



# EMFULENI

## STEELING THE RIVER CITY?



Joburg Metro Building, 16<sup>th</sup> floor, 158 Loveday Street, Braamfontein 2017  
Tel: +27 (0)11-407-6471 | Fax: +27 (0)11-403-5230 | email: [info@sacities.net](mailto:info@sacities.net) | [www.sacities.net](http://www.sacities.net)

## CONTENTS

<b>1.</b>	<b>Introduction</b>	<b>6</b>
<b>2.</b>	<b>The iron ore and steel industry value chain</b>	<b>9</b>
2.1	Mining of iron ore and the scrap metal system	9
2.2	Steel production and the steel market	9
2.3	Concluding comments and the future of the iron ore and steel industry	12
<b>3.</b>	<b>Historical perspective on Emfuleni</b>	<b>14</b>
<b>4.</b>	<b>Demographic and economic analysis</b>	<b>19</b>
4.1	Demographic analysis	19
4.1.1	Urbanisation and in-migration	19
4.1.2	Population age distribution	21
4.1.3	Daily commuting to Johannesburg	22
4.2	Economic and development profile	23
4.2.1	Economic profile	23
4.2.2	The manufacturing industry in Emfuleni	27
4.2.3	Income poverty	31
4.2.4	Human Development Index	33
4.2.5	Gini coefficient	34
4.3	Synthesis	34
<b>5.</b>	<b>Business environment</b>	<b>35</b>
5.1	Business profile	35
5.2	ArcelorMittal	35
5.3	DAV steel (Cape Gate Pty Ltd)	37
5.4	DCD ringrollers	38
5.5	Downstreaming in the steel industry	38
5.6	Business / local government relations	38
5.7	Synthesis	40
<b>6.</b>	<b>Municipal responses</b>	<b>40</b>
6.1	The Integrated Development Plan and LED plans	40
6.2	Spatial planning	42
6.2.1	Spatial planning pressures	43

6.2.2	The river city concept	44
6.2.3	Land use regulations	44
6.2.4	Student housing	45
6.2.5	Desegregation	45
6.2.6	The provision of RDP housing units	45
6.2.7	CBD development	46
6.2.8	Spatial planning: A synthesis	46
6.3	Municipal governance and management	47
6.4	Municipal engineering services	48
6.4.1	Water	48
6.4.2	Sanitation	49
6.4.3	Electricity	50
6.5	Municipal finance	50
6.5.1	Auditor-General findings	51
6.5.2	Income	52
6.5.3	Expenditure	54
6.5.4	Comparing Emfuleni with other areas	55
6.6	Service delivery protests	56
6.7	Social relations	57
<b>7.</b>	<b>The physical environment</b>	<b>58</b>
<b>8.</b>	<b>Innovation, the knowledge economy, human capital formation and universities</b>	<b>59</b>
8.1	The historical provision of human capital	59
8.2	The human capital profile of Emfuleni	60
8.3	Research and Development	60
8.4	The knowledge base of the area	61
<b>9.</b>	<b>Synthesis</b>	<b>61</b>
9.1	National importance of Emfuleni	61
9.2	International importance of Emfuleni	62
9.3	Long-term risks in Emfuleni	62
9.4	National policy issues	65
	<b>Annexures</b>	<b>66</b>

## TABLES

<b>Table 1:</b>	<b>An overview of the iron and steel value chain in South Africa, 2008</b> .....	13
Table 2:	A summary of the phases of development in Emfuleni, 1892–2013 .....	18
Table 3:	Population of Emfuleni, Sedibeng and Gauteng, 1996, 2001 and 2011 .....	19
Table 4:	Province of previous residence for current residents of Gauteng, Sedibeng and Emfuleni, 1996 and 2001 (as a % of the total residents that have lived in another province) .....	20
Table 5:	Place of birth of residents in Gauteng, Sedibeng and Emfuleni, 2011 (% of total residents) .....	21
Table 6:	Emfuleni economic growth by sector and total economic growth in Gauteng, South African metros and South Africa, 1996, 2001 and 2011 (constant 2005 figures, GVA).....	25
Table 7:	Racial desegregation of suburbs previously declared white areas, 1996–2011 .....	45
Table 8:	The changing housing landscape in Emfuleni and Gauteng, 1996, 2001 and 2011 .....	46
Table 9:	A comparison of key municipal finance indicators for Emfuleni and the metropolitan areas in South Africa, 2012 .....	55
Table 10:	Educational attainment of the Emfuleni and Gauteng populations, 1996, 2001 and 2011 (% of the total population excluding those five years and younger).....	60
Table 11:	Assessment of potential risks in Emfuleni, 2013 .....	64

## FIGURES

Figure 1:	Outline of report.....	8
Figure 2:	An overview of the steel value chain in South Africa, 2008 .....	12
Figure 3:	Location of Emfuleni .....	15
Figure 4:	Comparison of the population growth in Emfuleni, Sedibeng and Gauteng, 1996–2011 (1996 was calculated as 100%).....	20
Figure 5:	The population age structure for Emfuleni and Gauteng, 1996 and 2011 .....	22
<b>Figure 6:</b>	<b>A comparison of the size of Emfuleni’s economy with the metropolitan municipalities in South Africa (GVA – R 1000, 2005 constant figures), 2011</b> .....	<b>23</b>
Figure 7:	Relative contribution (%) of economic sectors in Emfuleni, Gauteng, South Africa and all metropolitan areas, 2011 (real values, GVA – R1000) .....	24
Figure 8:	The relative contribution of economic sectors in Emfuleni and Gauteng in 1996, 2001 and 2011 (real values, GVA – R1000).....	24
Figure 9:	Contribution of Emfuleni’s manufacturing sector and total economy to the economies of Gauteng and South Africa, 1996, 2001 and 2011 (real values, % of GVA) .....	26

Figure 10: The relative economic contribution of subsectors of the manufacturing economy in Emfuleni, 1996, 2001 and 2011 (GVA real figures used to calculate the percentages) .....	27
Figure 11: The relative employment of subsectors of the manufacturing economy in Emfuleni, 1996, 2001 and 2011 .....	28
Figure 12: Relative contribution of metal manufacturing in Emfuleni to total metal manufacturing in Gauteng, the metropolitan areas and South Africa overall, 1996, 2001 and 2011 (real figures used for GVA) .....	29
Figure 13: Total manufacturing and total metal manufacturing for Emfuleni, the Vaal Triangle and the South African metropolitan areas, 2011 (GVA, real figures –R1000) .....	30
Figure 14: Economic growth and job creation in Emfuleni across key sectors, 1996, 2001 and 2011 (1996 figures were taken as 100%).....	31
<b>Figure 15: Percentage of households earning below R2400 (1996 values) in Emfuleni, Gauteng and Sedibeng, 1996, 2001 and 2011 .....</b>	<b>32</b>
Figure 16: Percentage of population residing in poverty in Emfuleni and Gauteng, 1996, 2001 and 2011 .....	32
Figure 17: HDI in Emfuleni compared with Gauteng and the metropolitan areas in Gauteng, 1996, 2001 and 2011 .....	33
Figure 18: Gini coefficient for Emfuleni, Gauteng and the metropolitan municipalities in Gauteng, 1996, 2001 and 2011 .....	34
Figure 19: Overview of the spatial development plan for Emfuleni, 2013 .....	44
<b>Figure 20: A comparison of municipal revenue for Emfuleni, Msunduzi and the metropolitan areas, 2012 (Value Rbn) .....</b>	<b>51</b>
Figure 21: Proportional share of service charges, property tax and equitable share as components of revenue in Emfuleni, 2008–2012.....	52

## ACRONYMS

AMSA	-	ArcelorMittal South Africa
ANC	-	African National Congress
CBD	-	Central Business District
EAF	-	Electric arc furnace
GVA	-	Gross Value Added
ICT	-	Information and communications technology
IDC		Industrial Development Corporation
IDP	-	Integrated Development Plan
ISCOR	-	South African Iron and Steel Industrial Corporation Limited
HDI	-	Human Development Index
LED	-	Local Economic Development
MIG	-	Municipal Infrastructure Grant
NGO	-	Non-governmental organisation
R&D	-	Research and Development
RDP	-	Reconstruction and Development Programme

## 1. Introduction

This report on Emfuleni is one of six case studies on secondary cities in South Africa. The aim of the case studies is to identify key issues in respect of South Africa's intermediate cities, while the overall aim of the project is to start a policy debate regarding secondary cities. Emfuleni is located in the southern part of Gauteng province. The development of the area has historically been linked to the South African steel industry. The two main urban areas in the municipality are Vanderbijlpark and Vereeniging, with Sebokeng, Bophelong, Boipatong and Sharpeville being the most prominent township areas. Across the Vaal River in the northern part of the Free State lies the neighbouring town of Sasolburg. Sasolburg's petro-chemical industry and Emfuleni's steel-making industry form an interdependent regional economy across provincial boundaries known historically as the Vaal Triangle.<sup>1</sup>

The paper makes the following key points about Emfuleni:

- Emfuleni's historical development is closely linked to the steel industry, and the area plays an important role in the steel value chain. The steel industry is almost single-handedly responsible for Emfuleni's existence as an intermediate city (and for that matter its desire to become a metropolitan area). This dependence on a single economic sector and the lack of a major downstream steel industry are significant long-term threats for both the area's economy and the municipality's viability.
- The area has experienced significant job losses in the last twenty years. However, its proximity to Johannesburg and Pretoria (where significant numbers of Emfuleni residents work), the growing weekend tourism industry and an increasing number of students (and staff) at the two universities have played a crucial role in buffering the economic hardship of the 1990s.
- The majority of South Africa's domestic steel production occurs in Emfuleni, and the area is also an important node of international competitiveness for South Africa. However, globalisation is threatening the Emfuleni steel industry. Cheap steel imports and the inability of the Emfuleni steel industry to be internationally competitive might erode both the national and international importance of the area.
- The notion of international competitiveness is not well entrenched in Emfuleni planning documents. Although the growth and development strategy of the Sedibeng District Municipality does consider the importance of international competitiveness, the implementation strategies are mainly oriented towards local and national concerns. The local planning efforts need to start paying attention to the volatility of the international market and prepare for the associated risks.
- Emfuleni plays a mediating role in three main ways. (1) The city mediates between primary production (the mining of iron ore in the rural Northern Cape Province) and steel product development (in Ekurhuleni) by converting the raw iron ore into steel. The fact that steel product development has not occurred at any major scale in Emfuleni is probably the main reason why the area is viewed as backward within the Gauteng economy. (2) Emfuleni's growing tourism economy provides leisure spaces to residents of the nearby metropolitan areas. The focus is mainly on weekend tourism, which is an intermediate form of tourism between staying at home and heading out of town on a long-distance trip. (3) Emfuleni is one of a handful of places in South Africa where desegregation is occurring (other notable areas are Polokwane (Pietersburg)<sup>2</sup> and Matjhabeng<sup>3</sup> (Welkom), which are also outside the

---

<sup>1</sup> In a court case between two companies competing for gambling licenses, the court decided that a casino on the Free State side of the Vaal River would not be appropriate, as the gambling license provided on the northern side of the Vaal River would sufficiently address the needs of the area (Emfuleni and Metsimaholo).

<sup>2</sup> Donaldson R and Kotze, N. 2006. Residential desegregation dynamics in the South African city of Polokwane, *Journal of Social and Economic Geography (TESG)*, 97 (5): 567–582.

<sup>3</sup> Marais L. 2013. The impact of mine downscaling on the Free State Goldfields. *Urban Forum*, DOI: 10.1007/s12132-013-9191-3

metropolitan areas). Therefore, Emfuleni also mediates a more integrated society. Whether this racial integration has led to a larger degree of social cohesion among the middle class is a debate which falls outside the scope of this report.

- There are a number of long-term risks associated with the future development of Emfuleni. These risks include municipal governance and service delivery, future government policies in respect of the steel industry, the ability of the steel-making sector to be internationally competitive and the environmental risks associated with pollution.
- The Emfuleni case study also helps to identify a number of policy issues. The first issue relates to the demise of the rail freight industry, which hampers the international competitiveness of the steel industry. Another issue is the fact that the equitable share system used in inter-governmental revenue transfer seems to treat Emfuleni in an inappropriate manner. Third, the uncertainty with regard to the national steel policy is not helpful. Finally, the inherent volatility in the steel industry suggests that a more appropriate land-use regulatory environment is required.

Figure 1 provides a schematic representation of the structure of the report. It begins with a discussion of the iron ore and steel value chain, as this is crucial to understanding the historical growth of Emfuleni and will have an important impact on the future of the area. Next, the paper presents the history of Emfuleni. For the purpose of this discussion, the history is divided into five phases: Phase One (1892–1942) – Initial development of Vereeniging; Phase Two (1943–1959) – Establishment of the Vanderbijlpark steel works; Phase Three (1960–1988) – Building and growth of the steel industry and South African Iron and Steel Industrial Corporation Limited (ISCOR); Phase Four (1989–2000) – Privatisation; and Phase Five (2001–today) – Internationalisation. The historical section of the report pays only brief attention to Phase Four and Phase Five, as the later sections of the report focus in more detail on these phases. The remainder of the report considers the following key questions:

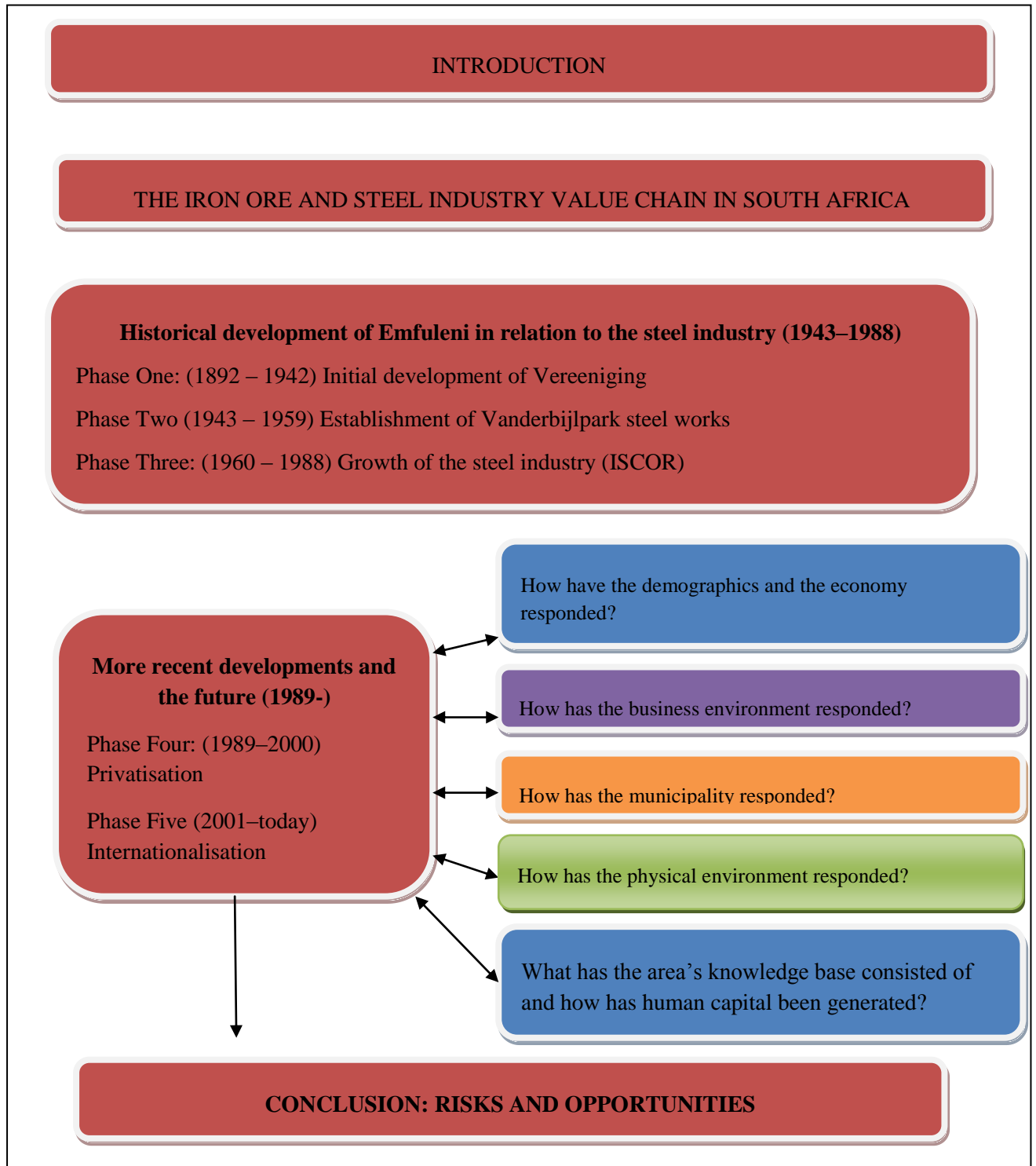
- How have the area's demographics and economy responded to these developments?
- How has the business environment responded to these developments?
- How has the municipality responded to these developments?
- How has the physical environment responded to these developments?
- What has the area's knowledge base consisted of, and how has human capital been generated?

The report ends with a discussion of medium- and long-term risks that could determine the future role and function of Emfuleni. Before turning to the next section, a couple of disclaimers are necessary:

- This paper is NOT and should not be read as an argument either in favour of or against the Municipal Demarcation Board's decision to declare Emfuleni a metropolitan area. Weighing in on whether or not the area should become a metropolitan municipality was not the aim of the study, nor was it a key research question.
- The notion of Emfuleni (Vanderbijlpark and Vereeniging) and Metsimaholo (Sasolburg) as one economic area may deserve more consideration in the future; the administrative divide caused by the provincial boundary is not the only factor that should be considered when looking at the Vaal Triangle area. However, this report focuses mainly on Emfuleni and only on a few occasions discusses Metsimaholo and the notion of the Vaal Triangle region.



**Figure 1: Outline of report**



## 2. The iron ore and steel industry value chain

The development of Emfuleni is closely related to the development of the South African steel industry. Therefore, a detailed understanding of the iron ore and steel value chain is essential to an understanding of Emfuleni. The below overview of the steel value chain is provided in three sections, (1) the mining of iron ore and the scrap metal gathering process, (2) steel production and the steel market and (3) concluding comments regarding the future of the steel industry in South Africa. It should be noted, at the outset, that iron ore is a cyclical commodity, and therefore the global industry experiences a significant degree of volatility. The overview provided below is mainly based on a document by Kumba<sup>4</sup>, and therefore this source is not referenced on a continuous basis.

### 2.1 Mining of iron ore and the scrap metal system

In 2008, South Africa mined approximately 48mt<sup>5</sup> of iron ore, and it is estimated that, once the Kolemala mine in Postmasburg is in full operation, another 9mt will be mined per year.<sup>6</sup> Most of the iron ore mining takes place in open pits. More than 90% of the country's iron ore mining occurs in the Northern Cape Province, although smaller iron ore operations also take place near Thabazimbi (Limpopo) and Mapochs (Mpumalanga). Kumba Iron Ore, a member of the Anglo American group, mines approximately 80% of the iron ore in South Africa and is the fifth largest iron ore mining company in the world. Other mining companies involved in iron ore mining include Assmang (50% owned by African Rainbow Minerals), Rio Tinto, and Evraz Highveld Steel & Vanadium. Kumba was originally the state corporation ISCOR, which was privatised in 1989. In 2001, the mining and steel functions were separated into ISCOR (steel making) and Kumba Resources (mining). Some beneficiation of iron ore takes place at the mines; the beneficiation process entails a 'capital intensive dense medium separation or jigging by miners at the mine site, in order to convert the iron ore into a saleable product and/or to increase value in use'.<sup>7</sup> As the domestic market absorbs only 20% of the iron ore mined in South Africa, the other 80% is exported, with China being one of the largest markets. South Africa is the fourth largest exporter of iron ore after Australia, Brazil and India. The railway between Kathu and Saldanha plays a significant role in South Africa's ability to effectively export its iron ore.

After raw iron ore, the second main input material used by steel manufacturers is scrap metal. The gathering of scrap metal provides employment to an estimated 425 000 people.<sup>8</sup> However, the government and the private sector are currently in dispute due to the increasing tendency to export scrap metal. New government regulations, which take effect in March 2014, mandate that scrap metal be offered to local steel making companies at export parity price minus 20%.<sup>9</sup> Due to the perceived negative effect this regulation could have on the scrap metal industry, the Metal Recyclers Association has brought a court case to stop the new regulation from being implemented. No decision on the case has been made as of yet.

### 2.2 Steel production and the steel market

The demand for steel in South Africa was initially a result of the expanding mining industry in the early 1900s. The second big wave of demand came during the Second World War, followed by renewed

---

<sup>4</sup> Kumba Iron Ore. 2011. The South African iron ore and steel value chain. [www.kumba.co.za/SIOC/pdf/iron\\_steel\\_sec1.pdf](http://www.kumba.co.za/SIOC/pdf/iron_steel_sec1.pdf).

<sup>5</sup> mt = million tones

<sup>6</sup> This mine has been in partial operation since 2011.

<sup>7</sup> Kumba Iron Ore 2011. The South African iron ore and steel value chain. [www.kumba.co.za/SIOC/pdf/iron\\_steel\\_sec1.pdf](http://www.kumba.co.za/SIOC/pdf/iron_steel_sec1.pdf).

<sup>8</sup> Cilliers H. 2013. Skrootmetaalbedryf skop vas. *Rapport*, 27 September 2013.

<sup>9</sup> Cilliers H. 2013. Skrootmetaalbedryf skop vas. *Rapport*, 27 September 2013.

demand in the late 1960s to meet the apartheid government's weapon requirements. More recently, infrastructure investment in preparation for the 2010 Soccer World Cup was a significant driver of steel production. Despite these factors, the overall demand for steel in South Africa has on average (despite some boom periods) grown by only about 1% for the last 30 years.<sup>10</sup>

Although South Africa has the capacity to produce up to 12mt of steel per annum, only 8mt were produced in 2008, and more recent estimates indicate that less than 6mt are produced annually.<sup>11</sup> Of this, about 5.5mt is consumed by the domestic market, with the remainder being exported (37% via land to southern Africa and 63% via sea mainly to East and West Africa). At the same time, around 0.8mt of steel is imported annually, although industry experts indicate that this figure is on the rise. In 2008, the industry contributed 0.6% of the country's gross domestic product and R4bn to the national fiscus. Despite losing a significant number of jobs between 2002 and 2008, the steel production industry still employed nearly 13 000 people in 2008.

Steel production in South Africa follows three different processes. The first process, referred to as the blast furnace, consists of smelting iron ore into pig iron and then refining it into steel products. This process is extremely expensive. Coking coal (50% of which is imported from Australia) is a key cost driver in this process, making up at least 27% of the final cost of the steel; electricity and labour are the other two cost drivers. The second process, mainly applicable to scrap metal, is the electric arc furnace (EAF) route in which electricity is the main cost driver. The scrap metal industry is described by Kumba as 'fragmented', with more than 140 companies involved across South Africa. In 2008, less than 4% of steel produced from scrap metal was exported. There is currently some talk about locating a scrap metal steel-making plant at Coega.<sup>12</sup> The third process involves making steel through processes called midrex and corex. This takes place mainly at Saldanha and is oriented towards export.

It is also important to note that the steel industry can be divided into two main components. The first involves steel mills' production of items such as hot rolled coil and merchant bars. Some conversion into intermediate products such as wire and tubing is also part of this component of the steel-making process. The second component, which uses approximately 30% of the available steel, involves using steel as converters and in fabrication. However, South African-made converters are not competitive on the international market, and cheaper converters are imported from other countries. The government believes that the main reason for this is 'the uncompetitive pricing' of steel, which leads to an inability to compete in global markets.<sup>13</sup>

ArcelorMittal South Africa (AMSA) is the largest steelmaker in South Africa, holding approximately 75% of the market share. The company has four main plants in South Africa:

- Vanderbijlpark produced 3.3mt of steel in 2008, but has the capacity to produce up to 5.1mt per annum (mainly through the blast furnace process).
- Vereeniging produced 0.3mt of steel in 2008, with the capacity to produce 0.4mt (uses the EAF process).
- Newcastle produced 1.4mt of steel in 2008, but has the capacity to produce 2.8mt (blast furnace process).
- Saldanha produced 0.9mt of flat steel products in 2008, mainly for export, with the capacity for 1.3mt (midrex and corex processes which require imported iron ore pellets).

Other steel production companies include Scaw Metals (owned by Anglo American) in Germiston (0.6mt per annum), DAV Steel in Vanderbijlpark (0.5mt per annum), CISCO in Kuils River (0.3mt per annum) and Evraz Highveld Steel and Vanadium in Witbank (0.3mt per annum). Just over 60% of

---

<sup>10</sup> Interview with Private Sector 1.

<sup>11</sup> Interview with Private Sector 1.

<sup>12</sup> Interview with Private Sector 2 and Private Sector 3.

<sup>13</sup> Filen C. 2012. South African metalworkers union slams steel maker ArcelorMittal SA. *Mineweb*, 12 April 2012.

South Africa's steel production through iron smelting (excluding fabricators/converters) and 22% of the country's steel production from scrap metal takes place in Emfuleni. The report will later return to the reasons for this.

There are many different end-users of steel and steel products. The construction industry is the biggest user (40%), followed by automotive (11%), machinery (9%) and mining (7%).

Finally, some comments are required regarding the long-term growth of the steel industry in South Africa. Steel demand in the country has grown at approximately 1% for the last 30 years<sup>14</sup>. The reasons for this low growth are complex, but three aspects are worth mentioning. First, the technology used to convert steel into packaging material is too old and is quite often replaced by alternative technologies such as plastic. For example, the technology in use in South Africa only allows for the production of 0.3mm tin cans, whereas technology used internationally can produce cans that are 0.1mm and less. Consequently, international companies can produce three times more cans than their South African counterparts with same amount of material input. Second, the quality of steel in South Africa is not good enough for some aspects of automotive manufacturing. Thus, in order to ensure quality production, automotive companies have started to import their steel and other component requirements. Third, a certain degree of unreliability has crept into the steel industry. For instance, AMSA's Vanderbijlpark<sup>15</sup> and Newcastle<sup>16</sup> plants were closed for significant periods of time in 2009 and 2011, respectively<sup>17</sup>, due to blast furnace failures. Subsequently, companies have started to import steel. In fact, some of these companies have now made it policy to import up to 20% of their steel in order to minimise the risks associated with steel production in South Africa.<sup>18</sup> An important question to consider is why blast furnace failures have become so common in the industry. Some respondents suggest that such failures are common in the steel industry globally. However, two other factors cannot be ignored. First, some respondents have expressed concern that there is not enough investment in maintenance. Second, blast furnace machines are designed to work 24/7, but the relatively low demand for steel in South Africa means that these machines are fairly often switched off for periods of time. The shutting down and restarting of the machines seems to damage them in the long run. Figure 2 provides a summary of the steel value chain in South Africa.

