

Andrew Partridge Macro & Resource Economics Email: andrewp@elsenburg.com

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# An Economic Overview of Swellendam Municipality

Swellendam local municipality is situated approximately 170 km from Cape Town along the N2 highway. It forms part of the Overberg District of the Western Cape Province. The Swellendam economy has performed well in recent years, although there are concerns over an observed contraction in the agricultural sector which is a very important employer in the region. This report provides an overview of the Swellendam economy with a specific focus on agriculture and the opportunities and challenges the sector presents.



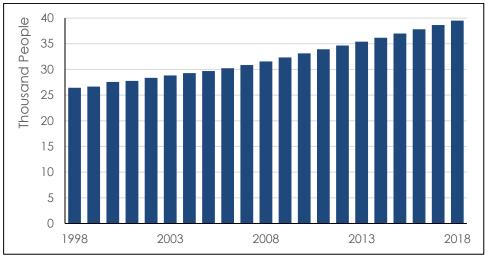
#### Figure 1: Map Showing Swellendam and Surrounding Municipalities Source: (WCDoA, 2019)

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## Population

Swellendam municipality is currently home to almost 40 thousand individuals, 14% of the people residing in the Overberg District. This is an increase of 25% since 10 years ago in 2008 and almost 50% since 20 years ago in 1998. Figure 2 shows the municipality's annual population from 1998 to 2018, exhibiting this aforementioned strong upward trend.





The population growth of the Swellendam municipality over the past decade was equivalent to 2.3% per year. This is in line with average growth observed across the Overberg District and wider in the Western Cape Province, albeit slightly lower. However this was also significantly more than the average growth rate at the national level of 1.6%. The growth rates at all levels, along with density statistics, are provided in Table 1 below.

	Municipality:	District:	Province:	Country:
	Swellendam	Overberg	Western Cape	South Africa
Annual Population Growth 2008-2018	2.27%	2.30%	2.33%	1.62%
Average Household Size	3.62	3.43	3.61	3.60
Population Density (people/km²)	10.30	23.69	51.14	47.28
Housing Density (houses/km²)	2.85	6.92	14.16	13.14

Table 1: Comparative Density Measures for Swellendam, 2018

Data Source: (Quantec, 2019)

The average household size in Swellendam municipality is 3.6, slightly higher than the average household for the whole of the Overberg District but similar to the average at the provincial and national level. The municipality is less dense than the rest of the Overberg, with on average 10.3 people and 2.9 houses per square kilometre. The Overberg average is then also a lot lower

than what is observed at the provincial and national level where the country's denser metropolitan regions are included.

The population of the Swellendam municipality, broken down for 2018 by age and gender in Figure 3, features two "bulges" from an age perspective. The age cohort with the most individuals is 0-4 years old where there was a recorded 1 981 male and 1 947 females. The population in each cohort then declines as the cohorts get older until the 15-19 years cohort after which it begins to increase again, forming the first bulge. Of particular note is the amount of males aged 30-34 years of age, 1 794, which makes up 9% of the male population. The second bulge is much smaller, occurring after the 40-44 cohort and is mainly due to the particularly low proportion in that particular cohort which it increases from.

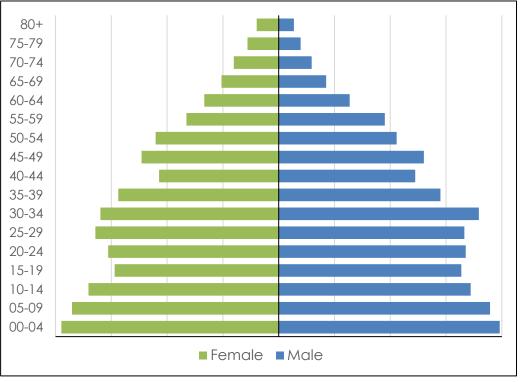


Figure 3: Age-Gender Profile of the Swellendam Municipality Population, 2018 Data Source: (Quantec, 2019)

The age breakdown of the population allows for the calculation of the age dependency ratio, calculated as the ratio of the non-working age population to the working age population. If working age is defined as between 15 and 64, then Swellendam Municipality has an age dependency ratio of 52.2%. This is quite a bit higher than what has been observed in South Africa in the past, where dependency is already high by international standards (Harwood, Sayer, & Hirschfeld, 2004). For example a study by Madhaven and Schatz (2007) showed that, even with an expanded definition of old age dependency (over 59 years old), between 1992 and 2003 South Africa's age dependency for females fell from 49.0% to 42.9% and for males fell from 51.1% to 42.83%. The fact that Swellendam Municipality has such a high dependency ratio does create additional strain on the working age population to provide for all the "dependents".

