

LIST OF LABOUR INTENSIVE SECTORS

AND

INDUSTRIES IN THE FREE STATE

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1. Background

High levels of unemployment plague South Africa's economy. The country's official unemployment rate has increased over time shooting up from 24.1% in Q4:2009 to 29.1% in Q4:2019.¹ 6.7million South Africans are currently unemployed and this number stands to increase drastically as economists estimate that unemployment will increase to 50% given the effects of Covid-19 on the economy.² The Free State province is likely to face a similar if not worse fate as the province's unemployment rate has traditionally remained higher than the national average.³

One of the measures which has been advocated for to assist with unemployment is the prioritisation of sectors which are highly labour intensive. This type of sectoral targeting has been employed in current policy such as the Industrial Policy Action Plan (IPAP) as well as the Expanded Public Works Programme (EPWP). Although labour-intensity cannot be the sole criterion used to prioritise a sector, it can be utilized in a balanced approach considering other relevant factors such as the foreign exchange generation capacity of a sector to help tackle unemployment.

This document aims to provide an information base for prioritising sectors according to their labour intensity. The lists provided in this document are based on the findings of an in-depth 2010 study by Professor Fiona Tregenna titled "Sectoral Labour Intensity in South Africa".⁴

2. Measures of Labour Intensity

Three main measures are used to rank the labour-intensity of economic sectors neither of which are inherently superior; each bring different insights and are useful in different ways. The first is the labour-capital ratio. This is the ratio between employment and capital stock. Second is the labour-value added ratio. This shows the ratio between employment and value added. Notably, the labour-value added ratio is the inverse of labour productivity. Thirdly, employment multipliers are calculated per sector. These multipliers are used to show the indirect labour-intensity and allow for comparison across sectors. It is important to note the existence of leakages to avoid

¹ Statistics South Africa. 2020. Quarterly Labour Force Survey Q4:2019

² Fin24. 2020. SA risks losing 7 million jobs, reaching over 50% unemployment: Treasury's grim worst-case scenario available from: https://www.fin24.com/Economy/South-Africa/sa-risks-losing-7-million-jobs-reaching-over-50-unemployment-treasurys-grim-worst-case-scenario-20200430

³ Free State official unemployment rate recorded at 35.0% in Q4:2019

⁴ Tregenna, F. 2010. Sectoral Labour-Intensity in South Africa

an overstatement of employment multipliers. As such an import-adjusted measure which excludes imported intermediate inputs used to rank sectors according to employment multipliers.

To consolidate all three measures, a final composite measure is used. This is a combined ranking that takes the average of sectors' ranks in the three separate measures.⁵

2.1. Labour-Capital Ratio

Table 1: List of Labour Intensive Broad Economic Sectors according to Labour-Capital Ratio

Ranking	Broad Economic Sector
1.	Construction
2.	Trade
3.	Agriculture
4.	Community, Social and Personal Services
5.	Manufacturing
6.	Finance
7.	Mining
8.	Transport
9.	Electricity, Gas and Water

Data Source: Tregenna, F. 2010. Sectoral Labour-Intensity in South Africa

Table 2: List of Labour Intensive Sub-Sectors according to Labour-Capital Ratio

Ranking	Sub-Sector	Labour-Capital Ratio
1.	Other Producers ⁶	207.92
2.	Clothing	62.64
3.	Furniture	31.21
4.	Civil Engineering and Other Construction	29.83
5.	Footwear	27.53
6.	Building Construction	23.40
7.	Leather	18.47
8.	Catering and Accommodation Services	13.99

⁵ Tregenna, F. 2010. Sectoral Labour-Intensity in South Africa

⁶ Other producers includes the following activities: washing and (dry-) cleaning of textiles and fur products; hairdressing and other beauty treatment; funeral and related activities; and other service activities not elsewhere classified.