---

<sup>14</sup> Interview with Private Sector 1.

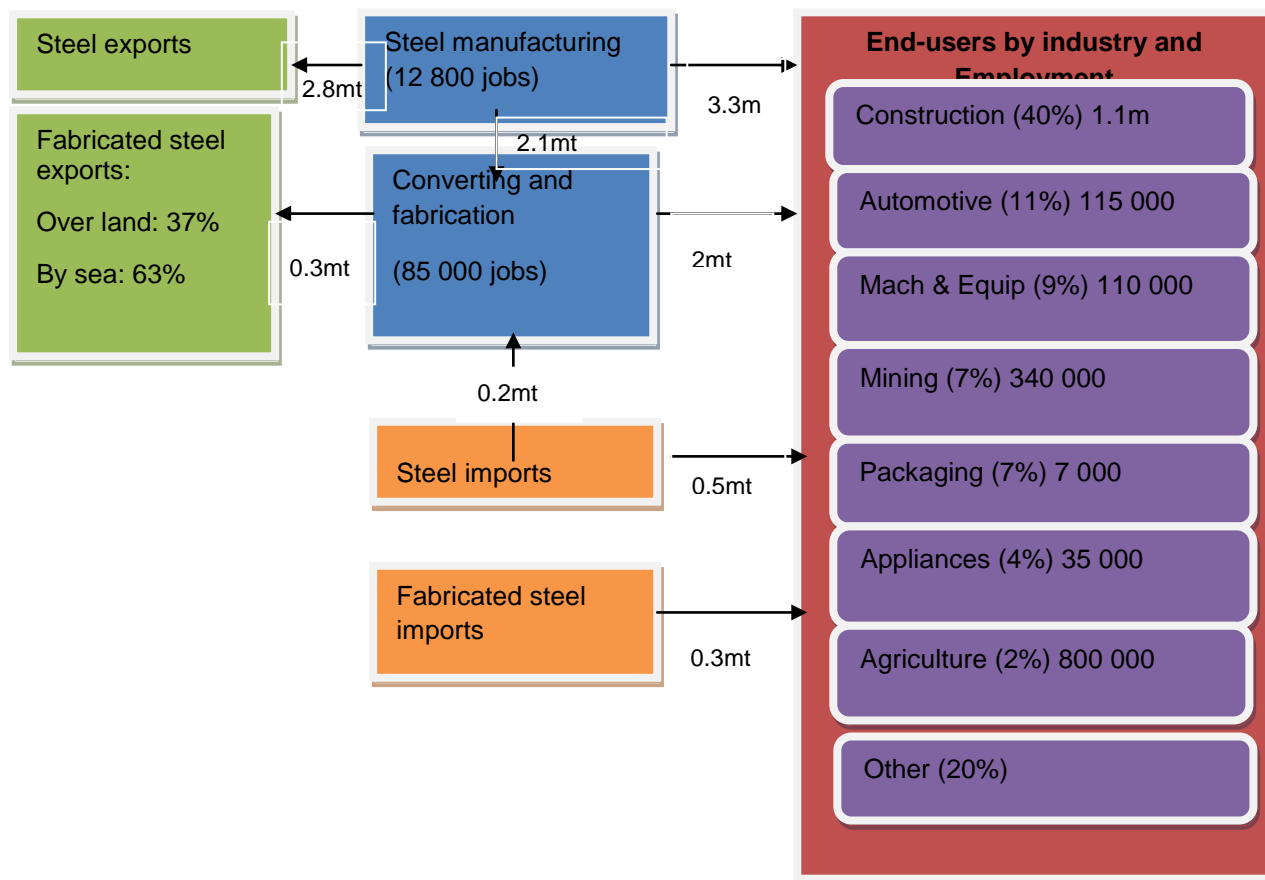
<sup>15</sup> Radebe K. 2013. ArcelorMittal to declare force majeure. *Money Web*. 11 February 2013.

<sup>16</sup> Radebe K. 2013. ArcelorMittal to declare force majeure. *Money Web*. 11 February 2013.

<sup>17</sup> ArcelorMittal SA, media release, 3 November 2011. [www.arcelormittalsa.com/Portals/0/Q3%20results%2020111026.pdf](http://www.arcelormittalsa.com/Portals/0/Q3%20results%2020111026.pdf)

<sup>18</sup> Interview with Private Sector 1.

Figure 2: An overview of the steel value chain in South Africa, 2008<sup>19 20</sup>



### 2.3 Concluding comments and the future of the iron ore and steel industry

Figure 2 provides a schematic representation of the steel value chain in South Africa, while Table 1 provides an overview of the different elements related to the South African iron ore and steel industries.

<sup>19</sup> Kumba Iron Ore. 2011. The South African iron ore and steel value chain. [www.kumba.co.za/SIOC/pdf/iron\\_steel\\_sec1.pdf](http://www.kumba.co.za/SIOC/pdf/iron_steel_sec1.pdf).

<sup>20</sup> It should be noted that the value chain expressed in this diagram reflects the situation in 2008, when the domestic demand for steel was high. The current volumes required by the end-users are probably 20–30% lower than in 2008, and there has been an increase in the amount of steel imports.

**Table 1: An overview of the iron and steel value chain in South Africa, 2008**

Criteria	Mining	Steel production	Market
Location and market share	Northern Cape: Kathu, Beeshoek and Postmasburg <sup>21</sup> (91.4%)	Emfuleni (61% of steel generated from iron ore and 22% of scrap metal steel production)	Gauteng (80%)
	Limpopo: Thabazimbi and Palaborwa	Newcastle (24% of steel generated from iron ore)	
	Mpumalanga: Mapochs	Saldanha (15% of steel generated from iron ore)	
Companies involved and market share	Kumba (Anglo) (78%)	AMSA I (75% of iron ore to steel)	Sectors: Construction (40%) Automotive (11%) Machinery & equipment (9%) Packaging (7%) Mining (7%) Appliances (4%) Agriculture (2%) Other (20%)
	Assmang (50% owned by African rainbow minerals) (13.8%)	Scrap metals (7% of scrap metal to steel)	
	Rio Tinto (do not sell to steel manufacturers)		
	Evraz Highveld Steel & Vanadium		
Production	2008: 48mt	Total capacity: 10mt-12mt Total production (2008): 8mt Domestic consumption: 5mt-6mt Exports (2008): just below 3mt	The exports seem to have declined due to increasing competition in the global market
Percentage exported	80%	20%	Iron ore: China Steel: Other African countries
Number of jobs		Direct steel making: 12 000 Steel products: 85 000	
Iron ore/steel as percentage of total revenue/cost	86%	6-20%	1% iron ore 5% steel
Significant cost drivers	Labour	Coking coal (27% of steel cost – 50% needs to be imported from Australia)	Logistics (gate price between 60-70% of price of steel)
		Logistics	
	Electricity		
	Labour		

It is estimated that the iron ore industry can more than double its output in the next 10 years, and plans are in place to make this a reality. This would potentially create approximately 7 000 more jobs in the iron ore mining sector. The three main factors that may challenge this growth are logistics, the availability of energy and the fluctuations of the international market. To expand mining operations is very capital intensive and would only be possible if the price of iron ore is high enough.

The future for the steel industry is more uncertain, and a number of points should be made in this respect:

- The promotion of downstream industries, such as construction, is necessary in order to stimulate the domestic market for steel (this aspect is reflected in the National Development Plan and current government initiatives).

<sup>21</sup> These calculations were done prior to the Kolomela mine near Postmasburg coming into full production in 2012.

- Steel producers should be treated equitably, regardless of whether they use iron ore smelting or other methods of production.
- World-wide, there is an approximately 18% overcapacity of steel.
- China is exporting steel.
- South Africa has significant disadvantages in terms of four of the main cost components of producing steel (coking coal, transport costs, labour and capital).
- The availability of surplus production capacity is to the detriment of the industry.
- South Africa is isolated from the main import markets.
- The South African steel industry is not currently orientated towards high value and niche markets, although the potential exists in this regard.
- Poor economies of scale and a lack of cost competitiveness hamper the production of steel used for conversion and fabrication.
- Steel exports might become more viable at an exchange rate of R10.50 to the US dollar.<sup>22</sup>
- The Vanderbijlpark steel works is one of the world's largest inland steel works, but the majority of steel works are located in coastal cities. Thus, there are higher costs involved in reaching the sea and exporting steel.

There seem to be four possibilities for strategic investment in the steel industry:

- Extensive research and development (R&D), including a focus on the reduction of the use of coking coal in steel manufacturing.
- A new steel mill (probably located at the coast) to realise the market opportunities in respect of intermediate steel products.
- Improving economies of scale in metal manufacturing linked to infrastructure development in southern Africa.
- Continued infrastructure development in South Africa, particular the development of rail and ports, could increase local demand for steel.

### 3. Historical perspective on Emfuleni

It is impossible to appreciate the history of Emfuleni without understanding the history of ISCOR and the steel industry in South Africa. In turn, the history of ISCOR is closely related to Afrikaner nationalism, job reservation for white people and low-paid black labour, mostly migrant labour. The historical overview below is organised according to the five important phases in the development of Emfuleni (Figure 3 provides an overview of the location of Emfuleni).

#### Phase One: Initial development of Vereeniging

The first phase (1892–1942) of the development of Emfuleni began with the 1892 founding of the settlement now known as Vereeniging. The town obtained the name Vereeniging after serving as the location for the signing of the peace treaty between the British and the Afrikaner republics in 1902. The growth of Vereeniging was largely due to the discovery of coal nearby and the establishment of a private steel-making enterprise near the coal mines shortly after the unification of South Africa. Horace Wright and Sammy Marks received a licence in 1909 to build a steel-making plant in Vereeniging. Their Union Steel Corporation started production in 1913 using scrap metal from railroads and mines as inputs.<sup>23</sup> In 1919, Newcastle (in today's KwaZulu-Natal) was the second town where iron and steel works were established, under the auspices of the Newcastle Iron and Steel Works.

Then, in 1929, the government established the ISCOR parastatal in an attempt to provide job opportunities for whites and assert Afrikaner control over the iron and steel industry, which up to that

---

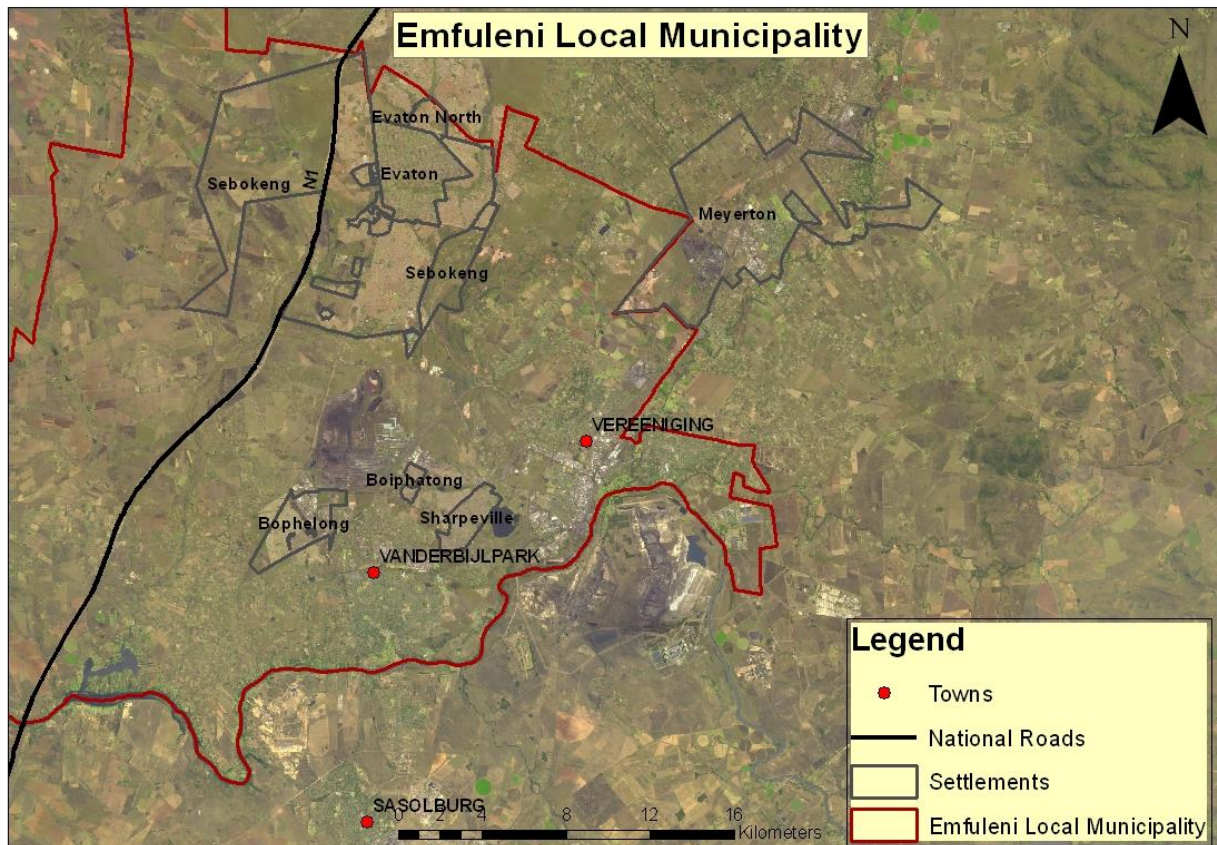
<sup>22</sup> Interview Private Sector 2.

<sup>23</sup> ArcelorMittal. 2013. The history of ArcelorMittal South Africa. <http://www.fundinguniverse.com/company-histories/iscor-limited-history>.



point had been dominated by English capital.<sup>24</sup> ISCOR started production in Pretoria in 1934 and became the main supplier of rail infrastructure in the country.<sup>25</sup> ISCOR soon established its own mining operation in Thabazimbi, in order to ensure sufficient iron ore for its steel-making efforts. By 1935, ISCOR provided 17% of South Africa's steel. During this same time period, General Jan Smuts recruited a South African engineer working in the United States of America, Dr. Hendrik van der Bijl, to spearhead the establishment of an industrial base for South Africa.

**Figure 3: Location of Emfuleni**



#### Phase Two: Establishment of the Vanderbijlpark steel works

The second phase (1943–1959) in the development of Emfuleni came with the establishment in 1943 of a steel-making plant near what is today Vanderbijlpark. The plant spurred the development of a new town, which was named after Dr. van der Bijl. The town was planned as a modern garden city, similar to other new towns such as Welkom. Although the plant was initially established to provide steel for the war industry (mainly armoured cars), it was planned in such a way that it could adjust to the commercial market once the war ended. The reasons for establishing the plant near Vanderbijlpark are not clear. Factors that may have played a role include the limited expansion possibilities in Pretoria, proximity to the existing steel industry in Vereeniging, ample open space, the availability of water and coal energy and the general slope towards the Vaal River, which allowed for industry-related waste products to be flooded into the Vaal (this was before environmental concerns

<sup>24</sup> ArcelorMittal. 2013. The history of ArcelorMittal South Africa. <http://www.fundinguniverse.com/company-histories/iscor-limited-history>.

<sup>25</sup> ArcelorMittal. 2013. The history of ArcelorMittal South Africa. <http://www.fundinguniverse.com/company-histories/iscor-limited-history>.



became prominent). The Vanderbijlpark location also ensured that the waste products would join the Vaal River below the pumping stations of Rand Water.

### Phase Three: Building and growth of ISCOR

The third phase (1960–1988) witnessed the growth of ISCOR into one of the largest parastatals in South Africa, employing more than 60 000 people at its peak. A number of factors influenced this growth:<sup>26</sup>

- International sanctions prohibiting South Africa from trading war machinery made it of strategic importance for the apartheid government to have control over the domestic steel industry.
- There was further expansion of various steel works in Vanderbijlpark and elsewhere in the country.
- ISCOR expanded from only providing steel to manufacturing a range of steel products.
- ISCOR expanded their mining operations, including opening the Sishen mines in what is now the Northern Cape Province.
- The railway to Saldanha allowed for the export of iron ore.
- Considerable efforts were made to modernise the steel industry.
- The formation of Sasol in the mid-1950s resulted in a large demand for steel and steel products and ensured the sustained growth of the steel industry.
- The large availability of coal in the area benefitted both the steel industry and Sasol. Although the Metsimaholo (Sasolburg) and Emfuleni (Vereeniging and Vanderbijlpark) economies developed in different sectors, there is a degree of interdependence between the two areas.

Although some rationalisation and strategic positioning did take place at different intervals, ISCOR grew significantly and, by the late 1980s, ISCOR:<sup>27</sup>

- had an 85% market share in the South African steel industry
- employed approximately 60 000 people
- received major subsidies from the government and benefitted from a protective market position, advantages which were not viable in the long term
- had very little private sector competition due to its protected position and subsidies

This third phase saw considerable economic growth in Emfuleni, and both Vanderbijlpark and Vereeniging expanded rapidly. However, with the demise of apartheid, the heyday of the steel industry was soon to come to an end

### Phase Four: Privatisation

Although phases four and five will be discussed briefly here, a more detailed discussion of the impacts, responses and risks associated with these two phases follows in Section 4. The fourth phase (1989–2000) involved the privatisation of ISCOR as ISCOR Limited in 1989. This privatisation process was part of the apartheid government's changing economic policy and involved a range of other parastatals as well. Some analysts also suggest that there is a link between the apartheid state's privatisation efforts and its attempts to manage the democratic transition in South Africa. Although privatisation resulted in significant job losses in Emfuleni (more than 10 000 jobs were lost in about ten years), the opening up of international markets after the end of apartheid meant that ISCOR Limited experienced significant growth in their mining operations at the Sishen mine. Also during this phase, ISCOR Limited, in association with the Industrial Development Corporation (IDC), built the Saldanha steel mills, which became operational in 1998. Thus, ISCOR managed to adapt to the

---

<sup>26</sup> ArcelorMittal. 2013. The history of ArcelorMittal South Africa. <http://www.fundinguniverse.com/company-histories/iscor-limited-history>

<sup>27</sup> ArcelorMittal. 2013. The history of ArcelorMittal South Africa. <http://www.fundinguniverse.com/company-histories/iscor-limited-history>.

changing times and even experienced growth in various areas around the country. The implications for Emfuleni, however, were disastrous. The region experienced massive job losses after ISCOR was privatised.

#### Phase Five: Internationalisation

The fifth phase (2001–today) started with ISCOR Limited unbundling its steel-making and mining activities. Kumba Iron Ore took over the mining activities, while ISCOR remained responsible for the steel-making process. This unbundling resulted in a long-term agreement between ISCOR and Kumba, whereby Kumba would provide ISCOR with iron ore at cost plus 3%, placing ISCOR in an extremely favourable position in respect of its iron ore supply. (Although currently being disputed in court, the relationship still exists.) Despite this advantage from its relationship with Kumba, ISCOR struggled to compete both nationally and internationally. The need to be internationally competitive led to ISCOR's first international cooperation agreement, with the Dutch-based LNV Holdings. In exchange for business advice and innovation assistance over a period of three years, LNV Holdings received 10 000 shares in ISCOR. By 2004, LNV had obtained a 35% share in ISCOR, and the company was renamed ISPAT ISCOR Limited. Later in 2004, ISCOR changed its name to Mittal Steel Company when Ispat international obtained the majority share in LNV Holdings. In 2006, Arcelor and Mittal Steel merged to form ArcelorMittal. A more detailed overview of economic trends related to phases four and five is provided in subsequent sections of this report. Another important component of phase five has been increasing hostility between the Emfuleni community and AMSA around environmental concerns; this aspect also receives more detailed discussion later on.

Table 2 provides a summary of the main drivers and attributes linked to the various phases of the development of Emfuleni. As mentioned above, the last two phases are discussed in more detail in the rest of the report. Therefore, some of the notes made in respect of these phases have not necessarily been discussed above.

In conclusion, the story of Emfuleni began with the discovery of coal, which was soon used to power privately owned steel mills and in turn provided steel for a growing mining industry. A few decades later, Afrikaner nationalism and the demand for war machinery led to the establishment and growth of ISCOR, the major role player in the growth and development of Emfuleni during the apartheid era. The changing economic policies of the apartheid government, coupled with the demise of apartheid, introduced privatisation to ISCOR, which in turn resulted in job losses and economic hardship in Emfuleni. With privatisation came internationalisation: companies have become more and more internationally linked in order to share R&D and technology. It should be noted, however, that investment in R&D in the South African steel industry is only 0.46% of sales, compared to the international bench mark of 1%<sup>28</sup>. In the short term, it seems as if internationalisation has helped to slow the decline of Emfuleni, but in the long run, the area's economy will be increasingly dependent on the volatility of international markets. The pivotal question is whether the municipality and the business sector fully understand the risks and are able to support the multi-nationals in their midst.

---

<sup>28</sup> Interview with Private Sector 1.

**Table 2: A summary of the phases of development in Emfuleni, 1892–2013**

Phase	Name	Main drivers	Key attributes
Phase One: 1892–1942	Initial development of Vereeniging	<ul style="list-style-type: none"> <li>• Availability of coal</li> <li>• Private sector investment in the steel industry</li> <li>• Demand for steel in the mining and rail industries</li> <li>• Establishment of ISCOR in 1928</li> <li>• ISCOR broadening its scope to also include mining in Thabazimbi</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of Vereeniging</li> <li>• First steel manufacturing in SA</li> <li>• Main input: scrap metal</li> </ul>
Phase Two 1943–1959	Establishment of Vanderbijlpark steel works	<ul style="list-style-type: none"> <li>• Afrikaner nationalism</li> <li>• Increasing demand for steel created by Second World War</li> <li>• Steel plant transformed after the war to feed the domestic market</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of Vanderbijlpark</li> <li>• Vaal River serves as a catchment for industrial waste</li> <li>• Massive economic and population growth in the area</li> </ul>
Phase Three 1960–1988	Building and growth of ISCOR	<ul style="list-style-type: none"> <li>• State corporations used to ensure white employment</li> <li>• Afrikaner nationalism</li> <li>• The strategic importance of the steel industry for the South African military due to sanctions</li> <li>• ISCOR broadening its mining involvement to Sishen</li> <li>• Establishment of the Sishen – Saldanha railway line</li> </ul>	<ul style="list-style-type: none"> <li>• Further growth of Emfuleni, especially Afrikaner working class</li> <li>• By the late 1980s, ISCOR had an 85% market share in the South African steel industry</li> <li>• ISCOR employed approximately 60 000 people</li> <li>• ISCOR benefitted from a protected market position and major government subsidies</li> <li>• Government support minimised the amount of private sector competition but was not viable in the long run</li> </ul>
Phase Four 1989–2000	Privatisation	<ul style="list-style-type: none"> <li>• Change in government policy</li> <li>• Democratic transition in South Africa</li> <li>• Attempts to make ISCOR more competitive</li> </ul>	<ul style="list-style-type: none"> <li>• ISCOR privatised</li> <li>• Major negative impacts on Emfuleni</li> <li>• 10 000–15 000 jobs lost in ten years</li> </ul>
Phase Five: 2001–today	Internationalisation	<ul style="list-style-type: none"> <li>• International competitiveness (the need to share technology from the rest of the world)</li> <li>• Reductions in labour/energy costs</li> <li>• Environmental concerns</li> <li>• Initially a growth in exports, but the growth of the steel industry in China has minimised exports</li> <li>• 2010 Soccer World Cup</li> <li>• Government intention to invest in infrastructure</li> <li>• Long term agreement between AMSA and Kumba</li> </ul>	<ul style="list-style-type: none"> <li>• Initial job losses have stabilised</li> <li>• Presence of international companies</li> <li>• Larger degree of uncertainty than ever before</li> <li>• ISCOR renamed AMSA</li> <li>• Future planning in Emfuleni needs to take into account the volatility of the international market and the position of the city in terms of its international competitiveness</li> </ul>

## 4. Demographic and economic analysis

Considering the rapid changes that have occurred over the past two and a half decades in South Africa in general (and the steel industry in particular), the focus now shifts to an assessment of the changes in the demographic and economic profiles of Emfuleni. The main question being considered here is: Given the national, political and steel industry changes that have transpired, what implications are there in respect of the area’s demographics and economic profile?

### 4.1 Demographic analysis

An overview of the demographic trends will help to understand the current changes occurring in the area’s population, including the population movements.

#### 4.1.1 Urbanisation and in-migration

Urbanisation in South African has historically been highly influenced by apartheid legislation, which minimised black urbanisation to South African cities. Where black labour was allowed, it was generally in the form of a migrant labour system. Two points should be made about the history of migration in Emfuleni. First, the black township near Vanderbijlpark (Boipatong) was established before the strict segregation policies of the National Party came into effect. Boipatong was established in 1955 between the industrial area and Vanderbijlpark, whereas Sebokeng, to the north of the main steel industries, was established by the apartheid government in the mid-1960s. Effectively, the industrial area served as a buffer between the black and white communities, in line with the planning paradigm at the time. Sebokeng is still characterised by a significant number of historic single sex hostels, typical of the migrant labour system.

With this background in mind, the focus now turns to migration trends in Emfuleni since 1996 (see Table 3 and Figure 3). The migration trends in Emfuleni are also compared with the figures for Sedibeng District Municipality and Gauteng Province, the two larger entities of which Emfuleni forms a part.