#### Economy

Swellendam is the smallest municipality in the Overberg district from an economic perspective. In 2018 the municipality recorded a total Gross Value Added (GVA) of R2.7 billion. According to the municipal breakdown of the Overberg's total district GVA, shown in Figure 4, the largest municipal economy is Theewaterskloof with GVA reaching R8.5 billion in 2018 (41%). In this most recent year Swellendam's contribution was 13%.

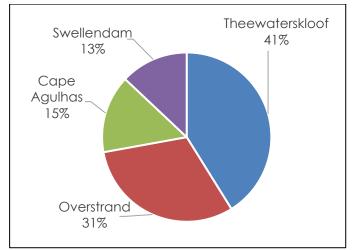


Figure 4: Municipal Contribution to the Overberg's District GVA, 2018 Data Source: (Quantec, 2019)

The Swellendam municipality has exhibited impressive economic growth over the past decade. When compared with the other municipalities, as in Figure 5, then it is clear that Swellendam had the highest real GVA growth rate in the Overberg District, 2.4% per annum. This was also significantly higher than the national average (1.62% per annum) which was itself significantly higher than the average for the Western Cape Province (1.3% per annum).

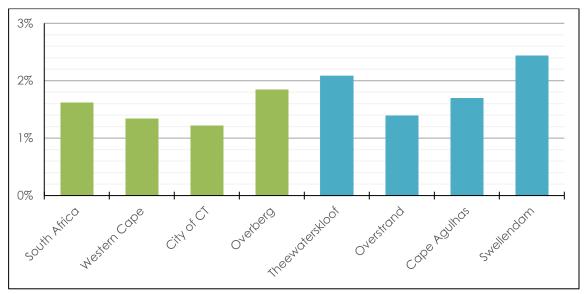


Figure 5: Real GVA Growth Rates by Area, 2008-2018 Data Source: (Quantec, 2019)

The business services sector is the largest sector in the Swellendam economy, contributing 23% to municipal GVA in 2018. This a slight increase from the share 10 years prior in 2008 when it stood at 22%. This can be observed in Figure 6 which shows the breakdown of GVA by economic sector for 2008 and 2018.

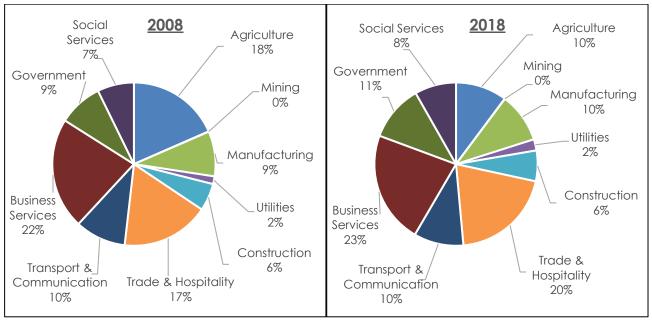


Figure 6: Breakdown of Swellendam Municipal GVA by Sector, 2008 & 2018 Data Source: (Quantec, 2019)

The share of GVA attributable to the agriculture, forestry and fisheries sector has fallen from 18% in 2008 to 10% in 2018. This was mainly made up for by an increase in the share attributable to the trade and hospitality sector, as well as the government sector. The poor agricultural performance becomes more obvious when looking at the municipalities' sectoral growth rates as shown in Figure 7 below for between 2008 and 2018.

