merSETA

MANUFACTURING, ENGINEERING AND RELATED SERVICES SETA

REGIONAL SECTOR SKILLS PLAN

KwaZulu-Natal Region

October, 2013

Regional Sector Skills Plan for KwaZulu-Natal

Prepared for

Manufacturing, Engineering and Related Services SETA (merSETA)

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FOREWORD

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ABBREVIATIONS AND ACRONYMS

AATP	Accelerated Artisan Training Program
Asgi-SA	Accelerated and Shared Growth Initiative for SA
BER	Bureau of Economic Research
CETEMF	capital equipment, transport equipment, metal fabrication
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
DoL	Department of Labour

dti	Department of Trade and Industry
EC	Eastern Cape
FET	Further Education & Training
FS	Free State
GDP	Gross Domestic Product
GDPR	Gross Domestic Product per Region
GET	General Education & Training
GP	Gauteng Province
GVA	Gross Value Added
GWM&E	Government-Wide Monitoring and Evaluation
HET	Higher Education & Training
HRDS	Human Resources Development Strategy
IDC	Industrial Development Corporation
IDS	Industrial Development Strategy
IDZ	Industrial Development Zone
IPAP	Industrial Policy Action Plan
KZN	KwaZulu-Natal
LP	Limpopo Province
merSETA	Manufacturing, Engineering and Related Services Sector Education and Training Authority
MP	Mpumalanga Province
NAAMSA	National Automotive Association of South Africa
NC	Northern Cape Province
NIPF	National Industrial Policy Framework
NGP	New Growth Path
NMBLP	Nelson Mandela Bay Logistics Park
NSC	National School Certificate
NSDS	National Skills Development Strategy
NSF	National Skills Fund
NW	North West
OEM	Original Equipment Manufacturer
PERO	Provincial Economic Review and Outlook
PGDP	Provincial Growth and Development Plan
QLFS	Quarterly Labour Force Survey
RSSP	Regional Skills Sector Plan
SDA	Skills Development Act
SDI	Spatial Development Initiatives
SERO	Socio-Economic Review and Outlook
SETA	Sector Education & Training Agency
SEZ	Special Economic Zone
SIC	Standard Industrial Classification
SSP	Skills Sector Plan
StatsSA	Statistics South Africa
VWSA	Volkswagen South Africa
WC	Western Cape

W&RSETA	Wholesale and Retail SETA
WSPs	Workplace Skills Plans

EXECUTIVE SUMMARY

1. Introduction

The Manufacturing, Engineering and Related Services Education and Training Authority (merSETA) was established through the Skills Development Act, (Act 97 of 1998). The merSETA facilitates skills development in the following five sub-sectors (or chambers); Metal, Plastics, Auto (including only the seven local assemblers of new vehicles), Motor (including automotive components manufacturers and the motor retail and service subsector) and New Tyre.

This Regional Sector Skills Plan (RSSP) is aimed at unpacking the regional specificity of the merSETA subsectors. The objectives of this RSSP is to identify and map key features, trends, forecasts and legislative initiatives at the regional level regarding skills development. This RSSP provides valuable insight into regional and local developments in the sector and conectss to skills development planning. To this end, the RSSP presents a regional socio-economic analysis, profiles regional companies, explores the labour supply and demand imperatives and offers a regional scarce and priority skills analysis.

2. Research Methodology

The research methodology used for this Regional Sector Skills Plan (RSSP) included both primary research and secondary research which involved both quantitative and qualitative research methods. The documentary and literature review covered provincial Growth and Employment Development Strategies (GEDSs), Economic Review and Outlook (PERO), Socio-Economic Review and Outlook (SERO) and these highlight the performance of the provincial economy and the social changes occurring in each province.

Some of the main data sources are Stats SA, SARB, DHET, DoL, BER, SARB, NAAMSA, and Quantec. The research also benefited from previous merSETA SSPs and Workplace Skills Plans (WSPs) data. Furthermore, the demand projections are based on the merSETA Sector Skills Plan 2012/13 – 2017/2018 national estimations, as per the econometric modelling performed by EcoQuant. Based on the distribution of manufacturing employment per province for Quarter 1 of 2013 the projections in the national SSP were proportioned to give a regional outlook.

The research study was designed to be as interactive as possible with the merSETA Regional Committees which have representatives from all chambers, labour and employers' associations. At the inception of the project the research team attended the Regional Committee meetings to introduce the project, initiate task teams and outline the objectives. The primary research aspect of the study involved in-depth interviews with employer representatives, labour union

representatives, FET colleges, and provincial government representatives. The majority of interviews were conducted face-to-face and some were done telephonically.

Information obtained from the primary research was used extensively to determine:

- Factors affecting the skills development in the region;
- Scarce and priority skills; and
- Implementation strategies and recommendations to address regional priorities.

3. Profile of merSETA Sector in the Region

The province of KwaZulu-Natal (KZN) constitutes 7.7% of South Africa's land area and the second most populous province in the country with approximately 19.8% of the population. KZN's population has grown by 7% since 2001 where it was 9.5 million to 10.3 million in 2011. According to Stats SA 2011 Census results 21% of the population of KZN (aged 15 and above) had no education or the highest level of education was less than grade 7 which is slightly higher than the national average of 19.1%. Unemployment is quite high, the Q1 2013 Quarterly Labour Force puts KZN's unemployment rate at 21.1% which is lower than the national rate of 25.2%. The KZN Provincial Growth and Development Strategy (PGDS) states that 54% of the population in KZN lives in rural areas.

KZN is the second largest (15.7%) contributor to the nation's economy after Gauteng (34.5%). For 2011, KZN's contribution to the agriculture, forestry and fishing sector was the largest (26.8%) in the country. The province made the second largest (21.6%) contribution to the nation's manufacturing GDP after Gauteng (40.5%). The eThekwini Municipality dominates the regional economy and contributes more than 50% to the provincial GDP. The manufacturing sector in KZN is crucial to the province and employs about 15% of the workforce. Petroleum & chemicals, and metals, machinery & equipment subsectors contributed the most to KZN's manufacturing GVA, 23% and 19% respectively.

Nationally, the merSETA has 53 150 companies in its database. Its biggest subsector is motor with 18,729 companies followed by metal (18,381), unknown (13,084), plastics (2,632), auto (256) and lastly new tyre (28).The biggest chambers in KZN in terms of number of companies are motor (37%), metal (36%) and plastics (5%). Below is the summary of the merSETA subsectors in the region:

i. *Metal subsector:* the subsector is highly concentrated in Gauteng and 15% (2776) of the metal chamber companies are in KZN.

ii. *Automotive and motor retail subsector:* One of the seven OEMs, Toyota is based in Durban. 15% of the companies in the Motor chamber are located in KZN.

iii. *New tyre subsector:* 25% of the companies in the New Tyre Chamber are in KZN. One of the four tyre manufacturers, Apollo Tyres has operating facilities in KZN.

iv. *Plastics subsector:* According to the merSETA database the plastics chamber has 2632 companies and 412 are from KZN which is 15.65% of the total. KwaZulu-Natal provides nearly a third of the country's plastics requirements[1].

In a bid to attract investment into the region, the government is supporting the establishment of Industrial Development Zones (IDZs) in the province and various Strategic Integrated Projects (SIPs) geared to grow the economy.

4. Major Policy Drivers in the Region

4.1 National Programmes

A. *New Growth Plan (NGP) and National Development Plan (NDP)*

The two documents position SA as a 'developmental state' and give the government an important role in the development of the economy, especially employment creation. The policy focus is to increase labour-absorbing activities, promote economic growth, and equity (which is to be measured by decreasing inequality and poverty). The targeted 'job-drivers' are the labour absorbing sectors such as mining, agriculture, manufacturing and services. Some of the SETA related specific targets in the NGP include:

- at least 30 000 additional engineers by 2014,
- at least 50 000 additional artisans by 2015,
- improve skills in every job and target 1,2 million workers for certified on-the-job skills improvement programmes annually from 2013;
- expand enrolment at FET colleges, targeting a million students in FET colleges by 2014; and
- Create 250 000 jobs a year in infrastructure (energy, transport, water, communications) and housing through 2015.

B. *National Industrial Policy Framework (NIPF) and Industrial Policy Action Plan (IPAP)*

National Industrial Policy Framework (NIPF) sets out government's broad approach to industrialisation while IPAP 2 acknowledges the important role for sector-specific training programmes and skills facilitation that emerge directly from industry demands in relation to detailed Customised Sector Programmes. The DTI commits to working with the Department of Higher Education and Training (DHET) to introduce the necessary window

[1] www.kzntopbusiness.co.za/site/manufacturing

within the SETA and NSF system for new Skills Centres based on the needs of IPAP sector strategies.

C. *Metal Customised Sector Plan (CSP)*

The strategic vision of the plan is that "by 2014, SA will have a globally competitive metal sector, optimally utilising the comparative advantages of abundant mineral resources, skilled labour force and world-class technologies to produce and market high value-added products in the prioritised industries." Programmes in the plan include the promotion of local metal beneficiation, maximising local content through backward linkages, and upgrading production capabilities in downstream industries.

D. *Industrial Development Corporation (IDC) Jobs Scheme*

In 2011 the IDC launched a R10 billion scheme to tackle the country's chronic unemployment problem. The scheme was aligned with the government's New Growth Path and the Industrial Policy Action Plan (IPAP2). Funding would be available to entrepreneurs across the IDC's mandated sectors over a five year period. The scheme aims to create an additional 40 000 to 50 000 employment opportunities. The sectors geared to benefit include the green economy, manufacturing, the mining value chain, agriculture and infrastructure.

E. *National Foundry Technology Network (NFTN)*

NFTN is the culmination of a significant government and industry association-led effort to develop a globally competitive South African foundry industry through appropriate skills training, technology transfer, and diffusion of state-of-the-art technologies. Its main outcome is to reduce import leakage, increase investments in key manufacturing processes and activities, employment and exportability.

F. *Automotive Production and Development Programme (APDP)*

The programme aims to increase local production to 1.2 million vehicles by 2020. It provides assistance to the component manufactures so that they can provide cost competitive components to the Original Equipment Manufacturers (OEMs) and to international markets via exports. The APDP offers an incentive to up-skill employees and to invest technology, research and development.

G. *Special Economic Zones (SEZs) and Industrial Development Zones (IDZs)*

The KwaZulu-Natal province has the Richards Bay Industrial Development Zone (RBIDZ) which was incorporated in 2002. Its aim is to attract export oriented manufacturing investment, value-adding and productivity improvements.

H. National Infrastructure Plan (NIP) and Strategic Integrated Projects (SIPs)

National Infrastructure Plan (NIP) is aimed at transforming the economic landscape, creating significant numbers of new jobs, and strengthening the delivery of basic services in South Africa. Some of this investment is earmarked for the construction of ports, roads, railway systems, electricity plants, hospitals, schools and dams with the ultimate aim of contributing to faster economic growth. Under the plan, 18 strategic integrated projects (SIPs) were identified. The total costs of the 18 SIPs is estimated at about R4-trillion over the next 15 years.

The SIP likely to have the most impact in the KZN region is SIP 2: Durban-Free State-Gauteng logistics and industrial corridor. The NIP estimates that 135 000 jobs will be created in the construction of projects in the corridor. Once the projects are completed a further 85 000 jobs are expected to be created by those businesses that use the new facilities.

4.2. Regional Economic Growth and Development Strategies

A. KwaZulu-Natal Provincial Growth and Development Strategy (PGDS)

The PGDS provides KwaZulu-Natal with a strategic framework for accelerating and sharing economic growth through catalytic and developmental interventions. Focus of the strategy incorporates the provision of infrastructure and services, restoration of natural resources, public sector leadership and attention placed on delivery and accountability. The aim of the PGDS is to attract and instil confidence in potential investors who can assist in addressing provincial economic development imperatives.

B. KZN DEDT Strategic Plan 2013/14 -2018

The strategic plan for 2013/14-2018 was cognisant of the global economic conditions, the national economy and the constraints faced by the KZN economy. The key economic interventions planned include: regional intervention, international competitiveness, market access, private public partnerships, industrial development, and infrastructure development.

5. Regional Scarce and Critical Skills

The regional scarce skills list (below) was developed through review of the merSETA national SSP (2012/2013); current chamber projects; in-depth interviews with labour representatives, employer organisations, provincial government officials and other stakeholders; and discussed through the regional committee and regional SSP task team workshops.

Chamber	Scarce Skills	Priority Skills
Plastics Sector	Plastics Manufacturing Machine Setter and Minder	Plastics Manufacturing Machine Setter and Minder
	Rubber, Plastic and Paper Products Machine Operators	
	Rubber Products Machine Operators	
	Rubber Production Machine Operator	
	Plastic Cable making Machine Operator	
	Plastics Fabricator or Welder	
	Plastics Production Machine Operator (General)	
	Production / Operations Manager (Manufacturing)	
	Industrial Engineer	
Metal Sector	Welders	
	Moulders	
	Boilermakers	
	Patternmakers	
	Toolmaker	
	Fitter and Turner	
	Electrician	
	Millwright	
	Manufacturing Machine Setter and Minder	
Motor and Auto Industry	Motor mechanics	
	Automotive machinist	
	Diesel Mechanic	
	Spray-painters	Spray-painters

6. Regional Strategic Plan

6.1. Strategic Issues Arising from this RSSP

i. *Demand Side Analysis*

- IPAP aims to create an additional 5 million jobs in the manufacturing sector over the period 2010 to 2020. The total new jobs anticipated for the automotive and plastics sector are 160,000 and 22,754 respectively.
- merSETA has set itself the national target of having qualified 20 000 artisans over the period 2011/12 to 2015/16.
- SIP 2: Durban-Free State-Gauteng logistics and industrial corridor is expected to create 135 000 jobs in the construction of projects in the corridor.
- The Provincial Job Strategy estimates that the province will need an additional 30,000 people which need artisan placements, learnerships, post-school training and educational opportunities.

From the merSETA national SSP (2012/2013), it can be deduced that the following total positions need to be filled in the KwaZulu-Natal Province.

Occupational Group	2014	2015	2016	2017	2018
Managers	573	580	582	586	590
Professionals	349	351	355	355	357
Technicians and Associate Professionals	569	571	575	580	584
Clerical Support Workers	185	185	185	187	187
Service and Sales Workers	418	418	422	424	426
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	130	130	132	134	134
Plant and Machine Operators and Assemblers	989	1 000	1 008	1 014	1 025
Elementary Occupations	756	760	767	773	777
Total	3 969	3 994	4 026	4 053	4 080

This all adds up to a very substantial number of people that will require training for the sector over the next ten years should national policies support sector growth to the extent that they are planning to.

ii. *Supply Side Analysis*

Supply side analysis reveals that:

- On average, a total of 2 632 first degree graduates in science and engineering related subjects are released into the market by SA higher education and training institutions (HET).

- Those who graduate with diplomas and therefore are available to train as engineering technicians in the relevant engineering disciplines average at 2 769 per annum.
- KwaZulu-Natal has two universities; University of KwaZulu-Natal (UKZN) and University of Zululand and two universities of technology; Mangosuthu University of Technology and Durban University of Technology
  - University of KwaZulu-Natal had the greatest number (14 617) of SET students in 2011; followed by Durban University of Technology (11 675) and Mangosuthu University of Technology (5 863
- The KwaZulu-Natal has 9 government FET Colleges which offer National Certificate Vocational (NCV) and the Nated (N-courses) programmes
- The province performed below the national pass rates for Mathematics and Physical Sciences, it was the lowest pass rate in the country in 2012. Only 26.6% qualified for a bachelor's degree.

6.2. Regional Strategic Plan Linked to merSETA Priorities

The RSSP aimed to identify interventions which the merSETA regional and national offices can implement in line with the National Skills Development Strategy III Priorities. Recommendations and input was obtained from stakeholders in the region.

NSDS III Priorities	merSETA Priorities	Regional Strategic Plan
Priority 1: develop a labour market intelligence system and facilitate sector specific research initiatives	– To effect best practice in line with King III, – Establish capacity for research and skills planning, – Implement partnerships for credible skills planning, – Intermediate skills needs are identified and addressed in all merSETA sub-sectors, – High-level national scarce skills need to be identified and addressed, – Relevant R&D and innovation capacity is developed and implemented, – To implement a research programme to identify current and future interventions to support productivity improvements.	Short to Medium Term Priorities – Develop a database of all merSETA trained artisans that is accessible to employers – Collaboration with the Department of labour to ensure the (Employment Services of South Africa) ESSA is working effectively for the sector
Priority 2: promote artisan and sector-specific priority skills	– A total of 20 000 artisans qualified over the five-year period	Short to Medium Term Priorities – Encourage employers to: o Take up more learners for experiential learning, o Retain trained artisans to help them get experience. o Release employees to get up-skilled with artisans standing in to reduce

			potential production downtime – Address the legislative and financial stumbling blocks that hinder employers from taking on apprentices and providing workshop experience to FET students
Priority 3: establish and facilitate strategic partnerships	– To ensure sector participation in the revision and development of the relevant curricula and qualifications offered by FET colleges – Establish partnerships that result in increased capacity to meet industry needs throughout the country – To enter into partnerships with organisations involved in youth skills development. – To establish cross-sectoral partnership projects to address skills needs in support of local economic development – Develop mechanisms and models to support skills development in the community-based- and small-enterprise sector through a range of partnerships, programmes, grants and incentives, – Identify and establish partnerships with international-, national- and provincial career-resources agencies	i.	Short to Medium Term Priorities – Encourage partnerships and collaboration between employers and FETs so that FETs can have: o Modern training equipment o Curriculum review, development and upgrade o Qualified lecturers with industry know-how, and o More learners being taken up by industry for experiential learning
		ii.	Long term – Greater cohesion and communication in all spheres of government is necessary. This will ensure that the intake at supply institutions (HEI) is informed by priorities of the nation.
Priority 4: increase the flow of appropriately skilled new entrants into the system	– Implement mechanisms aimed at bridging the gap between industry and academic provision – To contribute towards the support and encouragement of initiatives for young learners and educators to achieve maths, science and technology results for entry into the sector – Establish a merSETA career gateway innovation network to market and communicate career pathways and opportunities – To promote comprehensive career development to support sector growth.		Short to Medium Term Priorities – Develop and strengthen partnership with GET schools to increase pass rates especially in Maths, English and Science – Intensify career guidance, orientation and awareness in schools regarding careers in the manufacturing, engineering and related services industry – The merSETA Mobile Career Bus will be going around the province to ensure informed choices are made from grade 8. – Provide correct and relevant information to career advisors at schools – Forging stronger partnerships with HET institutions – Incorporate soft skills training to ensure learners and artisans develop holistically i.e. they can be able to take on supervisory and management roles – Use of trainers and facilitators who have industry experience important i.e. use qualified artisans with experience in the skilling of learners – Refresher courses and up-skilling of trainers and facilitators required to ensure learners get up to date knowledge – Concerted efforts must be made to ensure that there an oversupply of particular skills

			in the region is not created – Mechanisms must be established to ensure artisans who have obtained training but are currently unemployed can be up skilled to plug the skills gaps in the region – Artisans must be equipped with a core skills set which enable them to be flexible and adaptable to learning other trades in the event that there is a shortage of employment opportunities for them – Training institutions must be quick to adapt to changes in the industry requirements – Expose learners at GET level to manufacturing, engineering and related services in order to stimulate interest in the trades
Priority 5: develop the skills of the existing workforce	– To ensure sound financial accountability – Capacity building of stakeholders – To implement skills development initiatives in the workplace through the effective utilisation of the levy grants system – Intermediate skills needs are identified and addressed in all merSETA sub-sectors, – High-level national scarce skills need to be identified and addressed. – To address low levels of literacy and numeracy amongst workers and new entrants – Identify and implement sector projects to address specific skills gaps and skills imbalances to contribute towards transforming the workplace	i.	Short to Medium Term Priorities – To address the lack of fundamental basics bridging courses for unskilled, possibly through ABET programmes must be implemented – Address the growing demand for individuals who have practical and theoretical experience to function within the supervisory roles in the sector – Constant up-skilling of employees to ensure continuous professional development and career progression

In order for the RSSP to contribute to the skills development needs of KwaZulu-Natal, the identified regional strategic plan needs to be implemented. Although there are some specific issues raised in the KwaZulu-Natal task team and interviews with regional stakeholders, most of the inputs mirror those given in other regions.