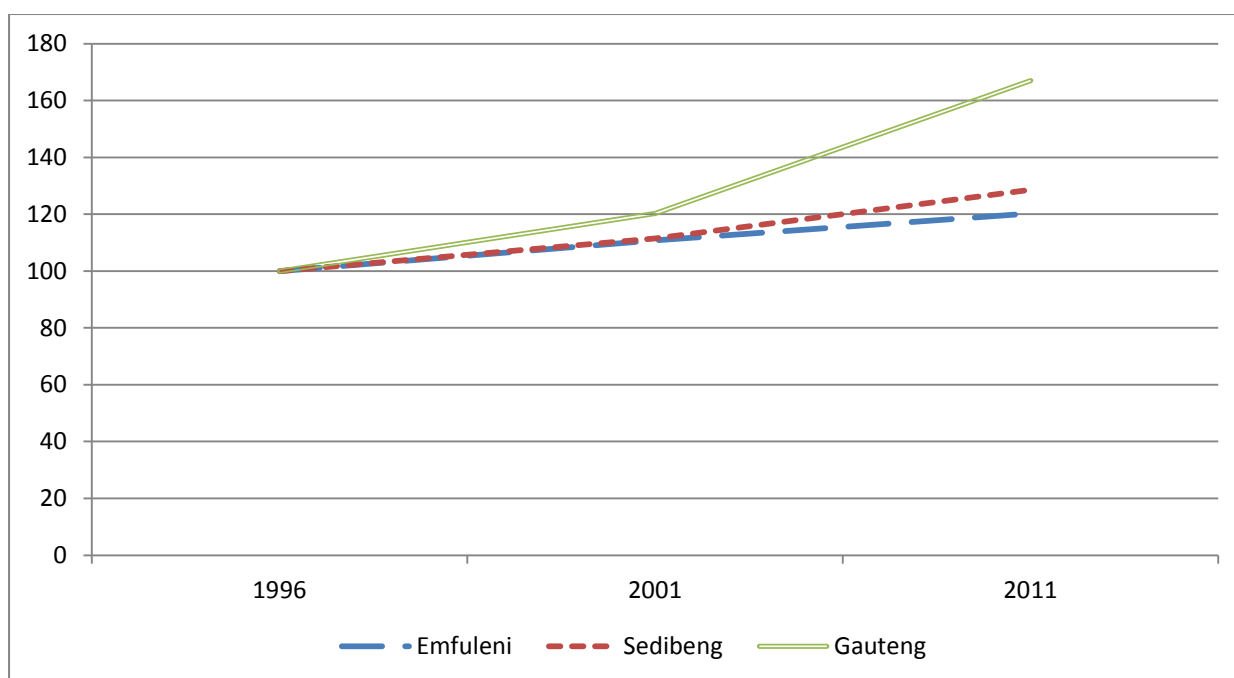
**Table 3: Population of Emfuleni, Sedibeng and Gauteng, 1996, 2001 and 2011<sup>29</sup>**

Area	1996	2001	2011	1996–2001 annual growth rate	1996–2011 annual growth rate	2001–2011 annual growth rate
Emfuleni	594 006	658 412	721 576	2.08	1.29	0.92
Sedibeng	712 394	794 605	916 390	2.21	1.68	1.44
Gauteng	7 348 425	8 837 174	12 271 736	3.76	3.44	3.34

The evidence from Table 3 suggests that Gauteng is growing considerably faster than Emfuleni and Sedibeng. During the 10 years leading up to the most recent 2011 census, the annual growth rate in Gauteng was 3.34% per annum, whereas Emfuleni’s growth rate was only 0.92% and Sedibeng’s growth rate was 1.44%. The considerable growth of Gauteng’s population in comparison with Emfuleni’s is presented schematically in Figure 4. Considering that South Africa’s natural growth rate is around 1%, very little (if any) influx of people to Emfuleni is taking place. (This point will be confirmed when the infrastructure services are discussed later.) More important is the fact that Emfuleni saw the most significant growth (just over 2%) during 1996–2001. This suggests, as is the case in other areas which experience deindustrialisation, that it takes some time for people to realise not to flock to areas going through deindustrialisation.

<sup>29</sup> Census data was used to compile this table.

**Figure 4: Comparison of the population growth in Emfuleni, Sedibeng and Gauteng, 1996–2011 (1996 was calculated as 100%)<sup>30</sup>**



Tables 4 and 5 provide an indication of the in-migration trends. Table 4 shows the province of previous residence, information that was gathered from the 1996 and 2001 censuses (those indicating Gauteng as their only province of residence were excluded). It should be noted that Table 4 does not indicate *when* the migration from these other provinces took place, only that respondents had at some point lived in these other provinces prior to moving to the area. Table 5 illustrates the place of birth of residents currently living in Gauteng, Sedibeng and Emfuleni, using 2011 census data.

**Table 4: Province of previous residence for current residents of Gauteng, Sedibeng and Emfuleni, 1996 and 2001 (as a % of the total residents that have lived in another province)<sup>31</sup>**

	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Mpumalanga	Limpopo
Gauteng (1996)	2.0	7.9	0.9	5.1	10.4	20.5	35.7	17.5
Sedibeng (1996)	0.1	17.8	1.2	40.9	10.6	7.8	13.3	8.3
Emfuleni (1996)	0.1	20.5	1.1	46.9	9.4	7.9	6.6	7.5
Gauteng (2001)	4.7	12.9	1.6	8.6	19.1	15.6	12.8	24.6
Sedibeng (2001)	3.1	14.6	1.4	39.1	11.5	8.9	11.0	10.5
Emfuleni (2001)	2.5	15.9	1.4	42.3	10.3	9.1	7.9	10.6

<sup>30</sup> Census data was used to compile the table.

<sup>31</sup> Census data was used to compile the table.

**Table 5: Place of birth of residents in Gauteng, Sedibeng and Emfuleni, 2011 (% of total residents)<sup>32</sup>**

Area	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	Outside South Africa - Not applicable
Gauteng	1.5	4.4	0.8	3.1	5.7	3.4	54.4	4.2	10.5	12.0
Sedibeng	1.5	2.9	0.6	10.1	2.3	1.4	69.2	2.3	2.5	7.2
Emfuleni	1.4	2.9	0.5	10.8	1.9	1.4	70.9	1.4	2.4	6.3

A number of notes should be made in respect of the tables above:

- In-migration into Gauteng overall is higher than in-migration to Emfuleni and Sedibeng. This is visible from the fact that Emfuleni has a significantly higher percentage of residents that were born in Gauteng province (70.9%) than does Gauteng province as a whole (54.4%).
- A significant number of people in Emfuleni and Sedibeng indicated the Free State as their province of previous residence (see Table 4). This leads to two important conclusions. First, the Free State has seemingly acted historically as some sort of rural hinterland for Emfuleni. Second, it suggests a considerable amount of interaction between Emfuleni and the northern parts of the Free State, Metsimaholo Local Municipality in particular.
- The percentage of people born outside the country is significantly higher in Gauteng overall than in Emfuleni.

The above points have important implications for how Emfuleni differs from the rest of Gauteng. In the first place, Emfuleni has experienced less in-migration from other countries and is less cosmopolitan than the province as a whole. This does not mean that international migration has not occurred at all in Emfuleni.<sup>33</sup> The Vaal University of Technology estimates that 20% of its students originate from outside South Africa.<sup>34</sup> Furthermore, concerns about foreign business people 'taking over local business opportunities' were common during interviews.<sup>35</sup> Secondly, Emfuleni is closely related to the northern Free State as its rural hinterland, while the rest of Gauteng has a higher percentage of migrants from the other provinces. The notion of Emfuleni as 'a Sotho-speaking area' cropped up a few times in the interviews, despite the fact that Emfuleni is a Zulu word.

#### 4.1.2 Population age distribution

The focus now shifts from migration patterns to the changing population age distribution patterns. The census data for 1996 and 2011 are used to compare Emfuleni with Gauteng overall (see Figure 5).

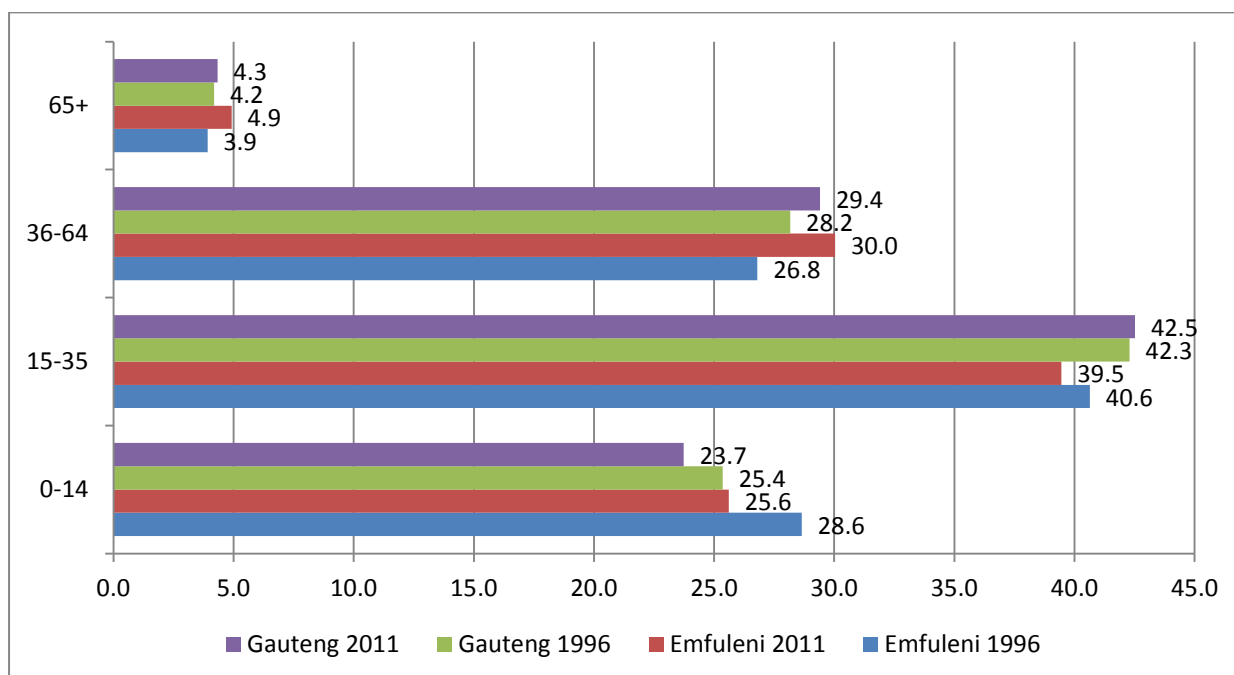
<sup>32</sup> Census data was used to compile the table.

<sup>33</sup> Two of the waiters at the restaurant we ate at were Zimbabwean in origin.

<sup>34</sup> Interview with University Respondent 1.

<sup>35</sup> Interviews with Private Sector 4 and Private Sector 5.

Figure 5: The population age structure for Emfuleni and Gauteng, 1996 and 2011<sup>36</sup>



The following observations should be made in respect of the changing age structure in Emfuleni:

- In 1996, Emfuleni had a larger percentage of its population (28.6%) under the age of fifteen than did Gauteng as a whole (25.4%). This is a 3.2% difference in this age group.
- By 2011, this difference had narrowed to 1.9%, with Emfuleni residents under fifteen making up 25.6% of the total population as opposed to 23.7% for Gauteng overall.
- At the same time, there was substantial growth in the percentage of Emfuleni's population older than 65 grew substantially (from 3.9% to 4.9%) and between the ages of 36 and 64 (from 26.8% to 30%). In 2011, the percentage of Emfuleni's population older than 65 was higher than the percentage for Gauteng as a whole. This might suggest a trend of retirement in the area (probably due to lower house prices), but this was not confirmed during the interviews. It might also mean that younger people are increasingly finding work outside the area – a trend that was confirmed during interviews with staff at the universities.<sup>37</sup> Although the declining steel industry is the main factor driving the reduction in the number of job opportunities in the area, some interviewees also mentioned that Emfuleni was not perceived to be a nice place to work or live. The bright lights and night life of Johannesburg are far more attractive for young people than 'dirty' and 'polluted' Emfuleni.<sup>38</sup>

#### 4.1.3 Daily commuting to Johannesburg

The increasing number of people that commute to Johannesburg on a daily basis was mentioned in virtually every interview. Comments reflective of this trend include: 'you should not try to use the R59 before 8:00 in the morning'<sup>39</sup> and 'if you go to Grasmere in the morning you will see that the traffic in a northern direction outweighs that in the southern direction at 7:1'.<sup>40</sup> The proximity of Johannesburg

<sup>36</sup> Census data was used to compile the table.

<sup>37</sup> Interviews with University Respondent 2 and University Respondent 3.

<sup>38</sup> Interview with Private Sector 6.

<sup>39</sup> Interview with Private Sector 6.

<sup>40</sup> Interview with Public Sector 1.



has most certainly cushioned the impact of the declining steel industry. Emfuleni residents, once able to depend on the steel industry for jobs, are able to find work in Johannesburg. This may be why Emfuleni does not have a negative population growth rate, despite the changes in the steel industry.

## 4.2 Economic and development profile

The economic analysis is divided into two main sections. First, the overall economic profile of Emfuleni is discussed, followed by a focus on the manufacturing sector. The steel manufacturing industry has been the backbone of the Emfuleni economy for more than 60 years, and therefore a more detailed emphasis on this industry is required.

However, before turning to these two aspects, we provide a broad overview of how the Emfuleni economy – measured in terms of Gross Value Added (GVA) – relates to the metropolitan areas of South Africa. For the purpose of comparison, the estimated GVA of the entire Vaal Triangle (including Sasolburg) was also included (see Figure 6).

**Figure 6: A comparison of the size of Emfuleni’s economy with the metropolitan municipalities in South Africa (GVA – R 1000, 2005 constant figures), 2011<sup>41</sup>**

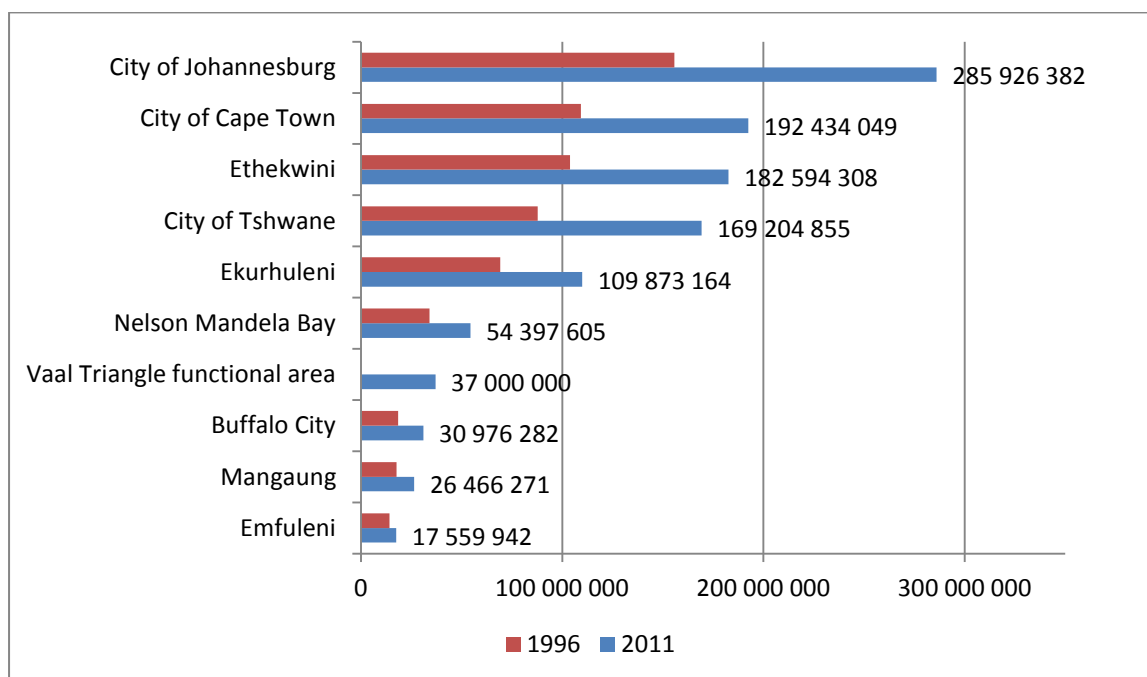


Figure 6 shows that Emfuleni has a much smaller economy than the metropolitan municipalities. However, a different picture emerges when Metsimaholo (Sasolburg) is included as part of the overall Vaal Triangle functional economic area. In terms of 2011 GVA, the Vaal Triangle functional area is nearly 20% bigger than Buffalo City and almost 30% bigger than Mangaung, the two smallest metropolitan municipalities. Despite the fact that Emfuleni and Metsimaholo have developed manufacturing capacity in two different subsectors, the interdependence of the two areas and sectors should be acknowledged.

### 4.2.1 Economic profile

Three main aspects are considered in more detail in respect of the economic structure of Emfuleni. First, consideration is given to the relative contribution of the various economic sectors (see Figure 7),

<sup>41</sup> Global Insight data was used; The figure for the Vaal Triangle functional area (Emfuleni and Metsimaholo) is a conservative estimate.



followed by a discussion of how the proportional contribution of these sectors has changed since 1996 (Figure 8). Finally, the various growth rates of these sectors are outlined (Table 6). The notion of regional comparison is prominent in these assessments; comparisons are made to Gauteng, the metropolitan areas and South Africa as a whole.

**Figure 7: Relative contribution (%) of economic sectors in Emfuleni, Gauteng, South Africa and all metropolitan areas, 2011 (real values, GVA – R1000)<sup>42</sup>**

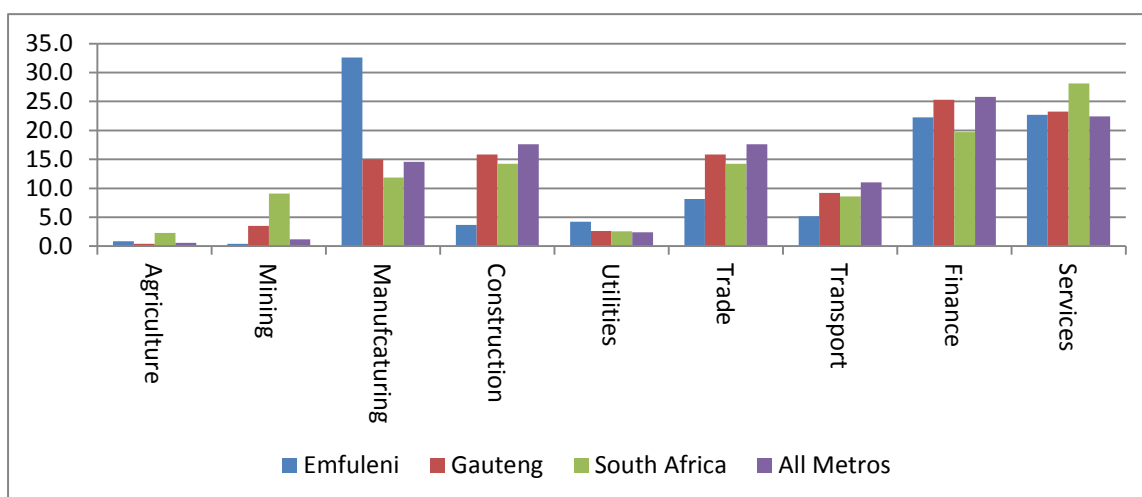
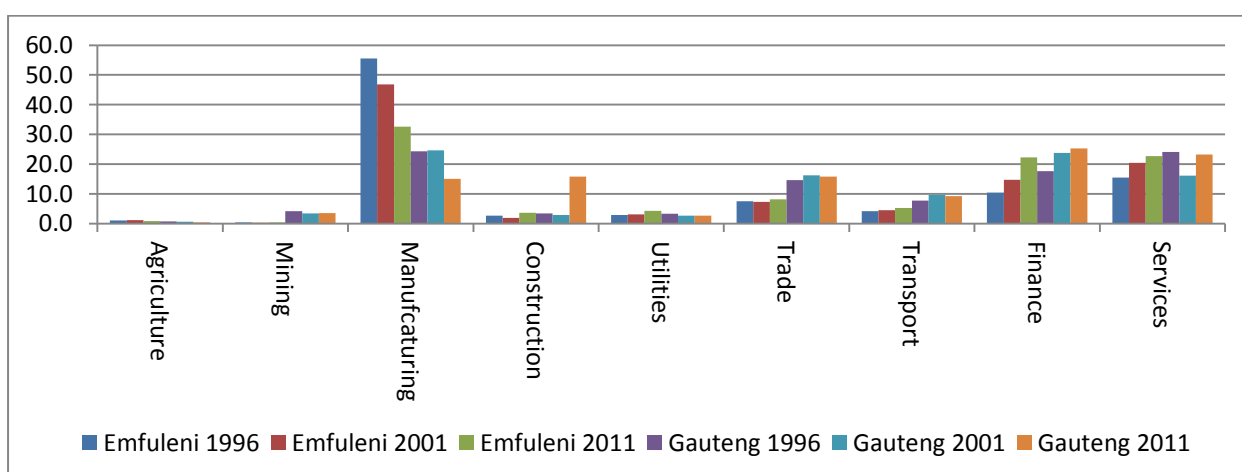


Figure 7 shows that manufacturing and the generation of water and electricity constitute a much larger proportion of the economy in Emfuleni than they do in Gauteng, South Africa and the metropolitan areas. This confirms the historical inter-relationship between the steel manufacturing sector and the availability of energy and water. However, an assessment of the relative contribution of various sectors is incomplete, if the changes in this respect are not unpacked in more detail (see Figure 8 and Table 6).

**Figure 8: The relative contribution of economic sectors in Emfuleni and Gauteng in 1996, 2001 and 2011 (real values, GVA – R1000)<sup>43</sup>**



<sup>42</sup> Global Insight data was used.

<sup>43</sup> Global Insight data was used.

**Table 6: Emfuleni economic growth by sector and total economic growth in Gauteng, South African metros and South Africa, 1996, 2001 and 2011 (constant 2005 figures, GVA)<sup>44</sup>**

	GVA 2005 constant figures (R 1000)			Annual growth rate		
	1996	2001	2011	1996-2001	2001-2011	1996-2011
Agriculture	106,629	108,652	121,444	0.4	1.1	0.9
Mining	66,860	20,366	42,930	-21.2	7.7	-2.9
Manufacturing	7,270,797	5,560,615	7,151,435	-5.2	2.5	-0.1
Construction	312,718	218,100	519,925	-7.0	9.1	3.4
Utilities	494,202	406,792	543,509	-3.8	2.9	0.6
Trade	1,033,842	840,880	1,210,746	-4.0	3.7	1.1
Transport	540,609	547,812	769,838	0.3	3.5	2.4
Finance	1,797,822	2,040,297	3,688,376	2.6	6.1	4.9
Services	2,579,133	2,501,756	3,511,739	-0.6	3.4	2.1
Total (Emfuleni)	14,202,613	12,245,270	17,559,942	-2.9	3.7	1.4
Gauteng	352,002,678	410,324,667	609,050,965	3.1	4.0	3.7
All Metros	595,946,896	708,520,914	1,051,872,917	3.5	4.0	3.9
SA	1,044,970,331	1,191,041,813	1,700,825,798	2.7	3.6	3.3

The following key points should be highlighted from the Figure 8 and Table 6:

- Growth rates in Emfuleni during the three periods considered in Table 6 were lower than growth rates for South Africa, Gauteng and the metropolitan areas in South Africa. For example, South Africa's GVA grew at 3.3% per annum between 1996 and 2011, compared to only 1.4% in Emfuleni.
- The decline in the relative contribution of manufacturing stands out. On the one hand, this should be viewed in the context of the area creating a more diverse economic structure that is less dependent on steel manufacturing and related industries; this diversification is a positive thing. On the other hand, the manufacturing industry has experienced a decline since 1996. The period from 1996 to 2001 saw a negative growth rate of -5.2% per annum, while an annual decline of -0.1% is reported for 1996–2011. This decline is directly related to the privatisation of ISCOR in 1989.
- Emfuleni's annual economic growth rate of 1.4% between 1996 and 2011 is considerably lower than that of South Africa, Gauteng and the metropolitan areas. This is directly related to the restructuring of the steel industry through privatisation and globalisation.
- That being said, however, Emfuleni's 3.7% annual growth rate between 2001 and 2011 compares much more favourably with Gauteng, the metropolitan areas and the country as a whole, suggesting that the ten years leading up to 2011 were more stable than the 1990s. It seems that the process of internationalisation has helped to stabilise the decline that was caused by privatisation. It will be argued later in the report that internationalisation also holds significant long-term risks, some of which have perhaps not yet been realised. Furthermore, internationalisation requires a planning approach, which gives adequate consideration to the concept of 'international competitiveness'.
- Some consideration should be given to the relationship between the manufacturing sector and other economic sectors. The annual decline of -5.2% per annum in manufacturing

<sup>44</sup> Global Insight data was used.

between 1996 and 2001 is most likely the reason for the annual decline of -4% in trade over the same period. This confirms the negative impact that the decline in manufacturing has had on the overall economy of Emfuleni.

- Within the trade sector, the restaurant and hotels subsector has grown considerably since 2001, after a significant slump between 1996 and 2001. The initial slump is probably directly related to the downscaling at ISCOR. On the other hand, the growth of 46% in this subsector between 2001 and 2011 is related to two factors. First, a weekend tourism industry has been prominent along the Vaal River for decades but received increasing momentum in the previous decade, growing significantly despite the recession in the late 2000s.<sup>45</sup> Destinations closer to Gauteng benefitted, as long-distance destinations became too expensive. The second factor has been the growth in the number of students at the region's two universities (a more detailed discussion of this aspect can be found in Section 8 of this report).

Having provided an overview of the main economic trends in Emfuleni, we now take a closer look at the relative contribution that the Emfuleni economy overall makes to the Gauteng and the South African economies, as well as the contribution that Emfuleni's manufacturing sector makes to the Gauteng and South African manufacturing sectors (see Figure 9).

**Figure 9: Contribution of Emfuleni's manufacturing sector and total economy to the economies of Gauteng and South Africa, 1996, 2001 and 2011 (real values, % of GVA)<sup>46</sup>**

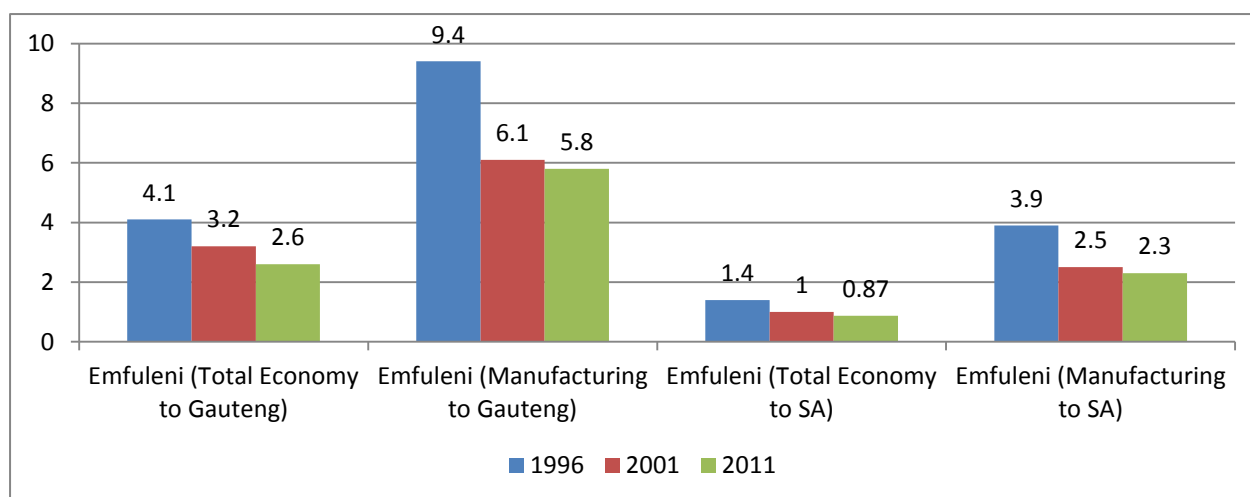


Figure 9 demonstrates that Emfuleni's contribution to the Gauteng and South African economies declined rapidly between 1996 and 2001. Since 2001, the decline has been more moderate. Furthermore, the contribution that Emfuleni's manufacturing sector made to Gauteng's manufacturing sector decreased drastically, from 9.4% in 1996 to 6.1% in 2001 and 5.8% in 2011. The same trend is visible in respect of Emfuleni's contribution to manufacturing in South Africa. Although the decrease is partly related to the decline of the steel manufacturing industry since 1996, it is also related to the fact that the steel industry is part of the old economy, which is growing much less quickly than manufacturing related to the 'new', knowledge- and service-oriented economy.