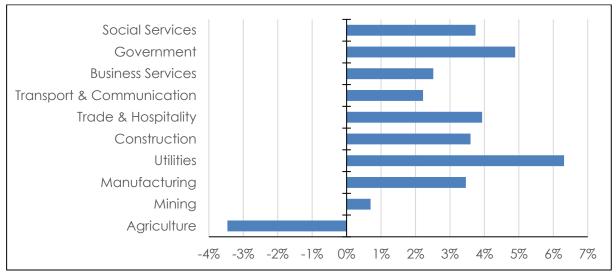


Figure 7: Swellendam Municipality Real GVA Annual Growth by Sector, 2008-2018 Data Source: (Quantec, 2019)

The agriculture, forestry and fisheries sector contracted in real terms at an average annual rate of 3.5% between 2008 and 2018. This was the only sector to have contracted with all other sectors exhibiting positive real growth rates over the ten year period. The highest growth rate was observed for the utilities sector, which grew at an average rate of 6.3% per year, followed by government which grew at an average annual rate of 4.9%.

### Employment

The Overberg provided approximately 132 thousand employment opportunities in 2018. This is an increase of 15.5% from 2008 as almost 18 thousand jobs have been created over the 10 year period in the district, roughly 1 800 new jobs per year. The municipal breakdown of these employment figures, provided graphically in Figure 8, indicates that Theewaterskloof is the biggest employer at the municipal level with a recorded workforce of 62 thousand in 2018, 46.8% of the district total.

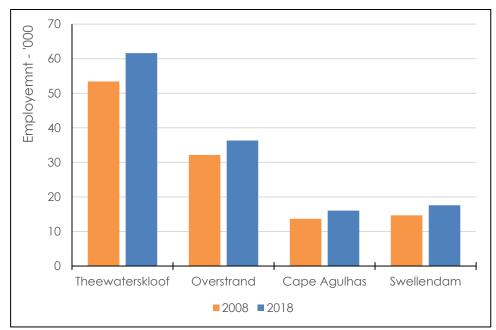


Figure 8: Overberg Employment by Municipality, 2008 & 2018 Data Source: (Quantec, 2019)

Swellendam's employment in stood at 18 thousand in 2018, 13.4% of the total district workforce. It should be noted that this is higher than the share in 2008, 12.9%, after impressive employment growth in the municipality over the proceeding 10 year period. In 2008 employment for the municipality stood at less than 15 thousand, meaning approximately 3 thousand jobs were added up to 2018, an increase of 20%, or an average of 300 jobs every year. The growth rate of 20% was the highest recorded in the Overberg and was significantly higher than the provincial and national averages which were 13% and 10% respectively.

Low skilled jobs in Swellendam amounted to 4.9 thousand in 2018, comprising 28% of the Swellendam municipal workforce. Informal employment made up a further 27% with 4.8 thousand. Over the past ten years there has been a slight shift in the skills composition of the workforce which has resulted in the share of the labour force being made up by informal and low skilled jobs to decline from shares of 31% and 32% respectively in 2008. Figure 9 breaks down the workforce by formal or informal and then breaks down formal employment by the level of skills.

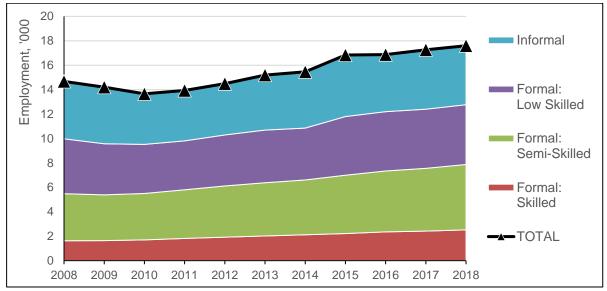


Figure 9: Swellendam Informal and Formal Workforce by Skill Level, 2008-2018 Data Source: (Quantec, 2019)

There was particularly high growth in semi-skilled employment, increasing from 3.8 thousand in 2008 to 5.4 thousand in 2018. This increase accounted for 51% of the total jobs added over the ten year period. In contrast only 399 new jobs (14%) were low skilled and only 129 (4%) were informal. This meant that the share of the workforce made up of semi-skilled jobs increased from 26% to 30%. Skilled employment increased in the relative share in the workforce, from 11% to 14%, accounting for 893 (31%) of the new jobs added over the ten year period.

Despite lob losses between 2008 and 2018, the Agriculture, Forestry and Fisheries Sector has remained a major employer in the Swellendam municipality accounting for 3.6 thousand jobs, 20% of the municipality's total workforce. This is down from 29% in 2008 but still only the Trade and Hospitality has higher employment with 3.9 thousand jobs, 22% of the workforce. This comes amidst strong growth in employment in the Trade and Hospitality Sector where approximately 1 thousand jobs were added over the past ten years to an already significant 2.9 thousand as at 2008.

