasticity between the growth of the number of people with a matric qualification and the levels of real GDP and employment growth.

FIGURE 14: QUALITY OF LABOUR SUPPLY SUB-INDEX RESULTS, Q1 2008 TO Q4 2024



Source: BMR (2024).

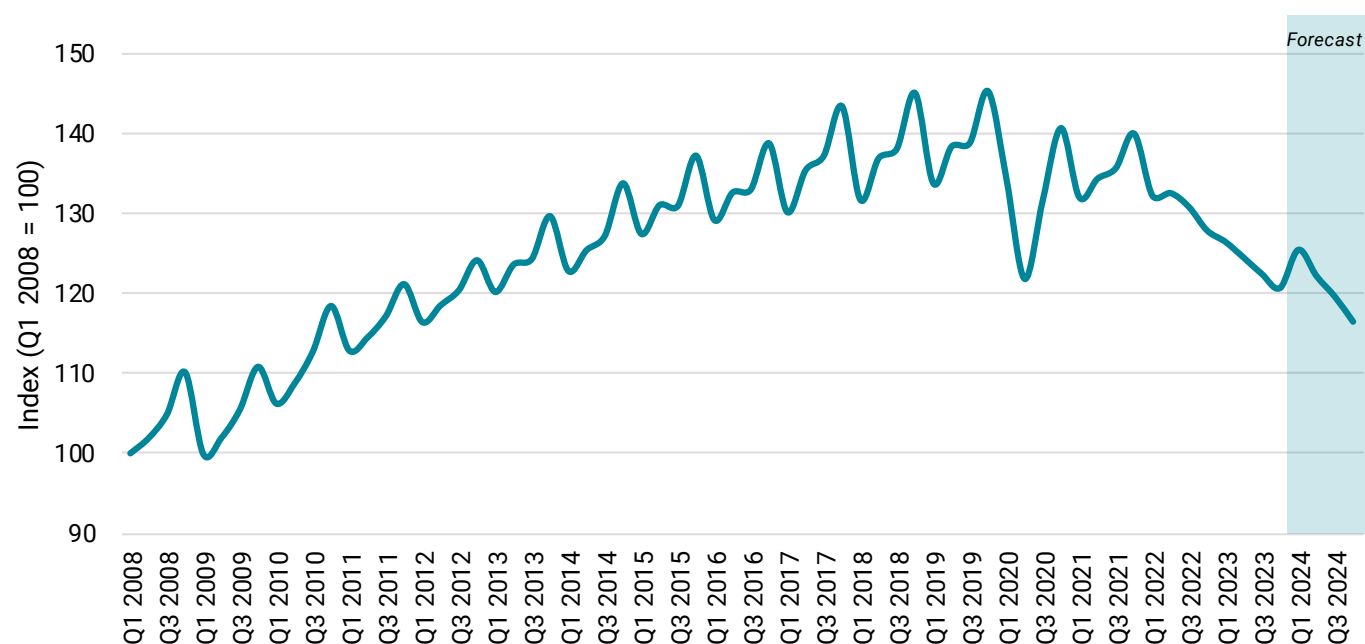
COMPENSATION GROWTH SUB-INDEX

Growth in compensation is calculated by considering the real growth in compensation, thereby removing the possible impact of inflation. Figure 15 illustrates that the real compensation growth index increased by 45% from Q1 2008 to Q1 2019 whereafter it showed increasing volatility and a longer-term decline up to Q4 2023. It is expected that this decline will continue during 2024.

It could be expected that improvements in the educational quality of the population would translate directly into

compensation growth. As evident from figures 14 and 15, the real compensation growth in South Africa lags behind the labour quality index. This could be an indication that although more people are attaining higher levels of education, such improvements do not directly translate into higher human capital. Given that the possible impact of inflation is removed, the trend also could imply that increases in compensation do not match increases in the cost of living.