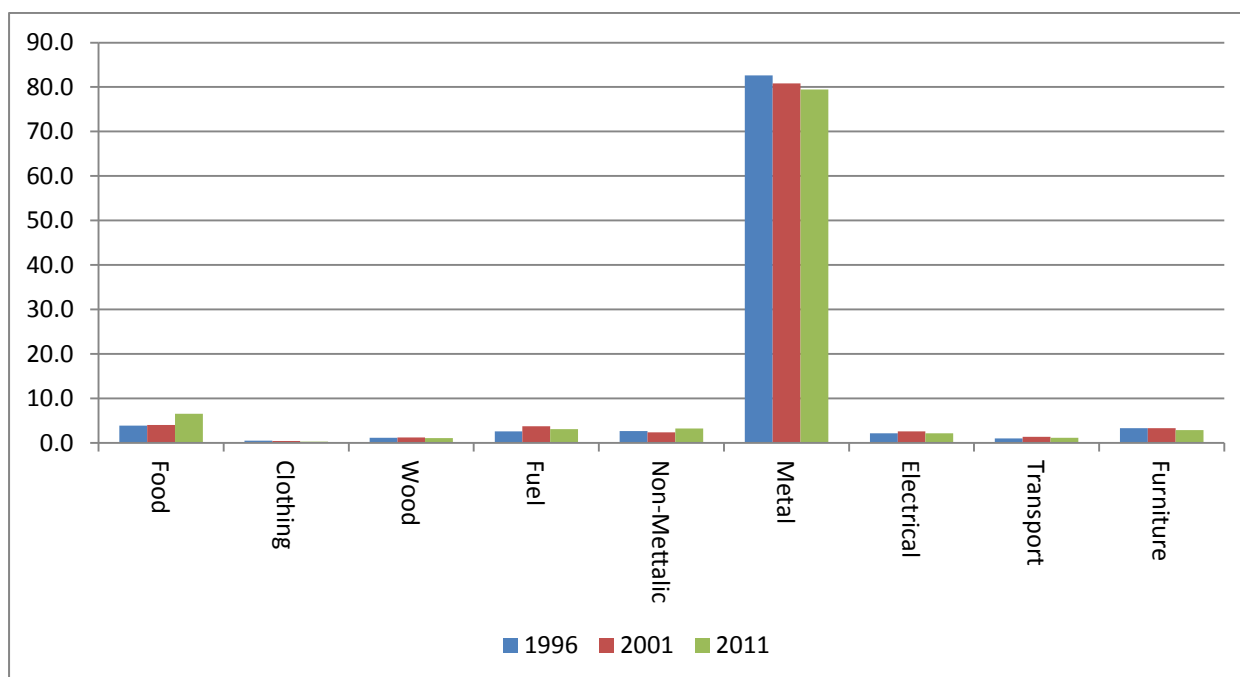
<sup>45</sup> Marais L et al. 2012. Tourism risks associated with small town development: the case of Clarens. In: R Donaldson & L Marais (eds). *Small town geographies in Africa: experiences from South Africa and elsewhere*. New York: Nova Publishers, pp. 223–232.

<sup>46</sup> Global Insight data was used.

## 4.2.2 The manufacturing industry in Emfuleni

The economic overview provided in Section 4.2.1 reveals that Emfuleni is highly dependent on the manufacturing sector. Furthermore, Table 6 shows that the manufacturing industry in Emfuleni did not grow during the 15-year period under consideration. The most significant decline occurred between 1996 and 2001, when the manufacturing sector shrunk by 5.2% per year. However, the sector then grew by 2.5% per year between 2001 and 2011. Given this context, the following section provides a more detailed picture of the manufacturing economy in Emfuleni. Figure 10 provides an overview of the relative contribution of the subsectors within the manufacturing sector.

**Figure 10: The relative economic contribution of subsectors of the manufacturing economy in Emfuleni, 1996, 2001 and 2011 (GVA real figures used to calculate the percentages)<sup>47</sup>**



The continued dominance of metal products is clearly visible in Figure 10. Nearly 80% of all manufacturing takes place in this subsector. The growth in the relative contribution of manufactured food products should also be noted, although the production of food products is still a very small percentage of the sector. Figure 11 also considers the relative contribution of various manufacturing subsectors in Emfuleni, but in terms of employment per subsector.

<sup>47</sup> Global Insight data was used.

**Figure 11: The relative employment of subsectors of the manufacturing economy in Emfuleni, 1996, 2001 and 2011<sup>48</sup>**

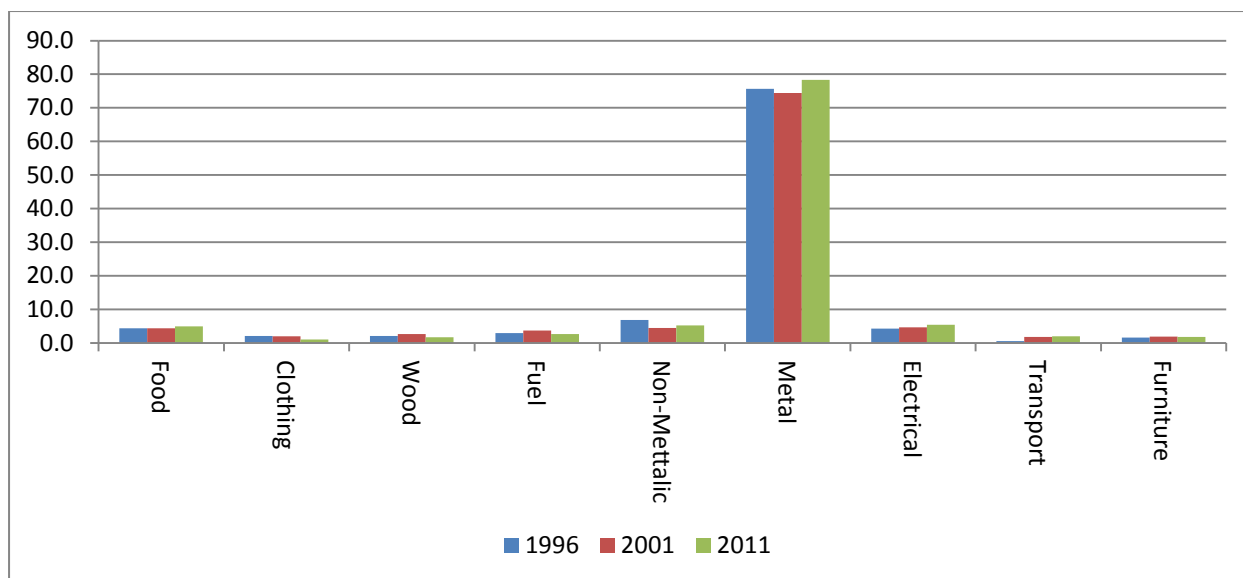
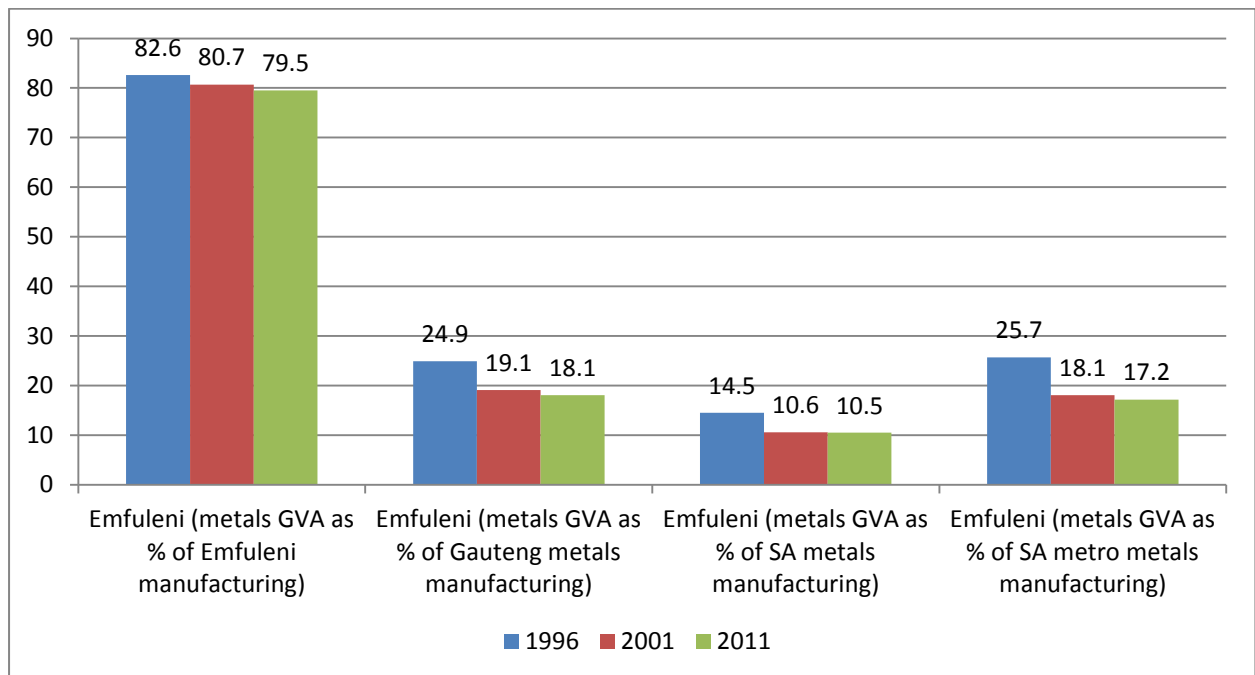


Figure 11 clearly reflects the fact that metal products also dominate in terms of employment, providing more than 75% of the jobs in the manufacturing sector. The fact that the percentage of employment provided by the metal manufacturing subsector is almost the same as the contribution that the subsector makes to the overall manufacturing economy suggests that the subsector remains labour intensive (although not more labour intensive than other manufacturing subsectors). This is despite significant job losses over the past two decades and attempts on the part of the manufacturing industry to use new technologies and machines. In actual fact, the proportional contribution of the metal manufacturing subsector to employment has shown a slight increase. As a final comparison, the Emfuleni manufacturing sector and metal manufacturing subsector are compared to Gauteng, South Africa and metropolitan areas in South Africa (see Figure 12).

<sup>48</sup> Global Insight data was used.

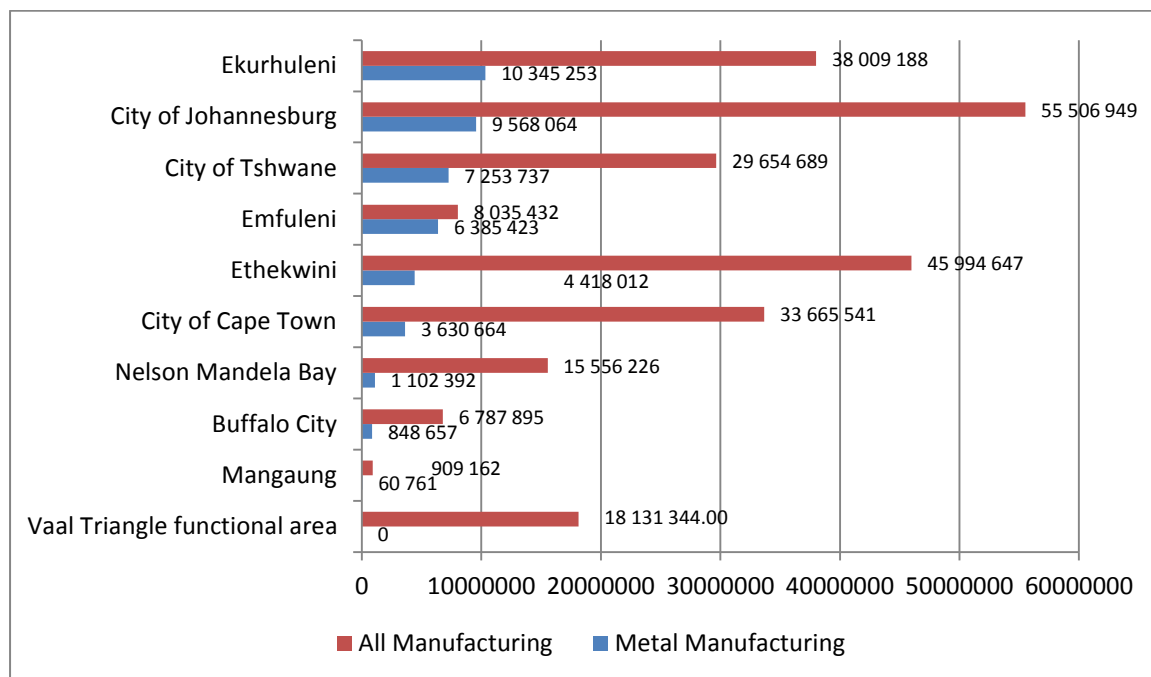
**Figure 12: Relative contribution of metal manufacturing in Emfuleni to total metal manufacturing in Gauteng, the metropolitan areas and South Africa overall, 1996, 2001 and 2011 (real figures used for GVA)<sup>49</sup>**



The evidence from the above figure suggests that in all comparisons, Emfuleni's relative contribution declined from 1996 to 2011. This decline can be directly related to Emfuleni's mediating role between the mining sector and the manufacture of steel converters and fabricators in Ekurhuleni. Figure 13 compares the size of Emfuleni's manufacturing and metal manufacturing sectors with the South African metropolitan areas.

<sup>49</sup> Global Insight data was used.

**Figure 13: Total manufacturing and total metal manufacturing for Emfuleni, the Vaal Triangle and the South African metropolitan areas, 2011 (GVA, real figures – R1000)<sup>50</sup>**



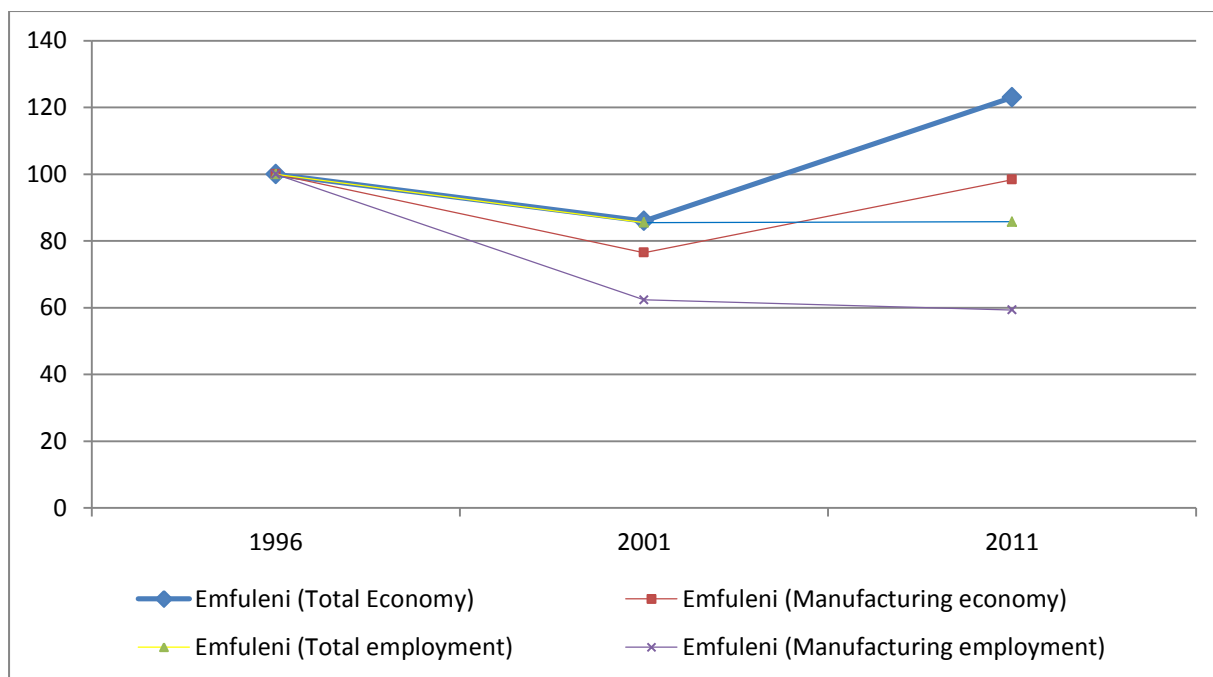
Figures 12 and 13 show that:

- Emfuleni’s metal manufacturing as a percentage of Gauteng’s metal manufacturing decreased from 24.9% to 18.1% from 1996 to 2011. Over the same time period, it decreased from 14.5% to 10.5% of total South African metal production.
- When compared to the metropolitan areas, Emfuleni has the fourth largest metal manufacturing industry in South Africa (after Ekurhuleni, Johannesburg and Tshwane).
- Six metropolitan municipalities have larger overall manufacturing sectors than Emfuleni, whereas Buffalo City and Mangaung are smaller.
- The Vaal Triangle (which includes Metsimaholo/Sasolburg) has the sixth largest manufacturing economy of any place in South Africa, outperforming Nelson Mandela Bay, Buffalo City and Mangaung.
- To provide some context, it is important to note that nearly 70% of the steel produced in South Africa is produced in Emfuleni.

In this respect, the steel manufacturing industry in Ekurhuleni is directly dependent on the steel produced in Emfuleni. Finally, some comments should be made in respect of employment in the manufacturing economy and how this compares with employment in the rest of the economy (see Figure 14).

<sup>50</sup> Global Insight data was used.

**Figure 14: Economic growth and job creation in Emfuleni across key sectors, 1996, 2001 and 2011 (1996 figures were taken as 100%)<sup>51</sup>**



The above figure confirms the overall trajectory already explained above. The size of the Emfuleni economy initially spiralled downwards between 1996 and 2001. Although overall economic growth occurred between 2001 and 2011, the manufacturing industry in 2011 was smaller than it was in 1996. The bigger problem is employment: employment overall (and employment in the manufacturing industry) is significantly lower than it was in 1996 and has not recovered as quickly as the overall economy. Although there are signs of economic stabilisation, the section later in the report that discusses the area's business profile suggests that a high risk for greater volatility in the future.

### 4.2.3 Income poverty

The available academic literature and the interviews both point to large-scale poverty in the area. Figure 15 provides an overview of the percentage of households in Emfuleni, Sedibeng and Gauteng with a monthly income below R2400 in 1996, 2001 and 2011 (figures for 2001 and 2011 were adjusted for inflation). Figure 15 uses Global Insight's calculations of people living in poverty.

<sup>51</sup> Global Insight data was used.



**Figure 15: Percentage of households earning below R2400 (1996 values) in Emfuleni, Gauteng and Sedibeng, 1996, 2001 and 2011<sup>52</sup>**

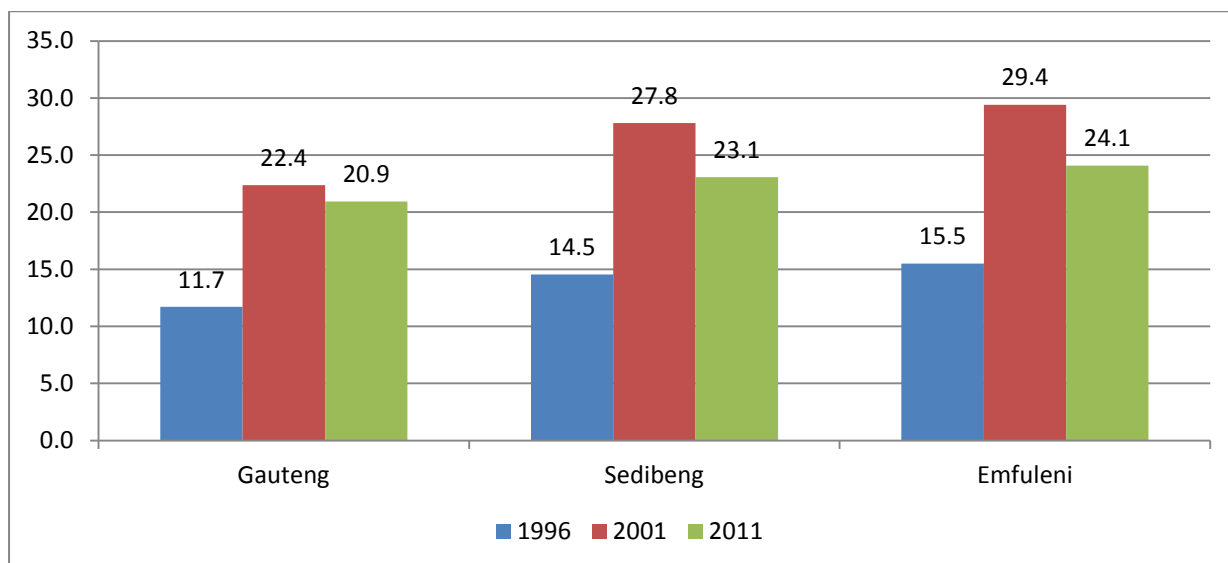
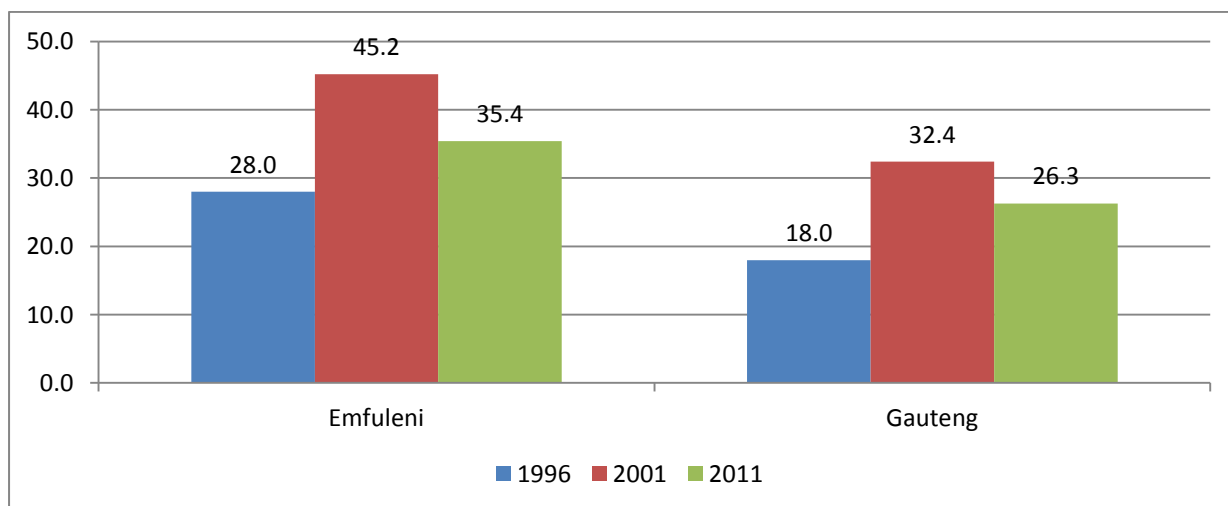


Figure 15 demonstrates that Emfuleni has the highest percentage of households with income levels below R2400 (1996 values). This is true for all three periods under consideration. The percentage of households surviving on a monthly income lower than the R2400 threshold also grew significantly from 1996 to 2001. This confirms previous data stating that Emfuleni’s economic growth from 1989 to 2000 was negative. Although the percentages dropped slightly by 2011, they were still much higher than in 1996.

**Figure 16: Percentage of population residing in poverty in Emfuleni and Gauteng, 1996, 2001 and 2011<sup>53</sup>**



The numbers in Figure 16, drawn from census data, confirm those in Figure 15. Emfuleni has a significantly larger percentage of people living in poverty than Gauteng as a whole. This has also been confirmed by empirical research conducted at the Vaal campus of the North West University

<sup>52</sup> The authors acknowledge that rough methodology was used but are of the opinion that one or two important conclusions can nonetheless be made from this approach.

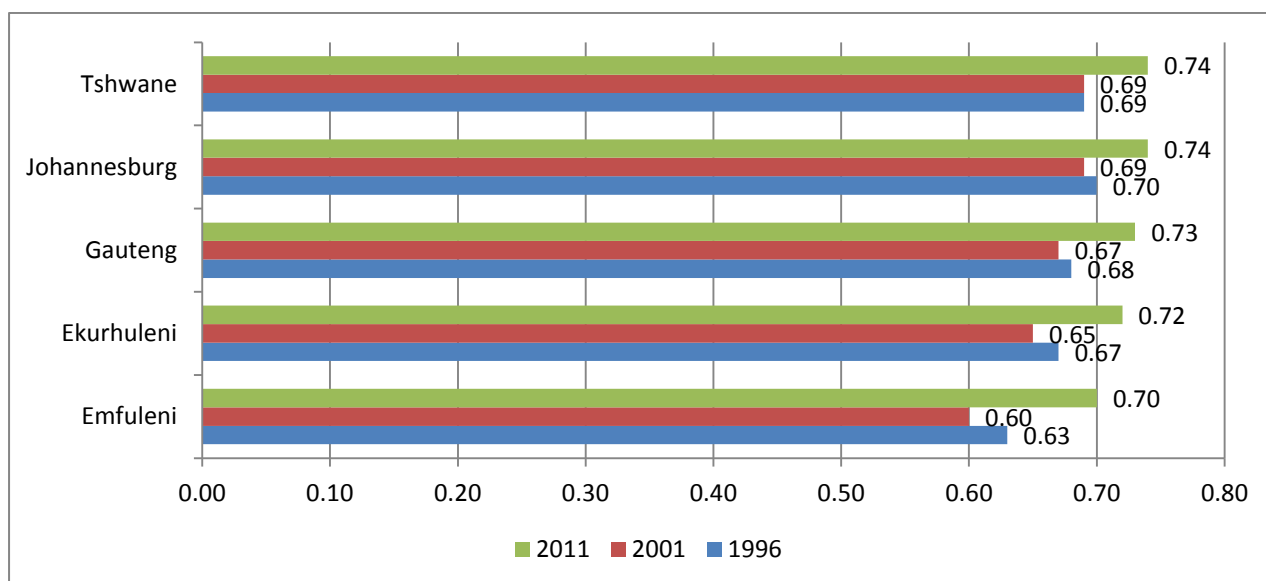
<sup>53</sup> Global Insight data was used.

regarding widespread food insecurity.<sup>54</sup> In real numbers, the approximately 250 000 people living in poverty in Emfuleni in 2011 is higher than the respective figures for Mangaung (225 000) and Buffalo City (212 000) for the same period.