1. INTRODUCTION AND BACKGROUND

1.1. Introduction

The Manufacturing, Engineering and Related Services Education and Training Authority (merSETA) was established through the Skills Development Act, (Act 97 of 1998). The merSETA facilitates skills development in the following five sub-sectors (or chambers); Metal, Plastics, Auto (including only the seven local assemblers of new vehicles), Motor (including automotive components manufacturers and the motor retail and service subsector), and New Tyre.

The merSETA, sub-sectors are demarcated on the basis of the three-digit Standard Industrial Classification (SIC) codes that are used in capturing the data for the National Accounts, these activities cover: basic iron & steel, non-ferrous metals, and metals products manufacturing (SIC codes 351 to 355); machinery manufacture (SIC codes 356 to 357); rubber products manufacturing (SIC code 337); plastics products manufacturing (SIC code 338); motor vehicles, parts and accessories manufacturing (SIC codes 381 to 383); and sale, maintenance and repair of motor vehicles, and fuel station operations (SIC codes 631 to 635). It is important to note that revised SETA landscape associated with NSDS III (and thus applicable from 1 April 2011 to 31March 2016) led to the transfer of petrol retail subsector from the merSETA to the Wholesale and Retail SETA (W&RSETA)[2]. However, it is not possible at this stage to separate fuel station operations from the data for the rest of the group.

The merSETA National Sector Skills Plan (SSP 2012/13-2017/18) notes that geographically, the merSETA sector is clustered in four main regions: Gauteng (including sections of the North West Province, which has the most significant concentration of firms and employment); Western Cape (mostly Cape Town and surrounds); the central Eastern Cape coast including Port Elizabeth and East London; and the Durban/Pietermaritzburg region of KwaZulu-Natal. Regardless of domestic location, a key characteristic of firms in almost all of the merSETA's subsectors is their high level of global integration. This factor impacts at many levels, including the adoption of technology and growth in production volumes and, through this, on employment levels and skills needs.

This Regional Sector Skills Plan (RSSP) is aimed at unpacking the regional specificity of the merSETA subsectors. To the best of our knowledge, merSETA is the first SETA to develop region or provincial specific SSPs.

[2]Dr Blade Nzimande (2010). *Press briefing the new SETA landscape for the period April 2011 till March 2016,* 09 November 2010. Online: http://www.dhet.gov.za/portals/0/documents/SETA%20Landscape.pdf (Accessed on 10 January 2013).

1.2. Background

SETAs are expected to facilitate the delivery of sector specific skills interventions that help achieve the goals of the NSDS III, address employer demand and deliver results. SETAs should be the authority on labour market intelligence and ensure that skills needs and strategies to address these needs are set out clearly in SSP. Thus, SETAs must be able to:

- coordinate the skills needs of the employers; both levy-paying and non-levy paying in their respective sectors,
- undertake sector-based initiatives, and
- Collaborate on cross-sector skills areas to enable collective impact.

Developing SSPs is core to the SETAs' mandate. The SSPs must:

- outline current and future learning and qualifications needs of workers and their employers,
- develop interventions that are agreed with stakeholders and can improve the match between education and training supply and demand, and
- Outline the current and projected needs of the sector and sector employers.

The SSPs are also a critical instrument for building a connected labour market information system across all the sectors, which is an important evidence base for skills development and its impact.

The objective of developing a Regional Sector Skills Plan (RSSP) is to identify and map key features, trends, forecasts and legislative initiatives at the regional level regarding skills development. This RSSP provides valuable insight into the KwaZulu-Natal Province and local developments in the sector and links to skills development planning. To achieve this, the RSSP undertakes a regional socio-economic analysis, profiles regional companies, explores the labour supply and demand imperatives and offers regional scarce and critical skills analysis.

1.3. Research Methodology

The research methodology used for this Regional Sector Skills Plan (RSSP) included both primary research and secondary research which involved both quantitative and qualitative research methods.

- Secondary (desktop) research was conducted on each region's economic, social and development status and strategies. The regional socio-economic analysis was done by doing a literature review of existing data and research papers. MerSETA has

done a range of research projects, these where reviewed and helped in understanding the chambers that make up merSETA.

- Research conducted by government departments, national research institutions, industry publications and the media were used extensively in the report. Provincial governments publish annual reports such as the Provincial Economic Review and Outlook (PERO) and the Socio-Economic Review and Outlook (SERO) and these highlight the performance of the provincial economy and the social changes occurring in each province.
- The merSETA workplace skills plans (WSPs) were analysed to provide data on sector employment by chamber, demographic profile of employees, occupations by province. Although the database provided was only for 8% of the companies on merSETA's database it represents 35% of levy-paying companies. The WSPs represent the majority of the employees in the sector because there is a direct relationship between levies paid and employment. The data was assumed to be a representative sample of the merSETA sector and was analysed as is.
- Regional and municipal economic data was obtained from Quantec and this was used extensively in the report. National Accounts data is not captured according to the merSETA chambers; Quantec data that most closely resembled the merSETA chambers was used.
- National data sources and a range of statistical publications by Statistics South Africa (Stats SA), the DHET, the Department of Labour and data from industry associations.
- The demand projections in Chapter 4 were based on the merSETA Sector Skills Plan 2012/13 – 2017/2018 national projections. The demand projections are based on new demand resulting from economic growth and economic creation – as well as for replacement demand that will occur because of mortality, emigration, and the retirement of employees. The employment growth figures used in the model were derived from econometric modelling performed by EcoQuant. The econometric modelling was based on the sectoral demarcations found in the National Accounts data. Based on the distribution of manufacturing employment per province for Quarter 1 of 2013 the projections in the national SSP were proportioned to give a regional outlook. In essence, 35% of manufacturing employment was from Gauteng and 35% of the projected demand was assigned to Gauteng. The customisation was limited as it assumed the distribution of manufacturing employment will remain the same in the foreseeable future.

The research study was designed to be as interactive as possible with the merSETA Regional Committees which have representatives from all chambers, labour and employers. At the

inception of the project the research team attended the Regional Committee meetings to introduce the project, initiate task teams and outline the objectives. The primary research aspect of the study involved in-depth interviews with employer representatives, labour union representatives, FET colleges, and provincial government representatives. Majority of interviews were conducted face-to-face and some were done telephonically. The table below gives the range of engagements conducted in the study and the number of participants:

Table 1: Stakeholder Engagements

Engagement	Number of participants
Introductory Meeting	10
Regional Committee Meeting	15
Task Team	5
In-depth interviews	6

Information obtained from the primary research was used extensively to determine:

- Factors affecting the skills development in the region
- Scarce and priority skills
- Implementation strategies and recommendations to address challenges faced

A draft report was presented at the Regional Committee meeting and further discussions were done to refine the report and formulate region specific strategies. The draft report was put on the merSETA website for two weeks for stakeholder's comments and inputs.

1.3.1. Limitations and Areas for Further Research

Limitations

The research project for regional skills sector plans was initiated in the fourth quarter of 2012 with the base year being 2011. Major statistical data sources used for the report were StatsSA and Quantec. Apart from labour data which is updated quarterly, most of the data still available is up to 2011, hence some figures and tables have 2011 data instead of 2012/13.

The database which was used for the WSP analysis of company employee data for merSETA was not complete. There were 4,800 companies on the database which was provided. Although the total should be around 53,150 the companies which were on the database were said to constitute around 70% of the employment in the merSETA chambers. Analysis of the occupational breakdowns and the age, gender and race analysis must therefore be taken with the above caveat in mind.

Identification of scarce and priority skills via primary research was conducted by engaging with stakeholders from different chambers in the region. Companies within the same chamber (sector) might have different specific skills needs which might get glossed over or overemphasised depending on respondents interviewed. Assent for the final scarce and priority skills lists are given with the need to take the aforementioned into account.

Areas of further research

Research into the readiness of FET colleges in delivering the identified skills required for the region must be conducted to ensure the region is not caught unawares when the skills are required. This current study did not give exact numbers of the people needed to be skilled in a particular areas, further research can be conducted to determine this.

1.4. Policy Context for Skills Planning

Each SETA is required to develop a SSP within the framework of the National Skills Development Strategy (NSDS) as prescribed by the Skills Development Act of 1988, Section 10 as amended (2008). Sector skills planning in South Africa must take into account a wide range of policy imperatives that seek to support inclusive sectoral growth paths that advance economic growth and the social development and transformation agenda. These policies include those that relate directly to skills development, those that focus more directly on economic growth and social development, and those that focus on monitoring and evaluation.

These policies and strategies and are briefly discussed below.

1.4.1. Skills development legislation and strategies

Constitution of the Republic of South Africa

The Bill of Rights, contained in the Constitution of the Republic of South Africa (1996), stipulates that everyone has the right to basic education, including adult basic education and further education, which the State, through reasonable measures, must progressively make available and accessible. The Constitution legitimises the need for quality education and training, human resources development (HRD) and human development (HD) for all South African citizens[3]. As a result, HRD and HD are important items on South Africa's developmental agenda to improve the quality of life for all its citizens.

[3] Republic of South Africa (RSA). (1996). Constitution of the Republic of South Africa Act 108 of 1996. Pretoria: Government Printer. 1996:14.

Human Resources Development Strategy for South Africa (HRDSA II)

The first Human Resource Development Strategy of South Africa (HRDSA) was approved and started to be implemented in 2001. This first National Human Resource Development Strategy (herein referred as HRDSA I) was a national strategic response to HRD challenges, led by both the National Department of Education and the Department of Labour.[4]

According to the Revised Human Resource Development Strategy of South Africa, 2010-2030 (herein referred to as HRDSA II), HRDSA provides an over-arching framework to improve and reinforce alignment, coordination, planning, management, monitoring, evaluation and reporting of all HRD imperatives in collaboration with all social partners, professional bodies and research communities[5].

The HRDSA is a coordinated framework intended to combine key levers of the constituent parts of the HRD System into a coherent strategy[6].Therefore, much of the implementation of the HRDSA's strategic priorities will be resourced and implemented by the constituent parts and national strategies such as the Occupational Learning System, which includes Sector Education and Training Authorities (SETAs), the Further Education and Training (FET) Sector the HRDS(steered by the DPSA), and the Technology and Innovation System of the public service(steered by the Department of Science and Technology)[7].

One of the HRDSA II strategic objectives is to audit and establish a policy framework on the level of planning capacity required in the Skills Development Act (SDA) institutions, namely Department of Labour (now DHET), SETAs, NSA); GET;FET and HET for the optimal implementation of their mandates.

Skills Development Act

The Skills Development Act, 1998 (SDA) and the Skills Development Levies Act, 1999 (SDLA) created an enabling regulatory framework for the development of the skills of the South African workforce. The two Acts, together with the other regulations published in terms of them (and the amendments thereof[8]), constitute a single regulatory structure and deals with funding of skills development and the allocation of grants by SETAs.

The SDA mandates the SETA to, among others:

[4] Republic of South Africa (RSA). (2001). *Human Resource Development Strategy of South Africa*. Pretoria: Government Printer.
[5]Revised HRDSA, 2009:30.Online. Available: http://www.info.gov.za/view/DownloadFileAction?id=117580 (Accessed: 11 January 2013)
[6]Republic of South Africa (RSA). (2009:31-32). *Revised Human Resource Development Strategy of South Africa 2010 - 2030*. Pretoria: Government Printer.
[7] Republic of South Africa (RSA). (2009:31-32). *Revised Human Resource Development Strategy of South Africa 2010 - 2030*. Pretoria: Government Printer.
[8]Skills Development Amendment Act, No. 37 of 2008.

- develop a SSP within the framework of the NSDS,
- implement its SSP,
- liaise with the provincial offices and labour centres of the Department and any education body established under any law regulating education in the Republic to improve information—
    - about [employment] placement opportunities; and
    - between education and [training] skills development providers and the labour market; and
- Liaise with the skills development forums established in each province in such manner and on such issues as may be prescribed;

National Skills Development Strategy (NSDS) III

The National Skills Development Strategy (NSDS) is the overarching strategic guide for skills development and provides SETAs with direction for sector skills planning and implementation that is in line with wider national goals and objectives. The new NSDS III (2011-2015) was launched in January 2011. It draws on lessons learned from NSDS I and II. The key driving force of this strategy is improving the effectiveness and efficiency of the skills development system. It represents an explicit commitment to encouraging the linking of skills development to career paths, career development and promoting sustainable employment and in-work progression. The emphasis is particularly on those who do not have relevant technical skills or adequate reading, writing and numeracy skills to enable them to find employment.

The NSDS III emphasised that developing SSP is core to the SETAs' mandate, and that the SSP must outline current and future learning and qualifications needs of workers and their employers and develop interventions that are agreed with stakeholders and can improve the match between education and training supply and demand - the current and projected needs of the sector and sector employers.[9]

1.4.2. Monitoring and evaluation strategies

The need for a monitoring and evaluation (M&E) system is a constitutional required as per Section 195 of the Constitution of South Africa (Act 108 of 1996)[10], which compels government departments (and other organs of state) to promote efficient, economic and effective use of resources and directs public administration to be developmentally oriented and accountable.

The Policy Framework for Government-Wide Monitoring and Evaluation (GWM&E) System is the overarching policy framework for monitoring and evaluation in the South African Government. It

[9] DHET (2011) *National Skills Development Strategy III*.
[10] As amended: No. 61 of 2001: Constitution of the Republic of South Africa Second Amendment Act, 2001

sketches the policy context for supporting frameworks, such as National Treasury's Framework for *Managing Programme Performance Information* and Statistics South Africa's *South African Statistics Quality Assurance Framework*[11].

1.5. Conclusion

The regional skills sector plan is aimed at assisting merSETA in mapping out strategies to tackle the education, training and development needs within the different provinces. All skills development related interventions have to be aligned with the Skills Development Act and within the framework of the National Skills Development Strategy. South Africa's NSDS provides guidance as to how skills development programs can be formulated and implemented in alignment with national goals and objectives.

[11]The Presidency (2007).Policy framework for the Government-wide Monitoring and Evaluation Systems Pretoria, South Africa.

2. ECONOMIC ANALYSIS OF KWAZULU-NATAL PROVINCE

2.1. Socio-economic profile

According to Census 2011 results, South Africa had a population of 51.7 million people in 2011. The provinces of Gauteng and KwaZulu-Natal account for 42% of South Africa's population. KwaZulu-Natal (KZN) is the second most populous with 10.3 million people. The third most populous province is Eastern Cape which accounts for 12.7% of the population and the fourth is Western Cape with 11.3%. The Northern Cape Province has the largest land area (30.5%) but is the least populous with 2.2% of the population.