FIGURE 15: COMPENSATION GROWTH SUB-INDEX RESULTS, Q1 2008 TO Q4 2024



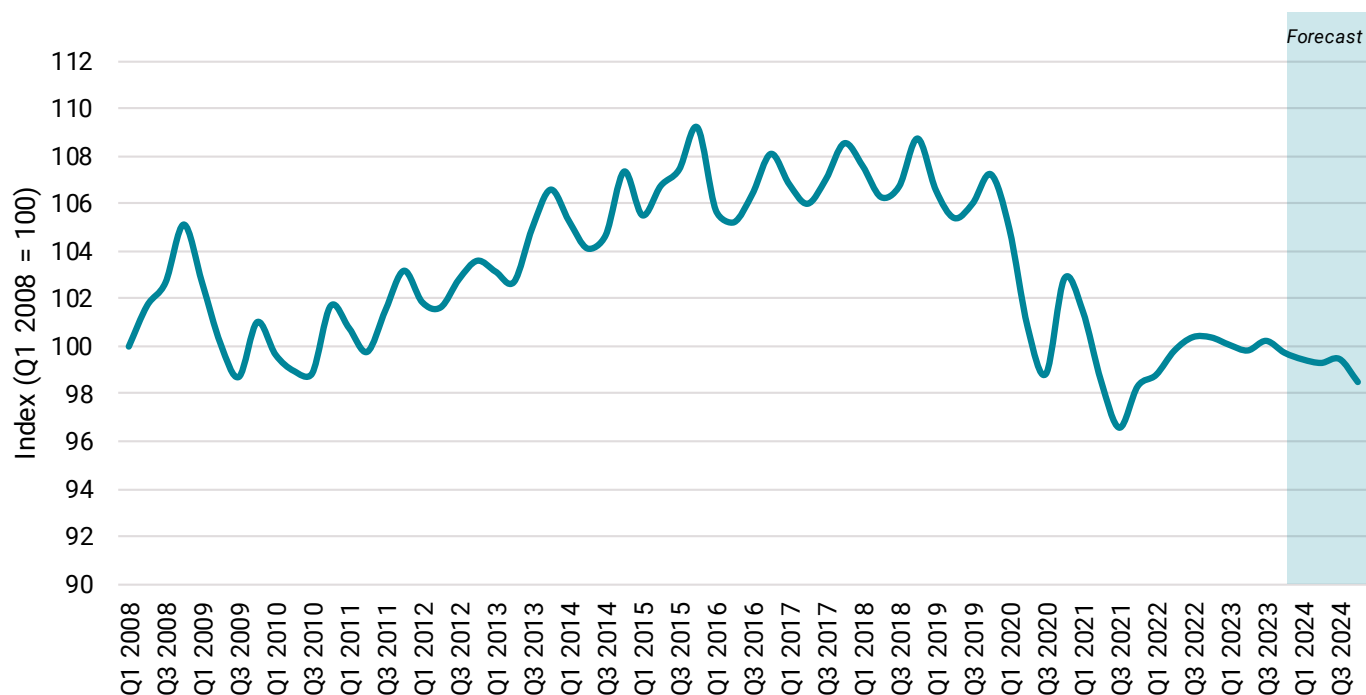
Source: BMR (2024).

OVERALL EMPLOYMENT INDEX

It is evident from the preceding analyses that the South African economy is not doing well concerning employment aspects. Figure 16 shows that the South African Employment Index (EI) recorded some, although sub-optimal, improvements during the period Q1 2008 to Q4 2018. A host of factors, including load shedding, low economic growth, corruption, sovereign investment

grade downgrades and COVID-19, negatively impacted the employment performance of South Africa since Q1 2019, with some improvement during the period Q3 2021 to Q4 2022, whereafter it deteriorated again. It is expected that the overall employment index will decline even further during 2024.

FIGURE 16: OVERALL EMPLOYMENT INDEX RESULTS, Q1 2008 TO Q4 2024



Source: BMR (2024).