The employment performance across all sectors is compared in Table 2 below. The biggest contributor to employment gains in the municipality over the past decade was business services where 1.3 thousand jobs were added resulting in a 65% increase in employment in the sector. Transport and communication exhibited strong growth over the period, albeit from a

low base. The good employment performance of the construction sector and government are also noteworthy.

Sector	Em	ploymen	t Numbe	rs	Share 2018 Statistics			cs	
	2008	2018	Δ	%∆	2008	2018	Jobs / GVA	Low-skill share	Informal share
Agriculture	4 257	3 585	-672	-16%	29%	20%	13.15	52%	31%
Mining	3	3	0	0%	0%	0%	2.12	33%	0%
Manufacturing	774	918	144	19%	5%	5%	3.48	21%	21%
Utilities	48	46	-2	-4%	0%	0%	0.77	26%	11%
Construction	680	946	266	39%	5%	5%	5.80	19%	28%
Trade & Hospitality	2 892	3 873	981	34%	20%	22%	7.17	17%	37%
Transport & Communication	416	612	196	47%	3%	3%	2.32	13%	36%
Business Services	2012	3 313	1 301	65%	14%	19%	5.56	16%	23%
Government	1 260	1 606	346	27%	9%	9%	5.39	17%	0%
Social Services	2 333	2 695	362	16%	16%	15%	12.23	41%	31%

Table 2: Swellendam Municipal Employment Statistics by Sector

Data Source: (Quantec, 2019)

The poor performance of agriculture over the past 10 years is a concern as this sector has the greatest potential in terms of rural development and poverty alleviation. This is clear when looking at the final 3 columns of Table 2. Firstly the agricultural sector is the most labour intensive, providing on average more than 13 jobs per million Rand GVA in the sector. The sector also has the highest share of jobs for unskilled workers, 52%. The sector also provides for a significant amount of informal activity, although not as high as some other sectors with strong informal links, specifically the trade and hospitality, and transport and communication sectors.

# Agriculture

It has been shown that Swellendam's agricultural sector contracted between 2008 and 2018, both in terms of real Gross Value Added (GVA) and in terms of employment. Figure 10 shows both series over the past ten years with GVA measures in real terms in 2018 prices on the left-hand axis and employment numbers measured on the right-hand axis. Both decline from 2008

to 2018, however whilst GVA exhibited a steady downward decline, employment declined initially before a recovery which begins in 2011 and ends in 2015 when it almost gets back to the levels observed in 2008, and after which it then declines again.





\* 2018 prices \*\* Agriculture, Forestry and Fisheries

The drop in agricultural activity after 2008 coincides with the global financial crisis. This drop is thus unsurprising given the high export intensity of the Western Cape economy, and especially within the agricultural sector, and the fact that the global financial crisis crippled key export markets in the European Union and the Americas. From 2011 the decline in GVA continued however employment began increasing, until 2015 after which a severe drought hit the Western Cape and put serious strain on agricultural production in the province through to the time when this report was written.

According to the "flyover survey" commissioned by the Western Cape Department of Agriculture (SIQ, 2018), there was 148 thousand hectares of agricultural land in Swellendam municipality in 2013, which increased by 5% to 156 thousand hectares by 2017. When broken down into the different agricultural land uses, as in Table 3, it is clear that most of the land is used for grains, pastures and grazing. This is mainly due to the extensive nature of these activities, meaning that large tracts of land are required to produce, compared to higher value horticultural products where you can produce what is technically more with a much smaller parcel of land.

Some major shifts between 2013 and 2017 in terms of land area use included an 8 thousand hectare decline in land used for pastures and grazing, and a 14 thousand hectare increase in the hectares of land under grain production. The largest percentage increase in Table 3 was for vegetable production, increasing by 95% from 48 hectares to 95. The largest area for specific vegetable production was for onions (44 ha) and carrots (22 ha).