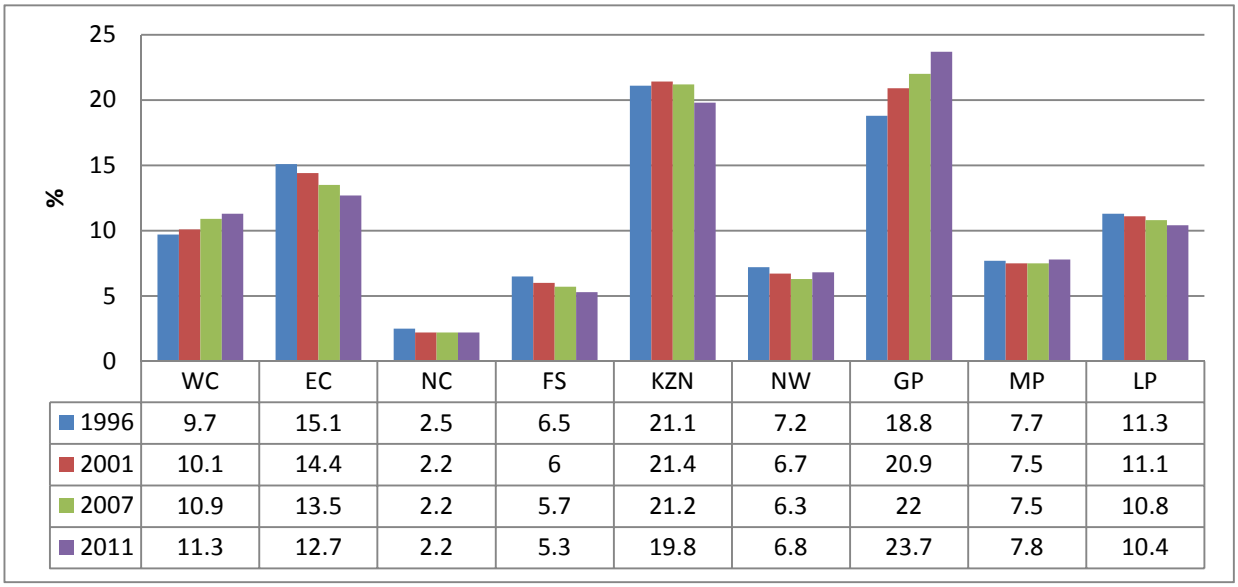
Table 2: Population by province

POPULATION BY PROVINCE 2011		
Province	**Population**	**% of total**
Eastern Cape	6 562 053	12.7%
Free State	2 745 590	5.3%
Gauteng	12 272 263	23.7%
KwaZulu-Natal	10 267 300	19.8%
Limpopo	5 404 868	10.4%
Mpumalanga	4 039 939	7.8%
Northern Cape	1 145 861	2.2%
North West	3 509 953	6.8%
Western Cape	5 822 734	11.3%
TOTAL	**51 770 560**	**100%**

Source: Stats SA, Census 2011

KZN's population has grown by 7% since 2001 where it was 9.5 million to 10.3 million in 2011. Gauteng's population grew by 31% to 12.2 million people by 2011 up from 9.4 million a decade ago. Comparing the three sets of census data, the provincial share of the total population has fallen in the Eastern Cape (from 15.1% in 1996 to 12.7% in 2011). The fastest growing province is the Western Cape, growing by 29% between 2006 and 2011.

Figure 1: Percentage distribution of population by province, 1996-2011



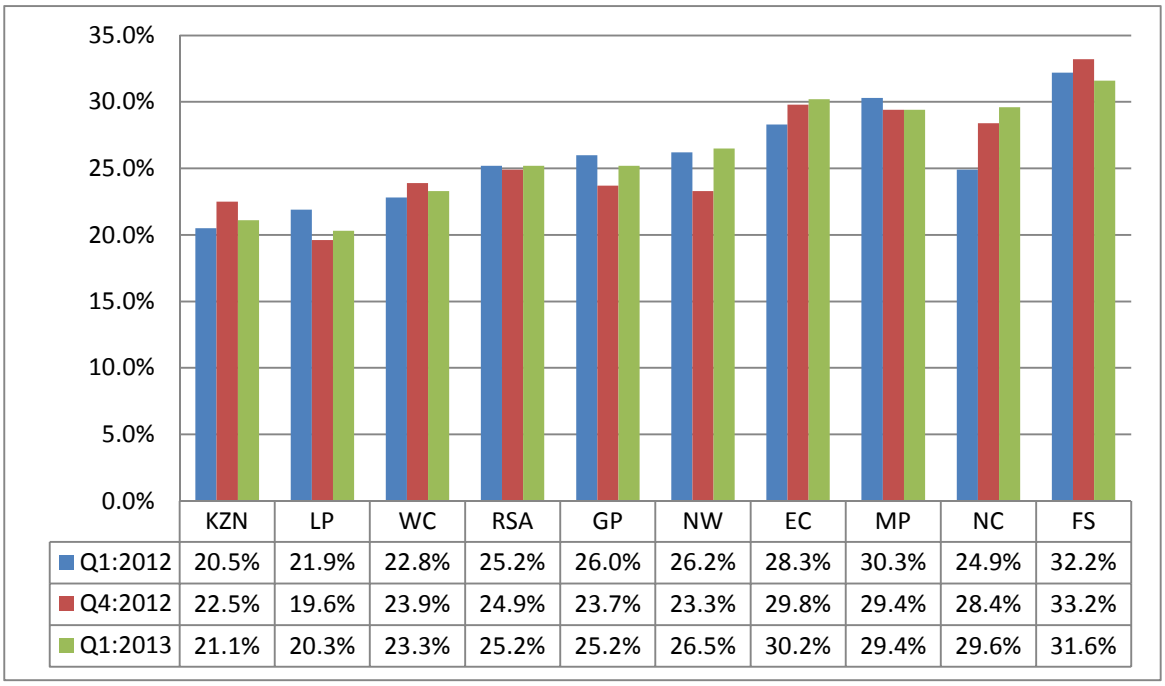
	WC	EC	NC	FS	KZN	NW	GP	MP	LP
1996	9.7	15.1	2.5	6.5	21.1	7.2	18.8	7.7	11.3
2001	10.1	14.4	2.2	6	21.4	6.7	20.9	7.5	11.1
2007	10.9	13.5	2.2	5.7	21.2	6.3	22	7.5	10.8
2011	11.3	12.7	2.2	5.3	19.8	6.8	23.7	7.8	10.4

Source: Stats SA, Census 2011

90% of people living in KZN were born there compared to only 56% of people living in Gauteng in 2011. Gauteng has the highest in-flow migration patterns of all the provinces. Around 1-million people have moved to Gauteng in the past decade, highlighting the flow of people from rural to urban areas.

South Africa has a very high unemployment rate of 25.5% according to the Quarterly Labour force Survey, Quarter 1 2013 report. The figure below shows the unemployment rates for all the provinces and for the nation as whole.

Figure 2: Unemployment rate by province



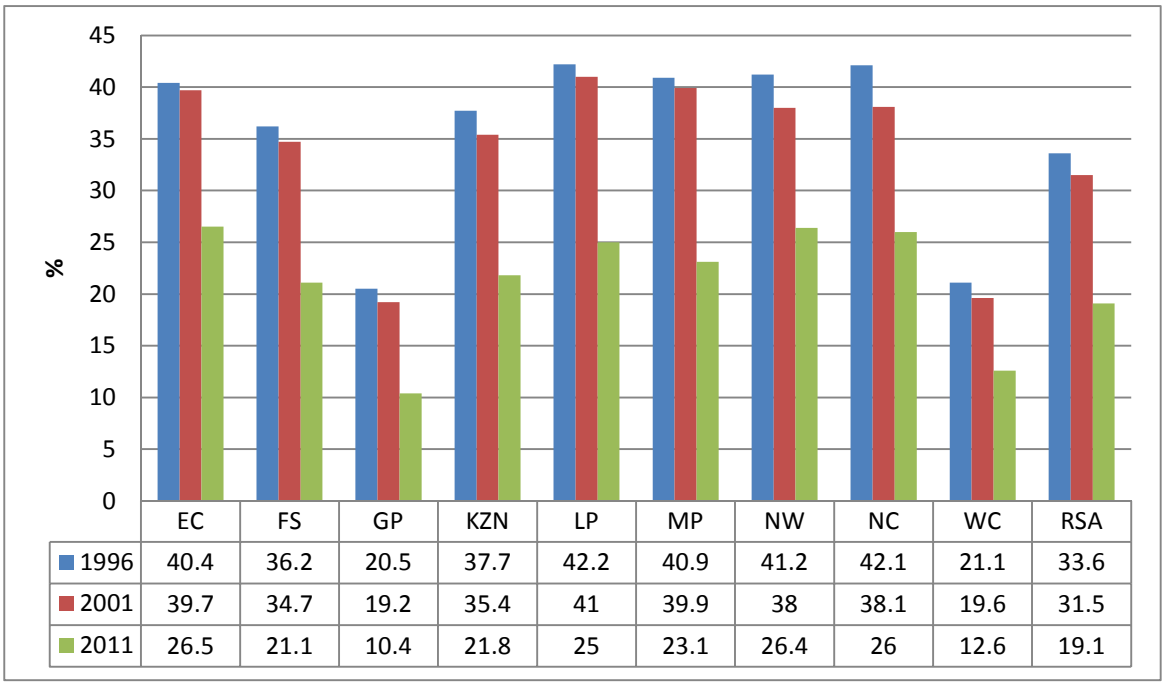
	KZN	LP	WC	RSA	GP	NW	EC	MP	NC	FS
Q1:2012	20.5%	21.9%	22.8%	25.2%	26.0%	26.2%	28.3%	30.3%	24.9%	32.2%
Q4:2012	22.5%	19.6%	23.9%	24.9%	23.7%	23.3%	29.8%	29.4%	28.4%	33.2%
Q1:2013	21.1%	20.3%	23.3%	25.2%	25.2%	26.5%	30.2%	29.4%	29.6%	31.6%

Source: Stats SA Quarterly Labour Force Survey, Q1 2013

As can be seen in the graph above, for Q1 2013 KZN had the second lowest unemployment rate amongst the provinces. Eastern Cape, Mpumalanga, Northern Cape and the Free State province are a cause for concern because for the period under review their unemployment rates have been higher than the national average.

An analysis of those aged 15 years and above with no education or a highest level of education less than Grade 7 shows the provinces of Eastern Cape, North West, and the Northern Cape with the highest percentages.

Figure 3: Percentage of people (>15 years) with no education or less than Grade 7



	EC	FS	GP	KZN	LP	MP	NW	NC	WC	RSA
1996	40.4	36.2	20.5	37.7	42.2	40.9	41.2	42.1	21.1	33.6
2001	39.7	34.7	19.2	35.4	41	39.9	38	38.1	19.6	31.5
2011	26.5	21.1	10.4	21.8	25	23.1	26.4	26	12.6	19.1

Source: Stats SA, Census 2011

In 2011 21.1% of the KZN provincial population (aged 15 and above) had no education or highest level of education less than grade 7, which is slightly higher than the national average of 19.1%. Nationally progress has been made with this percentage decreasing from 33.6% in 1996 to 19.1% in 2011.

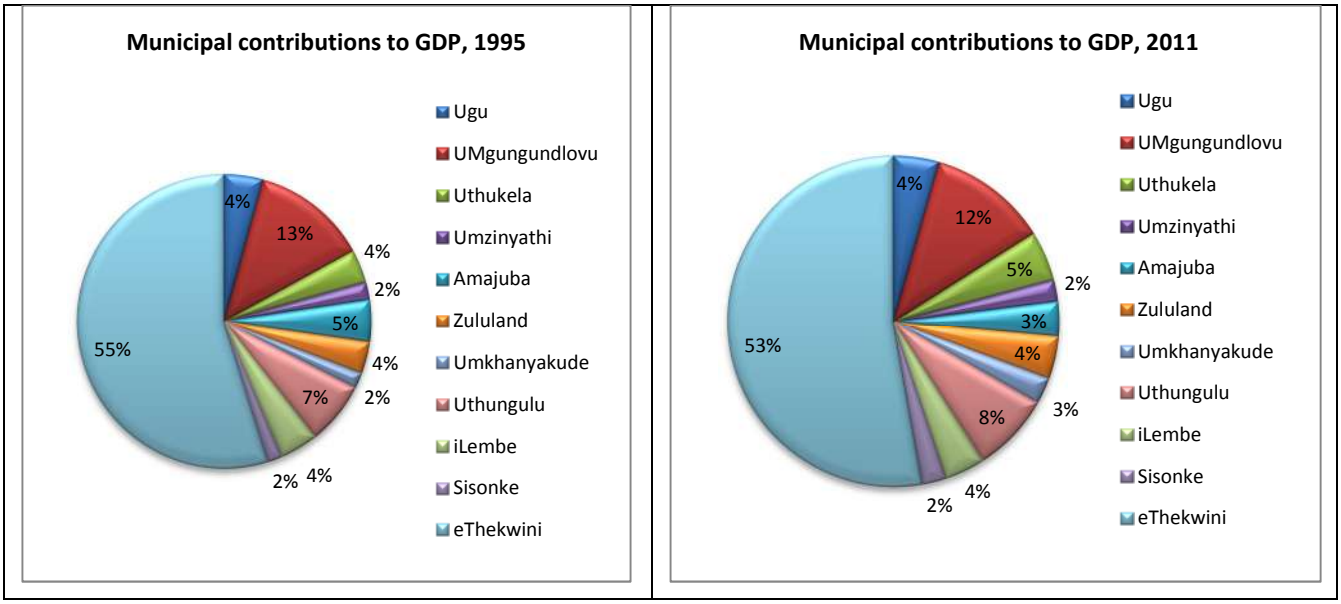
2.2. KwaZulu-Natal's Economy

The province of KZN constitutes 7.7% of South Africa's land area which makes it the country's third smallest province after Gauteng and Mpumalanga. KZN is the second biggest contributor to the country's GDP and one of the country's most popular tourist destinations. The province has several popular coastal holiday resorts, such as Port Shepstone and Umhlanga Rocks. Durban has been described as one of the fastest-growing urban areas in the world. The Durban harbour is the busiest in South Africa and handles over 30 million tons of cargo. The port of Richards Bay, a coal-export harbour, handles 12,000 containers a year.

KwaZulu-Natal has also recently undergone rapid industrialisation, due to its abundant water supply and labour resources. Industries are found at Newcastle, Ladysmith, Dundee, Richards Bay, Durban, Hammarsdale, Richmond, Pietermaritzburg and Mandeni. Newcastle area is well-known for steel production and coal mining. The fertile soil and good climate also make agriculture central to the economy and the province has many sugar-cane plantations and produces subtropical fruit, vegetable, dairy and stock-farming.

The province is divided into eleven districts, eThekwini (Durban and surrounding areas) is a metropolitan municipality and the other ten are district municipalities. EThekwini contributed the most (53%) to the 2011 provincial GDP. The only other municipality to contribute in double digit figures was UMgungundlovu at 12% and the rest of the other (9) municipalities all contributed less than 10%. The contribution to GDP has been dominated by the eThekwini Municipality for decades as it is the centre of economic activity in the province. The figure below shows the municipal contributions to the economy for 1995 and 2011.

Figure 4: Municipal contributions to GDP, 1995 and 2011



Source: Quantec, 2011

The table below breaks down the sectoral composition of KZN's Gross Value Added per Region (GVAR) into the municipalities. This provides an indication of the largest and smallest contributions of the municipalities in the respective sub-sectors.

Table 3: Sectoral composition of KZN economy by municipalities

	Ugu	UMgungundlovu	Uthukela	Umzinyathi	Amajuba	Zululand	Umkhanyakude	Uthungulu	iLembe	Sisonke	eThekwini	Total
Primary Sector												
Agriculture, forestry & fishing	8%	18%	8%	5%	2%	9%	5%	11%	8%	6%	18%	100%
Mining & quarrying	2%	15%	2%	4%	8%	15%	4%	25%	3%	1%	21%	100%
Secondary Sector												
Manufacturing	5%	11%	5%	2%	4%	3%	2%	9%	5%	2%	52%	100%
Electricity, gas & water	5%	13%	7%	2%	5%	4%	2%	7%	2%	2%	52%	100%
Construction	5%	11%	5%	2%	2%	4%	2%	8%	4%	3%	55%	100%
Tertiary Sector												
Wholesale & retail trade	5%	9%	6%	2%	3%	4%	4%	7%	4%	2%	55%	100%
Transport & communication	4%	11%	5%	1%	3%	3%	2%	8%	2%	2%	59%	100%
Finance & business service	4%	11%	4%	1%	3%	2%	1%	6%	4%	2%	61%	100%
Community, social and personal services	4%	12%	4%	3%	3%	4%	4%	8%	3%	3%	52%	100%
General government	4%	15%	5%	3%	4%	7%	4%	6%	3%	3%	46%	100%

Source: Quantec, 2011

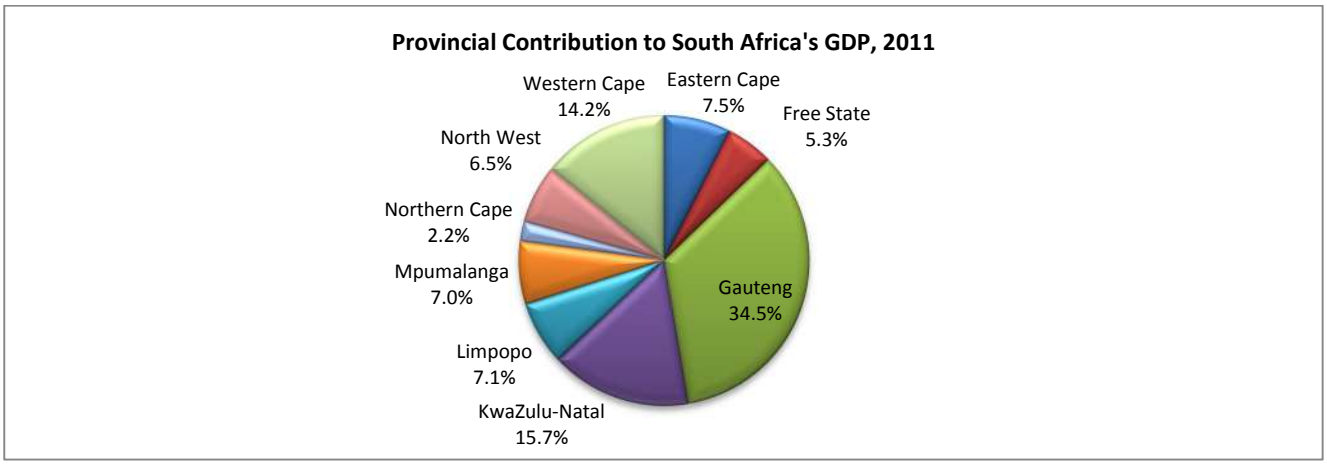
EThekwini Municipality, the regional powerhouse, contributes the most to every economic sector except the mining and quarrying sector where Uthungulu contributes the most (25%). The Umgungundhlovu is the second biggest contributor to most of the economic sectors. The dominance of the three districts is largely due to the infrastructure that exists within the city economies. This dominance highlights the need for investment in economic infrastructure in the smaller districts. The uThungulu district's economy is driven by the Richards Bay port (the biggest bulk cargo port in Africa), coal terminal, aluminium smelters and mining houses.