5. TECHNOLOGICAL ADVANCES AND THE FUTURE OF EMPLOYMENT IN SOUTH AFRICA

Research has shown consistently that the number of employment opportunities is strongly positively correlated with technological advancements while each industrial revolution brought about a huge additional spurt in employment worldwide. It has been estimated that more than 85% of employment growth over the past 80 years can be explained by the evolution of technology which has been responsible for creating new jobs.

Since and before the origin of UASA in 1894 there have been a lot of technological advancements which have had a very strong positive impact on the number of jobs created during the period 1875 to 2023, as shown in figure 17. During the same period, the number of employed in the world increased dramatically from about 583 million in 1894 to nearly 3.5 billion today.

The International Momentary Fund (2024) in a recent report indicated that new technologies such as Artificial Intelligence (AI) will bring about large-scale changes to the global economy and with that, also large-scale changes in the labour market globally. The International Momentary Fund (2024) estimates that worldwide about 60% of jobs are exposed to AI while about 40% of jobs in emerging economies are exposed to AI. According to

the IMF, university graduates will be in the best position to capitalize on AI to secure jobs although some graduate jobs which could be replaced by AI will be at risk.

Given the statistics provided by the IMF and to determine the level to which different employees in South Africa will be affected by the 4IR, an imputed variable was created in the Q4 2023 Quarterly Labour Force Survey (QLFS) based on the nature of the job that an employee is doing to determine whether an employee will be impacted by 4IR fully, to a large extent, to a limited extent or by an extremely limited extent. Whereas the IMF estimates that about 40% of employees in emerging economies will be impacted to a large extent by the 4IR, the results show that in South Africa about 50.6% of employees are being affected by the 4IR to a large extent.