9.	Wholesale and Retail	12.49
10.	Metal Products excluding Machinery	11.86

Data Source: Tregenna, F. 2010. Sectoral Labour-Intensity in South Africa

2.2. Labour-Value Added Ratio

Table 3: List of Labour Intensive Broad Sectors according to Labour-Value Added Ratio

Ranking	Broad Economic Sector
1.	Agriculture
2.	Construction
3.	Trade
4.	Community, Social and Personal Services
5.	Mining
6.	Finance
7.	Manufacturing
8.	Transport
9.	Electricity, Gas and Water

Data Source: Tregenna, F. 2010. Sectoral Labour-Intensity in South Africa

Table 4: List of Labour Intensive Sub-Sectors according to Labour-Value Added Ratio

Ranking	Sector	Labour-Capital Ratio
1.	Other Producers	36.48
2.	Clothing	23.07
3.	Textiles	17.81
4.	Agriculture	16.06
5.	Catering and Accommodation Services	15.86
6.	Building Construction	13.43
7.	Furniture	13.14
8.	Civil Engineering and Other Construction	12.38
9.	Leather	12.38
10.	Wholesale and Retail	10.62

Data Source: Tregenna, F. 2010. Sectoral Labour-Intensity in South Africa

2.3. Employment Multipliers

Table 5: List of Labour Intensive Sectors according to Employment Multipliers

Rankin (import-adjusted employment multiplier)	Sector	Rank (Total Employment Multipliers)
1.	Other producers	1
2.	Clothing	2
3.	Catering and Accommodation Services	3
4.	Agriculture	5
5.	Textiles	4
6.	Wholesale and Retail Trade	9
7.	Furniture	6
8.	Wood and Wood Products	8
9.	Leather	7
10.	Food	11

Data Source: Tregenna, F. 2010. Sectoral Labour-Intensity in South Africa

2.4. Composite Measure of Labour-Intensity

Table 4: List of Labour Intensive Sectors according to Composite Measure

Ranking	Sector	Composite Measure
1.	Other Producers	1.00
2.	Clothing	2.00
3.	Catering and Accommodation Services	5.33
4.	Textiles	5.67
5.	Furniture	5.67
6.	Leather	6.33
7.	Wholesale and Retail Trade	8.00
8.	Footwear	9.33
9.	Building Construction	9.33
10.	Civil Engineering and Other	9.67

Data Source: Tregenna, F. 2010. Sectoral Labour-Intensity in South Africa

The above prompt us to look into the current performance of the economic sectors that are driving the provincial economy, in terms of labour absorption and Gross Value Added (GVA).

3. Performance of the provincial economy

3.1 Labour force

Unemployment is one the major challenges faced by the province with the official unemployment rate increasing by 2.1 percentage points, from 32.9% to 35.0% year-on-year as per table 5 below. Youth aged 15 to 34 are most affected; in the final quarter of 2019 the official unemployment rate for Free State youth stood at 49.1% as compared to 22.3% for the adult population.

Table 5: Unemployment rate Free State Province Q4:2018 to Q4:2019

		Oct-Dec 2018	Jul-Sep 2019	Oct-Dec 2019	Qtr-to-Qtr change	Y-on-Y change	
			Per cent		Percentage	Percentage points	
South Africa	Official unemployment rate	27.1	29.1	29.1	0.0	2.0	
	Expanded unemployment rate	37.0	38.5	38.7	0.2	1.7	
Free State	Official unemployment rate	32.9	34.5	35.00	0.5	2.1	
	Expanded unemployment rate	39.3	42.5	42.3	-0.2	3.00	

Source: Statistics SA, Quarterly Labour Force Survey Q4:2019

The official unemployment rate in Free State increased both quarter-to-quarter (Q3: 2019 to Q4: 2019) and annually (Q4: 2018 to Q4: 2019) with 0.5 (from 34.5% to 35%) and 2.1 (from 32.9% to 35%) percentage points respectively.