Newcastle, which is the third largest urban centre in KwaZulu-Natal, is located in Amajuba district. The major activities in Newcastle are coal mining, steel processing and manufacturing.

2.3. Developments and Structure of KZN's Economy

KZN is the second biggest (15.7%) contributor to the nation's economy after Gauteng (34.5%). Despite KZN's significant contribution, Gauteng's economy is more than twice the size of KZN. KZN has the third highest export propensity and the second highest level of industrialisation in the country.

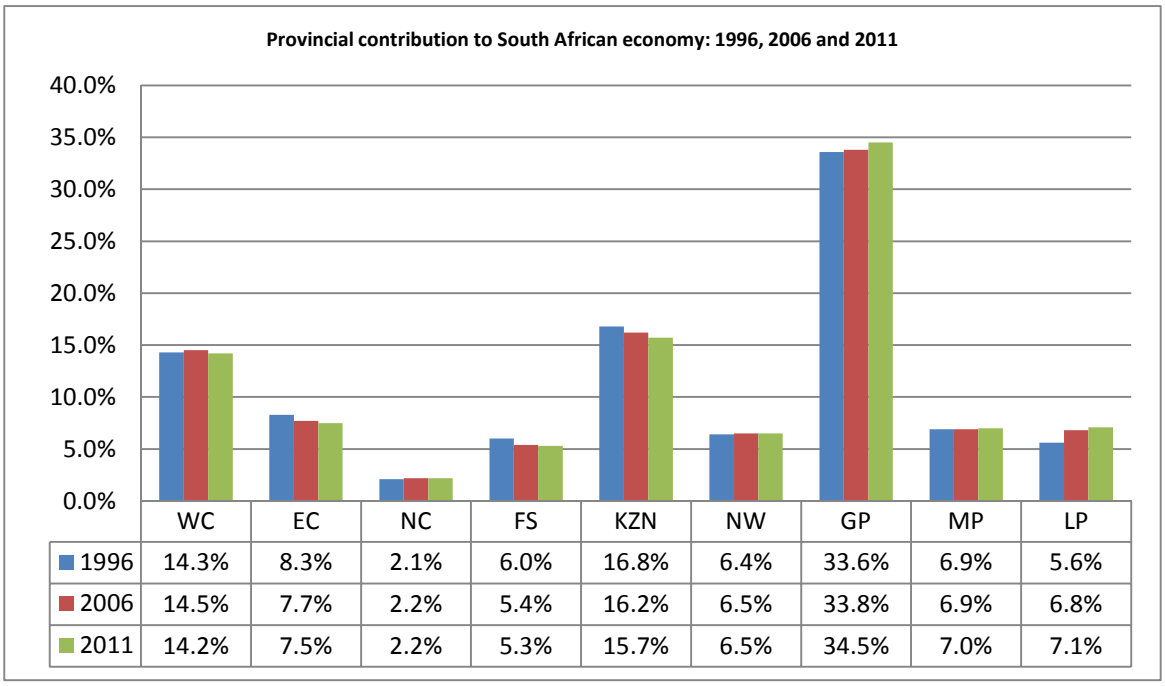
Figure 5: KZN's contribution to South Africa's GDP, 2011



Source: Stats SA P0441 Q3 2012

For the period 1996 to 2011, the province of KwaZulu-Natal has been the second biggest contributor followed by the Western Cape. Gauteng has always been the economic powerhouse of South Africa, the figure below shows the province has been contributing more than a third of South Africa's GDP since 1996.The province which contributed the least to the country's GDP is Northern Cape (2.2%).

Figure 6: Provincial contributions to SA economy 1996, 2006, 2011



	WC	EC	NC	FS	KZN	NW	GP	MP	LP
1996	14.3%	8.3%	2.1%	6.0%	16.8%	6.4%	33.6%	6.9%	5.6%
2006	14.5%	7.7%	2.2%	5.4%	16.2%	6.5%	33.8%	6.9%	6.8%
2011	14.2%	7.5%	2.2%	5.3%	15.7%	6.5%	34.5%	7.0%	7.1%

Source: Stats SA, PO441 Q3 2012

KZN contributed the most (27%) to the nation's Agriculture, forestry and fishing sector GDP for 2011 as shown in the table below. KZN's contribution to most economic subsectors reaches the double digits except for the mining and quarrying subsectors where it only contributes 3.4%.

As shown in Table 4 an estimated 21.6% of South Africa's manufacturing is done in KZN;16% of its electricity, gas and water output; 13% of the country's construction; 14% of its finance, real estate and business activity; 18% of its wholesale, retail, motor trade and accommodation; 22% of transport, storage and communication; and 14% of general governments services.

Table 4: Regional distribution of economy activity, 2011

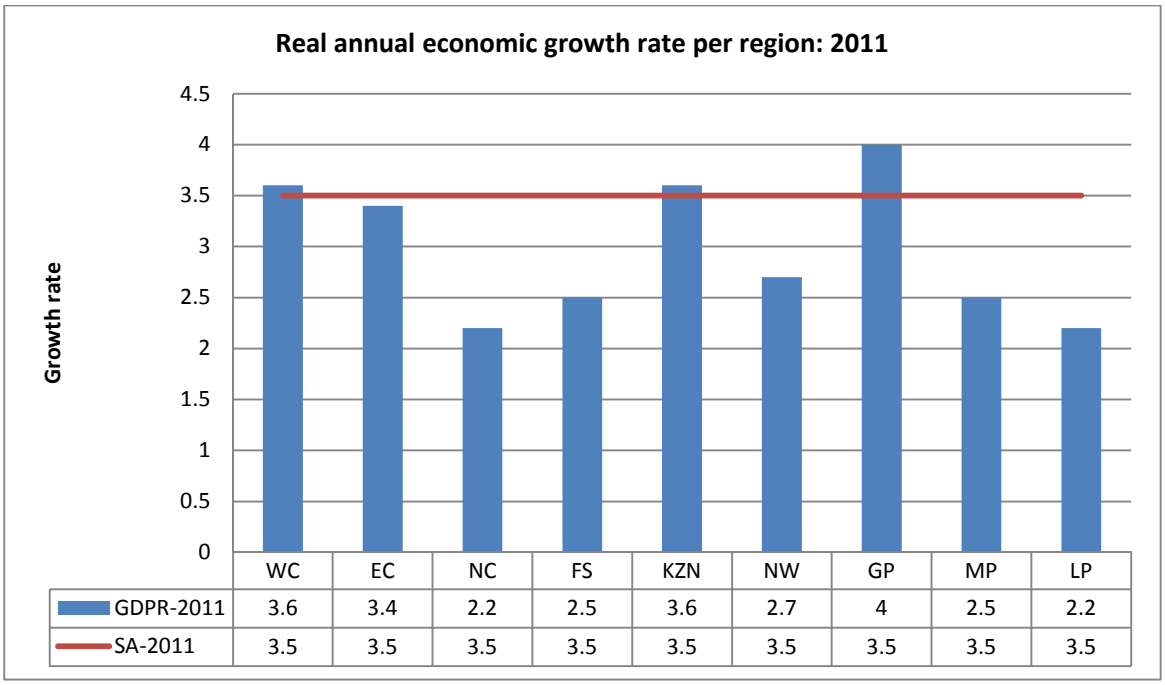
Industry	WC	EC	NC	FS	KZN	NW	GP	MP	LIM	SA
Agriculture, forestry and fishing	22.6	5	6.1	10.3	26.8	6.2	6	9	8.1	100
Mining and quarrying	0.4	0.2	6.8	7.9	3.4	24.8	12.8	20	23.7	100
Manufacturing	14.6	8	0.4	3.9	21.6	2.5	40.5	7.1	1.5	100
Electricity, gas and water	11.2	4.1	2.7	6.4	15.9	3.6	33	15	8.1	100
Construction	17.9	4.7	1.1	3.1	13	4.8	43.3	6.8	5.1	100
Wholesale ,retail and motor trade; catering and accommodation	17.4	8	1.6	4.7	17.6	4.4	35.5	5.2	5.5	100
Transport storage and communication	15.4	7.1	2.1	4.5	22.4	4.8	34.2	4.9	4.6	100
Finance, real estate and business services and business services	19.7	7.3	1.4	3.9	13.6	3.8	41.1	4	5.2	100

Personal services	13.7	12.9	3.4	10	17	8.5	23.5	5.7	5	100
General government services	9.8	11.2	1.9	5.2	14.2	5.3	39.7	5	7.7	100

Source: Stats SAPO441 Q3 2012

The real annual growth rate per region as measured by the gross domestic product per region (GDPR) of KZN in 2011 was 3.6%, slightly higher than the national average which was 3.5% Gauteng had the highest real annual growth rate per region at 4% followed by Western Cape and Eastern Cape.

Figure 7: Real annual economic growth rate per region, 2011



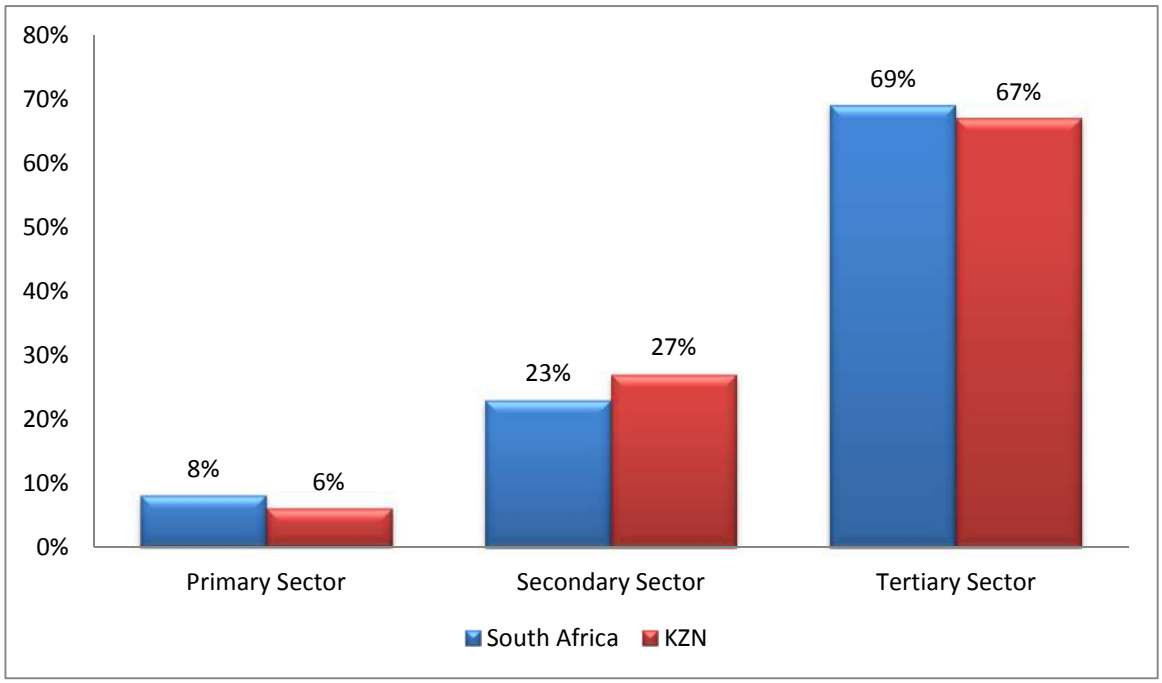
Source: Stats SA PO441 Q3 2012

For the period 2001 to 2011 the South African economy recorded an average growth rate of 4.0%, Gauteng and Western Cape were the only two provinces which were above this national average recording growth rates of 4.6% and 4.1% respectively. KwaZulu-Natal recorded the same average rate as that of the national economy (4.0%).

2.3.1. Economic Sector Performance

The structure of KZN's economy closely resembles that of the national economy which is also dominated by the tertiary sector which continues to grow in relative size. Although the primary sector is in decline in KZN, across the country it still accounts for 8% of output. KZN's economy is clearly dominated by the more knowledge-intensive secondary and tertiary sectors as shown in the figure below.

Figure 8: Broad sector composition, based on value added 2011

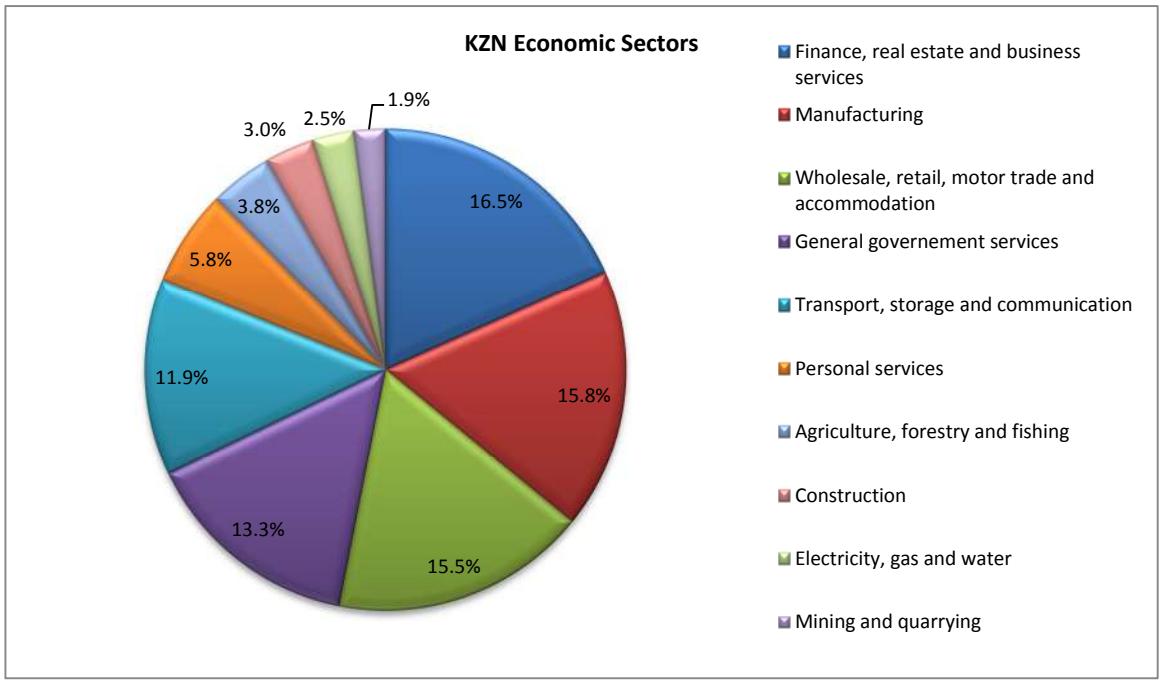


Source: Quantec (2013)

The KZN's economy is dominated by tertiary industries which contributed 67% to its regional GDP. The secondary sector in KZN makes a larger (27%) contribution to the region's economy than in the nation as a whole (23%).

The finance, real estate and business services sector makes up 16.5% of the province's gross domestic product, with manufacturing contributing 15.8%, and the wholesale, retail, motor trade and accommodation sector 15.5%.

Figure 9: KZN's Economic sectors, GDP 2011



Source: Stats SAPO441 Q3 2012

The table below shows the sectors which drove the KZN economy from 2002-2011. This sectoral analysis also identifies the sub-sectors that are growing and those that are shrinking in terms of their economic contribution.

Table 5: Sectoral Composition of the Economy GDP figures, KZN 2002-2011

Industry	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Primary Industries	**7.4**	**6.3**	**5.8**	**5.4**	**5.7**	**6.0**	**6.4**	**6.2**	**5.8**	**5.7**
Agriculture, forestry and fishing	5.7	4.8	4.5	4.0	4.1	4.3	4.4	4.4	4.0	3.8
Mining and quarrying	1.7	1.5	1.4	1.5	1.6	1.7	2.0	1.8	1.8	1.9
Secondary Industries	**27.5**	**27.1**	**26.9**	**26.1**	**25.0**	**24.9**	**24.9**	**24.2**	**22.7**	**21.3**
Manufacturing	22.9	22.8	22.3	21.6	20.5	20.1	20.0	18.4	17.2	15.8
Electricity, gas and water	2.8	2.4	2.3	2.2	2.2	2.2	2.0	2.5	2.4	2.5
Construction	1.9	1.9	2.3	2.2	2.4	2.5	2.9	3.3	3.1	3.0
Tertiary industries	**56.3**	**57.5**	**57.1**	**57.8**	**58.3**	**58.0**	**58.4**	**60.2**	**62.1**	**63.0**
Wholesale, retail and motor trade, catering accommodation	12.6	12.7	12.4	12.9	12.6	12.3	12.6	13.0	14.5	15.5
Transport, storage and communication	11.7	11.9	11.7	11.8	11.7	11.1	11.6	11.4	11.7	11.9
Finance, real estate and business services	14.9	15.6	15.4	16.3	16.7	17.5	17.1	17.1	16.9	16.5
Personal services	5.6	5.8	5.8	5.6	5.8	5.7	5.5	5.8	5.7	5.8
General government services	11.4	11.4	11.8	11.2	11.5	11.5	11.7	12.9	13.4	13.3

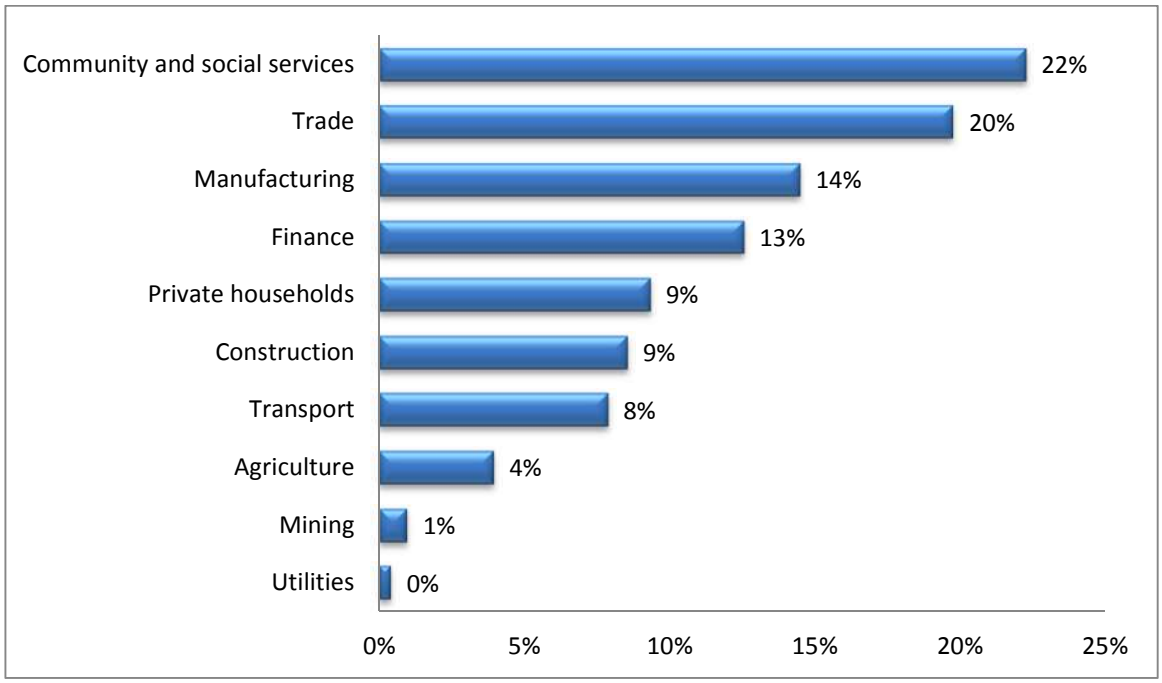
Source: Stats SA PO441 Q3 2012

As shown in the table above, the contribution of the tertiary industry to the GDPR has increased from 56.3% in 2002 to 63% in 2011. The manufacturing sector which dominates the secondary industries has seen its contribution to the GDPR declining from 22.9% in 2002 to 15.8% in 2011. Although the manufacturing sector's contribution has been declining it still very significant to the economy; it was the second biggest contributor in 2011. KZN's manufacturing sector contributes 22% to the nation's manufacturing GDP.