Land Use	Hectares: 2013	Hectares: 2017	Δ	%∆
Fallow & weeds	9 294	12 642	3 348	36%
Pastures & grazing	71 171	62 931	-8 240	-12%
Oilseeds & Lupines	14 401	13 530	-871	-6%
Grains	49 640	63 286	13 646	27%
Berries	84	91	7	8%
Citrus	679	891	212	31%
Other fruit	112	95	-18	-16%
Nuts	126	129	2	2%
Olives	368	377	9	2%
Pome fruit	497	540	43	9%
Stone fruit	824	697	-127	-15%
Grapes	221	190	-30	-14%
Теа	4	1	-4	-83%
Vegetables	48	95	46	95%
Flowers & herbs	124	101	-23	-18%
Total	147 595	155 595	8 000	5%

Table 3: Agricultural Land Use in Swellendam Municipality, 2013 & 2017

Data Source: (SIQ, 2018)

Most agricultural activity takes place in the Southern part of the municipality, as shown in Figure 11 which maps the production of various specific agricultural commodities.

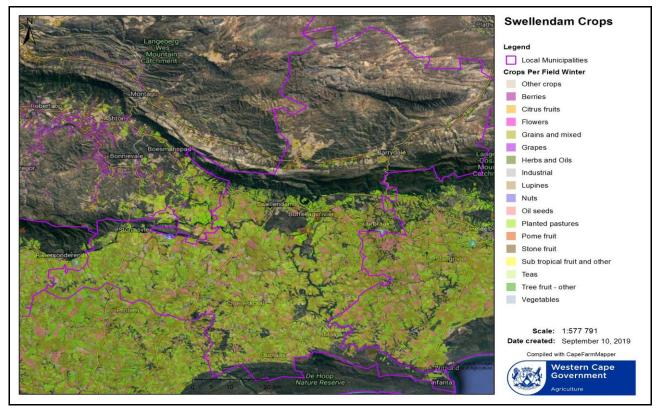


Figure 11: Map of Western Cape Crop Production, 2017 Source: (WCDoA, 2019)

Despite the increase in land being used for agriculture between 2013 and 2017, estimates of the value of production show a real decline over this period. In 2013 the total value of production was estimated at R0.90 billion, which after adjusting for inflation equates to a total value of R1.47 billion. In 2017 the total value was estimated to be only R1.29 billion, implying an average annual decline of 3.2%. The crops with the highest production value in the municipality in 2017 are listed in Table 4 below.

#	Сгор	2013: nominal (R)	2013: real (R, 2017 prices)	2017 (R)	Annual growth
1	Naartjies	97 552 800	160 255 150	269 332 700	14%
2	Wheat	192 405 092	316 074 032	235 922 026	-7%
3	Barley	181 718 746	298 519 006	162 312 093	-14%
4	Pears	52 604 749	86 416 607	94 243 052	2%
5	Canola	75 463 361	123 967 660	79 412 641	-11%
6	Lemons	6 522 120	10 714 232	69 615 360	60%
7	Peaches	61 324 198	100 740 508	69 199 862	-9%
8	Olives	56 129 150	92 206 327	53 103 420	-13%
9	Apples	25 732 800	42 272 633	40 611 581	-1%
10	Plums	30 408 400	49 953 489	36 944 600	-7%
11	Blackberries	38 265 938	62 861 482	36 062 100	-13%
12	Persimmons	20 575 465	33 800 405	31 131 870	-2%
13	Apricots	8 905 000	14 628 715	21 461 717	10%
14	Blueberries	5 004 000	8 220 336	19 437 750	24%
15	Almonds	0	0	18 200 410	
16	Oranges	11 017 784	18 099 498	16 136 016	-3%
17	Wine Grapes	6 437 866	10 575 823	6 648 022	-11%
18	Maize	10 284 912	16 895 570	6 308 190	-22%
19	Onions	1 748 768	2 872 794	4 872 527	14%
20	Soya Beans	0	0	2 413 440	
-	Other	14 905 942	24 486 780	18 073 389	-7%
-	Total	897 007 090	1 473 561 044	1 291 442 766	-3%

<b>Table 4: Potential Production</b>	Value of Crops Grown	in Swellendam, 2013 & 2017

Data Source: (SIQ, 2018)

In 2013 wheat and barley had the highest production value of crops in Swellendam municipality, together accounting for 42% of the total value of agricultural production. By 2017 this fell to only 31% as naartjies have taken over as being the biggest contributor to agricultural output with an estimated value of production of R270 million. This was after very strong real growth of 14% per annum above inflation, mainly due to an increase in the land under naartjie production from 574 ha to 740 ha, as well as a real price increase from R11.2 thousand per ton in 2013, when expressed in 2017 prices, to R14 thousand per ton in 2017. Yields also increased marginally from 25 tons per hectare to 26 tons per hectare.