#### 4.2.4 Human Development Index

The Human Development Index (HDI) measures the level of development in an area. The three main sub-indicators of the index are life expectancy, education and income. Figure 17 compares the HDI in Emfuleni with Gauteng overall and the Gauteng metropolitan areas.

**Figure 17: HDI in Emfuleni compared with Gauteng and the metropolitan areas in Gauteng, 1996, 2001 and 2011<sup>55</sup>**



The picture that emerges from the above figure is that, despite an initial slump from 1996 to 2001, Emfuleni managed to increase its HDI significantly between 2001 and 2011. Emfuleni's 2011 HDI of 0.70 is only 0.04 index points less than that of Johannesburg and Tshwane. Comparatively, the index point difference between Emfuleni and these two metropolitan areas was 0.09 in 2001 and 0.07 and 0.06 in 1996, respectively.

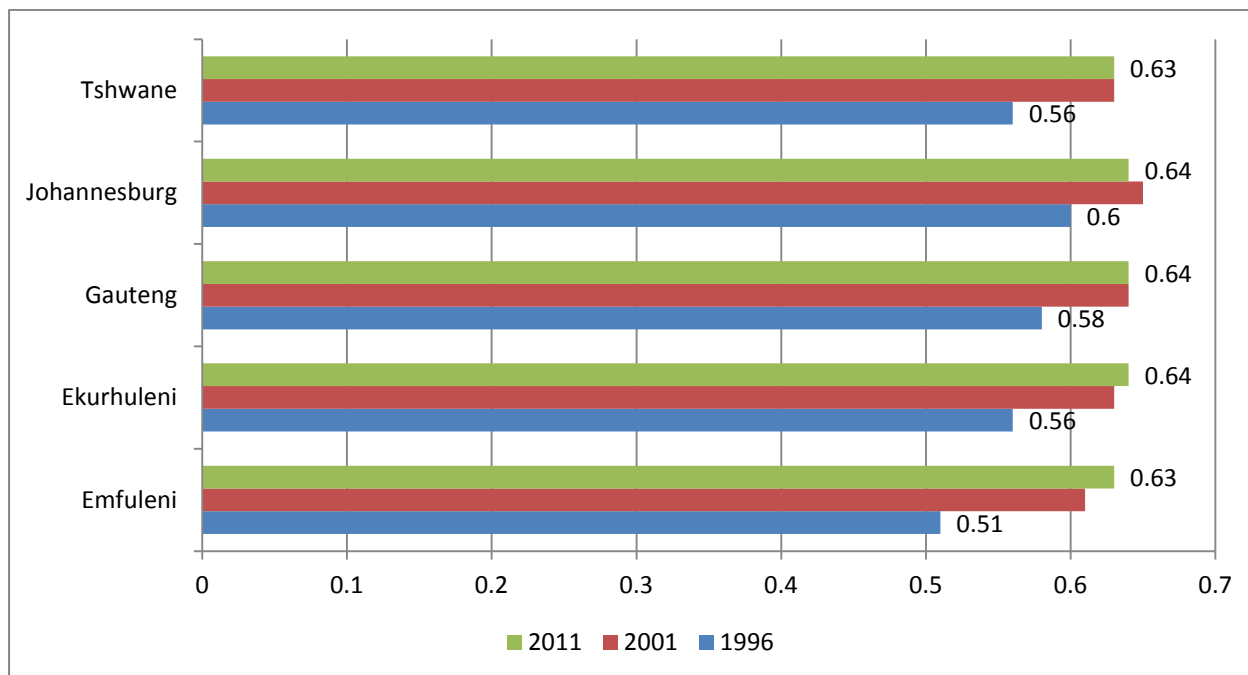
<sup>54</sup> Interview with University Respondent 4.

<sup>55</sup> Global Insight data was used.

#### 4.2.5 Gini coefficient

The Gini coefficient measures the degree of inequality in an area. Figure 18 compares the Gini coefficient for Emfuleni with the main metropolitan areas in Gauteng and the province overall.

**Figure 18: Gini coefficient for Emfuleni, Gauteng and the metropolitan municipalities in Gauteng, 1996, 2001 and 2011<sup>56</sup>**



In comparative terms, inequality seems to have grown more rapidly in Emfuleni than in the metropolitan municipalities. In 1996, the Gini coefficient for Emfuleni was only 0.51, significantly lower than the rest of Gauteng. This rose 0.12 index points to 0.63 in 2011. Ekurhuleni had the second biggest increase in inequality, from 0.56 in 1996 to 0.64 in 2011 (0.8 index points). It is likely that the economic hardship that Emfuleni has experienced (especially in the 1990s) has resulted in significant increases in the Gini coefficient.

### 4.3 Synthesis

The demographic, economic and development profiles of Emfuleni suggest the following key points:

- The privatisation of ISCOR resulted in negative economic growth and significant job losses. It seems that the more recent internationalisation has contributed to positive economic growth. However, new jobs have not been forthcoming, and a slight decline in employment is recorded in the manufacturing sector. Internationalisation also brings with it longer-term volatility and risks.
- There seems to be a direct relationship between the manufacturing sector's performance and that of other sectors such as trade.
- A number of factors have buffered Emfuleni against a greater economic slump. In the first place, its proximity to Johannesburg (and to a lesser extent Sasolburg) has helped to reduce the impact of ISCOR's privatisation and the economic downturn. These two nearby areas provide alternative employment opportunities for Emfuleni residents without forcing them to relocate. The second buffer is the weekend tourism industry. The third buffer is the growth of

<sup>56</sup> Global Insight data was used.

the two universities in the region (see Section 8). These last two buffers were probably the main drivers of trade since 2001 (although consumer-driven growth was a general South African trend between 2001 and 2008).

- The economic slump has resulted in lower population growth in Emfuleni. While Gauteng is still experiencing significant population growth, Emfuleni has lost its attractiveness for new migrants.

## 5. Business environment

Having provided an overview of economic change in Emfuleni, this section focuses on the business environment. It begins with a profile of the Emfuleni business environment. Then, the reality of increasing dependence on international markets is showcased in the description of the business activities of three major companies in the area: AMSA, DAV steel and DCD ringrollers. The section includes a brief discussion of the need for more downstream activities in Emfuleni, and why this has not historically occurred. Finally, the area's business-government relationships are described.

### 5.1 Business profile

Due to the lack of official information about business services in Emfuleni, the Mbendi website was used to provide a brief profile of the existing enterprises in Emfuleni, using 'Vereeniging' and 'Vanderbijlpark' as key search words. The following main points should be made in respect of the 1289 businesses listed:

- 17.6% of the enterprises were either engineering or manufacturing enterprises. This suggests that there are some downstream industries.
- Twenty-two enterprises were health services enterprises. This is an indication of the importance of the private health care environment in Emfuleni. The significant improvement in the accessibility of private health care in the area over the past two decades was also mentioned by a number of interviewees. Employment created within this industry most likely helped to buffer some of the initial job losses resulting from ISCOR's privatisation. It is likely that these health enterprises, including hospitals, attract patients from the northern parts of the Free State, as well as from Gauteng.
- There were a small number of chemical enterprises (10) and oil and gas enterprises (3), which are probably related to industrial cleaning and the chemical industry in Sasolburg. This provides further evidence of the interrelationship between Metsimaholo and Emfuleni.

The interviews provided much information about the type of enterprises in Emfuleni:

- There has been an extensive expansion of retail space over the past twenty years. This trend is related to the original 'under-provision' of retail space in Emfuleni; a few decades ago, if you wanted something 'you would just go to Johannesburg', which is apparently a perception that still exists.<sup>57</sup> Other reasons provided for the growth in retail space are the increased student numbers and weekend tourism.
- The high number of second-hand motor dealerships (which many believed to be proportionally higher than elsewhere in the country) was often used to suggest that the area still retains its blue collar worker culture and spending patterns.<sup>58</sup>
- The fact that Rand Water has one of its main operating offices in Vereeniging was mentioned as being an important factor in job creation in the area.

### 5.2 ArcelorMittal

ArcelorMittal is the world's largest steel company, and its South African operations are its biggest in Africa.<sup>59</sup> The relationship between ArcelorMittal and ISCOR has already been explained in Section 3.

---

<sup>57</sup> Interview with Private Sector 6.

<sup>58</sup> Interview with Private Sector 6.

The company has 316 000 employees world-wide and is the global leader in the production of steel for the automotive, construction, household appliance and packing material industries. ArcelorMittal has industrial plants in 27 countries across Europe, North and South America, Asia and Africa. In South Africa, the company is known as AMSA. Approximately 55% of AMSA's shares are held by foreign investors (including the 47% held by the ArcelorMittal Group), while the largest South African shareholders are the Public Investment Corporation and the IDC, which each own around 8% of AMSA. In total, AMSA has about 27 000 shareholders, which is dramatically fewer than the 200 000 South Africans shareholders after the privatisation of ISCOR in 1989.

As already noted, AMSA's biggest contribution to the South African steel industry is the provision of low-cost steel. The company's market share in South Africa was estimated at 75% in 2008, but this may have declined in the last five years. Their South African plants employ 9000 employees, and their 2010 revenue was R30.2 billion. Annual electricity consumption stands at 600MW (delivered directly from Eskom) and water consumption at 22 000 Mlt. AMSA has two plants in Emfuleni, one in Vanderbijlpark and one in Vereeniging. These two plants employ around 8000 people, of which approximately 50% are contract workers.<sup>60</sup> As noted earlier, AMSA's plants in Emfuleni produce just over 60% of all steel generated in South Africa, using iron ore as input. The Emfuleni plants receive their iron ore via rail from Kathu, but all steel is transported via road. The unreliability of the rail system in South Africa has forced steel transport onto roads, increasing logistical costs and contributing to the downscaling in steel exports over the past five years.<sup>61</sup>

The privatisation and internationalisation processes have already been described in Section 3. Within these two processes, a number of factors could influence the future of AMSA. As Emfuleni's historic development is closely related to that of ISCOR and now AMSA, these factors deserve some attention:

- A range of interviewees (albeit not from the public sector) mentioned the real possibility that AMSA could close down its South African production, although this possibility was denied by representatives of AMSA.<sup>62</sup> Four main arguments were provided as to why the closure of AMSA is a distinct possibility. (1) AMSA is responsible for only 1% of ArcelorMittal's international steel production,<sup>63</sup> and so closing AMSA would not have a major impact on the company's overall viability. (2) AMSA is struggling with increasingly unreliable equipment, and blast furnace failures are having a negative impact, which will most likely lead to more and more South African manufacturers using imported steel.<sup>64</sup> (3) Despite a recent investment of more than R300 million in the Vanderbijlpark plant, some interviewees suggested that there has been very little investment in the South African plants over the past ten years. (4) Multi-national corporations tend to require their international plants to compete against one another for international tenders.<sup>65</sup> This high cost of labour, logistics (directly related to the inland location of the Emfuleni plants) and electricity in South Africa make it increasingly

---

<sup>59</sup> ArcelorMittal South Africa. 2013. Investors. <http://www.arcelormittalsa.com/Company/Investors.aspx>

<sup>60</sup> Interviews Private Sector 2 and Private Sector 3.

<sup>61</sup> Interviews Private Sector 2 and Private Sector 3.

<sup>62</sup> Interviews Private Sector 2 and Private Sector 3.

<sup>63</sup> Interview Private Sector 1.

<sup>64</sup> Interview Private Sector 1.

<sup>65</sup> Interview University 1.

uncompetitive on the international market.<sup>66</sup> Industry estimates suggest that steel exports would again be viable at an exchange rate of R10.50 to the US dollar.<sup>67</sup>

- Within South Africa, there are increasing complaints from government and union circles accusing AMSA of 'uncompetitive pricing'.<sup>68</sup> The argument is that because there is very little domestic competition, AMSA sells its steel at prices that are artificially inflated to equal the cost of imported steel. If this is the case, then the downstream job creation is inhibited. Obviously, AMSA denies these allegations and, although AMSA has been taken to court, has to date not paid any fines for uncompetitive behaviour.<sup>69</sup>
- A counter argument used by AMSA is that there is some domestic competition and that the steel prices of the competitors are not significantly different from the price of AMSA steel. Furthermore, it seems that the steel price is largely determined by the value chain in the downstream market. In addition, in a free market system, corporations must set their prices in relation to the competition; in this case other companies producing steel locally as well as imported steel. Finally, the lack of growth in downstream industries can be attributed to the fragmented nature of this sector, which inhibits economies of scale.<sup>70</sup>
- Due to the above concerns, the government, through the IDC, is actively investigating an alternative steel-making plant in South Africa.<sup>71</sup> Mpumalanga has been mentioned as an alternative location. Although such a venture is certainly possible, a number of interviewees have raised concerns in this respect. First, the claimed need to build another steel-making plant is based upon the perhaps untrue assumptions about AMSA's pricing policy. Secondly, if AMSA were to drop their prices once a new role player became involved, it would be extremely difficult for the new plant to make a profit. Thirdly, any new investment in steel would be capital intensive, most likely requiring international capital. The overall appetite for steel investment around the world is not very high, and it seems unlikely that such capital would be acquired.<sup>72</sup>

### 5.3 DAV steel (Cape Gate Pty Ltd)

DAV steel is the second biggest steel producer in Emfuleni. The company also has plants in Israel, Botswana and Cape Town. DAV steel is significantly different from that produced by AMSA in that it uses mainly scrap metal as the input in its steel-making processes. Furthermore, the company itself is involved in some beneficiation of downstream components and has a 50% share in the firm, ensuring that it has access to scrap metal. All DAV steel inputs and outputs are transported by road. It should be noted that there is an increasing tendency to export scrap metal. There also seem to be plans to create a new steel mill at Coega, with scrap metal as the main source of raw material.

---

<sup>66</sup> Interviews Private Sector 2 and Private Sector 3.

<sup>67</sup> Interviews Private Sector 2 and Private Sector 3.

<sup>68</sup> Filen C. 2012. South African metalworkers union slams steel maker ArcelorMittal SA. *Mineweb*, 12 April 2012.

<sup>69</sup> A finding against AMSA is currently under appeal.

<sup>70</sup> Interview Private Sector 1.

<sup>71</sup> Filen C. 2012. South African metalworkers union slams steel maker ArcelorMittal SA, *Mineweb*, 12 April 2012.

<sup>72</sup> Kumba Iron Ore. 2011. The South African iron ore and steel value chain. [www.kumba.co.za/SIOC/pdf/iron\\_steel\\_sec1.pdf](http://www.kumba.co.za/SIOC/pdf/iron_steel_sec1.pdf).

## 5.4 DCD ringrollers

DCD ringrollers is an internationally prominent enterprise providing train accessories to 2% of the world market.<sup>73</sup> It opened its new plant in Vereeniging in November 2012, a R380 million capital investment.<sup>74</sup> The plant uses new imported technology from Europe and plans to export extensively to Africa.<sup>75</sup> DCD ringrollers' long-term vision also includes the production of renewable energy.

## 5.5 Downstreaming in the steel industry

Many analysts suggest that the obvious local economic development (LED) strategy for Emfuleni is to increase the opportunities for downstreaming in the steel industry.<sup>76</sup> Although a small amount of downstream, steel-related industries currently exist in Emfuleni, the majority have developed in Ekurhuleni. The new DCD ringrollers factory proves that downstream industries can be successfully initiated in Emfuleni. However, a number of obstacles should be acknowledged:

- Many downstream activities are located in Ekurhuleni because of ISCOR's historic zone pricing policy,<sup>77</sup> which made the delivery price of steel the same for an entire zone. This policy, combined with the fact that 80% of the steel market was in today's Gauteng, resulted in manufacturers trying to find the point that was closest to the steel market but still in a cheap delivery zone.<sup>78</sup> Although ISCOR's policy changed by the 1990s, Ekurhuleni had already developed as the important area for steel manufacturing. At this point, it would be hard to entice downstream industries to move to Emfuleni.<sup>79</sup>
- The slow growth in the steel product sector suggests that alternative technologies might be taking over some of the market share traditionally held by steel.
- The fragmentation of the steel product industry and the resulting lack of economy of scale would make it difficult for downstream industries located in Emfuleni to make a profit.
- Recent attempts to create economies of scale in Emalahleni (Witbank) might jeopardise attempts in Emfuleni. Emalahleni has locational advantages in respect of the African export market and the Maputo harbour.

In sum, the potential of downstreaming in Emfuleni cannot be ignored. However, it is dependent on international markets, technological improvements, economies of scale and the local demand for steel products.

## 5.6 Business / local government relations

Business/local government relations can at best be described as ad hoc and dependent on individuals rather than being institutionalised. The historic racial divide remains evident, and racial prejudice was experienced during some of the interviews. Although municipal employees are mostly black, the business owners are largely white. From the local government side, there is an emphasis on an inclusive LED forum and regular business breakfasts, but these efforts are mainly superficial. In practice, there is limited coordinated effort by the local or district municipalities to truly engage with

---

<sup>73</sup> Interview University Respondent 5.

<sup>74</sup> SEIFISA news 2012. DCD ringrollers open new R390 manufacturing facility. December 2012. <http://www.dcd.co.za/rail/DCDRingrollers.aspx>

<sup>75</sup> SEIFISA news 2012. DCD ringrollers open new R390 manufacturing facility. December 2012. <http://www.dcd.co.za/rail/DCDRingrollers.aspx>

<sup>76</sup> Interview University Respondent 4.

<sup>77</sup> Interview Private Sector 1.

<sup>78</sup> Interview Private Sector 1.

<sup>79</sup> Interview Private Sector 1.



business. Considering the fact that the steel industry in Emfuleni has been globalised (both AMSA and DAV have plants across the world), a more formalised and institutionalised approach is necessary. Emfuleni's manufacturing sector is an important part of South Africa's drive to be internationally competitive. The obvious question to ask is how a local government can promote international competitiveness. The two examples provided below show that: (1) the concept of international competitiveness is not commonly acknowledged in local government circles, and (2) local government actions in fact do not contribute to international competitiveness.

The first example relates to AMSA. In 2012, one of their steel-making blast furnaces had mechanical problems due to an industrial accident. In order to continue with production, the firm needed to revert to older technology, which releases significantly more harmful particles into the atmosphere. However, permission to use the older machines must be obtained from local government. The process to grant permission includes extensive public participation and was slowed down by various factors, such as meetings not being constituted legally. When, three months later, the local government finally made the decision to allow AMSA to switch on their old machines, the original mechanical problems had largely been solved. The time it took to make the decision is problematic. However, more problematic is the fact that nobody foresaw the possibility that such a problem requiring a decision by local government would develop. Thus, there was no policy or procedure in place to systematically address the problem. A government entity that prioritised 'international competitiveness' should have had some kind of guidelines in place for such a scenario.

The second example comes from a different company. Unlike AMSA, this company is dependent on Emfuleni for the provision of electricity. A transformer close to the company recently started having sporadic issues and, in the company's opinion, the municipality has taken too long to fix to the problem. In addition to the slow response time on the part of the municipality, the spare parts needed to address the problem are seldom available. Therefore, the company holds the spare parts itself in order to speed up the process. As a company representative aptly summarised the situation: 'If one of my top three clients, who pay on time, have a problem, I would immediately attend to their problem'<sup>80</sup>. Whenever the electricity supply is disrupted, the company's production processes are stopped, costing the company a 'million per hour'.<sup>81</sup>

The relationship between the Chamber of Commerce (the Afrikaanse Handelsinstituut, which represents mainly smaller business people), is also largely ad hoc and driven by personalities (the mayor and the chairperson of the Chamber). Although significant progress has been made in establishing a good working relationship, very little progress has been made with regard to the following chamber proposals:<sup>82</sup>

- Revamping the tourism office: The Chamber has proposed to take over the office and develop it into a key point for tourism in the area. One of the biggest problems with the office is that it closes at 13:00 on Saturdays, despite the fact that most tourists visit over weekends.
- Ensuring a larger degree of integrity in the procurement process, by having a chamber member participate in the procurement committee.
- Working towards better financial planning, by including a Chamber of Commerce member on the finance committee of the Emfuleni Council.
- Encouraging a more customer-service orientation in the municipality.

---

<sup>80</sup> Interview with Private Sector 7.

<sup>81</sup> Interview with Private Sector 7.

<sup>82</sup> Interview with Private Sector 8.



## 5.7 Synthesis

The business environment in Emfuleni is becoming increasingly internationalised. This should be acknowledged and accounted for in the municipality's planning documents, but currently it is not (see Section 6.1). Increased international linkages will most likely extend the life of the steel industry but will also result in increased volatility, with significant implications for both planning and municipal finance. The current ad hoc relationship between business and local government will not be strong enough to deal with this volatility or with the inherent risks associated with the municipality's finances (see Section 6.5). At the same time, more certainty regarding the national policy approach towards the steel industry would help Emfuleni plan for the future. In addition, despite talk of getting freight off the South African road network, the unreliability of Transnet has had a negative impact on the feasibility of exporting from Emfuleni. In conclusion, the future of the steel industry and related sectors in Emfuleni is dependent upon:

- international business decisions
- the volatile international market
- the ability to export, especially to other African countries
- good logistics and improved rail transport
- clear government policies regarding the steel industry
- whether another steel mill will be established elsewhere in the country
- the ability of local government to understand the implications of the above six aspects

## 6. Municipal responses

The focus now shifts towards the municipal responses to the realities described above. More specifically, the section considers:

- the current economic and strategic planning at the municipal level
- spatial planning in the municipality
- the state of municipal governance and management
- municipal engineering services
- municipal finance
- service delivery protests in Emfuleni

### 6.1 The Integrated Development Plan and LED plans

The current Integrated Development Plan (IDP), covering the period 2012–2016, builds on previous IDPs and has an overall vision of 'Providing responsive, effective, efficient, and sustainable municipal services in an accountable manner'.<sup>83</sup> The IDP articulates the following eleven strategic objectives:

- united, non-racial and integrated communities
- sustainable livelihoods through decent employment
- informed and participatory communities
- effective and efficient municipal government
- co-operative, participative and interrelated government
- viable and sustainable municipal government
- professional and responsive municipal administration
- municipal services that are quality rendered, accessible, sustainable and reliable
- accountable municipal government
- healthy and safe environment and communities
- an environment that is conducive to the formation of a metro

---

<sup>83</sup> Emfuleni Local Municipality. 2012. Integrated Development Plan. Vanderbijlpark.

A number of critical comments can be made regarding the IDP:

- It is largely fragmented and not well developed. For instance, the key objectives and programmes are not clearly linked to the current reality.
- It does not have a regional focus, concentrating mainly on municipal issues instead. This is evident from a range of factors, particularly the fact that the vision concentrates on municipal service delivery. Although such an approach is probably not inappropriate in principle, it seems from the interviews as if this orientation was heavily influenced by community resistance and calls from communities that want to know what the 'municipality will do for them, and when the municipality will do it'.<sup>84</sup> The significant amount of the IDP that is devoted to the municipal turnaround strategy is further evidence of this inward focus.
- There is very little analysis of the current state of development and the risks associated with the current situation. For example, it is unclear how the key priorities stated in the IDP relate to the current development status of the municipality. Some of these links are indirectly visible, but they are not explicitly made in the IDP.
- It seems as if objectives have largely been chosen based upon the national development objectives and, to a lesser degree, based on integration with the growth and development strategy of Sedibeng District Municipality. Although this is not necessarily wrong, the IDP fails to identify specific realities and risks associated with Emfuleni (some of which have already been discussed in the economic analysis, while others will be discussed in more detail under the section on municipal finance).
- It is unclear how the objectives will be measured.
- The economic section in the IDP does make reference to AMSA's role in poverty alleviation and lists the social responsibility programmes of the company.<sup>85</sup> However, neither the economic trends nor the specific risks associated with the steel industry are articulated. The notion of international competitiveness and its implications for the municipality are also not considered.
- It does not specify how business/local government relations can be improved to the benefit of the municipality.

Despite the concerns listed above, some positive comments can be made about Emfuleni's IDP:

- There is a focus on ensuring that communities are aware of and able to provide input into projects and programmes. This has helped to reduce tension at the community level.<sup>86</sup>
- It emphasises better local coordination of municipal programmes.

A number of notes are required in respect of the IDP's approach to LED. First, the IDP identifies two main tourism-related LED opportunities. The one is the notion of a river city and the associated weekend tourism, which is articulated in the IDP as: 'These greenbelt continuums provide the municipality with ample opportunities to develop recreational open spaces with scenic, conservancy and tourism value needed to generate greater business opportunities and employment'.<sup>87</sup> The second is heritage tourism in the Sharpeville and Boipatong precincts, focusing on the history of resistance to apartheid. Despite these tourism opportunities and a creditable plan developed in the mid-2000s, very little has actually been implemented. A site visit to the Sharpeville precinct confirmed this, as the precinct was difficult to find and the site had no tourism-related activities.

The planning of a logistics hub is also a key LED component of the current IDP. This idea is based on the assumption that Johannesburg's Oliver Tambo airport cannot handle the current freight. The viability of such a hub was demonstrated in a study conducted for Emfuleni.<sup>88</sup> However, discussions

---

<sup>84</sup> Interview Public Sector 2.

<sup>85</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan*. Vanderbijlpark, p.83.

<sup>86</sup> Interview Public Sector 5.

<sup>87</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan*. Vanderbijlpark, p. 3.