The contribution of the primary industries has been declining over the period from 2002 to 2011 but nevertheless the province has a growing agriculture, forestry and fishing sector. The region's forestry sector is home to South Africa's three largest forest owners and timber productions accounts 6.5% of KZN's agricultural output. The two largest paper manufactures, Mondi and Sappi have several plants located in the province.

As the commercial hub of the country Gauteng also has the largest share of national employment at 31% followed by KZN (19%) and Western Cape (13%). The figure below shows the employment share of KZN by industry for the first quarter of 2013.

Figure 10: Employment share by industry, KZN Quarter 1 2013



Source: Stats SAP0221, Q1 2013

The community and social services sector has 22% of the employment share. The manufacturing sector employs 15% of the KZN workforce.

2.4. Economic Outlook – Opportunities and Challenges

The KwaZulu-Natal region still faces the challenges the rest of the country is plagued by such as high unemployment levels, inequality and poverty. The PGDS states that the substantial decline in investment into the primary and secondary sectors (predominantly agriculture and manufacturing) over the past decade has reduced employment, and the real growth rate of GVA. The KZN Department of Economic Development and Tourism in its Strategic Plan for 2013/14-18 mentions that the structural challenges facing the provincial economy are adding to the problem of output decline in the productive economy. The challenges include infrastructure bottlenecks, low investment by companies, long-term decline in the agricultural sector and scarcity of skills. The challenges that the provincial government is cognisant of in its plans and interventions are as follows:

- The gap of inequality is high and rate of economic transformation is slow
- High dependence on imported goods especially finished goods, apparels luxuries etc.
- High dependence on commodity exports (exports of jobs and economic output)
- Failure to attract new investment (expansionary and start-up capital)
- High rate of company liquidations
- External competition
- Lack of competitiveness
- Capacity Constraints, especially skills;
- Labour market rigidities
- External shocks (Oil prices, recession, EU debt crisis)
- Structural rigidities
    - Shortage of raw materials e.g. cotton
    - Infrastructural bottlenecks
    - Primary commodity dependence
    - Skills shortages
    - Lacklustre growth in the real economy (manufacturing, mining and agriculture)
    - Port capacity constraints
- Crime; and
- Services oriented economy.

Recent data released by the Bureau for Economic Research (BER), national GDP growth in 2013Q1 moderated significantly to 0.9% quarter-on-quarter [q-o-q] (annualised) compared to the 2.1% recorded in 2012Q4. Analysts had expected the economy to lose momentum but the extent was more severe than expected. Year-on-year GDP growth was 1.9% for 2013Q1 compared 2.3% during 2012Q4. A weak performance from the secondary sector was the major reason for the minimal GDP growth observed. The value added in the manufacturing sector

declined by almost 8% q-o-q and this decline shaved 1.2 percentage points of overall Q1 growth. The manufacturing sector was affected by a fire at ArcelorMittal's Vanderbijlpark plant and outages a Cape Town fuel refinery.

The economic challenges impacting the nation will also impact on the KZN region. The South African Reserve Bank (SARB) has raised concerns on the cost of labour per unit of output in the economy i.e. unit labour costs which have grown by 10% per year from 2008 and 2010. Unit labour costs then slowed to growth of 5.9 percent in 2011 and 6.3 percent in 2012. However, over the course of 2012, unit labour costs accelerated from 5.5 percent in the final quarter of 2011 to 7.4 percent in the third quarter of 2012.

The SARB has reduced its economic growth forecast for the year 2013 from 2.7% to 2.4%. The 0.9% growth recorded in the economy for the first quarter of 2013 is the lowest experienced since the 2009 recession. South Africa also faced labour unrest 2012/2013 that has negatively affected business confidence.

2.4.1. Opportunities

Despite the challenges faced by the KwaZulu-Natal region the region has enormous potential because of untapped environmental resources and pool of human potential and resources. KwaZulu-Natal's competitive and comparative advantages include[12]:

- The ports of Durban and Richards Bay, which together handle nearly 80% of South Africa's cargo tonnage.
- Richards Bay is the country's centre of aluminium industry operations, producing over 4% of the world's export of aluminium. It is also the seat of the world's largest sand mining and mineral-producing operations.
- KwaZulu-Natal is the country's leading producer of timber, processing over half of all timber used in the country, and accounting for a significant percentage of the country's wood exports.
- KwaZulu-Natal's reputation as a leading tourist destination is well established, with potential to grow exponentially.
- The Province has the highest export propensity, as well as the highest level of industrialization in the country.
- The Province is second only to Gauteng in terms of its percentage contribution to South Africa's GDP.

[12] KwaZulu-Natal Provincial Planning Commission, Provincial Growth and Development Strategy, August 2011

The province has a well developed infrastructure includes roads, railways and telecommunications, a sophisticated commercial and financial business structure. The 2012 State of the Nation Address by President Jacob Zuma elaborated on infrastructure plans that will also help grow the KZN. These plans include improving the Durban-Free State-Gauteng logistics and transport corridor, expansion of the ports as well as lowering port tariffs. The table below gives the opportunities in each district.

Table 6: Opportunities in KwaZulu-Natal[13]

eThekwini Metro	The municipality has been identified as an auto park zone and a centre of excellence for solar, wind turbines and biofuels
uMgungundlovu	Designated as a leather and creative industry
uThekela	An electronics hub, focusing on migrating from analogue to digital technologies
Amajuba	Clothing and textile hub
uMkhanyakude	Agriculture mechanisation hub
iLembe	Renewable energy hub, focusing on solar and wind turbines
Zululand	Agro-processing and a major abattoir will be established in the region
uMzinyathi	Coal-mining and minerals hub, with a focus on downstream processing of by-products including biofuels and paper products
Ugu	Commodities hub geared to high value grains and legumes for the Indian market
Sisonke	Sisonke is a timber industry hub
uThungulu	Richards Bay Industrial Development Zone and the municipality have been tasked with broadening the industrial scope of this SEZ

Source: www.kzntopbusiness.co.za

2.5. Manufacturing Sector

Manufacturing is known as an advanced industry and an engine for growth and industrial development. The manufacturing sector is very vital to economic development because of its immense linkages with other sectors of the economy. It is with this background that most of the sectors identified in IPA2 are mostly from manufacturing and are regarded as having significant potential to change KZN's growth path.

According to McKinsey Global Institute (2012), over the past decade the global manufacturing sector has undergone a tumultuous decade: large developing economies leaped into the first tier of manufacturing nations, a severe recession choked off demand and manufacturing employment fell at an accelerated rate in advanced economies.[14] The manufacturing sector is

[13] www.kzntopbusiness.co.za

[14] McKinsey Global Institute (2012); *Manufacturing the future: The next era of global growth and innovation*. Online: https://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&ved=0CDYQFjAB&url=http%3A%2F%2Fwww.mckinsey.com%2F~%2Fmedia%2FMcKinsey%2Fdotcom%2FInsights%2520and%2520pubs%2FMGI%2FResearch%2FProductivity%2520Competitiveness%2520and%2520Growth%2FThe%2520Future%2520of%2520Manufacturing%2FMGI_Manufacturing%2520the%2520future_Full%2520report_Nov%25202012.ashx&ei=Ntf-

critical to the economic health of both developing and advanced economies. In advanced economies manufacturing is a source of innovation and competitiveness which contributes to research and development, exports, and productivity growth.

Globally, manufacturing continues to grow by about 2.7% annually in advanced economies and 7.4% in large developing economies (2007-2008) and it accounts for approximately 16% of global GDP and 14% of employment[15]. Studies have shown that the manufacturing sector's relative size in an economy varies with its stage of development. When economies industrialise, manufacturing employment and output both rise rapidly but once the manufacturing share of GDP peaks at 20 to 35% it falls along with its share of employment. This trend is also observed in both South Africa and KZN economy as the table below illustrates. The contribution of the manufacturing sector to the GDP has been declining over the past decade in South Africa.

Table 7: Manufacturing percentage contribution to GDP: 2002-2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
South Africa	19,1%	18,3%	18,3%	18,5%	18,7%	18,6%	18,4%	16,8%	17,2%	17,2%
KwaZulu-Natal	22,9%	22,8%	22,3%	21,6%	20,5%	20,1%	20,0%	18,4%	17,2%	15,8%

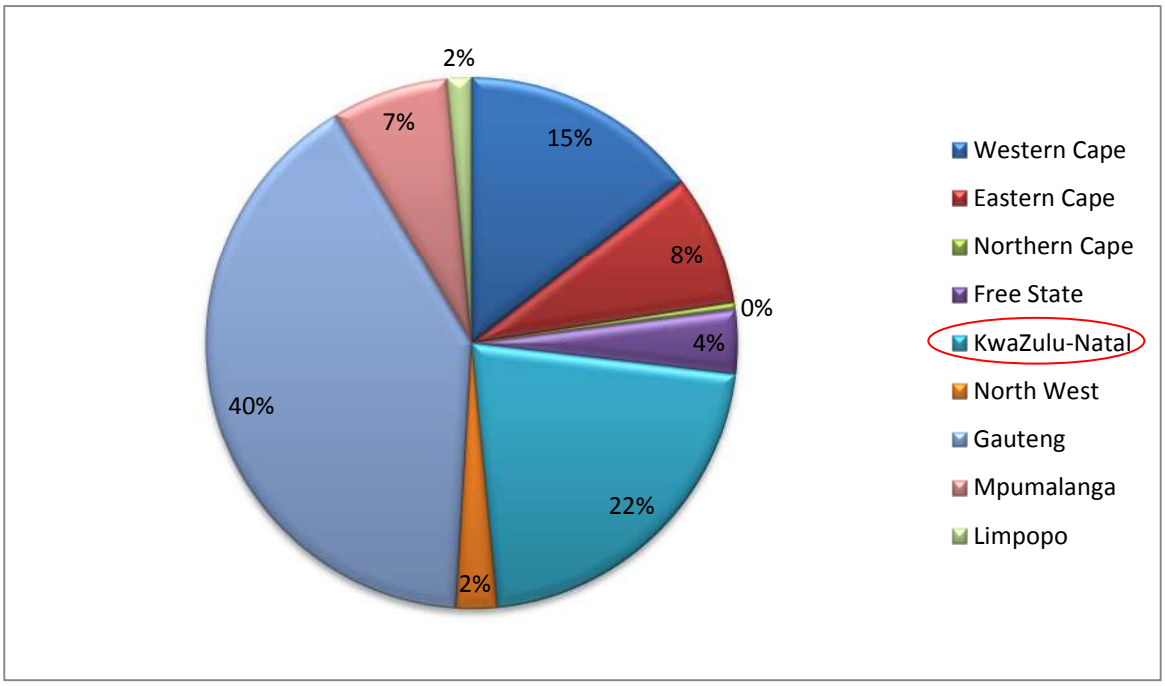
Source: Stats SA, P0441Q3 2012.

Despite the decline in the manufacturing sector contribution to GDPR of KZN, KZN is the second biggest contributor to the gross domestic output from the manufacturing sector at 22% as shown in the graph below.

UJblJ4e50QXLlYCYDQ&usg=AFQjCNGNtRHjHlsbma5jbB0dUkbPTAbHkw&sig2=raSgyG_6_nDhnxN80UV2sA&bvm=bv.41248874,d.d2k

[15] Same as above

Figure 11: Regional distribution of Manufacturing Sector activity, South Africa 2011

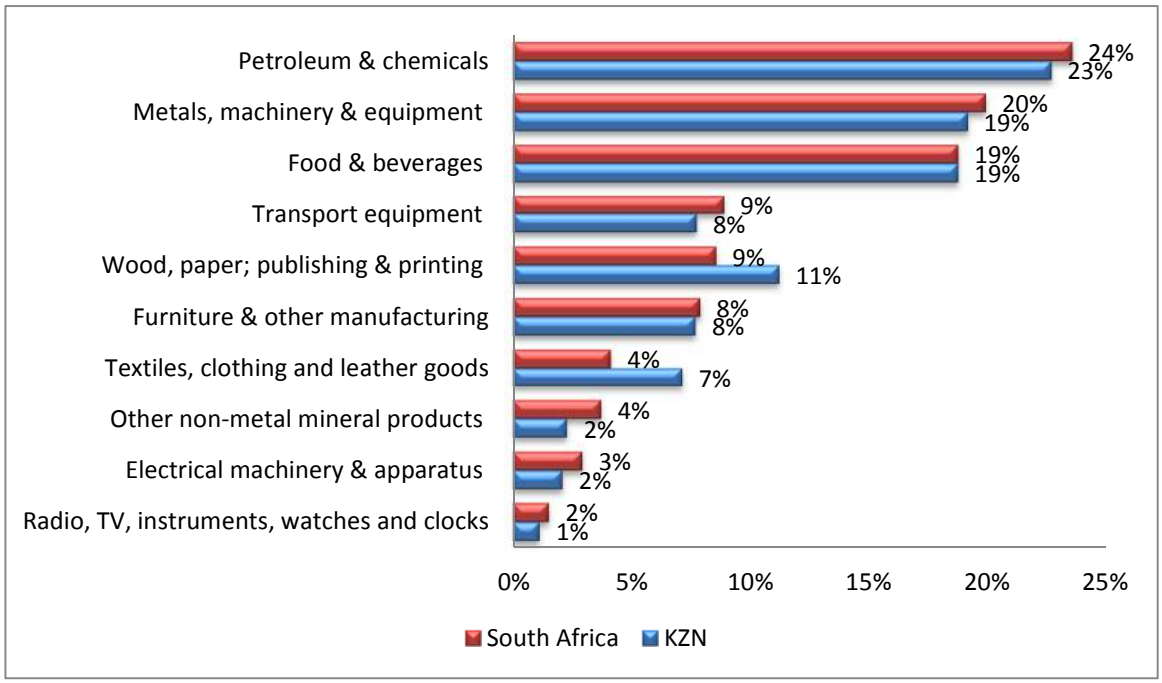


Source: Stats SAP0441 Q3 2012.

KZN's diversified manufacturing sector is the second largest in the country with nearly a third of South Africa's manufactured exports produced in the province. Globally competitive manufactures operate in the province in industries involving automobiles and automobile parts, forestry products, petrochemicals, food and beverages, steelworks metals as clothing and textiles.

The graph below illustrates the contributions to the GVA by manufacturing industries in 2011 at both national and regional (KZN) level. Petroleum & chemicals, and metals, machinery & equipment subsectors contributed the most to KZN's manufacturing GVA, 23% and 19% respectively. Both these two sectors have companies that fall under the merSETA sector.

Figure 12: GVA for Manufacturing Industries, 2011



Source: Quantec (2013)

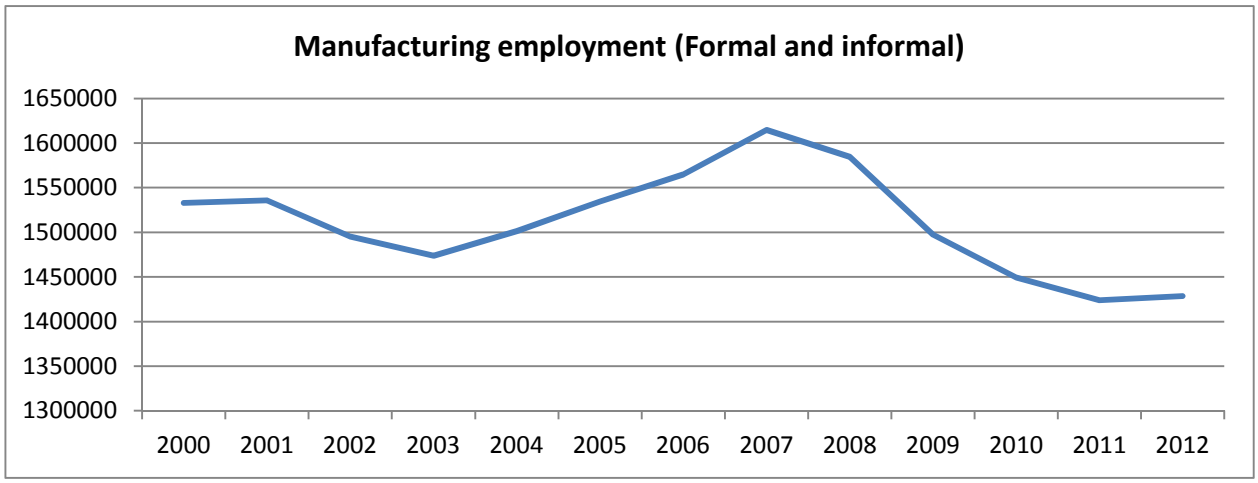
KZN is home to many large manufacturing corporations like Arcelor Mittal, Macdonald Holdings, BHP Biliton, Hulamin, Safal Steel, Tata Steel, Sappi, Mondi, Foskor, Engen and Unilever which are some of the major contributors to the economy of the province.