Severe pressure was noted on the municipality's grain producers where there was an observed decline in the both yields and the real price of produce, in some cases resulting in a decline in

the area under production. The land under barley production, for example, fell from 20 272 ha to 18 559 ha between 2013 and 2017. This as yields for the predominant dryland production falling from 2.8 tons per hectare to 2.2 tons per hectare, and prices fell from a 2017 equivalent of R5.3 thousand per ton in 2013 to R4.0 thousand tons in 2017. The area under wheat production actually increased despite also suffering significant drops in yields and prices which led to the overall loss in the real value of production.

Particularly strong growth in terms of production value was also noted for lemons, which grew at a real average annual rate of 60% between 2013 and 2017 as the amount of land under production increased from 33 ha to 97 ha and the real price increased from R7.2 thousand per ton to R16 thousand per ton. Yields remained constant at approximately 45 tons per hectare. Blueberries also exhibited impressive growth but this was due to area expansion from 7 ha to 26 ha. Blueberry yields and prices actually declined over this period, yields from 16 to 15 tons per hectare and real prices from R74 thousand per ton to R50 thousand per ton.

A final note worthy of mention is the production of persimmons in Swellendam. Whilst persimmons only made up 2.4% of the total value of agricultural production in the municipality, this is equivalent to 23% of the entire amount of persimmons produced in the Western Cape Province. The reminder is mostly grown in Theewaterskloof (33%) and Langeberg (27%).

#### Infrastructure

Swellendam is conveniently situated along the N2 highway providing easy access to other parts of the country, particularly Cape Town and Port Elizabeth. Within the municipality there is a total of 86km paved road systems. The average condition of the roads is fair, however 21% of these roads are rated poor to very poor. This is according to the Swellendam Municipality's (2019) *Integrated Development Plan* (IDP) which lays out the strategic plan for the municipality for 2017-2022. According to the IDP road repairs face a substantial, and growing, backlog which is hampering on the ability of the municipality to initiate critical repairs and maintenance.

The Swellendam municipality is landlocked and hence does not have its own ports. It is only approximately 220 km along the N2 from the major port at Cape Town and 540km from the port at Nelson Mandela Bay. A number of smaller harbours are in close proximity of the municipality, namely Hermanus, Gans Bay, Struis Bay and Mossel Bay.

There were a total of 78 building plans completed for industrial and warehouse spaces between 2007 and 2017, by far the most common of all the infrastructure developments listed in Table 5 below. There were also 20 building plans completed for shopping space over this period.

Year	Office & banking space	Shopping space	Industrial & warehouse space	Churches, sport & recreation clubs	Schools, crèches & hospitals	Other non- residential buildings
2007	0	5	9	2	1	0
2008	0	0	2	0	0	0
2009	1	0	8	0	0	0
2010	0	1	8	2	1	0
2011	0	4	12	0	0	0
2012	0	0	4	0	1	0
2013	0	6	13	0	0	0
2014	1	0	2	2	0	2
2015	3	4	13	1	0	0
2016	0	0	1	0	0	0
2017	0	0	6	1	1	0
Total	5	20	78	8	4	2

Table 5: Building Plans Completed for Infrastructure Developments, 2007-2017

Data Source: (Quantec, 2019)

Figure 12 and Figure 13 map out the location of all recorded agricultural production infrastructure, and storage and processing infrastructure respectively. The municipality is well endowed with certain facilities, particularly dairies and grain storage.