FIGURE 17: TECHNOLOGICAL INVENTION TIMELINE AND WORLD EMPLOYMENT LEVELS

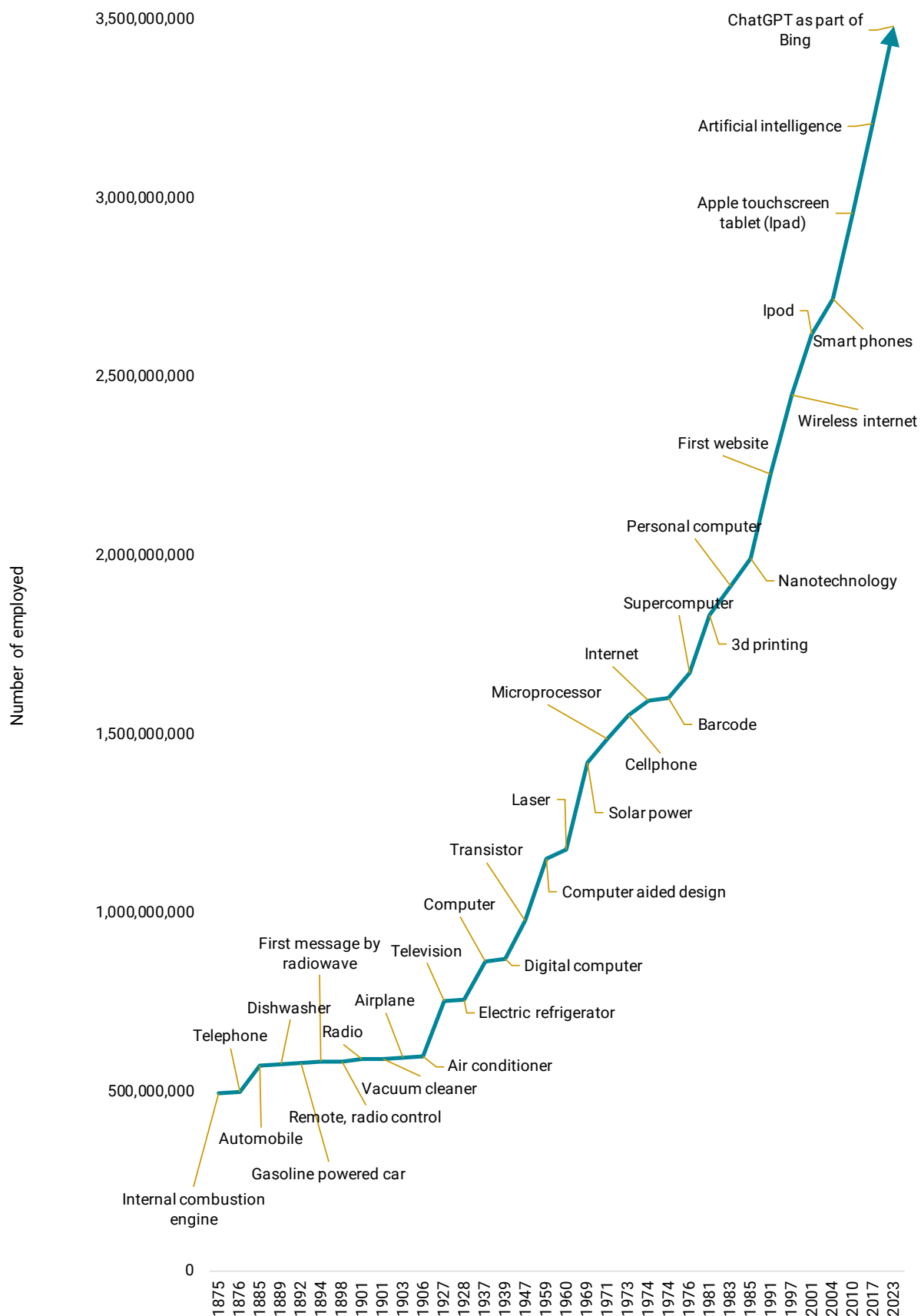


Table 2 provides a sectoral breakdown, indicating the estimated level to which employees in the different sectors of the economy are impacted by the 4IR. It appears from the analysis that the sectors that are the most impacted by the 4IR include mining and quarrying; manufacturing; electricity, gas and water; wholesale and retail; transport, storage and communication; financial intermediation; insurance; real estate and business services; and community, social and personal services. The implication of this is that seven out of the ten economic sub-sectors will be impacted by the 4IR to either a large or full extent. Given that all the economic sectors are linked with supply flows, there is no escaping the impact of the 4IR on the broader economy.

TABLE 2: THE LEVEL TO WHICH EMPLOYEES WILL BE IMPACTED BY 4IR BY SECTOR

Sector	Fully	To a large extent	To a limited extent	Extremely limited
Agriculture; hunting; forestry and fishing	4.0	11.0	6.6	78.4
Mining and quarrying	10.2	40.3	5.9	43.6
Manufacturing	13.8	31.8	6.7	47.7
Electricity; gas and water supply	34.5	38.7	9.2	17.5
Construction	10.4	6.5	2.8	80.4
Wholesale and retail trade	12.5	35.9	15.5	36.1
Transport; storage and communication	16.2	58.0	12.2	13.6
Financial intermediation; insurance; real estate and business services	26.5	39.1	12.8	21.6
Community; social and personal services	25.8	44.4	13.3	16.6
Private households	0.0	3.8	0.0	96.2
Other	0.0	4.4	51.2	44.4
Total	17.0	33.6	10.7	38.7

Source: BMR (2024).



Table 3 presents a breakdown of the level to which employees with different highest educational qualifications are impacted by the 4IR given the jobs that they are doing. It appears that employees right through the educational spectrum will be impacted by the 4IR to some extent. There, however, appears to be some correlation between the level of education and the level to which employees will be impacted by the 4IR. This could be ascribed to the

fact that 4IR goes hand-in-hand with cognitive complexity of which educational level is a good proxy.

Table 4 provides a breakdown of the 4IR impact on employees from different study fields. As expected, employees from the ICT-related, business, education and training; engineering, healthcare, languages, legal, life sciences and physical sciences study fields are most heavily impacted.