2.5.1. Employment in the manufacturing sector

According to Stats SA quarterly labour force survey (QLFS) for the first quarter of 2013, a total of 1.753 million people were employed in the manufacturing sector. The manufacturing sector is the fourth largest employer nationally. The employment figures from South Africa's manufacturing sector have been declining over the 2000-2012 period and this trend is similar to other advanced economies. In advanced economies this decline in manufacturing's share of employment is due to on-going productivity improvements, continued growth of services as a share of the economy and the force of global competition, which pushes advanced economies to specialise in more high-skill activities.[16]

[16] McKinsey Global Institute; Manufacturing the future: The next era of global growth and innovation

Figure 13: Employment levels for the manufacturing sector in SA, 2000-2012



Source: Quantec (2013)

As shown in the figure above the 2008/2009 recession led to job losses in the manufacturing sector and these figures are yet to return to their pre-recession levels. The QLFS Q12013 indicates formal employment job losses of 48 000 and an increase in informal employment of 41 000 jobs created during the quarter.

2.6. Overview of the merSETA Sectors

The definition of the manufacturing sector from the National Accounts includes sub-sectors that do not fall under the merSETA jurisdiction. MerSETA companies are grouped into five chambers. The table below is a conceptual map of the sub-sectors and their relation to merSETA chambers.

Figure 14: merSETA Sector Classification

	merSETA					SECTORS / INDUSTRIES
SERVICES		MANUFACTURING				
OTHER	RETAIL	AUTOMOTIVE	METAL	PLASTICS	OTHER	
		Automotive Assembly	Capital Equipment	Polymer Producer		SUBSECTORS
		New Tyre	Transport Equipment	Plastics Convertors		
	Motor Retail Motor Repair	Components	Metal Fabrication	Plastic Fabrication		
			Other	Other		

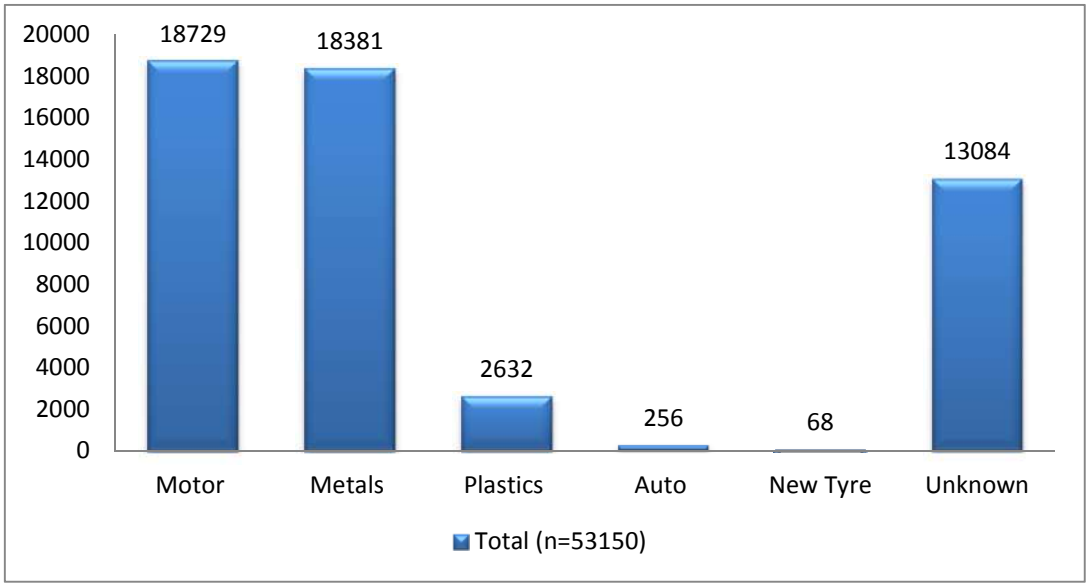
Colour Key	merSETA Chambers
	Metal Chamber
	Plastics Chamber
	Auto Chamber
	New Tyre Chamber
	Motor Chamber

Source: merSETA SSP Update 2012/13-2016/2017

The merSETA Metal Chamber is the largest in respect of both the number of firms and the number of employees. All chambers, with the exception of the Auto Chamber contain a cross section both large and small firms.

The merSETA database used provides had a total of 53 150 companies and the majority of these were from the metal and motor chambers as shown in the graph. Approximately 13 500 companies on the merSETA database are levy-paying[17].

Figure 15: Distribution of merSETA companies by chamber, 2012

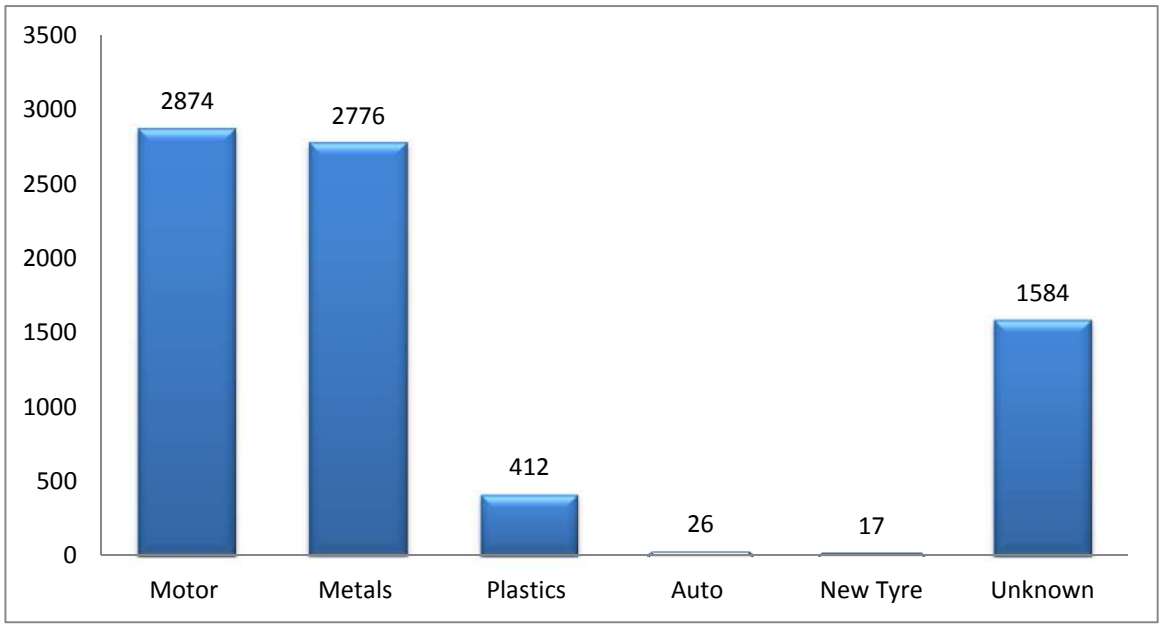


Source: merSETA Database 2013

The majority of merSETA companies are in Gauteng, accounting for more than 40% of the companies in merSETA. MerSETA companies in KZN make up 14% of the total and those in Western Cape make up 16% of the total. The majority of merSETA companies on the database belong to the Motor and Metal chambers.

[17] MerSETA CEO presentation

Figure 16: Distribution of merSETA companies by chamber-KZN, 2012



Source: merSETA Database 2013

The figure above shows the distribution of merSETA companies by chamber in KZN. A significant portion (21%) is not affiliated to any chamber. The motor and metal chambers dominate the merSETA sector in KZN with very few companies in the other chambers.

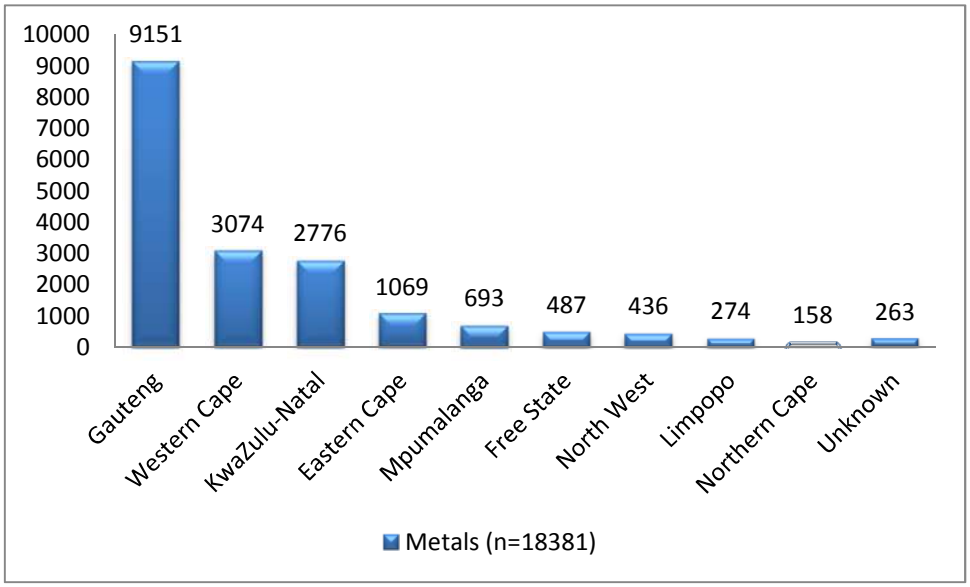
2.6.1. The Metal Chamber

The Metal Chamber comprises firms involved in the manufacturing and servicing of capital equipment including transport equipment. The Metal sector, including the capital equipment, transport equipment, metal fabrication (CETEMF) and related subsectors, forms a substantial part of SA's manufacturing.

This sector is at the centre of economic development, as what they produce is used across the entire economy: infrastructure programmes, construction, general engineering, mining, automotive production, furniture manufacture, transport, home appliance manufacture, defence and packaging[18]. The Metal industry is estimated to represent about a third of all South Africa's manufacturing[19]. South Africa's non-ferrous metal industries comprise of aluminium and other metals (copper, brass, lead, zinc and tin amongst others). The aluminium sector is quite large and a key player Billiton has smelters in Richards Bay.

[18] MerSETA SSP 2010/2011-2015/2016
[19] http://www.southafrica.info/business/economy/sectors/manufacturing.htm#.UfE4_KxqjYc

Figure 17: Regional Distribution of the merSETA Metal Chamber, 2012



Source: merSETA Database 2013

The majority of the metals company on the merSETA database are domiciled in Gauteng which is expected as the province contributes the most the manufacturing GDP of the country.15% of the metal chamber companies are in KZN. The Hillside and Bayside aluminium smelters are located at Richards Bay. These are supported downstream by a major aluminium extrusion and profiling operation in Pietermaritzburg. The Arcelor Mittal steel plant at Newcastle is the fourth lowest cost steel producer in the world[20]. KZN's stainless steel industry supplies sectors such as the pulp and paper, chemical, petrochemical, sugar, automotive and catering and transport industries. The Action Stainless KwaZulu-Natal (ASKzn) was created to promote stainless steel products manufactured in KwaZulu-Natal.

2.6.2. The Auto sector

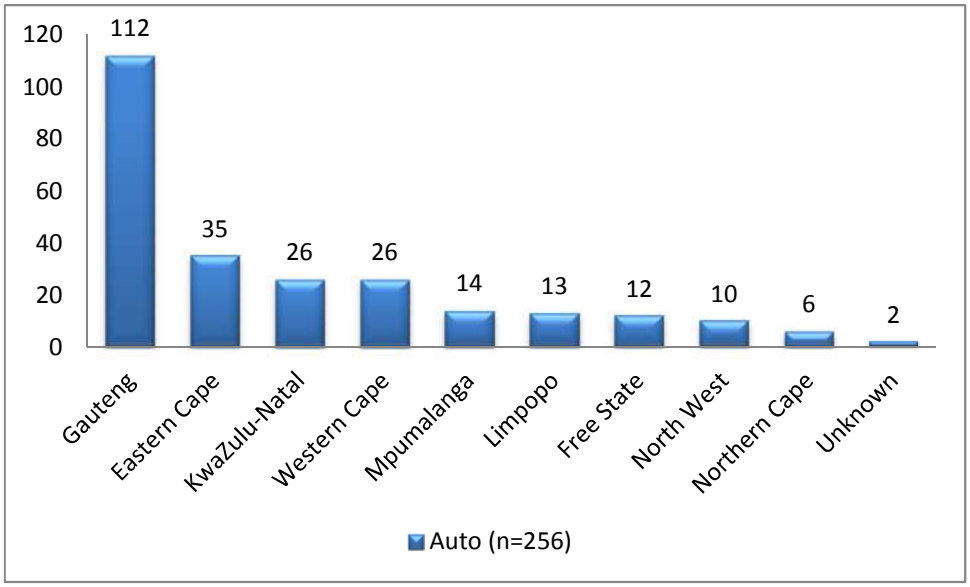
The auto industry, broadly defined includes vehicle retail, distribution and servicing, auto parts production and vehicle production. The automotive sector covers South Africa's seven large automotive assemblers, also known as original equipment manufacturers (OEMs); a number of smaller, specialist medium and heavy commercial vehicle assemblers and approximately 400 automotive components manufacturers which are then tiered according to their position in relation to OEM supply.

Of the seven locally based (multinationals) vehicle assembly operations (OEMs), three are located in northern Gauteng namely BMW South Africa, Nissan South Africa and Ford Motor Company South Africa. General Motors South Africa and Volkswagen South Africa are based in

[20] http://kzntopbusiness.co.za/site/manufacturing

Port Elizabeth; the Mercedes-Benz South Africa plant is in East London, while Toyota South Africa is situated in Durban. merSETA's Auto Chamber comprises the seven OEMs.

Figure 18: Regional Distribution of the merSETA Auto Chamber, 2012



Source: merSETA Database 2013

KZN's vehicle-manufacturing industry has created a considerable multiplier effect in component- and service-providers. The automotive leather industry has grown rapidly, with exports significantly increasing foreign exchange earnings. Major automotive companies including Toyota, MAN Truck and Bus SA, Volvo Trucks and Bell Equipment operate in KZN. The automotive manufacturing industry in KwaZulu-Natal is concentrated within the eThekwini Municipality, but includes firms in Pietermaritzburg, Stanger, Ladysmith and Richards Bay.The industry employs approximately 20,000 people and contributes roughly R21 billion to the local economy per annum[21].

The Durban Automotive Cluster (DAC) was established to support the automotive manufacturing industry in Durban and the Province of KwaZulu-Natal. The cluster has 35 automotive firms, which represent more than 80% of the regional industry. The cluster's mandate is to enhance the competitiveness of the regional automotive manufacturing industry through the co-ordination and facilitation of information sharing and joint activities.

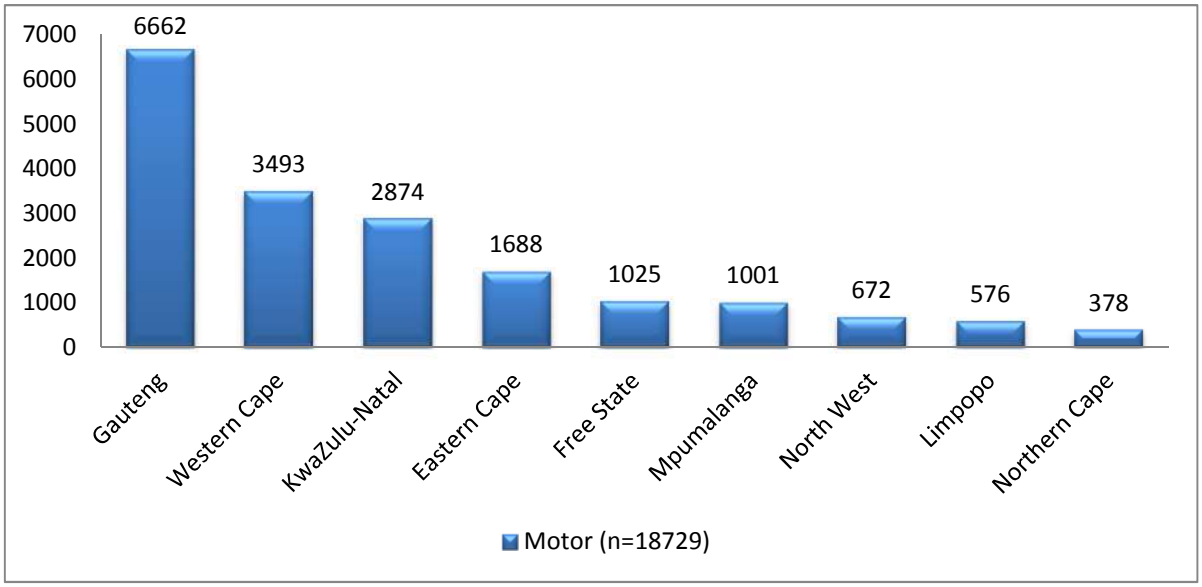
2.6.3. The Motor Chamber

The Motor Chamber includes firms involved in the motor retail and service industries, as well as in the manufacture of automotive components. The motor retail and components sector is

[21] http://kzntopbusiness.co.za/site/manufacturing

closely linked to the automotive sector, since the supply of components for motor vehicle assembly and after sales market is a prime source of trade.