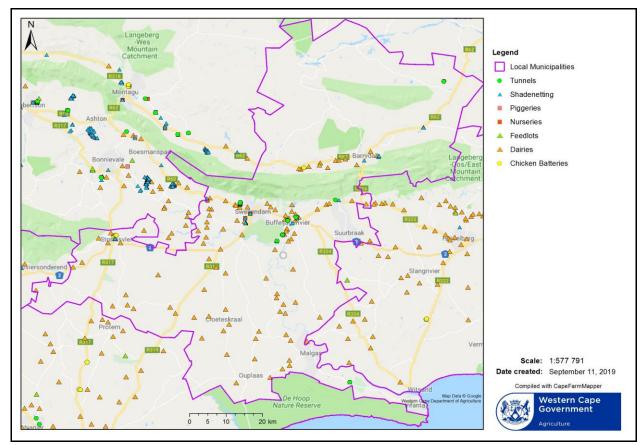


Figure 12: Agricultural Production Infrastructure in Swellendam Municipality, 2017 Source: (WCDoA, 2019)

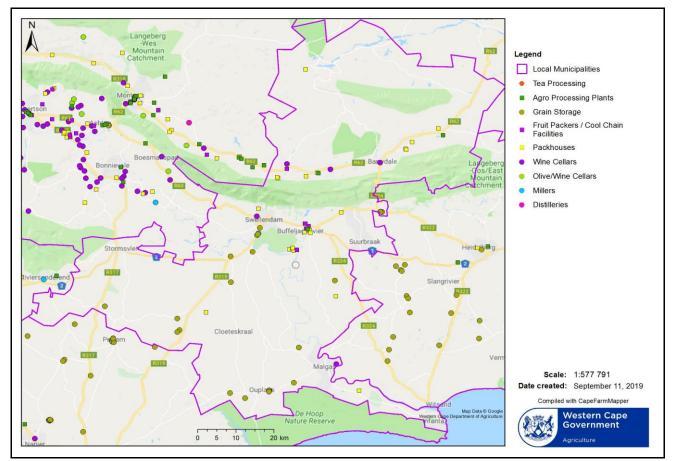


Figure 13: Agricultural Storage and Processing Infrastructure in Swellendam Municipality, 2017 Source: (WCDoA, 2019)

With regards to agricultural infrastructure it is clear that everything is concentrated in the southern part of the municipality. The only agricultural infrastructure above the Langeberg mountain range is situated right along the R62 highway.

#### Socio-Economic Status

The Human Development Index (HDI) provides a holistic measure of development, scoring areas based on life expectancy, expected education levels and incomes. Swellendam performs relatively well on the HDI, both in terms of its current level and in terms of progress made over the past decade. In 2008 Swellendam had an HDI of 0.69, slightly higher than the average level of the Overberg District (0.67), the Western Cape Province (0.66) and significantly higher than the South African national average (0.55). From 2008 to 2018 Swellendam's HDI increased by 17% to 0.81. This was higher than the growth rate observed at the district and provincial levels, leading to an even greater gap developing between Swellendam and the district and province as a whole. The national HDI increased by 23%, however this led to a 2018 value of 0.68 which was still significantly lower than Swellendam's index.

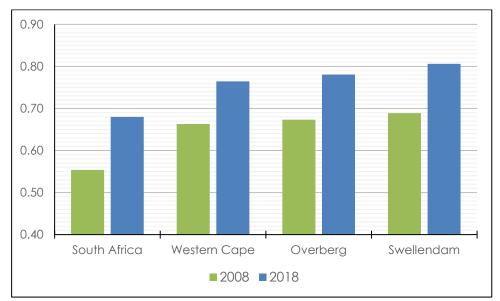


Figure 14: Human Development Indicator by Area, 2008 & 2018 Data Source: (Quantec, 2019)

The GINI coefficient is a widely used measure of inequality, specifically inequality in the distribution of income. Figure 15 shows the GINI coefficient by area of specification. Between 2008 and 2018 Swellendam's GINI coefficient fell from 0.590 to 0.577, lower than the Overberg District's coefficient of 0.594, the provincial coefficient of 0.62, and the South African national coefficient of 0.687.