TABLE 3: THE LEVEL TO WHICH EMPLOYEES WILL BE IMPACTED BY 4IR BY HIGHEST LEVEL OF EDUCATION

Level of education	Fully	To a large extent	To a limited extent	Extremely limited
Grade R/0	0.0	57.7	0.0	42.3
Grade 1/Sub A	1.1	24.7	5.9	68.3
Grade 2/Sub B	4.3	15.9	8.2	71.6
Grade 3/Standard 1/AET 1	0.0	21.9	4.8	73.4
Grade 4/Standard 2	2.9	16.5	2.0	78.6
Grade 5/Standard 3/AET 2	2.9	19.9	0.6	76.5
Grade 6/Standard 4	2.2	16.6	1.9	79.3
Grade 7/Standard 5/AET 3	1.1	22.7	2.0	74.2
Grade 8/Standard 6/Form 1	3.7	28.2	2.5	65.6
Grade 9/Standard 7/Form 2/AET 4	3.9	23.5	2.0	70.6
Grade 10/Standard 8/Form 3	4.2	32.9	3.7	59.2
Grade 11/Standard 9/Form 4	3.5	35.1	5.4	55.9
Grade 12/Standard 10/Form 5/Matric (No Exemption)	12.0	40.2	16.2	31.5
Grade 12/Standard 10/Form 5/Matric (Exemption/Bachelor's pass)	15.9	39.7	19.8	24.6
NTC I/N1/NIC/(v) Level 2	0.0	41.5	7.6	50.9
NTC II/N2/NIC/(v) Level 3	23.4	35.4	0.0	41.1
NTC III/N3/NIC/(v) Level 4	14.3	38.0	8.9	38.9
N4/NTC 4	18.7	30.6	7.8	42.9
N5/NTC 5	4.8	51.0	14.7	29.5
N6/NTC 6	18.4	34.0	14.1	33.5
Certificate with less than Grade 12/Std 10	19.1	41.6	15.3	24.1
Diploma with less than Grade 12/Std 10	25.3	45.6	11.1	18.0
Certificate with Grade 12/Std 10	15.6	44.1	18.2	22.1
Diploma with Grade 12/Std 10	24.9	45.8	17.5	11.7
Higher Diploma	28.8	46.5	19.7	4.9
Post Higher Diploma (Masters; Doctoral Diploma)	76.1	12.1	10.9	0.9
Bachelor's Degree	69.5	16.9	10.2	3.4
Bachelor's Degree and Post Graduate Diploma	64.4	23.4	8.7	3.5
Honours Degree	75.5	14.7	8.7	1.1
Higher Degree (Masters/PhD)	83.6	11.2	2.9	2.3
Other	14.0	32.2	7.7	46.1
No schooling	0.7	14.5	1.2	83.6
Total	17.0	33.6	10.7	38.7

Source: BMR (2024).

TABLE 4: THE LEVEL TO WHICH EMPLOYEES WILL BE IMPACTED BY 4IR BY STUDY FIELD

Study field	Fully	To a large extent	To a limited extent	Extremely limited
Agriculture or Renewable natural resources	46.3	31.1	6.0	16.7
Architecture or environmental design	59.9	29.0	6.7	4.5
Arts; Visual or Performing	41.0	38.8	8.7	11.5
Business; commerce and management studies	44.9	22.4	25.8	6.9
Communication	41.5	35.1	18.9	4.5
Computer science	48.7	24.8	14.1	12.4
Education; training or development	56.6	35.1	5.2	3.1
Engineering or engineering technology	37.1	27.2	5.5	30.1
Healthcare or health sciences	38.7	56.0	3.2	2.1
Home economics	48.5	39.0	6.4	6.1
Industrial arts; traders or technology	41.9	23.6	9.9	24.6
Languages; linguistic or literature	56.0	23.6	0.0	20.4
Law	62.5	24.3	7.5	5.7
Libraries or museums	62.2	37.8	0.0	0.0
Life sciences or physical sciences	60.5	31.7	7.0	0.9
Mathematical sciences	60.2	18.4	21.3	0.0
Military sciences	40.6	44.8	0.0	14.6
Philosophy; religion or theology	76.4	19.9	1.7	2.0
Physical education or leisure	28.6	58.8	0.0	12.6
Psychology	69.8	17.2	10.8	2.1
Public administration or social services	24.5	28.6	39.6	7.4
Social sciences or social studies	53.4	13.8	18.4	14.4
Management	30.2	24.5	34.0	11.2
Marketing	42.5	20.7	22.7	14.1
Information technology and computer science	49.5	33.0	12.0	5.5
Finance, economics and accounting	54.8	19.7	21.3	4.2
Office administration	16.9	23.9	46.1	13.2
Electrical infrastructure construction	17.2	30.4	2.2	50.2
Civil engineering and building construction	58.2	10.0	2.7	29.1
Primary agriculture	0.0	0.0	0.0	100.0
Hospitality	19.3	54.7	7.6	18.4
Tourism	26.3	33.0	28.7	12.0
Safety in society	3.3	76.5	4.8	15.4
Mechatronics	19.2	6.7	0.0	74.1
Education and development	60.8	29.5	2.5	7.2
Total	44.9	31.1	13.1	10.9