The expanded unemployment, includes people who have stopped looking for a work, decreased by 0.2 percentage points in Q4: 2019 compared to Q3: 2019 (from 42.5% to 42.3%). Compared to the same period last year, the expanded unemployment rate increased by 3,0 percentage points in Q4: 2019.

The table below shows that Free State recorded employment losses year-on-year (Q4: 2018 to Q4: 2019) with 21 000 jobs. The province also recorded quarter-to-quarter (Q3: 2019 to Q4: 2019) losses of 10 000 jobs.

Table 6: Labour force characteristics – Free State

	Oct-Dec 2018	Oct-Dec 2019	Year-on-Year change
Working age population (15-64)	1 902 000	1910 000	8 000
Labour force	1 202 000	1 208 000	6 000
Employed	806 000	785 000	-21 000
Unemployed	396 000	423 000	27 000
Not Economically Active	699 000	702 000	3 000
Discourage work seekers	91 000	112 000	21 000
Other	609 000	590 000	-19 000

Source: Statistics SA, Quarterly Labour Force Survey Q4:2019

The economically active population (EAP) between 15-64 years recorded an increase of 6 000 people when comparing Q4: 2019 (1 208 000) with Q4: 2018 (1 202 000). Statistics SA recorded that men consist of 55.3% (668 000 people) and women consist of 44.7% (540 000 people) of the total labour force in Q4: 2019 in the province.

3.2 Sectoral performance

The majority of the province's workforce are employment in the Community Services sector (25.5%), followed by the Trade sector (20.5%). The province's mining sector experienced the highest losses in employment year-on-year recording 7 500 fewer jobs between Q4:2018 and Q4:2019 (down 31.1%). Agriculture, Construction and Trade sectors recorded the highest increases in employment year on year up 16.0%, 15.2% and 14.8% respectively.⁷

Four industries (Agriculture, Construction, Trade and Private Households) as per table 7 below recorded increases in employment when comparing Q4: 2019 with Q4: 2018 with the highest employment gains in Trade.

⁷ Statistics South Africa. 2020. Quarterly Labour Force Survey Q4:2019

Table 7: Employment losses and gains by industry - Free State

GAINS	Industry	Oct-Dec 2018	Oct-Dec 2019	LOSSES	Industry	Oct-Dec 2018	Oct-Dec 2019
	Agriculture	57 000	66 000		Mining	24 000	17 000
	Construction	58 000	66 000		Manufacturing	71 000	55 000
	Trade	140 000	161 000		Utilities	10 000	9 000
	Private Households	96 000	97 000		Transport	40 000	34 000
					Finance	91 000	79 000
					Community & Social Services	219 000	201 000

Source: Statistics SA, Quarterly Labour Force Survey Q4:2019

Employment in six industries (Mining, Manufacturing, Utilities, Transport, Finance and Community & Social Services) decreased with the highest employment losses in Community & Social Services, followed by Manufacturing.

Table 8: Employment losses and gains by sector - Free State

	Oct - Dec 2018	Oct - Dec 2019	Gain/Loss
Formal sector (non-agriculture)	519 000	490 000	-29 000
Informal sector (non-agriculture)	134 000	132 000	-2 000
Agriculture	57 000	66 000	9 000
Private Households	96 000	97 000	1 000

Source: Statistics SA, Quarterly Labour Force Survey Q4:2019

Both the formal and informal sectors recorded employment losses when comparing Q4: 2019 with Q4: 2018. Agriculture and Private Households recorded increases in employment.

3.3 Contribution of the economic sectors

The Free State Province's economy is made up of various industries. Table 9 below provides the Gross Value Added (GVA) of the broad economic sectors of the province.