<sup>88</sup> Interview University Respondent 3.

with a range of role players revealed that two issues seem to be hampering progress on this project. First, it seems as if the municipality appears to have a lack of commitment to LED,<sup>89</sup> so nobody is actively driving the process.<sup>90</sup> This point was also made in the 2010 municipal turnaround strategy.<sup>91</sup> Second, it does not seem as if this plan is supported at other levels of government. More recent work on transport policy suggests that national policy frameworks are not supportive of regional airports.<sup>92</sup>

Finally, a discussion of LED is incomplete without a brief reflection on the growth and development strategy of the Sedibeng District Municipality. In contrast with the inward looking IDP of Emfuleni, Sedibeng's growth and development strategy contextualises a range of issues related to the external environment. A couple of examples include:<sup>93</sup>

- accepting that globalisation is a reality that needs to be considered when making plans regarding the local economy
- acknowledging that environmental concerns might negatively impact the region
- recognising the importance of Information and Communications Technology (ICT) for the future development of the area

Thus, the growth and development plan includes a number of good principles. However, it then narrows to focus on a range of capital investment projects directly related to the settlement environment – the five 'Rs':

- Release human skills (the skill profile of an economy is critical, but the plan does not detail how these skills will be enhanced, or how the local universities could/should be involved)
- Re-invent the economy (economic diversification)
- Renew communities (largely based on ensuring more sustainable settlements)
- Revive (including addressing the environmental concerns and greening the area)
- Reintegrate (ensuring a larger degree of road and rail connectivity and promoting ICT)

It is extremely difficult to judge the practicality and feasibility of the five 'Rs', as they include both promising strategies and concepts unlikely to make significant impact. The list of so-called flagship projects suggests that very little implementation has taken place.

## 6.2 Spatial planning

The following key issues will be discussed in respect of spatial planning in Emfuleni:

- spatial planning pressures
- the river city concept
- land-use regulations
- student housing
- desegregation
- housing subsidies, or what is commonly known as reconstruction and development (RDP) housing units
- development of the central business district (CBD)

---

<sup>89</sup> Interview Public Sector 6.

<sup>90</sup> Interview University Respondent 4.

<sup>91</sup> Emfuleni Local Municipality. 2010. *Emfuleni Turnaround Strategy*, April 2010.

<sup>92</sup> Pretorius M. 2013. Logistical cities in peripheral areas. Unpublished PhD thesis, University of the Free State, Bloemfontein.

<sup>93</sup> Sedibeng District Municipality. 2012. *Growth and Development Strategy*. Vereeniging.

### 6.2.1 Spatial planning pressures

The current IDP states that '[c]urrently, urbanization within Emfuleni is highly fragmented'.<sup>94</sup> There is a significant amount of empty land between Vereeniging and Sebokeng, creating the potential for infill development. The open space between Boipatong and Vanderbijlpark also seems to be underdeveloped.<sup>95</sup> The obvious question is: twenty years after the demise of apartheid, why has infill development not taken place? The answers obtained during the interviews include land cost, the difficulty of providing bulk infrastructure to such projects, the lack of capacity to drive the process and that some infilling has in fact occurred.

In addition to the factors which inhibit the development of a more integrated and compact city, the following aspects also influence settlement dynamics in Emfuleni (see Figure 19 for an overview of the spatial development plan):

- Settlement should occur as close as possible to the road and rail networks linking Emfuleni with Johannesburg and other areas in Gauteng.<sup>96</sup>
- Areas near the Vaal River seem to be desirable, but two conflicting forces are at play in terms of land near the river. On the one hand, there is increasing pressure from developers to build high-income housing near the river. Such development could have a positive effect on municipal finances due to increased property tax revenue. On the other hand, the municipality's sewage system is already over its maximum capacity and therefore cannot handle large new developments. In addition, there is pressure from community groups to keep the land next to the Vaal River public. Due to its cash flow situation, Emfuleni sold some riverfront land in the mid-2000s.<sup>97</sup> The police ended up investigating another transaction, in which riverfront land was sold to a business person from Johannesburg for R1-million and only months later was sold for R12-million.<sup>98</sup> In yet another transaction, a caravan park was almost sold. A negative reaction from the community<sup>99</sup> resulted in this transaction being reversed, but the once well-functioning caravan park has not yet been restored to its original functionality.<sup>100</sup>
- There is a high frequency of 'land invasions', especially close to places where new housing developments are supposed to take place.<sup>101</sup>
- Finally, there is an over-supply of RDP houses in Emfuleni (to be discussed in more detail in Section 6.2.6).

---

<sup>94</sup> Emfuleni Local Municipality. 2012. Integrated Development Plan. Vanderbijlpark, p. 16.

<sup>95</sup> Emfuleni Local Municipality. 2012. Integrated Development Plan. Vanderbijlpark.

<sup>96</sup> Emfuleni Local Municipality. 2012. . Integrated Development Plan. Vanderbijlpark.

<sup>97</sup> Mohale J. 2004. Emfuleni sells off its assets, *The Sowetan*, 4 January 2004.

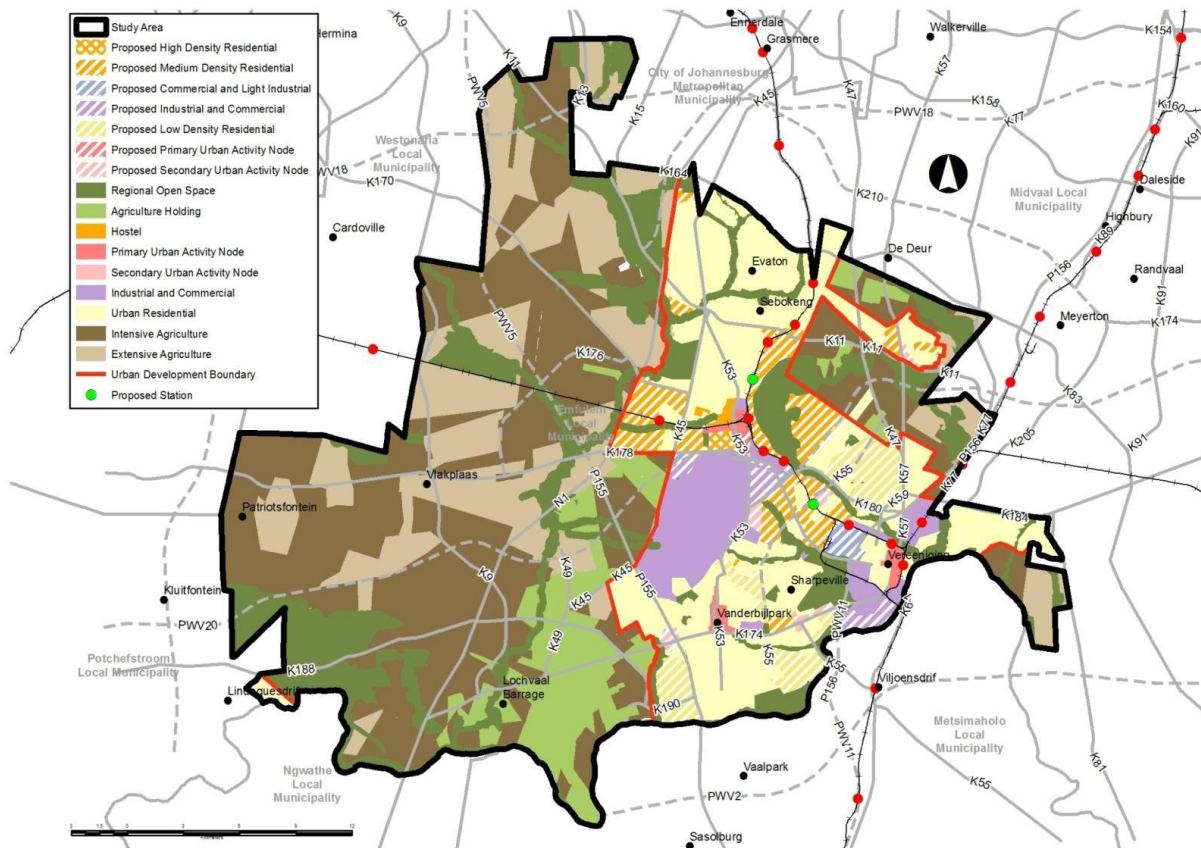
<sup>98</sup> Tempelhof E. 2004. Ondersoek gelas na Emfuleni eiendomstransaksie, *Beeld*, 13 Augustus 2004; Sepotokela, S. 2004. Probe into R1m sale of council land. *Star*, 23 August 2004.

<sup>99</sup> Tempelhof E. 2007. Mense boos oor woonwapark waai, *Beeld*, 21 May 2007.

<sup>100</sup> Interview with University Respondent 5.

<sup>101</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan*. Vanderbijlpark.

**Figure 19: Overview of the spatial development plan for Emfuleni, 2013**



### 6.2.2 The river city concept

The river city concept described earlier would promote the tourism potential of Emfuleni given its location on the Vaal River and only an hour's drive from Johannesburg. This seems to be a positive idea. The biggest challenges would be to find the appropriate capital, to effectively implement an extensive greening programme and to maintain the new green spaces in an area where the water source is already under pressure.

### 6.2.3 Land use regulations

The municipality has full jurisdiction over land use, and three important points in this respect came up in the interviews:<sup>102</sup>

- Although the municipality states that it should not take longer than three months to change land uses, in reality it takes significantly longer due to staff shortages.<sup>103</sup>
- The excessive fee (up to R1-million) which accompanies land-use changes seems exorbitant and difficult to explain, and inhibits business developments that require land-use changes.
- There are also stringent parking regulations associated with land-use changes.

Although municipal control over land use is important, the regulations should not be viewed apart from the rate of economic growth in an area. These strict regulations originated during an era of considerable economic growth. Today, however, Emfuleni is in a state of economic distress, and a more flexible approach would be more appropriate.

<sup>102</sup> Interview with Private Sector 8.

<sup>103</sup> Interview with Private Sector 8.



### 6.2.4 Student housing

The growth of the two universities has resulted not only in increased retail expenditure in Emfuleni,<sup>104</sup> but also in the growth of student housing in some suburbs such as Bedworthpark, where a number of individual home owners rent out their properties to students. The growing number of students and the resulting demand for housing has placed increased pressure on existing municipal regulations. Unlike the issues surrounding land-use change, the growth in student housing requires extensive regulation and enforcement. The municipality is considering changing the Bedworthpark suburb into a student village, but allowing owners to maintain their Residential One status if they comply with the student village principles. Owners who do not comply will have to pay guest house rates and taxes.

### 6.2.5 Desegregation

The level of general desegregation after the abandonment of the Group Areas Act in the early 1990s requires some attention. Table 7 below provides an overview according to figures obtained from census data.

**Table 7: Racial desegregation of suburbs previously declared white areas, 1996–2011<sup>105</sup>**

Year	Vereeniging (previously a white suburb)	Vanderbijlpark (previously a white suburb)
1996 (black, coloured and Indian)	27.9%	25.8%
2001 (black, coloured and Indian)	42.6%	40.1%
2011 (black, coloured and Indian)	59.6%	48.1%

The levels of desegregation are significantly higher than in the metropolitan areas.<sup>106</sup> It is likely that the main contributing reason for this is the lower house prices in the area. An internet search of 20 housing units for sale in Johannesburg, compared to units for sale in Emfuleni, revealed that the prices in Emfuleni were 20–30% lower than in Johannesburg.<sup>107</sup> The lower prices can be attributed to two main factors: (1) the area has experienced economic hardship and significant job losses over the past 20 years, and (2) in the early 1990s, when ISCOR was privatised, its property group Vesgo<sup>108</sup> sold many houses that had been originally constructed for ISCOR workers. This flooded the market, and although some recovery has occurred, house prices were initially substantially lower than they had been previously. This provided ample opportunity for desegregation as reflected in the above table.

### 6.2.6 The provision of RDP housing units

A number of interviewees mentioned that Emfuleni is the leading municipality in respect of the provision of RDP houses through the housing subsidy scheme.<sup>109</sup> However, this achievement has not been viewed by everybody as a positive thing. First, the noteworthy scale at which housing units have been delivered in Emfuleni is in contrast to the city's capacity to provide waterborne sanitation services to these new developments (see Section 6.4). Second, one of the main reasons for this

<sup>104</sup> Emfuleni Local Municipality. 2012. Integrated Development Plan. Vanderbijlpark.

<sup>105</sup> Census data was used to compile the table.

<sup>106</sup> Christopher AJ. 2005. Further step in the desegregation of South African towns and cities, 1996–2001, *Developmental Southern Africa*, 18(4): 267–276.

<sup>107</sup> This is based on the researcher's own calculations from the 'MyProperties' website.

<sup>108</sup> This non-profit organisation was established to develop Vanderbijlpark; see [www.vesgo.co.za](http://www.vesgo.co.za)

<sup>109</sup> Attempts to try and verify this were not successful.

significant achievement is the fact that there is significant land available, unlike the metropolitan areas in Gauteng. Third, one interviewee suggested that the Department of Human Settlements uses Emfuleni to achieve their provincial targets and the targets of specific managers at the provincial offices.<sup>110</sup> As the interviewee rightfully said, 'The provincial department will not bulldoze the metros in the same way'.<sup>111</sup> In other words, because Emfuleni is not a metropolitan municipality, the provincial Department of Human Settlements was able to dominate the municipality without considering the implications. Table 8 provides an overview of the changing housing landscape in Emfuleni and Gauteng.

**Table 8: The changing housing landscape in Emfuleni and Gauteng, 1996, 2001 and 2011**

Housing Category	Emfuleni			Gauteng		
	1996 (n)	2001 (n)	2011 (n)	1996 (n)	2001 (n)	2011 (n)
Formal housing units	106 451	152 947	187 844	1 403 136	1 973 926	3 120 908
Informal housing units	34 437	30 746	30 735	457 947	634 210	742 620
Traditional units	1 238	2 695	653	9 700	34 661	13 721
Other	3 464	3 772	861	30 104	193 531	31 521
TOTAL	145 590	190 160	220 093	1 900 887	2 836 328	3 908 770
	<b>1996 (%)</b>	<b>2001 (%)</b>	<b>2011 (%)</b>	<b>1996 (%)</b>	<b>2001 (%)</b>	<b>2011 (%)</b>
Formal housing units	73.1	80.4	85.3	73.8	69.6	79.8
Informal housing units	23.7	16.2	14.0	24.1	22.4	19.0
Traditional units	0.9	1.4	0.3	0.5	1.2	0.4
Other	2.4	2.0	0.4	1.6	6.8	0.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

The changing housing situation requires a couple of notes. Firstly, the anecdotal interview evidence that Emfuleni has been quite successful in building RDP houses is supported by the data in Table 8. Emfuleni has managed to reduce the percentage of households residing in informal housing units from 23.7% in 1996 to 14% in 2011. Secondly, not only did Emfuleni reduce the percentage of households in informal housing units, but the municipality also managed to reduce the real number of informal housing units, from 34 437 in 1996 to 30 735 in 2011. This achievement is significant when compared to Gauteng overall, where the percentage of households living in informal structures decreased by 5.1% between 1996 and 2011, although the absolute number rose from 457 947 in 1996 to 742 620 in 2011.

### 6.2.7 CBD development

The historically fragmented planning in the area resulted in the existence of three distinct CBDs in Vanderbijlpark, Vereeniging and Sebokeng. The municipality plans to develop all three of these nodes, hoping to create a development triangle.

### 6.2.8 Spatial planning: A synthesis

<sup>110</sup> Interview with Public Sector 1.

<sup>111</sup> Interview with Public Sector 1.



A number of concluding comments should be made in respect of the area's spatial planning. For the purpose of this synthesis, the following framework from the National Development Plan is applied:

- spatial justice
- spatial sustainability
- spatial resilience
- spatial quality
- spatial efficiency

Although there is substantial evidence of improved infrastructure in areas, which historically did not have adequate services, this improved service delivery has not gone hand in hand with the expansion of bulk infrastructure. Thus, the improvements in spatial justice did not take into account the long-term pressure that these improvements would place on the available infrastructure. In respect of spatial sustainability, air and water pollution put the area under severe pressure and negatively influenced the area's resilience. The river city idea is an attempt to improve the overall spatial quality but seems not to have progressed beyond the conceptual level. These factors aside, the biggest problem facing the area may be the lack of spatial efficiency. The spatial inefficiencies of apartheid largely remain, with one or two exceptions (for example the increased desegregation).

### 6.3 Municipal governance and management

Emfuleni has 89 city councillors. The majority (64) are from the African National Congress (ANC), with 21 representing the Democratic Alliance. The other smaller opposition parties hold the remaining four seats. Since the municipality was created, it has had its fair share of political turmoil, mainly related to political divisions within the ANC. In 2005, the national ANC intervened, forcing the mayor, speaker and chief whip to resign and suspending a large number of senior officials<sup>112</sup> due to poor service delivery in the region.<sup>113</sup> At the same time, a councillor was suspended for allegedly writing off his outstanding debt.<sup>114</sup> Despite this turnover, municipal officials received large bonuses in 2006.<sup>115</sup> Then in 2008, five senior municipal officials were suspended<sup>116</sup> and the mayor and the municipal manager resigned after further infighting in the ANC<sup>117</sup> and the disruption of a council meeting by ANC members.<sup>118</sup> This was the fourth resignation by a mayor in less than three years.<sup>119</sup> By 2009, Emfuleni had had five municipal managers in three years.<sup>120</sup> Although the situation has stabilised somewhat by now, Emfuleni has had two mayors since the last local government elections. Recently, the city council argued about putting R1.3 aside to purchase 4x4 vehicles for the mayor and speaker.<sup>121</sup>

---

<sup>112</sup> Kgosana C. 2005. Cleaning up the municipal mess, *City Press*, 3 April 2005.

<sup>113</sup> Tempelhoff E. 2005. ANC skop munisipale hoes uit, *Volksblad*, 27 April 2005.

<sup>114</sup> Kgosana C. 2005. Emfuleni suspends councilor over allegations of corruption, *City Press*, 10 April 2005.

<sup>115</sup> Mafela N. 2006. Fat bonuses for officials at ailing municipalities, *Sunday Times*, 8 January 2006.

<sup>116</sup> Mooki S. 2008. Corrupt municipal officials suspended, *City Press*, 16 March 2008.

<sup>117</sup> Van Buul S. 2008. 1ste burger waai ook na raadmoles, *Die Burger*, 24 May 2008.

<sup>118</sup> Seleka N. 2008. ANC members disrupt meeting, *Sowetan*, 20 May 2008.

<sup>119</sup> Van Buul S. 2008. ANC hoofsweep skryf brief en toe sit hy in trunk, *Beeld*, 17 May 2008.

<sup>120</sup> Tempelhoff E and Van Buul S. 2009. Armlastiges and wanbetalers skuld Emfuleni meer as 2.6 miljard, *Beeld*, 9 March 2009.

<sup>121</sup> *City Press*. 2011. Bling 4x4's for bling towns, 18 December 2011.

In 2009, a municipal turnaround strategy was developed in association with the Department of Cooperative Governance and Traditional Affairs.<sup>122</sup> This strategy has had the following positive effects:

- improved compliance with financial regulations
- better monitoring of the key performance indicators of the municipality
- a clearer understanding of the urgency of dealing with the non-payment of services

## 6.4 Municipal engineering services

This section is divided into three subsections, each considering a specific service: water, sanitation and electricity.

### 6.4.1 Water

Emfuleni receives 90% of its water from Rand Water, and the municipality has received blue drop status for the last three years.<sup>123</sup> Metsi-A-Lekoa is the municipal entity responsible for the provision of water and sanitation services in Emfuleni. A recent attempt to ring-fence Metsi-A-Lekoa has stalled due to political processes.<sup>124</sup> According to officials at Metsi-A-Lekoa, Emfuleni provides water to all its residents in line with government policy.<sup>125</sup> The available data from StatsSA confirms this (see Annexure A). Fewer than 2% of households have water access further than 200m from their homes,<sup>126</sup> and 70% of people have water inside their homes, significantly more than in Gauteng as a whole. Water use is divided in an 80:20 ratio between households and industry/business.<sup>127</sup>

There are five main problems with the municipality's current provision of water. Firstly, there seems to be difficulty in ensuring sufficient water pressure.<sup>128</sup> Secondly, the aging infrastructure in the area has led to a large number of leakages and an increase in maintenance costs.<sup>129</sup> Thirdly, the municipality is unable to account for a significant percentage of the water losses in the area.<sup>130</sup> In this respect, the Auditor-General found in November 2010 that the municipality lost about R250-million of unrecovered water and electricity income,<sup>131</sup> while the IDP (2012) estimates that 39% of water is lost due to leakage and poor maintenance.<sup>132</sup> Fourthly, there is a significant problem with the non-payment of water bills, complicated by the fact that in some cases the municipality is unable to bill correctly.<sup>133</sup> The IDP estimates that 26% of households are not paying their water bills, while consumers owed the municipality R3.2-billion in 2012.<sup>134</sup> Finally, the water supply itself seems to be under some pressure,

<sup>122</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan*. Vanderbijlpark.

<sup>123</sup> Blue Drop Report for Emfuleni. 2012. [http://www.emfuleni.gov.za/index.php?option=com\\_content&view=article&id=404:emfuleni-awarded-with-the-blue-drop-certification&catid=1:emfuleni-news&Itemid=2](http://www.emfuleni.gov.za/index.php?option=com_content&view=article&id=404:emfuleni-awarded-with-the-blue-drop-certification&catid=1:emfuleni-news&Itemid=2)

<sup>124</sup> Interviews with Public Sector 2 and Public Sector 3.

<sup>125</sup> Interviews with Public Sector 2 and Public Sector 3.

<sup>126</sup> Based on Census data – see Annexure A.

<sup>127</sup> Interviews with Public Sector 2 and Public Sector 3.

<sup>128</sup> Interviews with Public Sector 2 and Public Sector 3.

<sup>129</sup> Interviews with Public Sector 2 and Public Sector 3.

<sup>130</sup> Emfuleni Local Municipality. 2013. Annual financial statements for the year ended June 2012.

<sup>131</sup> *City Press*. 2011. Bling 4x4s for bling towns, 18 December 2011.

<sup>132</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan*. Vanderbijlpark.

<sup>133</sup> Emfuleni Local Municipality. 2013. Annual financial statements for the year ended June 2012.

<sup>134</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan*. Vanderbijlpark.

and will remain so until the Lesotho Highlands Project Phase Two begins delivering water to Gauteng (which is expected to be in 2018). Therefore, there is pressure on the municipality to address leaking pipes and ensure a larger degree of accountability with regard to water use.

In conclusion, the municipality has made significant achievements in ensuring access to water. However, Emfuleni is struggling to guarantee the water supply, collect payments, carry out adequate maintenance and enact a proactive plan to ensure that the water infrastructure is upgraded or expanded. The municipality's inability to appropriately spend and invest in infrastructure is discussed in more detail in the section related to municipal finances.

#### 6.4.2 Sanitation

As is the case with access to water, since 1996 the municipality has managed to increase the percentage of people with access to waterborne sanitation (see Annexure B). This success should not be viewed apart from the significant achievement in providing RDP houses by means of the housing subsidy scheme. Furthermore, Emfuleni's sanitation system received 'green drop' status from the Department of Water Affairs<sup>135</sup> during their most recent evaluation. However, the municipality's ability to manage sanitation is under extreme risk. The sewerage works operate at up to 150% capacity.<sup>136</sup> This means that any electricity outage or pump breakdown holds significant risk. It also means that no new major residential or industrial development can take place.

Although the situation has improved recently, the municipality's sewer system has a poor history. In 2006, the Emfuleni Local Municipality was in dispute with a range of environmental non-governmental organisations (NGOs) for pumping raw sewage into the Vaal River.<sup>137</sup> In 2008, the Blue Scorpions ordered the municipality to clean up the dead fish in the Vanderbijlpark Lake<sup>138</sup> that had apparently died due to sewage spills.<sup>139</sup> At the time, the municipality claimed that the spill was due to outdated infrastructure at the sewerage works. It seems as if the Sebokeng sewerage works especially was operating above capacity. Also in 2008, the court ordered the municipality to clean the Vaal River of dead fish, agreeing with the environmental groups and Scorpions that the municipality was responsible for the dead fish because of sewage spilling into the river.<sup>140</sup> A general warning was issued to people not to use the river in any way, with negative repercussions for the area's tourism industry.<sup>141</sup> Earlier spills also negatively affected the area's LED, as an international angling competition had to be moved to an alternative venue.<sup>142</sup> In addition to the spills from the sewage plants, there have also been cases in which Emfuleni pumped sewage from their tank lorries into rivers and dams.<sup>143</sup>

---

<sup>135</sup> Department of Water Affairs. 2013. Green Drop reports. [www.ewisa.co.za/ewisawaterworks/misc/.../defaultGAUSedibeng.htm](http://www.ewisa.co.za/ewisawaterworks/misc/.../defaultGAUSedibeng.htm)

<sup>136</sup> Interviews with University Respondent 1 and Private Sector 8.

<sup>137</sup> *The Star*. 2006. But sewage spills remain a problem, 8 Feb 2006.

<sup>138</sup> Bega S. 2008. Big stink over dead fish in Gauteng lake, *Saturday Star*, 18 October 2008.

<sup>139</sup> Bega S. 2009. Council disputes the number of fish that died in the Vaal River, *Saturday Star*, 17 January 2009.

<sup>140</sup> Schoeman A and Scholtz H. 2008. Dooie vise 24 uur per dag uit Vaal gehaal, *Beeld*, 6 December 2008.

<sup>141</sup> Skade T and Flanagan L. 2008. Ecological disaster as municipality allows sewage spill in Vaal, *Star*, 5 December 2008.

<sup>142</sup> *Citizen*. 2006. Foul Vaal River seen as health risk, 9 February 2006.

<sup>143</sup> Tempelhof E. 2009. Dis glo modder, *Beeld*, 19 November 2009.

The long-standing dispute went to court again in 2009, and the court ordered Emfuleni to get its house in order within four months.<sup>144</sup> This court order came twelve years after the first report of sewage spilling into the Vaal River.<sup>145</sup> The Gauteng Department of Local Government provided Emfuleni with R150-million to address the problem.<sup>146</sup> Although this amount was helpful, it is much lower than the amount required to fully address the issue. On the surface, the problem seems to have been addressed, but the fact that all sewage works in Vanderbijlpark run at more than 100% capacity holds a significant long-term risk. Members of the Save the Vaal Environment action group have referred to the municipality's actions as a 'band-aid' approach that does not solve the longer-term problem.<sup>147</sup> Some respondents were of the opinion that the municipality should establish a regional sewage works, at an estimated cost of R4-billion.

### 6.4.3 Electricity

AMSA receives its electricity directly from Eskom, but Emfuleni is responsible for providing electricity to the remainder of the businesses and all the households in the area. Of the total electricity bill, 78% is paid by industry, and only 22% is paid by households<sup>148</sup> (Annexure C provides an overview of household access to electricity in Emfuleni). More importantly, five individual companies are responsible for 50% of the energy use in the area.<sup>149</sup> The energy intensity of steel production is the main reason why the area's electricity is used mostly by industry. Normal maintenance problems occur and illegal connections are common, leading to electricity being unaccounted for. However, it is the dominance of heavy industry that is the most significant factor, holding both advantages and risks for the municipality. On the positive side, it is fairly easy to ensure payments from the five businesses which pay 50% of the municipality's electricity bill. However, the possibility of these five main energy users downscaling their operations or becoming more energy efficient carries long-term risks for municipal finance.