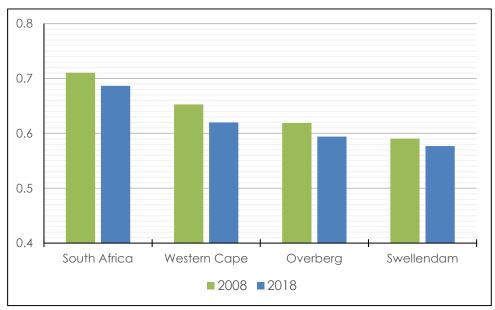


Figure 15: GINI Coefficient by Area, 2008 & 2018 Data Source: (Quantec, 2019)

The decline in inequality experienced in Swellendam was less than what was observed at the district, provincial and national level but the declines at the other levels of area specification were not enough to catch up with the lower level of inequality in the Swellendam municipality.

### **Concluding Comments**

In conclusion, the Swellendam municipality is a small, but generally thriving economy with huge growth potential. There was impressive growth observed over the past decade, albeit from a small base, being the smallest municipal economy in the Overberg district. This growth was driven mainly by very strong growth in the trade and hospitality sector, as well as strong growth from a lower base in the utilities and government sectors, and moderate growth from a strong base in the business services sector. As the Swellendam economy has grown there has been a rise in employment with more than 3 thousand new jobs created over the past ten years, the largest shares being in the business services, and trade and hospitability sectors.

A worrying concern has been the poor performance of agriculture in the region, where economic activity has fallen and a large number of jobs have been lost. It would appear that the job losses in particular are due to a high level of sensitivity to external factors such as the global financial crisis and the recent drought which has hit the Western Cape. This needs to be remedied as even in the midst of all the turmoil, the agricultural sector has proven to have very high job creating potential, and to have the greatest share of jobs for unskilled labour amongst whom unemployment tends to be highest in South Africa.

Looking more specifically at individual crops it was found that a lot of the contraction in the municipality was due to the poor performance of grain, where yields have declined, prices have dropped in real terms and in some cases the area planted has also decreased. However there are other products, particularly amongst fruit and vegetable commodities, where the local industry has seen significant expansion and resultant economic gains.

Going forward it is important to first take note of the impressive overall performance of the Swellendam municipal economy and continue efforts to build on this, particularly in sectors where substantial gains have been realised. Then something needs to be done to revitalise agriculture in the region. How this needs to be done is beyond the scope of this report. However the information pertained in this report does provide a guideline, of where the region is strong, of which agricultural commodities have already shown themselves to be winners in the region, and where there are weaknesses which need serious attention.

It is also important to take note of the sensitivity of agricultural employment to external factors. An increased effort at improving resilience to these forces will strengthen the agricultural sector and help it to move forward

With the right policies, and agricultural initiatives which are focused on commodities which yield the greatest returns, the Swellendam agricultural sector could be revived and the municipal economy will be a real force to be reckoned with. Without this, the economy may continue performing well as it has been, however it will not bring the benefits in terms of creating significant jobs for low-skilled workers. Not only would this development be out of line with South Africa's national development objectives, as set out in the National Development Plan, it also leads to a deterioration of well-being, particularly for the most needy, and can

lead to dissent and friction amongst the population. In a nutshell it is not a sustainable development path. An effective strategy for the municipality will thus be one which builds on the positive developments which have taken place but with a renewed focus on the revitalisation of agriculture in the region.

### References

- Harwood, R., Sayer, A., & Hirschfeld, M. (2004). Current and Future Worldwide Prevalence of Dependency, its Relationship to Total population, and Dependency Ratios. *Bulletin of the World Health Organisation*, 82(4), 251-258.
- Madhaven, S., & Schatz, E. (2007). Coping with Change: Household Structure and Composition in Rural South Africa, 1992 – 2003. Scandinavian Journal of Public Health, 85-93.
- Quantec. (2019, 09 02). Population, Number of Households and Densities: By Population Group at 2011 Local Municipal/Ward-Based Metro Region Level 1993-2018. Retrieved from Easy Data: www.easydata.co.za
- SIQ. (2018). Mapping of Agricultural Commodities and Infrastructure in the Western Cape. Elsenburg: Western Cape Department of Agriculture.
- Swellendam Municipality. (2019). 4th Generation Final Integrated Development Plan (IDP): 1st Ammendment IDP, 30 May 2019. Swellendam: Swellendam Municipality.
- WCDoA. (2019, 09 02). Cape Farm Mapper. Retrieved from Western Cape Department of Agriculture: https://gis.elsenburg.com/apps/cfm/#