Table 9: GVA by broad economic sector – Free State, 2019 (R Billions, current prices)

	Free State	National Total	Free State as % of national
Agriculture	11.0	95.7	11.5%
Mining	23.8	376.4	6.3%
Manufacturing	24.1	598.2	4.0%
Electricity	9.4	173.4	5.4%
Construction	6.0	172.2	3.5%
Trade	32.5	685.3	4.7%
Transport	23.3	442.1	5.3%
Finance	36.1	889.3	4.1%
Community services	56.6	1,091.2	5.2%
Total Industries	222.9	4,523.6	4.9%

Source: IHS Markit Regional eXplorer version 1946

In 2019, the Community services sector is the largest within province accounting for R 56.6 billion or 25.4% of the total GVA in the province's economy. The sector that contributes the second most to the GVA of the Free State is the Finance sector at 16.2%, followed by the Trade sector with 14.6%. The sector that contributes the least to the economy of province is the Construction sector with a contribution of R 6.04 billion or 2.71% of the total GVA.

3.3.1 Historical Economic Growth

Over a ten year period, from 2009 to 2019 as per table 10 below, the GVA in the Trade sector had the highest average annual growth rate in Free State at 1.93%. The industry with the second highest average annual growth rate is the Community services sector averaging at 1.91% per year. Mining had an average annual growth rate of -0.47%, while Agriculture had the lowest average annual growth of -2.62%. Overall a negative growth existed for all the industries in 2019 with an annual growth rate of -0.53% since 2018.

Table 10: GVA by broad economic sector – Free State, 2009, 2014 and 2019 (R billions, 2010 constant prices)

2010 Constant prices,					
	2009	2014	2019	Average Annual growth	
Agriculture	6.6	6.9	5.1	-2.62 %	
Mining	18.1	19.7	17.2	-0.47 %	
Manufacturing	13.8	15.4	15.5	1.18 %	
Electricity	4.4	4.5	4.3	<i>-0.11</i> %	
Construction	4.0	4.1	4.0	0.00 %	
Trade	21.9	25.8	26.5	1.93%	
Transport	11.4	12.5	12.9	1.17 %	
Finance	20.4	22.2	23.7	1.50 %	
Community services	30.0	34.3	36.3	1.91%	
Total Industries	130.6	145.6	145.4	1.08%	

Source: IHS Markit Regional eXplorer version 1946

The Tertiary sector contributes the most to the GVA within the province at 66.7%. This is slightly lower than the national economy (68.7%). The secondary sector contributed a total of 17.7% (ranking second), while the primary sector contributed the least at 15.6%.

3.3.2 Sector Growth forecast

The GVA forecasts are based on forecasted growth rates derived from two sources: historical growth rate estimates and national level industry forecasts. Over a five year period, from 2019 to 2024 as per table 11 below, the agriculture sector is expected to grow fastest at an average of 1.54% annually from R 5.06 billion in Free State to R 5.47 billion in 2024.

Table 11: GVA by broad economic sector – Free State, 2019-2024 (R Billions, constant 2010 prices)

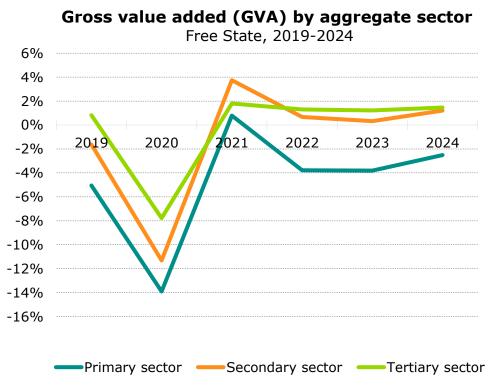
	2019	2020	2021	2022	2023	2024	Average Annual growth
Agriculture	5.1	5.3	5.3	5.4	5.4	5.5	1.54 %
Mining	17.2	13.9	14.0	13.2	12.5	12.0	-7.00 %
Manufacturing	15.5	14.0	14.7	14.8	14.9	15.0	<i>-0.55</i> %
Electricity	4.3	4.1	4.0	4.0	4.0	4.0	<i>-1.45</i> %
Construction	4.0	3.0	3.2	3.2	3.3	3.3	-3.71 %
Trade	26.5	23.9	24.5	25.6	26.5	26.8	0.27 %
Transport	12.9	11.6	12.1	12.3	12.5	12.8	<i>-0.11</i> %
Finance	23.7	22.9	23.8	24.1	24.4	25.0	1.11%
Community	36.3	33.2	32.9	32.5	32.2	32.3	-2.27 %
services							
Total Industries	145.4	131.9	134.5	135.1	135.6	136.9	-1.21%