Figure 19: Regional Distribution of the merSETA Motor Chamber, 2012



Source: merSETA Database 2013

A respondent from the motor sector mentioned that the number of companies in the region has remained almost static in the last five years. "*Employees are on the decline though as a result of the labour legislation which makes it difficult to hire so there is reluctance to hire. We have seen decline from total employee figures of 250 000 some 10 years ago to around 210 000 currently.*"

2.6.4. The New Tyre manufacturing sector

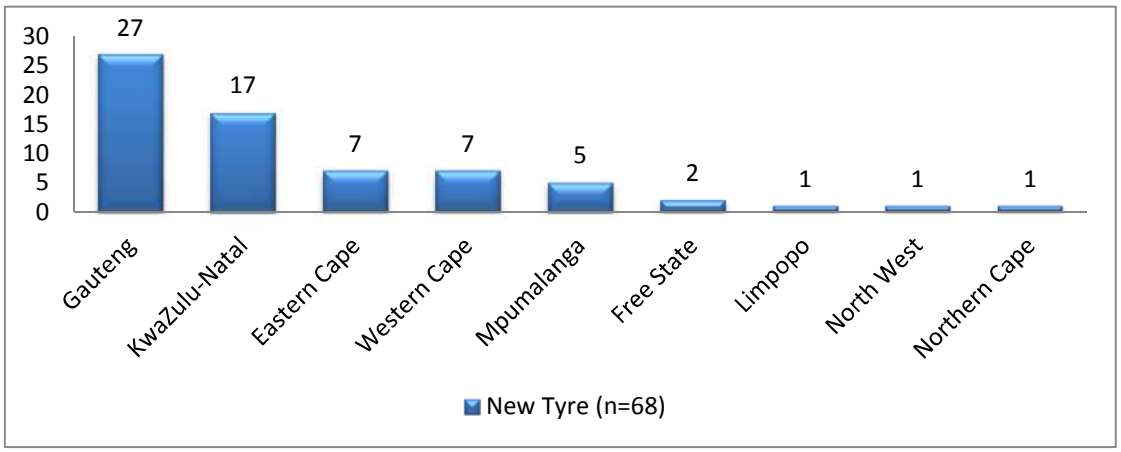
The New Tyre Chamber consists of firms involved in the manufacture of new tyres for OEMs and aftermarket supply. The SA pneumatic tyre manufacturing industry comprises four companies[22], operating six factories, all of which are controlled by international groups. Many hundreds of companies also import other international brands of tyres into SA.

The industry manufactures new pneumatic tyres of rubber of a kind used on passenger, commercial, agricultural, mining, construction and industrial vehicles and implements. The total SA market for tyres is approximately 12 million units per year. The SA tyre manufacturing capability equates to just over 1% of world tyre manufacturing capacity albeit at a very high technical level.

[22]The four tyre manufacturing companies in SA are Bridgestone South Africa, Continental Tyre South Africa, Dunlop Tyres International and Goodyear Tyre & Rubber Holdings. The South African Tyre Manufacturers Conference (SATMC) is the united face of the four SA tyre manufacturers to government, the motor industry and the public.

The sector directly employs about 6,000 people. Five of the factories are situated in areas with higher than average unemployment levels, namely Port Elizabeth, Uitenhage, Ladysmith and Brits[23].

Figure 20: Regional Distribution of the merSETA New Tyre Chamber, 2012



Source: merSETA Database 2013

As shown in the figure above the New Tyre Chamber as of 2013 had 68 companies and the majority of these are in Gauteng and KZN.

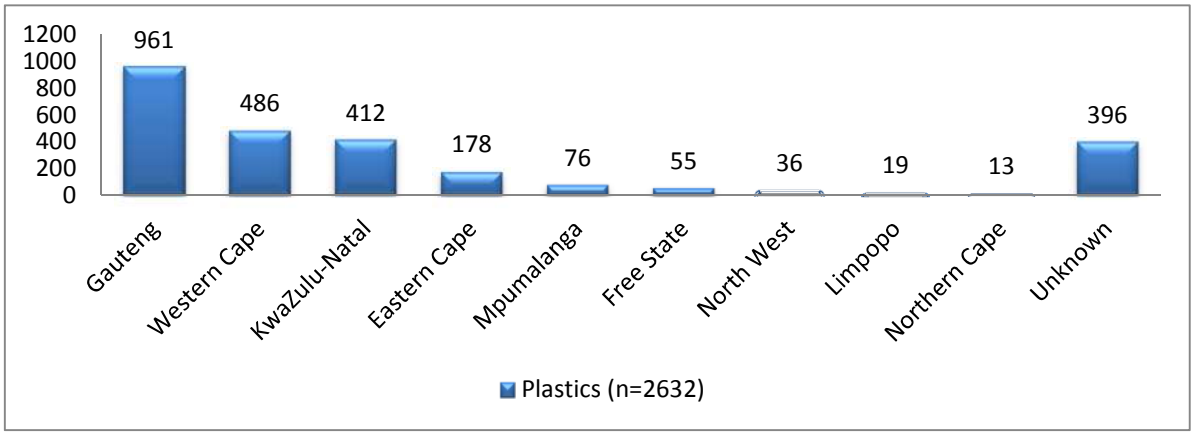
2.6.5. The Plastics Chamber

The Plastics Chamber includes firms involved in the manufacture of plastics products from locally manufactured and imported polymers. The plastics manufacturing sub-sector is part of a supply chain from the polymer manufacturing industry (chemical companies) through to a variety of end-use markets, and is characterised by ease of entry because of its low economies of scale and high degree of mechanisation. This means the sector is characterised by the following:

- Many micro and small companies and a few medium sized plants,
- Is not a large scale employer, and
- Plastics manufacturing cells can be found within manufacturing plants of other manufacturing industries.

[23] http://www.rubbersa.com/facts.html

Figure 21: Regional Distribution of the merSETA Plastics chamber, 2012



Source: merSETA Database 2013

According to the merSETA database the plastics chamber has 2632 companies and 412 are from KZN which is 15.65% of the total. The plastics chamber research stated that from anecdotal evidence from players in the industry, the numbers of companies in the industry is around 1700. KwaZulu-Natal provides nearly a third of the country's plastics requirements[24].The major challenges facing the sector include rising cost of raw materials which is linked to the crude-oil price which has risen dramatically and quickly in the last several years.

2.7. Conclusion

The province of KwaZulu-Natal accounts for 19.8% of South Africa's population and the second most populous with 10.3 million people according to the 2011 Census figures. Unemployment is quite high, the Q1 2013 Quarterly Labour Force puts KZN's unemployment rate at 21.1% which is lower than the national rate at 25.2%.

KZN is the second biggest (15.7%) contributor to the nation's economy after Gauteng (34.5%). For 2011, KZN's contribution to the agriculture, forestry and fishing sector was the largest (26.8%) in the country. The province made the second largest (21.6%) contribution to the nation's manufacturing GDP after Gauteng (40.5%). The eThekwini Municipality dominates the regional economy and contributes more than 50% to the provincial GDP.

KZN's diversified manufacturing sector is the second largest in the country. Petroleum & chemicals, and metals, machinery & equipment subsectors contributed the most to KZN's manufacturing GVA, 23% and 19% respectively and these two sectors have companies that fall under merSETA. The manufacturing sector in KZN is crucial to the province and employs about 15% of the workforce.

[24] www.kzntopbusiness.co.za/site/manufacturing

Although the province faces enormous socio-economic challenges it has a vibrant and growing economy with many opportunities for continued growth.

3. POLICIES AND STRATEGIES THAT IMPACT ON SKILLS DEVELOPMENT IN THE REGION

3.1. National Economic Growth and Development Strategies

3.1.1. The New Growth Path and National Development Plan

The New Growth Plan (2010) is the SA government's latest macro-economic policy. Together with the National Development Plan (2011), the two documents position SA as a 'developmental state' and give the government an important role in the development of the economy, especially employment creation. The policy focus is to increase labour-absorbing activities, promote economic growth, and equity (which is to be measured by decreasing inequality and poverty). The targeted 'job-drivers' are the labour absorbing sectors such as mining, agriculture, manufacturing and services.

New Growth Path (NGP) emphasised that improvements in education and skill levels are a fundamental prerequisite for achieving many of its goals. It noted that NGP requires a radical review of the training system to address shortfalls in artisanal and technical skills. Overall, NGP aims to create 5 million jobs over the next 10 years. Some of the SETA related specific targets include:

- at least 30 000 additional engineers by 2014,
- at least 50 000 additional artisans by 2015,
- improve skills in every job and target 1,2 million workers for certified on-the-job skills improvement programmes annually from 2013;
- expand enrolment at FET colleges, targeting a million students in FET colleges by 2014; and
- Create 250 000 jobs a year in infrastructure (energy, transport, water, communications) and housing through 2015.

3.1.2. Industrial Policy Action Plan

In January 2007, Cabinet adopted the National Industrial Policy Framework (NIPF), which sets out government's broad approach to industrialisation. Guided by the NIPF, the implementation of the industrial policy was set out in an Industrial Policy Action Plan (IPAP), and in August 2007, Cabinet approved the first IPAP. The current IPAP, IPAP 2011/12 – 2013/14 (IPAP 2) constitutes a consolidation of plans and programmes outlined in the previous iteration of IPAP 2.

The IPAP 2 notes that the SETAs and National Skills Fund (NSF) system have an extremely important role for sector-specific training programmes and skills facilitation that emerge directly

from industry demands in relation to detailed Customised Sector Programmes. The DTI therefore committed to working with the Department of Higher Education and Training (DHET) to introduce the necessary window within the SETA and NSF system for new Skills Centres based on the needs of IPAP sector strategies[25].

3.1.3. Metals Customised Sector Plan (CSP)

The CSP for the priority sector metals was published by the dti in 2005. The strategic vision of the plan is that "by 2014, SA will have a globally competitive metal sector, optimally utilising the comparative advantages of abundant mineral resources, skilled labour force and world-class technologies to produce and market high value-added products in the prioritised industries." Programmes in the plan include the promotion of local metals beneficiation, maximising local content through backward linkages, and upgrading production capabilities in downstream industries.[26]

3.1.4. Industrial Development Corporation (IDC) Jobs Scheme

In 2011 the IDC launched a R10 billion scheme to tackle the country's chronic unemployment problem. The scheme was aligned with the government's New Growth Path and the Industrial Policy Action Plan (IPAP2). Funding would be available to entrepreneurs across the IDC's mandated sectors over a five year period. The scheme aims to create an additional 40 000 to 50 000 employment opportunities. The sectors geared to benefit include the green economy, manufacturing, the mining value chain, agriculture and infrastructure.

3.1.5. National Foundry Technology Network (NFTN)

NFTN is the culmination of a significant government and industry association-led effort to develop a globally competitive South African foundry industry through appropriate skills training, technology transfer, and diffusion of state-of-the-art technologies. Its main outcome is to reduce import leakage, increase investments in key manufacturing processes and activities, employment and exportability.

3.1.6. Automotive Production and Development Programme (APDP)

The APDP replaced the Motor Industry Development Programme and is in line with World Trade Organisation (WTO) regulations. The APDP design has evolved from an export based incentive to a local manufacturing incentive, regardless of whether the motor vehicles are sold locally or

[25]DTI (2011*).Industrial Policy Action Plan (IPAP 2011/12-2013-/14).*Department of Trade and Industry. Pretoria, South Africa.
[26]dti (2006) Metals Sector Development Strategy: Trade and Investment South Africa – Customised Sector Programme – Metals.

abroad.[27] The programme aims to increase local production to 1.2 million vehicles by 2020. The APDP will extend support to the South African automotive industry until 2020. The objectives of the APDP include:

- improving the international competitiveness of the South African automotive industry
- stabilize and potentially increase employment levels
- and encourage the rationalization of platforms to achieve economies of scale in assembly
- Continue to encourage growth, particularly through exports and thereby improve industry's current trade balance

The focus under the APDP is to provide assistance to the component manufactures so that they can provide cost competitive components to the Original Equipment Manufacturers (OEMs) and to international markets via exports. The APDP offers an incentive to up-skill employees and to invest technology, research and development.

3.1.7. Special Economic Zones

South Africa's drive to encourage regional industrial development dates back to the 1960's and has been part of government policy initiative. "In the early 1990s, industrial policy was markedly less focused on location. However more recently the Spatial Development Initiatives (SDI) and Industrial Development Zone (IDZ) programmes have both involved the identification of industrial locations and used incentives to encourage firms to locate in these areas"[28]. IDZs are aimed at stimulating the local economy of the region in which they are located, by attracting investment, increase exports and the competitiveness of South African products.

There are four designated IDZs in South Africa: East London Industrial Development Zone (ELIDZ) and COEGA Industrial Development Zone (COEGAIDZ) in Eastern Cape Province, Richards Bay Industrial Development Zone (RBIDZ) in KwaZulu-Natal (KZN) and OR Tambo International Airport IDZ (in Gauteng Province). Only 3 are currently functional namely, Coega, East London and Richards Bay[29], while Saldanha Bay IDZ (in Western Cape Province) is still at feasibility stage. A Special Economic Zones (SEZs) Bill was gazetted in January 2012 by the Minister of Trade and Industry Dr Rob Davies. Under this Bill, IDZs will no longer be classified as a separate entity but will be classified as SEZs[30]. Previously, a key requirement for a region to

[27]http://www.automotiveonline.co.za/site/files/6860/APDP_Deloitte.pdf
28Trudi, H. (2001). *South African regional industrial policy: from border industries to spatial development initiatives.* Journal of International Development, 2001, vol. 13, issue 6, pages 767-777
[29] The DTI (2013) *Special Economic Zones Bill, 2013*; Presentation to Portfolio Committee On Trade And Industry, 26 April 2013. Available at:
http://www.thedti.gov.za/parliament/SEZ-Bill.pdf (Accessed 11 July 2013).
[30] The DTI (2013) *10 Potential Special Economic Zones Have Been Identified*, Media Statement. Available at: http://www.thedti.gov.za/editmedia.jsp?id=2685(Accessed 11 July 2013)

qualify as an IDZ was proximity to either an international sea or airport. The Bill is expected to facilitate spatial development of other regions previously side-lined by the IDZ framework.

The DTI (2013) argues that the IDZ programme has delivered good results, particularly the ELIDZ whose private sector investment rose from R600-million in 2009 to R4-billion in 2012/13.

Figure 22: DTI Funding and Employment Creation by IDZs

IDZ	Number of investors	Value of investment (R'000)	Funding transfers by the dti (R'000)	Direct employment	Construction & indirect jobs	Total employment
Coega	20	1,131,750	4,364,680	3,778	37,156	**40,934**
ELIDZ	21	1,082,700	1,394,983	1,179	6,379	**7,558**
RBIDZ	1	650,000	331,123	126	54	**180**
Total	**42**	**2,864,450**	**6,090,786**	**5,169**	**43,589**	**48,758**

Source: The DTI (2013)

The RBIDZ was incorporated in 2002 with the aim of attracting export oriented manufacturing investment, value-adding and productivity improvements. Its goal is to accelerate economic growth through industrialisation, create new permanent employment opportunities, sustain existing employment and improve the socio-economic status of the region.

3.1.8. National Infrastructure Plan

The Government adopted a National Infrastructure Plan (NIP) in 2012, which is aimed at transforming the economic landscape, creating significant numbers of new jobs, and strengthen the delivery of basic services in South Africa. The plan also supports the integration of African economies. The costs of the 18 strategic projects identified are estimated at about R4-trillion over the next 15 years[31]. The government pledged to invest R827 billion in building new and upgrading existing infrastructure over the three years from 2013/14 financial year[32].State owned enterprises (SOEs) such as Eskom, Transnet and others are also expected to fund a further R400 billion of projects in the next three years, supported by National Treasury guarantees[33].Some of this investment is earmarked for the construction of ports, roads, railway systems, electricity plants, hospitals, schools and dams with the ultimate aim of contributing to faster economic growth.

[31] Business Day (2012) *Infrastructure projects will 'not come cheap'*. Available at: http://www.bdlive.co.za/economy/2012/10/21/infrastructure-projects-will-not-come-cheap (Accessed 11 July 2013)
[32]National Treasury (2013) *2013 Budget Speech* by Minister of Finance.
[33]National Treasury (2013) *2013 Budget Speech* by Minister of Finance.

In order to coordinate, integrate and accelerate the implementation of this massive infrastructure development drive, Cabinet established the Presidential Infrastructure Coordinating Committee (PICC). The PICC has already identified, developed and approved 18 strategic integrated projects (SIPS) which cover 150 social and economic infrastructure across all nine provinces (with an emphasis on lagging regions). Each SIP comprises a large number of specific infrastructure components and programmes[34].The SIPs comprise of:

- Five geographically-focussed SIPs,
- Three spatial SIPs,
- Three energy SIPs,
- Three social infrastructure SIPs,
- Two knowledge SIPs,
- One regional integration SIP, and
- One water and sanitation SIP.

Though it might too early to review the impact of the NIP to date, the Draft Infrastructure Development Bill (2013) estimate that around R24 billion spent to date creating 145 000 jobs[35].

SIPs which will directly impact the KZN region include the **SIP 2: Durban-Free State-Gauteng logistics and industrial corridor**. The NIP estimates that 135 000 jobs will be created in the construction of projects in the corridor. Once the projects are completed a further 85 000 jobs are expected to be created by those businesses that use the new facilities. The aim of the project is to strengthen the logistics and transport corridor between South Africa's main industrial hubs and to improve access to Durban's export and import facilities. Work has already started on a massive logistics corridor stretching between Durban and the central provinces of the Free State and Gauteng. Most of the projects that form part of the second Strategic Infrastructure Project (SIP 2), also known as the Durban-Free State-Johannesburg Logistics and Industrial Corridor, are still in the concept or pre-feasibility stage, but construction has already started on several projects.

These include:

- the building of a R2,3 billion container terminal at City Deep
- a R3,9 billion project to upgrade Pier 2 at the Port of Durban
- R14,9 billion procurement of rolling stock for the rail line which will service the corridor.