## 6.5 Municipal finance

The management of Emfuleni's municipal finances has been extremely poor since the municipality's inception in 2001. Although some improvements have occurred recently, the municipality has not received one unqualified audit report. As shown in Figure 20, Emfuleni has the sixth highest municipal revenue in South Africa. It should be mentioned that, despite various attempts on the part of the researchers, we were unable to obtain an appointment with the municipality's Chief Financial Officer. Thus, the interpretation of the financial statements is based solely on the researchers' interpretation of the available data.

---

<sup>144</sup> Templehoff E. 2009. Aanlegte moet gou werk, *Volksblad*, 14 April 2009.

<sup>145</sup> Templehoff E. 2009. Aanlegte moet gou werk, *Volksblad*, 14 April 2009.

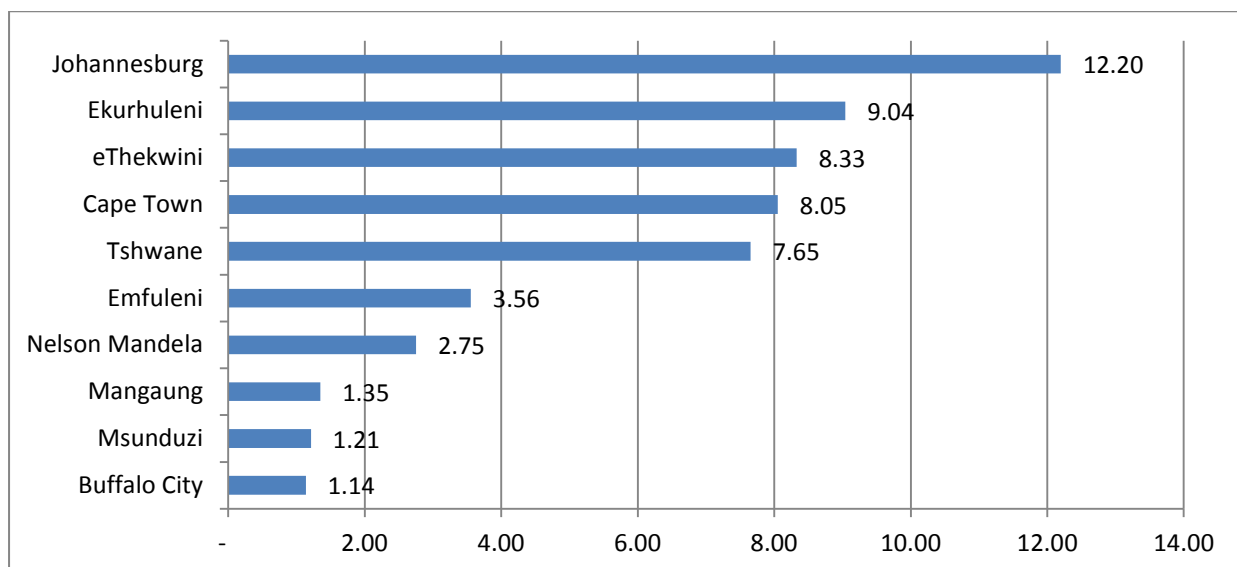
<sup>146</sup> Tempelhof E. 2009. Dis glo modder, *Beeld*, 19 November 2009.

<sup>147</sup> Bega S. 2009. Emfuleni's band-aid approach to sewage a recipe for disaster, *Saturday Star*, 24 January 2009.

<sup>148</sup> Interview Public Sector 4.

<sup>149</sup> Interview Public Sector 4.

**Figure 20: A comparison of municipal revenue for Emfuleni, Msunduzi and the metropolitan areas, 2012 (Value Rbn)<sup>150 151</sup>**



### 6.5.1 Auditor-General findings

In 2008, the Auditor-General could not express an opinion on Emfuleni's finance for the eighth year in a row.<sup>152</sup> The last five years, however, have seen considerable improvement.<sup>153</sup> The outcomes for the last five years are provided below:<sup>154</sup>

- 2011/12: Unqualified audit with findings
- 2010/11: Qualified audit
- 2009/10: Qualified audit
- 2008/2009: Qualified audit
- 2007/2008: Disclaimer

The Auditor-General's report for Emfuleni suggests that a number of improvements occurred during the 2011/12 financial year, including the following:<sup>155</sup>

- improved leadership responsibility for finance management
- positive political tone
- prior year qualifications were addressed
- a performance audit committee was established

<sup>150</sup> The amount for Mangaung was estimated.

<sup>151</sup> Information for metropolitan areas from SACN, 2013 data; Emfuleni data from Emfuleni Local Municipality, 2013. The figures shown come from the annual financial statements for the year ending June 2012.

<sup>152</sup> Tempelhoff E and Van Buul S. 2009. Armlastiges and wanbetalers skuld Emfuleni meer as 2.6miljard, *Beeld*, 9 March 2009.

<sup>153</sup> Auditor-General. 2013. General report on audit outcomes of local governments in Gauteng; See also The local government handbook. 2013. <http://www.localgovernment.co.za/LocalAudits/information/60>

<sup>154</sup> Auditor-General. 2013. General report on audit outcomes of local governments in Gauteng.

<sup>155</sup> Auditor-General. 2013. General report on audit outcomes of local governments in Gauteng.

Despite these improvements, the following key problems were still noted:<sup>156</sup>

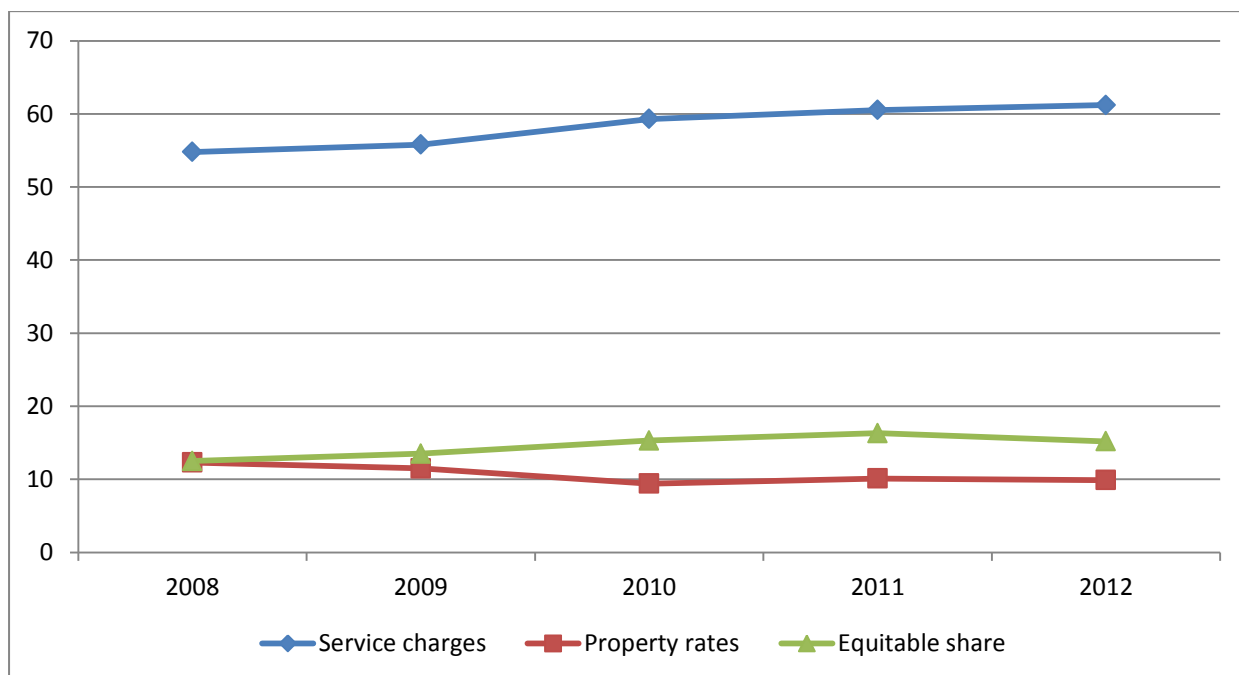
- Some tenders were awarded to state officials.
- The staff vacancy rate is extremely high, at 57% (the norm for Gauteng was only 20%), including a 43% vacancy rate amongst senior officials.
- Under-spending on capital budgets was significant.

### 6.5.2 Income

Emfuleni’s total revenue for 2012 was R3,555-million,<sup>157</sup> which is nearly 16% more than in 2011 and significantly more than the R1.9-billion in 2008.<sup>158</sup> Annexure D provides a more detailed assessment of Emfuleni’s income over the past five financial years. The largest portion of this income was generated through services charges (61.2%), followed by government grants and subsidies (15.2%) and property rates (9.9%).

Seven important notes should be made in respect of Emfuleni’s revenue. First, the majority of Emfuleni’s income comes from services charges, and this is increasing proportionally. Figure 21 and Annexure D show an increase over the past five years in the proportional share of service charges, some increase in the equitable share and a decline in the proportional share of property rates.

**Figure 21: Proportional share of service charges, property tax and equitable share as components of revenue in Emfuleni, 2008–2012**



<sup>156</sup> Auditor-General. 2013. General report on audit outcomes of local governments in Gauteng.

<sup>157</sup> Emfuleni Local Municipality. 2013. Annual financial statements for the year ended June 2012.

<sup>158</sup> Emfuleni Local Municipality. 2009. Annual financial statements for the year ended June 2008.



The increasing percentage of revenue that comes from services charges is acknowledged in Emfuleni's IDP<sup>159</sup> and is probably related to significant increases in the cost of electricity over the past five years. In fact, Annexure D and Annexure E illustrate that services charges have increased by approximately 20% per annum over the period under consideration. Overall, Emfuleni Local Municipality is becoming increasingly dependent on service charges, in particular electricity, which made up 63.8% of the service charges in 2011/2012<sup>160</sup> (significantly more than the 53.7% in 2008<sup>161</sup> – see Annexure E). Given that five of the area's businesses pay about half the electricity bill and industry overall pays almost 80% of the electricity bill, two risks are imminent. First, there is increasing pressure on businesses to minimise their energy costs, which may have long term implications for municipal revenue. The business overview provided earlier mentioned that industries in Emfuleni are trying to minimise electricity and labour costs. New technology and machines that consume less energy might have a long-term negative impact on Emfuleni's finances. Secondly, these industries are dependent on the global market, which can be quite volatile. Therefore, any global trend affecting Emfuleni's industries will also affect the municipal finances.

The second important note is the initial indication of a possible decline in the equitable share, shown in Figure 21. Considering the increasing pressure on the South African national budget, transfers from the National Treasury to local governments might decrease in the future. Third, Emfuleni has very few resources to spend on capital expenditure. This is especially concerning given the quite small amount Emfuleni receives in the form of a Municipal Infrastructure Grant (MIG). In fact, one of the main problems in Emfuleni has been the lack of appropriate capital expenditure, which is a key requirement for continued economic growth. Fourth, the amounts of water and electricity that are unaccounted for, as well as the significant non-payment of services, are significant long-term issues. At the end of June 2012, 18 municipal councillors had account arrears for longer than 90 days.<sup>162</sup> In 2011, 31 councillors had this problem. On average, only 74% of service charge-related bills sent out are paid, and it remains unclear how the municipality intends to raise the lost revenue.<sup>163</sup> The 2012 financial statements estimate that nearly 51m kilolitres of water were lost due to leakages, which in rand terms resulted in an estimated revenue loss of R230-million. The corresponding figures for electricity are 363m kilowatts and R183-million. Fifth, the consumers owe the municipality around R3,2 billion, which is almost equal to the entire annual operating budget of the municipality.<sup>164</sup> The above reality is due to multiple factors: illegal connections, billing errors, bridging of meters by consumers and aging infrastructure.<sup>165</sup> Another contributing factor is that the municipal account information is not always correct – significant disputes exist in this respect.<sup>166</sup>

Sixth, it has become common practice in South Africa to ring-fence electricity and water services at the municipal level to ensure that appropriate services are being delivered. Apparently, this process in Emfuleni has been halted due to political opposition.<sup>167</sup> However, the possible ring-fencing of

---

<sup>159</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan, 2012–2016*. Vanderbijlpark.

<sup>160</sup> Emfuleni Local Municipality. 2013. *Annual financial statements for the year ended 30 June 2012*.

<sup>161</sup> Emfuleni Local Municipality. 2009. *Annual financial statements for the year ended 30 June 2008*.

<sup>162</sup> Emfuleni Local Municipality. 2013. *Annual financial statements for the year ended 30 June 2013*.

<sup>163</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan 2012–2016*. Vanderbijlpark.

<sup>164</sup> Emfuleni Local Municipality. 2012. *Integrated Development Plan, 2012–2016*. Vanderbijlpark.

<sup>165</sup> Emfuleni Local Municipality. 2013. *Annual financial statements for the year ended 30 June 2013*.

<sup>166</sup> Nel R. 2012. Taakspan pak die wanbetalers, *Beeld*, 30 May 2012.

<sup>167</sup> Interviews with Public Sector 2 and Public Sector 3.



Emfuleni's water and electricity services seems highly unlikely considering the high dependence of the municipality on revenue from the provision of electricity. Seventh, during the course of the interviews, a number of comments were made about the unfair calculation of the equitable share. Interviewees mentioned an under-count during the latest census due to a cyclic change in student numbers. However, the determination of the equitable share discriminates against Emfuleni for other reasons as well. The equitable share is mainly calculated based on a municipality's share of the national population. This does not take into account the fact that electricity consumption in Emfuleni is considerably higher due to the industry presence in the area and thus puts Emfuleni at a disadvantage.

### 6.5.3 Expenditure

Expenditure for the 2011/2012 financial year was just over R4-billion, leaving the municipality with a deficit of R487-million.<sup>168</sup> Annexure F provides a detailed overview of the expenditures of Emfuleni Local Municipality from 2008 to 2012. A few key notes should be made.

First, although employment costs have been coming down as a percentage of total costs since 2008 (from 23.6% to 17.9%), the growth in these costs remains higher than inflation, creating a long-term burden for the municipality. The current percentage of expenditure going to employee costs is significantly lower than any of the metropolitan areas in South Africa, but this is directly related to the significant number of vacant posts at the municipality. This situation might change if Emfuleni were to become a metropolitan municipality, as it would have to absorb human capacity from the other local municipalities, as well as from Sedibeng.

Second, the figure in respect of maintenance and repairs requires some comment. From 2008 to 2012, it dropped from 4.8% to 3% of the municipality's total expenditure (see Annexure F). The comparative figure for the metropolitan areas in South Africa is 6%.<sup>169</sup> In 2011, the expenditure on repairs and maintenance was approximately 30% less than in 2010, while the 2012 amount was 1% less than in 2011 and only R5,000 more than in 2009. Considering the large-scale complaints about the old infrastructure and the increasing need for maintenance, the relative decrease in the maintenance and repair budget comes as a surprise. It suggests that not all needed maintenance is being carried out (especially preventative maintenance), which will come back to hurt the municipality in the long run. The threat of non-payment of services also remains a big problem for Emfuleni, and a recent summit was held focusing on the payment of services.<sup>170</sup> In 2012, loans to the value of R150-million were acquired from Standard Bank and ABSA to ensure that the municipality's short-term commitments could be honoured.<sup>171</sup>

Third, some comments should be made regarding capital expenditure in Emfuleni. On average, the MIG constituted 3.38% of the municipality's revenue over the five years under consideration. However, estimates from the financial statements suggest that only 66% of the funds were spent on time, meaning that only an estimated 2.2% of Emfuleni's annual budget was allocated to new infrastructure developments. The under-spending of MIG funds is confirmed in the IDP.<sup>172</sup> The IDP

---

<sup>168</sup> Emfuleni Local Municipality. 2013. Annual financial statements for the year ended 30 June 2012.

<sup>169</sup> SACN 2013. Database of financials of metropolitan areas in South Africa.

<sup>170</sup> Masilela S. 2013. Emfuleni municipality hosts summit to build consensus. *The New Age*, 31 January 2013.

<sup>171</sup> Nel E. 2012. Emfuleni na banke vir R150m. *Beeld*, 27 Julie 2012.

<sup>172</sup> Emfuleni Local Municipality. 2012. Integrated Development Plan. Vanderbijlpark, p. 44.

also mentioned that previous capital expenditure funded by the municipality has been stopped as a result of cash flow problems.<sup>173</sup>

#### 6.5.4 Comparing Emfuleni with other areas

The above analysis of the Auditor-General reports and the income and expenditure of Emfuleni Local Municipality has concentrated on internal comparisons and trends. We now turn to a comparison of Emfuleni with the metropolitan municipalities (see Table 9).

**Table 9: A comparison of key municipal finance indicators for Emfuleni and the metropolitan areas in South Africa, 2012**

Indicator	Emfuleni	Highest metro	Lowest Metro	Metro Average
Area (km <sup>2</sup> )	966	6 283	1 644	2 659
Population	721 576	4 434 827	747 731	2 546 000
GVA (Rbn) (2005 - Constant values)	17.6	437	43	203
City employees	3 419	24 254	3 633	13 810
Total city spending (Rm)	3 815	28 356	2 017	15 855
City spending on employees (Rm)	722	6,907	812	3,990
Population density (people per km <sup>2</sup> )	747	2 698	119	1 213
Economic density (GVA per km <sup>2</sup> ) (Rm)	18.1	266	7	99
City employees per km <sup>2</sup>	3.5	14.8	0.6	6.58
City spending per km <sup>2</sup> (Rm)	3.9	17.2	0.3	7.68
Employee-related spending per km <sup>2</sup> (Rm)	0.75	4.2	0.1	1.9
GVA per 1000 people (Rm)	24	98.4	58	75
City employees per 1000 people	4.7	6.1	4.7	5.4
City spending per 1000 people (Rm)	5.3	7.3	2.7	5.9
Employee-related spending per 1000 people (Rm)	1.0	1.8	1.1	1.5
Population served per city employee	211	213	165	185
Employee-related spending per city employee (R)	211,381	330,220	197,844	276,878
City revenue (Rbn)	3.5	n/a	n/a	15.3

<sup>173</sup> Emfuleni Local Municipality. 2012. Integrated Development Plan. Vanderbijlpark, p. 44.

Indicator	Emfuleni	Highest metro	Lowest Metro	Metro Average
Contribution of property rates to city income in 2012 (%)	9.9	n/a	n/a	24.9
Contribution of service charges to city income in 2012 (%)	61.2	n/a	n/a	52.9
Contribution of grants to city income in 2012 (%)	15.18	n/a	n/a	12.7
Contribution of capital grants to income in 2012 (%)	4.06	n/a	n/a	8.6
Percentage spent on maintenance in 2012 (%)	3.0	n/a	n/a	6.0
Operating grants in 2012 (Rm)	539.84	4,553	352	1,730
Capital grants in 2012 (Rm)	144.23	2,988	149	1,317
Property taxes 2012 (Rm)	351.97	5,539	463	2,555
Service revenues (Rm)	2,176.38	18,000	625	8,100

Although the majority of issues have been discussed in the preceding sections, a few additional notes regarding the information presented in Table 9 should be made:

- In comparison to the metropolitan areas, the percentage of revenue that Emfuleni receives from property rates is significantly lower. This is not an indication that property rates should be increased. Rather, it emphasises that large energy users in the steel industry ensure a disproportional contribution of service charges to Emfuleni's income.
- Capital expenditure in Emfuleni is significantly lower than in metropolitan areas.
- The percentage spent on maintenance and repairs is significantly lower than the average for metropolitan areas.
- Emfuleni's total expenditures and revenue are higher than the smallest metropolitan areas.
- The municipality compares favourably with metropolitan areas in respect of expenditure on staff.

The 2010 Emfuleni turnaround strategy deals with a number of key issues. However, the proposals contained in the turnaround strategy are mostly short-term mechanisms meant to improve revenue and the quality of financial management. Longer-term questions regarding the viability of the area and long-term threats to municipal finance do not receive any attention.

## 6.6 Service delivery protests

Emfuleni has had its fair share of service delivery protests. The following examples provide a broad overview of what has been captured in the media:

- In 2004, a memorandum was handed over to the mayor with 27 demands related to service delivery in Sebokeng.<sup>174</sup>
- Before a visit of former President Thabo Mbeki to the area in 2005, *The Weekly Mail and Guardian* reported that 'Residents threatened another Vaal Uprising' that might match some of the uprisings from the apartheid era.<sup>175</sup>
- The year 2005 also witnessed protest marches by employees of Emfuleni.<sup>176</sup>
- In October 2006, residents in Sebokeng took to the streets and blocked the Golden Highway in Zone 13.<sup>177</sup> At the same time, there was also a protest in the Sonderwater informal settlement.<sup>178</sup>
- Boiketlong residents marched in July 2008 and delivered a memorandum to the mayor.<sup>179</sup> An ultimatum was issued to the council to respond to the demands before 3 August 2008.
- During January 2009, the police had to use rubber bullets to disperse protestors in Rust-der-Vaal. The protestors barricaded the old Johannesburg road to demonstrate their dissatisfaction for (in their view) not receiving adequate attention from the municipality.<sup>180</sup>
- September 2009 saw a massive protest in the community of Rust-der-Vaal.<sup>181</sup> The community claimed that the Emfuleni Local Municipality was not attending to their problems and needs.
- The 2010 municipal turnaround strategy listed the increasing number of service delivery protests.
- Boitumelo residents planned a protest march in April 2012.<sup>182</sup>

Despite the high number of protests in the last decade, it seems as if the municipality has recently improved its communication with communities and found ways to provide more effective service delivery.

## 6.7 Social relations

Although it is difficult to assess the social relations of a place, a number of comments should be made in this respect. The historic nature of Emfuleni as a place where ISCOR attempted to address the problem of 'poor Afrikaners' remains deeply embedded in the overall social relations. Racial prejudice was not uncommon during the interviews, and within the upper-class white community, there was indeed a feeling of disenfranchisement regarding planning and decision-making. The gullibility of the Afrikaner working class (and other working class groups) is best encapsulated in the Krion Pyramid scheme which seemingly stripped the area of R1-billion cash<sup>183</sup>.

Although there has been significant racial integration of Emfuleni's former white suburbs, there is very little indication of a new unified middle class developing in the area. The outside perceptions of

---

<sup>174</sup> Tempelhof E. 2004. Inwoners beplan opstand en stryd in hof, *Beeld*, 19 October 2004.

<sup>175</sup> Tabane R. 2005. Residents threaten another Vaal Uprising, *The Weekly Mail and Guardian*, 13 October 2005.

<sup>176</sup> Tau P. 2005. Some relive the days of freedom marches, *The Star*, 13 July 2005.

<sup>177</sup> *The Star*. 2006. Residents protest against lack of water and electricity, 12 October 2006.

<sup>178</sup> *The Star*. 2006. Residents protest against lack of water and electricity, 12 October 2006.

<sup>179</sup> Seleka N. 2008. Council warned. *Sowetan*, 27 July 2008.

<sup>180</sup> Van Buul S. 2009. Rubberkoeels op betogers gevuur, *Beeld*, 9 January 2009.

<sup>181</sup> Van Buul S. 2009. Die bruin opstand het begin, *Beeld*, 11 September 2009.

<sup>182</sup> Emfuleni Local Municipality media release [http://www.emfuleni.gov.za/index.php?option=com\\_content&view=article&id=128:boitumelo-service-delivery-protest&catid=14:media-room&Itemid=5](http://www.emfuleni.gov.za/index.php?option=com_content&view=article&id=128:boitumelo-service-delivery-protest&catid=14:media-room&Itemid=5)

<sup>183</sup> Sergennt B. 2013. How Krion estate was pumped dry, *Business Day*, 17 November 2013.

Emfuleni as a 'dirty place', a 'conservative place' and an 'if you want night life you need to go to Johannesburg' place will also need to be addressed in the future.

## 7. The physical environment

Some reference has already been made in previous sections of this report to the environmental risks facing Emfuleni. Although the intention of this section is not to repeat detailed discussions that appear elsewhere in the report, there are three environmental problems that should be highlighted.

First, there are historical, current and future risks due to the industry-related pollution in the area. These risks include air, water and land pollution. In respect of air pollution, it seems as if the industries in the area are largely compliant.<sup>184</sup> However, some groups still question the degree of compliance.<sup>185</sup> In addition, there is increasing global pressure to improve industry's ecological footprint. Subsequently, legislation and enforcement are both likely to become stricter in the future. Planning ahead for this probability, industries are progressively investing in more energy-efficient machines.<sup>186</sup> Although these new machines are likely to lead to a decrease in air pollution, they might also reduce the need for labour, thus negatively impacting employment.

Water pollution seems to be related to two main risk factors. In the first place, the steel industry uses water to cool their steel, after which the heated water is returned into the water system. This factor seems largely under control and well managed. The second risk is related to water pollution resulting from industry activity. Reference was made earlier in the paper to the fact that prior to environmental legislation, the Vanderbijlpark ISCOR plant was located strategically so that its pollution could be drained into the Vaal River. A more recent (2006) dispute between AMSA and the Emfuleni municipality related to claims that AMSA was dumping mothballs in the Vaal River.<sup>187</sup> AMSA denied these allegations. The debate about the pollution of land surrounding AMSA's activities is well documented in media and court reports. It has been proven that the land adjacent to AMSA is significantly polluted and is not viable for agriculture. This issue was 'solved' when AMSA purchased the land surrounding its premises. A final risk is related to the potential failure of the blast furnaces. At the bare minimum, some kind of risk contingency plan should exist at the local government level to address this possibility.

Second, there are significant environmental risks associated with the over-capacity of the Emfuleni sewerage works and other outdated infrastructure in the area. This risk was discussed in length during the analysis of infrastructure services in Emfuleni. Although on the surface it seems as if much has improved since 2009, the fact that the current sewerage works function at 150% capacity is a matter of great concern. An estimated R4-billion is needed to provide an appropriate regional sewerage system for Emfuleni.<sup>188</sup>

Third, there is potential risk associated with government plans to release treated 'neutral' acid mine water from Gauteng into the Klip River, which runs into the Vaal River at Emfuleni. Apparently, this water would have salt levels higher than the acceptable limit, creating significant risks for the ecology of the river and business activities associated with it.<sup>189</sup> It seems that the decision to release this 'neutral' mine water will be made without a proper environmental impact assessment due to the urgency of the matter. Increased pollution of the Vaal River might also result in the depreciation of

---

<sup>184</sup> Interview with Private Sector 7.

<sup>185</sup> Interview with University Respondent 1.

<sup>186</sup> Interview with Private Sector 7.