Source: IHS Markit Regional eXplorer version 1946

The community services sector is estimated to be the largest sector within the province in 2024, with a total share of 23.6% of the total GVA (as measured in current prices), growing at an average annual rate of -2.3%. The sector that is estimated to grow the slowest is the mining sector with an average annual growth rate of -7.00%.

Over a five year period, 2019-2024, the chart below represents the GVA by aggregate sector for the Free State Province. These sectors consists of the primary sector (mining and the agricultural), secondary sector (manufacturing, electricity, construction) and the tertiary sector (trade, transport, finance and community services).

Chart 1: GVA by aggregate economic sector – FS, 2019-2024 (Annual growth rate, constant 2010 prices)



Source: IHS Markit Regional eXplorer version 1946

The Primary sector is expected to grow at an average annual rate of -4.78% between 2019 and 2024, with the secondary sector growing at -1.22% on average annually. The tertiary sector is expected to grow at an average annual rate of -0.47% for the same period.

4. Conclusion

Over a ten year period, from 2009 to 2019, economic growth in Free State has been heavily reliant on the tertiary sector (trade, transport, finance and community services) which contributed the most to the GVA within the province at 66.7%. Forecasted growth over a five year period, from 2019 to 2024, highlights the importance of the agriculture sector which is expected to grow the fastest at an average of 1.54% annually from R 5.06 billion in Free State to R 5.47 billion in 2024, to be followed by the finance sector with an average of 1.11% annually from R 23.7 billion to R 25 billion.

Statistics South Africa indicated that the Agriculture, Construction and Trade sectors recorded the highest increases in employment year on year, 2018 to 2019, up 16.0%, 15.2% and 14.8% respectively with the highest employment gains in Trade. The majority of the province's workforce are employed in the Community Services sector (25.5%), followed by the Trade sector (20.5%) when comparing 2018 with 2019. This analysis emphasised the importance of the trade sector which 'relied' exclusively or primary on the manufacturing sector and sub-sectors.

The findings of an in-depth 2010 study by Professor Fiona Tregenna also highlights the significance of Agriculture, Trade, Construction and Community, Social & Personal Services. The importance of subsectors, especially those link to manufacturing, i.e. clothing, textiles, leather, footwear, furniture are also highlighted according to the composite measure of labour-intensity.

It is imperative to note the growing importance and the role of the tertiary sector which relies to some extent on the growth of other sectors. The significant contribution by the manufacturing sector cannot be ignored in this regard. It furthermore highlight the importance of both competitiveness and increasing integration with the rest of the economy for rapid growth.

Annexure A provides the Standard Industrial Classification (SIC) Codes of all economic activities according to the various sectors and sub-sectors.

Annexure A

STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES OF ALL ECONOMIC ACTIVITIES⁸

The individual categories of SIC have been aggregated into the following 21 sections:

Division	Industry			
01 – 03	Agriculture, Forestry, Fishing	Crop and animal production, hunting and related service activities		
		Forestry and logging		
		Fishing and aquaculture		
05 – 09	Mining and quarrying	Mining of coal and lignite		
		Extraction of crude petroleum and natural gas		
		Mining of metal ores		
		Other mining and quarrying		
		Mining support service activities		
10 - 33	Manufacturing	Manufacturing of food products		
		Manufacturing of beverages		
		Manufacturing of tobacco products		
		Manufacturing of textiles		
		Manufacturing of wearing apparel		
		Manufacturing of leather and related products		
		Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials		
		Manufacturing of paper and paper products		
		Printing and reproduction of recorded media		
		Manufacture of coke and refined petroleum products		
		Manufacture of chemicals and chemical products		
		Manufacture of pharmaceuticals, medicinal chemical and botanical products		
		Manufacture of rubber and plastic products		
		Manufacture of other non-metallic mineral products		
		Manufacture of basic metals		
		Manufacture of fabricated metal products, except machinery and equipment		
		Manufacture of computer, electronic and optical products		
		Manufacture of electrical equipment		
		Manufacture of machinery and equipment		