Source: BMR (2024).

Those employees with higher education and working in professional, managerial, scientific, engineering, finance, and ICT-related fields are the people that will be most impacted by the 4IR. According to the IMF (2024), these people will also be the employees who will benefit most from the 4IR in terms of productivity, efficiencies and compensation growth with the implication that the income and wealth inequalities, which are already fairly large between employees with different skills levels and study fields in South Africa, will in all probability become even bigger. The implication is that the already very skewed income and net wealth distributions are set to become even bigger with the 4IR. A challenge is given the content of the current school curricula in South Africa, employees are generally cognitively, technically, and academically not able to fully cope with the job changes brought about by the 4IR or to optimize it to the benefit of efficiencies, product development, market penetration, sales, businesses and the broader economy in South Africa. A great concern for employees related to the impact of the 4IR, and here especially for lower-skilled workers such as assembly line, call centre and sales workers, is that their jobs could be replaced by AI, machine learning, chatbots, etc. which are all part of 4IR developments. Over the longer term, 4IR will not only negatively impact lower-level skilled jobs in South Africa, but also higher-skilled jobs such as accounting, finance, law, management and entertainment. The World Economic Forum (2023) stated that close to half of the world's working population will need to adapt their core skills over the next five years to adapt to technological changes, highlighting the need for reskilling the labour force.



6. POLICY INTERVENTIONS NEEDED TO ADDRESS LABOUR MARKET PROBLEMS

The research highlighted that South Africa continues to have many acute labour market problems including:

1

Low job creation rates as a result of, among other things, slow rates of economic growth, a lack of elasticity in the relationship between employment and economic growth, and low skill levels among those who are actively seeking employment.

3

Low growth in real compensation as a result of low levels of entrepreneurship, the economy's incapacity to absorb the unemployed, and poor job creation, all of which contribute to high rates of inequality and poverty.

2

The labour market's limited capacity to absorb the unemployed due to low rates of economic growth, low levels of elasticity between employment and economic growth, potential employers' preference for capital over labour, an inflexible labour market, and the low skill levels of the population that is actively seeking work.

4

A large number of positions that would typically be filled by non-tertiary qualified workers are instead occupied by those with a tertiary level education, resulting in a less than ideal level of non-tertiary qualified worker absorption into the labour market. This is because there is a mismatch between the labour supply and labour demand in terms of skill quality and skill mix.

Several labour policy initiatives aimed at resolving these labour market issues have not always yielded the best results. This is because these initiatives fail to closely follow an array of labour market policies that have been successfully adopted by many other developing countries.

The government must foster an atmosphere that encourages economic expansion, draws foreign direct investment to South Africa, and provides chances for private capital to invest with the hope of making a profit and generating jobs. The government's role in fostering sustainable economic growth and employment creation cannot be overstated, nor can it be separated from the importance of infrastructure development and maintenance and the effective delivery of high-quality services.

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