<sup>187</sup> Tempelhof E. 2006. Mittal dalk gestraf oor water, *Beeld*, 20 November 2006.

<sup>188</sup> Interview with University Respondent 5.

<sup>189</sup> Interview with University Respondent 1 and see also / <http://www.thegreentimes.co.za/stories/water/item/1762-acid-mine-drainage-to-be-pumped-into-already-ailing-rivers>

value of waterfront properties. This could in turn have a negative impact on municipal revenue, even though property taxes account for only a small percentage of the local government's income (10%).

SAVE (Save our Vaal Environment) and the Vaal Environmental Justice Alliance are two prominent environmental NGOs in the area, which have been instrumental in taking the Emfuleni municipality and AMSA to court on a number of occasions. However, the jury is still out on whether these organisations and the residents of Emfuleni will be able to protect their air, their land and the Vaal River from all possible environmental risks.

## 8. Innovation, the knowledge economy, human capital formation and universities

The area has two main tertiary education facilities, and AMSA also has their own training centre. The Vaal Campus of the North West University dates back to the middle 1960s, when an engineering faculty was created at Vanderbijlpark. This was done to provide engineers for the steel industry in general and ISCOR in particular. Student enrolment has risen from below 1000 at the beginning of the 1990s to 6000 students currently. Future plans are to increase the number of students to around 10 000. More than 80% of the students at this institution originate from within 80km of the campus. The other main institution is the Vaal University of Technology, whose origins are somewhat more complex. It was originally established in 1966 as the Vaal Triangle College for Advanced Technical Education and was also closely related to ISCOR and other steel manufacturers in the area. By 1976, there were more than 3000 students enrolled at the college. The College evolved into a Technicon in 1979 and became the Vaal University of Technology (VUT) in 2004. The student numbers have risen considerably, from approximately 6000 in the middle 1980s to 16 000 currently. Although official figures could not be obtained, it appears as if approximately 20% of VUT students originate from other African countries<sup>190</sup> with about 80% originating from within 150km.<sup>191</sup> The increasing number of students (an increase of about 15 000 over a period of 25 years) and staff at the two universities have served as a buffer against the economic hardship caused by the downscaling in the steel industry.

This section traces the historical and current relations between the steel industry and tertiary education institutions in Emfuleni. The following key aspects receive attention. In the first place, an attempt is made to provide a historical picture of the relationship between post-school educational institutions and the main industries in the area. Secondly, an overview of the educational profile of the region is provided. Thirdly, the universities' role in providing industry with local R&D services and new technologies is discussed. Finally, there is a brief discussion of how the universities have contributed to the knowledge base of the area. This section focuses on the last 40 years and leaves much room for more extensive historical work about the relationship between educational institutions and industry in the area.

### 8.1 The historical provision of human capital

The relationship between the area's technical colleges and the steel industry has historically been extremely strong. The colleges and the ISCOR Training Centre provided skilled workers to the steel and chemical industries and also to downstream enterprises. The decision to locate the engineering faculty in the Vaal Triangle was made in an attempt to ensure that enough engineers were being trained for the local industries. That being said, two unrelated factors have played a crucial role in the growing divide between the educational system and the steel industry over the past 25 years.

First is the privatisation and internationalisation that started in the late 1980s. The fact that ISCOR laid off a considerable number of employees just before privatisation meant that the industry's demand for human capital declined (the job losses reflected upon earlier in the report are evidence of this). The declining demand for labour is also due to increasing mechanisation and a growing R&D focus on

---

<sup>190</sup> Interview University Respondent 1.

<sup>191</sup> Interview University Respondent 6.



new production technologies that are less labour intensive. In addition, the high level of retrenchment resulted in a large number of unemployed highly skilled people that were available to work. As a result of all of these factors, the local industries are no longer so dependent upon local institutions providing skilled workers.

The second reason for the apparent divide between industry and education institutions is the changing structure of the tertiary education sector in South Africa over the past 40 years. The South African education system has evolved from a highly differentiated system to one in which differentiation is limited. A range of teacher training colleges, nursing colleges and agricultural colleges have been closed, and the further education and training colleges are not functioning well. The original technical colleges in the Vaal Triangle emphasised practical and work-based education and were closely linked to ISCOR's own training and human capital development programmes. The emphasis on work-based learning decreased somewhat with the creation of the Vaal Technicon in 1979, and the creation of Technological Universities in 2004 has made work-based learning even less important.

Despite the fact that the historical links between industry and institutions of learning have eroded and fewer people are employed in the steel industry, both local universities are busy with a number of creative initiatives. The Vaal University of Technology, for instance, has a range of industrial stations available to help with the design and business development of creative engineering ideas – some of these stations are linked to a Small Enterprise Development Agency (SEDA) office. The Vaal campus of the North West University has initiated entrepreneurship programmes linked to a business incubation centre. Although the jury is still out on the success of these programmes in facilitating local entrepreneurship, they have the potential to play a positive role in economic development. For some reason, though, it seems as if these programmes have largely gone unnoticed by local and regional government structures.

## 8.2 The human capital profile of Emfuleni

Having provided a historical perspective, this section focuses on two indicators of human capital and compares the profile in Emfuleni with that of Gauteng (see Table 10).

**Table 10: Educational attainment of the Emfuleni and Gauteng populations, 1996, 2001 and 2011 (% of the total population excluding those five years and younger)**

Education level	Emfuleni			Gauteng		
	1996	2001	2012	1996	2001	2012
% of population without any education	13.2	9.2	3.3	10.8	8.7	3.4
% of population with a bachelors degree	1.0	1.5	2.6	2.3	3.5	5.0

Table 10 suggests that Emfuleni has made significant progress in terms of its population's educational attainment. The percentage of the population with degrees increased faster in Emfuleni (from 1% in 1996 to 2.6% in 2012) than in Gauteng (from 2.3% in 1996 to 5% in 2012). There is no doubt that the two universities have played a significant role in this achievement. However, the percentage of Gauteng residents with a higher degree remains considerably higher than that of Emfuleni.

## 8.3 Research and Development

The two main factors discussed in relation to human capital are also partially applicable when considering the relationship between industry and R&D at the two universities. By the early 1990s, the engineering faculty of the then Potchefstroom University that was initially in Vanderbijlpark had relocated to Potchefstroom, and ISCOR outsourced their internal R&D unit to the University of Pretoria. Since then, the process of internationalisation has meant that AMSA can also tap into ArcelorMittal's international R&D centre in Europe, making local R&D less important. Although the connections between industry and local universities have weakened significantly, some attempts are



being made to try and re-establish these links. Due to the pioneering work of Prof Deon de Beer, the Vaal University of Technology has established fairly good links with industries in Emfuleni and outside the region. The two universities and a range of local role players are also spearheading the newly established Southern Gauteng Regional Innovation Committee, with substantial industry participation.

## 8.4 The knowledge base of the area

In assessing the knowledge base of the area, an attempt was made to examine the nature and scale of post-graduate research. In the process, 56 theses and dissertations were found, which can be classified under the following main themes:

- development planning (17%)
- service delivery (12.5%)
- human resource and performance management (12.5%)
- poverty (12.5%)
- LED (10.7%)

These main themes are closely aligned with the development problems experienced in the area. 75% of the theses/dissertations were completed at North West University, a sign of the institution's important presence in the area. However, post-graduate students from the University of the Witwatersrand, the University of Pretoria, the University of Johannesburg and the University of South Africa also focused their research on the Emfuleni area, showing that the region is of national interest.

Emfuleni most likely benefits indirectly from this knowledge generation, and many of the students who complete their post-graduate studies probably live and/or work in the area. However, it does not seem as if there is a deliberate effort on the part of the government to ensure the systematic utilisation of the knowledge base created through post-graduate work. Initiatives encouraging one-page summaries (or policy briefs) and debates on the policy lessons could help significantly in the application of this important post-graduate research.

Although the amount of literature published in academic journals is significantly smaller, there is some knowledge that is being created and publicised through this venue. It would be helpful if more of the post-graduate work gets published, as this would result in the further spread of the knowledge.

## 9. Synthesis

This concluding section is divided into four sections. The first two sections serve to contextualise the national and international importance of a city such as Emfuleni. The focus then shifts towards identifying key long-term risks. This risk assessment is accompanied by a table which assesses the possibility of these risks occurring. Finally, the section ends with a discussion of the policy lessons that can be learned from the case study.

### 9.1 National importance of Emfuleni

The national importance of Emfuleni can be summarised in the following key points:

- Around 70% of South Africa's domestic steel production occurs in Emfuleni, making the city of utmost national importance.
- Emfuleni's location on the banks of the Vaal River means that activities in Emfuleni might impact the ecology of the river.
- The air pollution generated by industry in the area has a negative impact on Gauteng and parts of the northern Free State.

## 9.2 International importance of Emfuleni

The international importance of Emfuleni includes the following aspects:

- The two large steel manufacturing businesses in Emfuleni are multi-national corporations, subject to the volatility of the international market.
- Plants owned by these international companies compete either directly or indirectly with one another, making locational competitiveness an important consideration.
- AMSA's South African operations contribute only 1% to ArcelorMittal's global steel production; thus, although steel production in Emfuleni is pivotal for the local economy, it is insignificant in terms of the company's worldwide production.
- Some products are exported from the area, for instance those manufactured by DCD ringrollers; AMSA has also historically exported some steel from the area.
- Efforts to reduce air pollution and decrease industry's ecological footprint are closely linked to international attempts to combat global warming.

## 9.3 Long-term risks in Emfuleni

The future of Emfuleni is dependent on a number of key risk factors. These risks are related to governance, municipal service delivery, the future of the steel industry and the physical environment. Each of these risks is discussed in more detail below.

### Governance, municipal service delivery and strategic planning

Although significant improvements have been achieved in service delivery and governance in the municipality, a number of long-term risks should be noted:

- The area's aging infrastructure will require increasing maintenance, leading to increased costs and impacting service delivery.
- If the current inward-looking approach to strategic and economic planning continues, there will be negative implications for the region's economy and the municipality's revenue stream.
- There is not a separate infrastructure and maintenance plan for the industrial areas.
- The local government has been plagued by instability and political infighting.
- The municipality has a history of poor financial management.
- The current administrative divide between Emfuleni and Metsimaholo means that planning does not consider the economic interdependence of the two municipalities.

### Environmental risks

Three specific environmental risks exist. First is the area's long standing debate about air pollution. Although it seems as if the steel companies have made significant progress in this respect over the past ten years, there continue to be on-going battles between environmental groups and AMSA. Furthermore, it is likely that environmental laws and regulations will become stricter over time. Thus, although there has been improvement and the area's industries currently comply with emissions regulations, long-term compliance might be difficult to ensure. It should be noted that improvements in environmental compliance usually go hand in hand with new machinery/technology, which reduces energy use and air pollution, but might also reduce the demand for labour.

The second environmental risk relates to the current process for treating acid mine water, which involves cleaning it to some extent and then releasing it into the Klip River, a tributary of the Vaal River. This could have serious implications for Emfuleni and for the agricultural industry downstream. As this is a new process, the long-term implications for the ecosystem are still unknown. However, the probable implications for Emfuleni are two-fold. Firstly, there may be a negative impact on the tourism industry, which has grown over the last few decades and has helped to diversify the area's economy. Secondly, it might reduce the city's tax base, as properties on the Vaal River might lose value.

The third environmental risk is the raw sewage that ends up in the Vaal River. Although Emfuleni has made significant progress in reducing spills since 2009, the sewerage works currently run well above 100% capacity. Thus, sewage spills (and industrial spills) into the river are a significant long-term risk.

#### Risks related to the steel industry

A number of risks related to the steel industry could have major implications for the area. In the first place, the rapidly increasing energy costs deserve mention. Considering the local industries' high dependence on energy, especially steel manufacturing enterprises, the rapid increase in electricity prices over the past ten years has not been good news. Granted, South Africa's energy prices were historically far below the world average, serving as a disincentive for companies to invest in new technology or alternative sources of energy. That being said, the recent price hikes may make the industry uncompetitive in the future. If industries begin to use new energy-saving technology, this might in turn have a negative impact on municipal finance.

The second risk is related to the second largest cost driver in the industry: labour. Industry representatives mentioned both the direct labour costs and the cost of dismissing employees. In addition, the centralised system of determining labour costs through the bargaining council has been singled out as quite problematic. The third risk is the dependence on old (and in many cases energy-dependent) technology for producing steel. The industry representatives interviewed all mentioned that their companies are engaging in a long-term process of renewing their old technology. As mentioned above, new technology might reduce industries' dependence on energy and labour. Fourth, the steel industry is in dire need of increased R&D to find alternative production methods that are cheaper and have a smaller environmental impact.

Fifth, reports suggest that the government and the IDC are considering the creation of a new steel manufacturing plant in South Africa. The main reason for this is the uncompetitive pricing of steel (at import parity), which inhibits downstream opportunities in the country. Mpumalanga has been mentioned as a possible location for this new plant, which would compete with the industry in Emfuleni. However, the creation of a new plant in Mpumalanga seems unlikely, as a report produced by the iron and steel industry suggests that the one market opportunity is the creation of a steel mill at a coastal location focusing on steel exports.<sup>192</sup> Furthermore, any new investment in the steel industry would be very capital intensive, and it is unlikely that the government would obtain the required amount of capital on its own.

Finally, the possibility of AMSA's Vanderbijlpark plant closing in the future cannot be ignored. Table 11 is a summary of the long-term risks facing Emfuleni and an evaluation of how likely it is that each risk will realise.

---

<sup>192</sup> Ensor A. 2013. Buoyant mood from focus on steel mill, *Business Day*, 1 April 2013, p 2.

**Table 11: Assessment of potential risks in Emfuleni, 2013**

Risk Factor	Unlikely..... Will occur				
	1	2	3	4	5
<b>Municipal and governance risks</b>					
Aging infrastructure will negatively affect the municipality's ability to deliver quality services				X	
The continuation of an inward-looking approach to strategic and economic planning				X	
No separate infrastructure and maintenance plan for industrial areas				X	
Political instability			X		
Poor financial management			X		
Current administrative divide between Emfuleni and Metsimaholo will prevent planning that considers the areas' economic interdependence			X		
<b>Environmental risks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Air pollution					X
Stricter environmental legislation					X
Water pollution due to poor municipal sewage management					X
Water pollution due to industry spillages				X	
Water pollution due to acid mine water			X		
Industry spillage of chemicals into the water				X	
<b>Steel industry risks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Attempts to reduce energy costs and improve environmental compliance will have a negative impact on municipal revenue					X
Increase in environmental compliance will lead to a reduction in the labour absorption of the industry				X	
Lack of labour productivity, high labour costs and stringent labour legislation				X	
Government will intervene in steel industry pricing				X	
Another steel mill will be built in South Africa		X			
AMSA will close down its Vanderbijlpark plant		X			
The steel industry will become less prominent due to the failure to develop and implement new technologies			X		

## 9.4 National policy issues

In conclusion, the case study on Emfuleni reveals four national policy issues:

1. Despite much talk about ensuring an integrated rail freight environment, the decline of rail freight systems in South Africa has had a detrimental effect on the inland steel manufacturing plant in Emfuleni. AMSA has had to revert to road transport for steel exports, making the South African leg of the logistics more expensive than the sea transport. This has contributed to AMSA's operations in Emfuleni being uncompetitive in the international arena.
2. The dispute between AMSA and the government around the issue of steel pricing is not conducive to ensuring a competitive business environment.
3. There should be a national response to the notion of international competitiveness and risks, even if such response is simply a basic policy about how to deal with distressed urban areas of international and national importance. This type of policy would be helpful for mining areas, as well as industrial areas such as Emfuleni. The national response would not necessarily mean financial rescue packages, but could entail national planning support during phases of economic growth, helping these areas to prepare for long-term risks.
4. The fact that revenue transfers to municipalities are based on population size is not favourable to areas such as Emfuleni. In terms of population size, the area barely makes it into the top ten municipalities in South Africa. However, in terms of municipal revenue, Emfuleni is number six in the country. Essentially, Emfuleni is a case in point showing that the equitable share, calculated on population size only, does have some shortcomings.

## Annexures

### Annexure A: Water provision in Emfuleni, Sedibeng and Gauteng, 1996, 2001 and 2011

Area	Year	Real numbers				Percentage			
		Piped water in dwelling	Piped water on site	Public tap	Other	Piped water in dwelling	Piped water on site	Public tap	Other
Emfuleni	1996	93 567	36 059	14 689	4 554	62.9	24.2	9.9	3.1
	2001	96 138	76 605	15 363	2 060	50.6	40.3	8.1	1.1
	2011	153 877	53 434	10 978	1 257	70.1	24.3	5.0	0.6
Sedibeng	1996	112 467	41 721	18 034	9 674	61.8	22.9	9.9	5.3
	2001	108 922	94 179	23 240	2 751	47.5	41.1	10.1	1.2
	2011	188 863	70 627	16 530	2 875	67.7	25.3	5.9	1.0
Gauteng	1996	1 435 581	415 655	291 062	77 954	64.7	18.7	13.1	3.5
	2001	1 325 479	1 056 987	385 354	68 514	46.7	37.3	13.6	2.4
	2011	2 426 522	1 067 534	333 553	70 334	62.3	27.4	8.6	1.8

**Annexure B: An overview of sanitation access in Emfuleni, Sedibeng and Gauteng, 1996, 2001 and 2011**

Area	Year	Real numbers				Percentage			
		Flush or chemical toilet	Pit latrine	Bucket latrine	None of the above	Flush or chemical toilet	Pit latrine	Bucket latrine	None of the above
Emfuleni	1996	115 258	30 407	1 036	2 265	77.4	20.4	0.7	1.5
	2001	164 755	19 412	1 987	412	88.3	10.4	1.1	0.2
	2011	198 942	15 405	2 029	2 256	91.0	7.0	0.9	1.0
Sedibeng	1996	137 356	37 014	4 445	3 188	75.5	20.3	2.4	1.8
	2001	192 496	26 611	4 660	6 224	83.7	11.6	2.0	2.7
	2011	250 193	21 151	3 023	3 198	90.1	7.6	1.1	1.2
Gauteng	1996	1 757 729	382 125	52 537	57 180	78.1	17.0	2.3	2.5
	2001	2 364 712	307 522	61 837	102 264	83.4	10.8	2.2	3.6
	2011	3 382 466	382 805	69 077	42 966	87.2	9.9	1.8	1.1



**Annexure C: Electricity access in Emfuleni, Sedibeng and Gautang, 1996, 2001 and 2011**

Area	Year	Real numbers				Percentage			
		Electricity	Gas	Paraffin	Candles	Electricity	Gas	Paraffin	Candles
Emfuleni	1996	122 550	165	1 628	24 059	82.6	0.1	1.1	16.2
	2001	170 659	265	1 660	17 221	89.9	0.1	0.9	9.1
	2011	3 416 169	8 250	100 670	365 807	87.8	0.2	2.6	9.4
Sedibeng	1996	143 729	281	2 561	34 755	79.3	0.2	1.4	19.2
	2001	197 695	331	2 642	28 781	86.2	0.1	1.2	12.5
	2011	253 325	595	4 350	20 269	90.9	0.2	1.6	7.3
Gauteng	1996	1 769 977	5 041	55 630	410 696	79.0	0.2	2.5	18.3
	2001	2 300 472	8 752	78 168	441 059	81.3	0.3	2.8	15.6
	2011	3 416 169	8 250	100 670	365 807	87.8	0.2	2.6	9.4

**Annexure D: Revenue source for the Emfuleni Local Municipality, 2008–2012 (Rands)**

Items	2012	2011	2010	2009	2008
Property and other taxes	351,966,028	310,197,555	244,994,625	262,075,166	234,526,481
Service charges	2,176,382,626	1,855,360,142	1,539,956,149	1,270,288,936	1,043,782,200
Equitable share	539,842,000	498,815,000	396,256,491	307,071,663	237,308,815
Other operating grants	165,280,389	86,797,960	92,126,476	100,286,505	76,243,545
<b>TOTAL OPERATING REVENUE</b>	<b>3,233,471,043</b>	<b>2,751,170,657</b>	<b>2,273,333,741</b>	<b>1,939,722,270</b>	<b>1,591,861,041</b>
Capital grants (MIG)	144,227,937	122,112,654	98,805,446	-	96,275,673
Interest	37,669,136	50,278,298	83,851,104	39,308,894	34,773,795
Other non-operating revenue	140,621,007	142,140,718	140,497,782	296,146,441	180,801,683
<b>TOTAL ALL REVENUE SOURCES</b>	<b>3,555,989,123</b>	<b>3,065,702,327.00</b>	<b>2,596,488,073.00</b>	<b>2,275,177,605</b>	<b>1,903,712,192</b>
<b>ANNUAL CHANGE (%)</b>					
Property and other taxes	13.47	26.61	-6.52	11.75	
Service charges	17.30	20.48	21.23	21.70	
Equitable share	8.22	25.88	29.04	29.40	
Other operating grants	90.42	-5.78	-8.14	31.53	
<b>TOTAL OPERATING REVENUE</b>	<b>17.53</b>	<b>21.02</b>	<b>17.20</b>	<b>21.85</b>	
Capital grants (MIG)	18.11	23.59	-	-100.00	
Interest	-25.08	-40.04	113.31	13.04	

Items	2012	2011	2010	2009	2008
Other non-operating revenue	-1.07	1.17	-52.56	63.80	
<b>TOTAL ALL REVENUE SOURCES</b>	15.99	18.07	14.12	19.51	
<b>TOTAL ALL REVENUE SOURCES</b>	3,555,989,123.00	3,065,702,327.00	2,596,488,073.00	2,275,177,605.00	1,903,712,192.00
<b>SHARE OF TOTAL REVENUE (%)</b>					
Property and other taxes	9.90	10.12	9.44	11.52	12.32
Service charges	61.20	60.52	59.31	55.83	54.83
Equitable share	15.18	16.27	15.26	13.50	12.47
Other operating grants	4.65	2.83	3.55	4.41	4.00
Capital grants (MIG)	4.06	3.98	3.81	-	5.06
Interest	1.06	1.64	3.23	1.73	1.83
Other non-operating revenue	3.95	4.64	5.41	13.02	9.50
<b>TOTAL ALL REVENUE SOURCES</b>	100.00	100.00	100.00	100.00	100.00

**Annexure E: Services charge income for Emfuleni, 2008 – 2012**

Items	2012 (Rand)	2011 (Rand)	2010 (Rand)	2009 (Rand)	2008 (Rand)
Service charges	2,176,382,626.00	1,855,360,142.00	1,539,956,149.00	1,270,288,932.00	1,043,782,202.00
Water revenues	492,337,050.00	420,482,491.00	364,510,415.00	308,958,778.00	275,645,957.00
Electricity	1,390,378,935.00	1,163,243,011.00	924,376,574.00	727,808,934.00	570,067,249.00
Sewerage revenues	197,320,365.00	182,001,870.00	167,871,445.00	157,342,103.00	132,082,797.00
Cleaning revenues	96,346,276.00	89,632,770.00	83,197,715.00	76,179,117.00	65,986,199.00
<b>Percentage contribution</b>					
Water revenues	22.6	22.7	23.7	24.3	26.4
Electricity	63.9	62.7	60.0	57.3	54.6
Sewerage revenues	9.1	9.8	10.9	12.4	12.7
Cleaning revenues	4.4	4.8	5.4	6.0	6.3
TOTAL %	100.0	100.0	100.0	100.0	100.0

### Annexure F: Overview of municipal expenditure in Emfuleni, 2008 – 2012

Expenditure Item	2012	2011	2010	2009	2008
Employee costs	722,713,867	643,426,687	541,489,073	445,994,440	386,557,110
Remuneration of councillors	25,133,151	22,931,137	21,637,513	20,149,859	18,298,598
Depreciation and amortisation	732,772,994	719,116,393	120,858,066	97,085,156	85,056,273
Bad debts	314,129,108	329,956,165	416,087,060	679,766,212	129,678,039
R & M	120,158,199	121,213,246	175,154,909	115,563,935	78,478,179
Finance cost	19,106,887	33,519,487	30,823,934	26,265,074	28,533,495
Bulk purchases	1,574,330,647	1,266,006,636	994,917,583	779,473,403	638,550,191
Contract services	83,289,231	47,257,711	59,732,289	40,115,703	32,956,753
Grants and subsidies paid	18,239,072	5,727,320	13,312,322	18,423,868	2,065,458
Impairment loss / reversal of impairments	4,499,254	224,649	-	-	-
Loss of disposable assets	-	2,956,466	-	-	-
General expenses	429,313,778	363,485,442	270,575,615	313,711,679	238,476,827
Total expenditure	4,043,686,188	3,555,821,339	2,644,588,364	2,536,549,329	1,638,650,923
Deficit	487,125,607	379,421,601	45,209,828	261,371,724	265,061,269
<b>PERCENTAGE</b>					
Employee costs	17.9	18.1	20.5	17.6	23.6
Remuneration of councillors	0.6	0.6	0.8	0.8	1.1
Depreciation and amortisation	18.1	20.2	4.6	3.8	5.2
Bad debts	7.8	9.3	15.7	26.8	7.9
R & M	3.0	3.4	6.6	4.6	4.8
Finance cost	0.5	0.9	1.2	1.0	1.7
Bulk purchases	38.9	35.6	37.6	30.7	39.0

<b>Expenditure Item</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Contract services	2.1	1.3	2.3	1.6	2.0
Grants and subsidies paid	0.5	0.2	0.5	0.7	0.1
Impairment loss / reversal of impairments	0.1	0.0	0.0	0.0	0.0
Loss of disposable assets	0.0	0.1	0.0	0.0	0.0
General expenses	10.6	10.2	10.2	12.4	14.6
<b>Total expenditure</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Deficit as % of expenditure	12.0	10.7	1.7	10.3	16.2
<b>PERCENTAGE CHANGE</b>					
Employee costs	12.3	18.8	21.4	15.4	
Remuneration of councillors	9.6	6.0	7.4	10.1	
Depreciation and amortisation	1.9	495.0	24.5	14.1	
Bad debts	-4.8	-20.7	-38.8	424.2	
R & M	-0.9	-30.8	51.6	47.3	
Finance cost	-43.0	8.7	17.4	-8.0	
Bulk purchases	24.4	27.2	27.6	22.1	
Contract services	76.2	-20.9	48.9	21.7	
Grants and subsidies paid	218.5	-57.0	-27.7	792.0	
Impairment loss / reversal of impairments	1902.8				
Loss of disposable assets	-100.0				
General expenses	18.1	34.3	-13.8	31.5	
<b>Total expenditure</b>	<b>13.7</b>	<b>34.5</b>	<b>4.3</b>	<b>54.8</b>	
Deficit as % of expenditure	28.4	739.2	-82.7	-1.4	