⁸ Stats SA, Standard Industrial Classification of all Economic Activities, October 2012 Seven Edition (http://www.statssa.gov.za/additional_services/sic/mdvdvmg2.htm)

		Manufacture of motor vahiolog, trailors and somi trailors
		Manufacture of motor vehicles, trailers and semi-trailers
		Manufacture of other transport equipment
		Manufacture of furniture
		Other manufacturing
		Repair and installation of machinery and equipment
35	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply
36 - 39	Water supply; sewerage, waste management and remediation activities	Water collection, treatment and supply
		Sewerage
		Waste collection, treatment and disposal activities materials recovery Remediation activities and other waste management
		services
41 – 43	Construction	Construction of buildings
		Civil engineering
		Specialised construction activities
45 – 47	Wholesale and retail trade; repair of motor vehicles and motorcycles	Wholesale and retail trade and repair of motor vehicles and motorcycles Wholesale trade, except of motor vehicles and motorcycles Retail trade, except of motor vehicles and motor cycles
		Land transport and transport via pipelines
49 – 53	Transport and storage	Water transport
		·
		Air transport
		Warehousing and support activities for transportation
		Postal and courier activities
55 - 56	Accommodation and food service activities	Accommodation
		Food and beverage service activities
58 - 63	Information and communication	Publishing activities
		Motion picture, video and television programme production, sound recording and music publishing activities Programming and broadcasting activities
		Telecommunications
		Computer programming, consultancy and related
		activities
		Information service activities
64 – 66	Financial and insurance activities	Information service activities Financial service activities, except insurance and pension funding
64 – 66	Financial and insurance activities	Information service activities Financial service activities, except insurance and pension funding Insurance, reinsurance and pension funding, except compulsory social security
64 – 66	Financial and insurance activities Real estate activities	Information service activities Financial service activities, except insurance and pension funding Insurance, reinsurance and pension funding, except compulsory social security Activities auxiliary to financial service and insurance

69 - 75	Professional, scientific and technical activities	Activities of head office; management consultancy activities
		Architectural and engineering activities; technical testing and analysis
		Scientific research and development
		Advertising and market research
		Other professional, scientific and technical activities
		Veterinary activities
77 00	Administrative and surrent	Rental and leasing activities
77 - 82	Administrative and support activities	Employment activities
		Travel agency, tour operator, reservation service and
		related activities
		Security and investigation activities
		Services to buildings and landscape activities
		Office administrative, office support and other business
	Public administration and	support activities Public administration and defence; compulsory social
84	defence; compulsory social security	security
85	Education	Education
86 - 88	Human health and social work	Human health activities
00 00	activities	Residential care activities
		Social work activities without accommodation
90 - 93	Arts, entertainment and recreation	Creative, arts and entertainment activities
		Libraries, archives, museums and other cultural activities
		Gambling and betting activities
		Sport activities and amusement and recreation activities
94 - 96	Other service activities	Activities of membership organisations
		Repair of computers and personal and household goods
		Other personal service activities
97 - 98	Activities of households as	Activities of households as employers of domestic
	employers; undifferentiated	personnel
	goods- and services- producing	Undifferentiated goods- and services- producing
	activities of households for own use	activities of private households for own use
99	Activities of extraterritorial	Activities of extraterritorial organisations and bodies, not
	organisations and bodies, not	economically active people, unemployed people, etc.
	economically active people,	
	unemployed people, etc.	