[34] Presidential Infrastructure Coordinating Commission (PICC) (2012) *A Summary of the South African National Infrastructure Plan.*Pretoria, South Africa.
[35]Department of Economic Development (2013) *Draft Infrastructure Development Bill (2013)*

Work has also started on the R250 million Harrismith logistics hub development to set up a fuel distribution depot, as well as on phase one of the new multi-product pipeline which will run between Johannesburg and Durban and transport petrol, diesel, jet fuel and gas.[36]

The economic benefits that are anticipated to accrue from the Durban-Gauteng Freight Corridor are as follows:

- R6 billion p.a increase in National GDP during construction
- R29 billion p.a increase in National GDP during operation
- Approx 62 000 new jobs created
- R4 billion p.a increase in Local GDP during construction
- R12.5 billion p.a increase in Local GDP during operation
- 5-7% reduction in local unemployment

3.2. Regional Economic Growth and Development Strategies

3.2.1. Provincial Growth and Development Strategy (PGDS)

The PGDS provides KwaZulu-Natal with a strategic framework for accelerating and sharing economic growth through catalytic and developmental interventions. Focus of the strategy incorporates the provision of infrastructure and services, restoration of natural resources, public sector leadership and attention placed on delivery and accountability. The aim of the PGDS is to attract and instil confidence in potential investors who can assist in addressing provincial challenges.

The purpose of the 2011 KZN PGDS is to:

- Be the primary growth and development strategy for KwaZulu-Natal to 2030;
- Mobilise and synchronise strategic plans and investment priorities in all spheres of government, state owned entities, business, higher education institutions, labour, civil society and all other social partners in order to achieve the desired growth and development goals, objectives and outcomes;
- Spatially contextualise and prioritise interventions so as to achieve greater spatial equity;
- Develop clearly defined institutional arrangements that ensure decisive leadership, robust management, thorough implementation and on-going review of the growth and development plan.[37]

The provincial growth development strategy was formulated on the basis of provincial, national and global policy frameworks i.e. the six Provincial Priorities, the twelve National Outcomes, the

[36] http://www.info.gov.za/issues/national-infrastructure-plan/index.html
[37] KwaZulu-Natal Provincial Growth and Development Strategy, 2011

New Growth Path, the National Planning Commission's Diagnostic Report (NPC) and the Millennium Development Goals (MDGs).PGDS' strategic goals which form the basis of the operational plan of the provincial strategy are;

i. Job creation
ii. Human resource development
iii. Human and community development
iv. Strategic infrastructure
v. Response to climate change
vi. Governance and policy
vii. Spatial equity

In order to achieve these 7 goals, 30 objectives with 124 implementation interventions were formulated by the provincial planning commission. These objectives are outlined in the Provincial Growth and Development Plan.

Table 8: Goals and Objectives of the KZN PGDS

Listing of Strategic Goals and Objectives		
Strategic Goal	**No.**	**Strategic Objective**
1 Job Creation	1.1	Unleash agricultural potential
	1.2	Enhance industrial development through trade, investment & exports
	1.3	Expand government-led job creation programmes
	1.4	Promote SMME, entrepreneurial and youth development
	1.5	Enhance the knowledge economy
2 Human resource development	2.1	Improve early childhood development, primary and secondary education
	2.2	Support skills alignment to economic growth
	2.3	Promote and enhance youth skills development & life-long learning
3 Human and community development	3.1	Alleviate poverty and improve social welfare
	3.2	Enhance health of communities and citizens
	3.3	Safeguard sustainable livelihoods & food security
	3.4	Sustain human settlements
	3.5	Enhance safety & security
	3.6	Advance social cohesion
	3.7	Promote youth, gender and disability advocacy & the advancement of women
4	4.1	Develop ports and harbours
	4.2	Develop road & rail networks

Strategic infrastructure	4.3	Develop ICT infrastructure
	4.4	Improve water resource management
	4.5	Develop energy production capacity
5 Responses to climate change	5.1	Increase productive use of land
	5.2	Advance alternative energy generation
	5.3	Manage pressures on biodiversity
	5.4	Manage disaster
6 Governance and policy	6.1	Strengthen policy, strategy coordination and inter-government relations (IGR)
	6.2	Build government capacity
	6.3	Eradicate fraud & corruption
	6.4	Promote participative, facilitative & accountable governance
7 Spatial equity	7.1	Promote spatial concentration
	7.2	Facilitate integrated land management & spatial planning

Source: KZN PGDS[38]

The KZN PDGS states that 54% of the population in KZN lives in rural areas. KZN's rural nature puts considerable pressure on the provision of social service and infrastructure. The outward migration to areas such as Gauteng, the Western Cape and Mpumalanga has detrimental effects such as brain drain and skills shortages in rural areas. Many rural areas are rich natural resources including coal and other minerals, game and a rich cultural heritage.[39]

3.2.2. KZN DEDT Strategic Plan 2013/14-2018[40]

The KwaZulu-Natal Department of Economic Development and Tourism (DEDT) is entrusted with the responsibility of championing economic development in the province. The strategic plan for 2013/14-2018 was cognisant of the global economic conditions, the national economy and the constraints faced by the KZN economy. The key economic interventions planned by the department are:

- *Regional Integration:* is crucial as the province aims to broaden its export basket and grow outbound investment. There is need for KZN companies to expand into the growing African market and other regions in the Asian markets whilst consolidating the province's traditional markets.
- *International competitiveness:* It is important for the KZN provincial government to devise mechanisms to shrug-off the unintended consequences of foreign competition.
- *Market Access:* globalisation means countries can now seek new markets for their products as companies are subjected to intense competition from their foreign

[38] KwaZulu-Natal Provincial Growth and Development Strategy, 2011
[39] www.kzntopbusiness.co.za
[40] KwaZulu-Natal DEDT Strategic Plan 2013/14-2018

counterparts. Market access issues become useful in terms of the export growth and industrial development agendas of province.

- *Private Public Partnerships:* encouraging participation by both the public and private sectors. Public resources for economic development are limited, so these resources must be used to leverage private resources
- *Infrastructure development:* The department needs to take advantage of the infrastructure drive currently being pursued by the government in terms of its interventions in the province.
- *Industrial development:* lowers transaction costs and fosters a growing environment of commerce, entrepreneurship, exports and other market productive activities. Industrial development is catalytic for the development of other sectors of the economy. It is thus essential that the department speedily implement sector specific interventions need to development the KZN industry.
- *Labour quality:* Improving labour quality through skills development programmes
- *Foreign direct investment:* A targeted investment promotion strategy can play a powerful economic development role as it influences not only the attractiveness of location for inward investment, but also the benefits accruing to the local economy such as job creation, linkages (also provided by domestic capital) and knowledge spill-over.

Some of the key programmes that the department will pursue to engender future sustainable economic development and develop a robust and resilient local economy include the following:

- Effective implementation of SEZ
- Lobbying national government for speedy implementation of Infrastructure development programmes as per PGDS, SoNA and SoPA
- Beneficiation programmes
- Capitalising on regional economic integration initiatives;
- Insulating strategic job creation sectors from foreign competition;
- Broaden KwaZulu-Natal export basket;
- Developing the KZN export sector and inculcating an export culture among companies
- Investment Attraction programmes and
- Corridor development initiatives

3.2.3. KZN Provincial Growth Fund

The KZN Growth Fund is an initiative uniquely structured as private public partnership. The fund provides finance for commercially viable projects in the province. The fund aims to unlock the economic development potential of the province as well as create sustainable employment

and promote broad-based black economic development. Its strategic objective is to "*target productive infrastructure to crowd-in private sector investment into KZN*[41]*."*

The fund aims to enhance the existing comparative advantages of the Province by focusing on:

- Tourism-based development projects
- Provision of bulk water supply
- Transportation and logistics for well-defined economic and industrial zones
- Sector specific infrastructure projects.

3.3. Other Factors Impacting on Future Demand and Supply of Skills in the Region

A number of major projects are occurring in the KwaZulu-Natal province and these are briefly summarised below.

3.3.1. Renewable Electricity Generation in KZN

Ingula pumped-storage scheme project, on the border between the Free State and KwaZulu-Natal (KZN) is located within the Little Drakensberg mountain range. It will comprise an upper dam (Bedford) and lower dam (Braamhoek) and the upper reservoir site is in KZN. The scheme is being built at a cost of R27 billion and is scheduled to come into operation in 2014. The construction phase will make use of 4 800 employees and 100 employees will be required for the operation phase[42].

3.3.2. Expansion of the existing Durban Port

The development plans for Durban are aimed at meeting the rapid need for shipping containers at Durban port, which services most of the country. The development plans for Durban are driven by the major container expansions required to ensure that the port capacity component of Durban to Gauteng Freight Corridor can meet future demand.

3.3.3. Port of Richards Bay Development Plans

Future development plans include a ship repair facility, dry dock and cruise liner facilities. The long term potential layout plan show major expansion on newly acquired land on the western axis of the port. This will give Richards Bay the potential to handle long term freight volumes once the Port of Durban has reached capacity.

[41] www.kzngrowthfund.co.za
[42] The KwaZulu-Natal Provincial Growth and Development Strategy and Plan (2030), 31 August 2012

3.3.4. Cornubia

Cornubia is a mixed-use, mixed-income, 1 200-hectare development with 80 hectares earmarked for industrial development and the rest for commercial, housing and other social and public facilities (including schools, crèches, clinics, multi-purpose halls, police stations and post offices). Initially a joint venture between the eThekwini Metro Municipality and Tongaat Hulett, the Cornubia development has since been adopted by the Cabinet as a national priority project, bringing all spheres of government in as official partners in the development. The South African National Roads Agency having agreed to fund the bulk of the R830-million N2/M41 interchange upgrade which lies at the heart of the development[43].

According to the KwaZulu-Natal Provincial Growth and Development Strategy and Plan (2030), the projected cost to completion is R20 billion and 100 000 permanent jobs and 96 000 temporary jobs will be created.

3.3.5. Dube Trade Port

The Dube Trade Port is the flagship development project of the provincial Department of Economic Development. The Provincial Government of KwaZulu-Natal established the public company, Dube Trade Port, which is wholly funded by the Province's Department of Economic Development, so enabling it to undertake the development of the Trade Zone, Support Zone and AgriZone which combine to form the Dube Trade Port.

The Dube Trade Port project will provide a significant economic stimulus to the economy of KwaZulu-Natal specifically and South Africa generally, through the provision of world-class facilities for inter-continental passenger travel and freight transfer.

The Trade Port comprises of an airport and a trade port designed to promote tourism and the ease of flow of manufactured goods entering and, especially leaving country. According to the SouthAfrica.info website the construction phase of the projected generated close to 20 000 jobs.

3.4. Conclusion

The South African government has a number of strategies and policies in place to stimulate growth and address challenges faced by the nation. The strategies and policies are geared to ensure global competitiveness of industry and also employment creation. The National

[43] http://www.southafrica.info/business/economy/infrastructure/cornubia-220713.htm#.Ue_MpKxqjYc#ixzz2Zy35TnRh

Infrastructure Plan aims to create a significant number of new jobs and also strengthen the delivery of basic services in South Africa. The Durban-Free State–Gauteng logistics and industrial corridor SIP is likely to have a huge impact on the province. The NIP estimates that 135 000 jobs will be created in the construction of projects in the corridor.

At a provincial level the KZN Provincial Government has the KZN Provincial Growth and Development Strategy and Plan to accelerate economic growth through catalytic and developmental interventions. The KZN PGDS focuses on job creation, human resource development, human community development, strategic infrastructure, responses to climate change, governance and policy and special equity. It is important that the merSETA and the companies in the sector be aware and involved in the implementation of these strategies as they are likely to have an impact on their own operations.

A number of projects of interest to the manufacturing sector have also been implemented in the province. The Ingula pumped-storage scheme project is a renewable electricity generation project which is scheduled to come into operation in 2014. The Cornubia project is envisioned to create 100 000 permanent jobs and 96 000 temporary jobs which is a welcome development in province plagued by high employment. The Dube Trade Port is positive step in making "KwaZulu-Natal the gateway of Africa" as planned by the provincial department as it will ease the flow of manufactured goods.

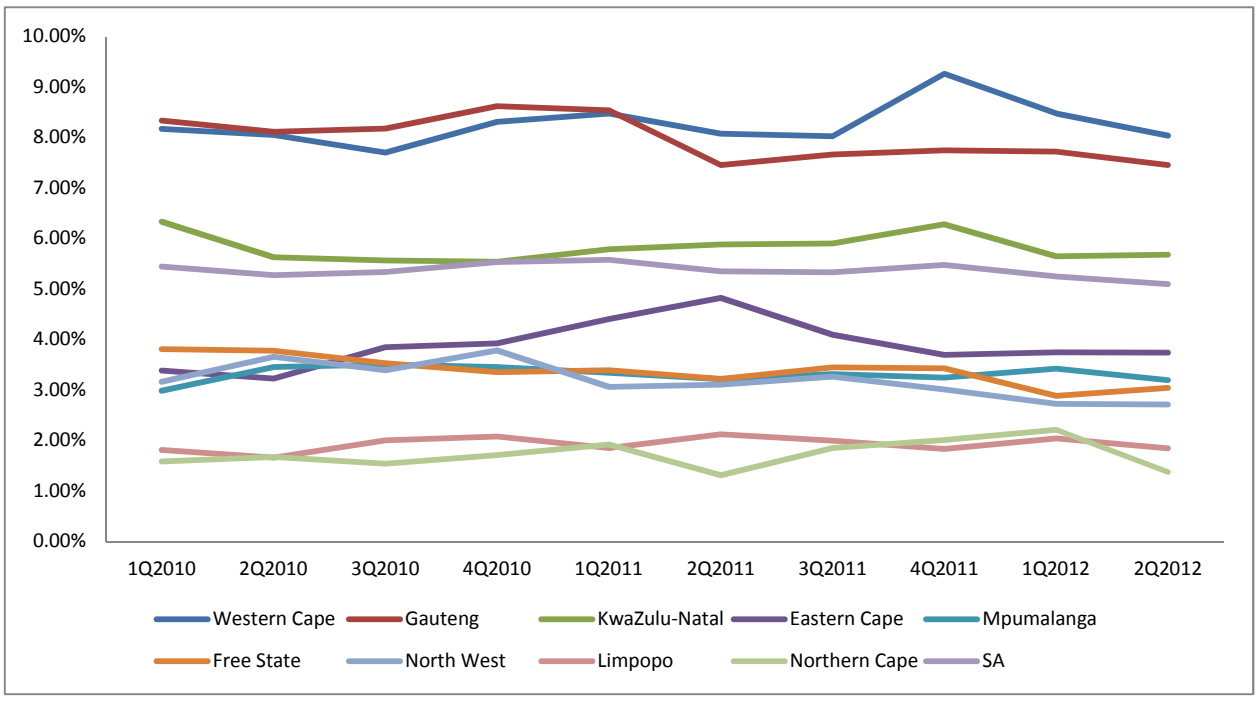
4. THE DEMAND FOR LABOUR

4.1. Introduction

The manufacturing sector is the fourth largest (13%) employer in the country with a total employment figure just above 1.7 million according to the QLFS Q1 2013. Distribution of the total manufacturing workforce shows a bias similar to the economic contribution of the provinces with the bulk of the workforce being found in Gauteng followed by KwaZulu-Natal and Western Cape.

The manufacturing sectors contribution to provincial employment is shown in the graph below, which shows that the sector makes significant contributions in the economies of Western Cape, Gauteng and KwaZulu-Natal.

Figure 23: Manufacturing sector's contribution to provincial employment



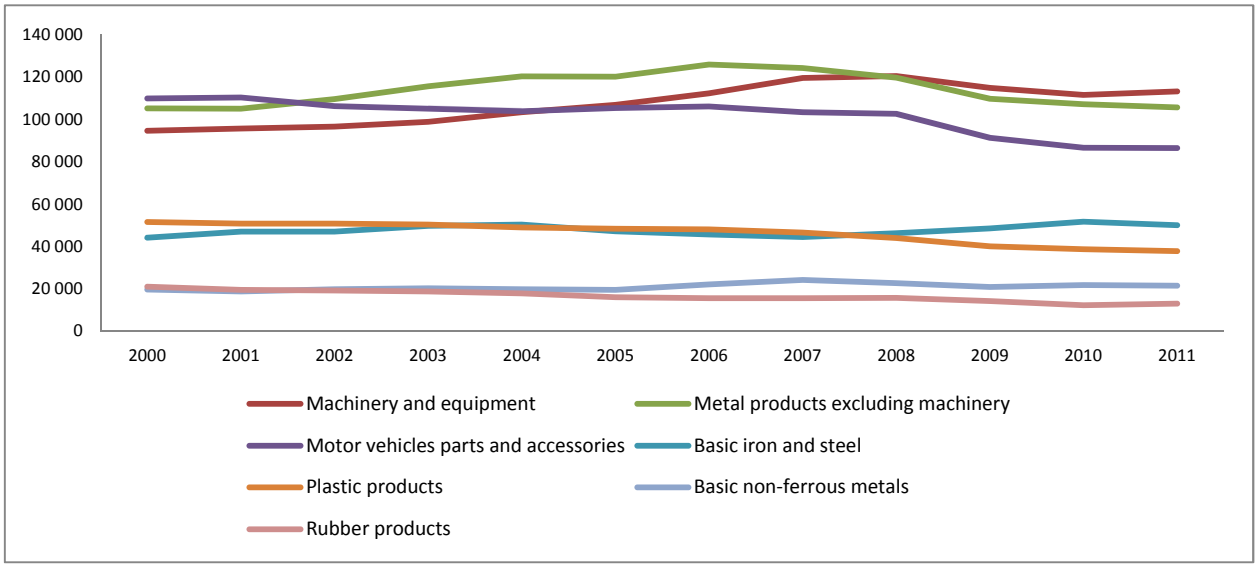
Source: own calculations from Stats SA Labour Force Survey

The metals, metal products, machinery and equipment [SIC: 351-359] is the subsector with the highest employment figures in the manufacturing sector.

An analysis of the employment trends (at a national level) of the subsectors that make-up the merSETA cluster show that employment numbers have gradually decreased over the period

2000-2011.The graph below shows the subsectors that fall under Manufacturing in the National Accounts and does not include the subsector: Sale, maintenance and repair of motor vehicles and motor cycles; retail trade in automotive fuel which falls under the Wholesale and Retail sector.

Figure 24: Employment figures by subsectors, South Africa



Source: Quantec (2013)

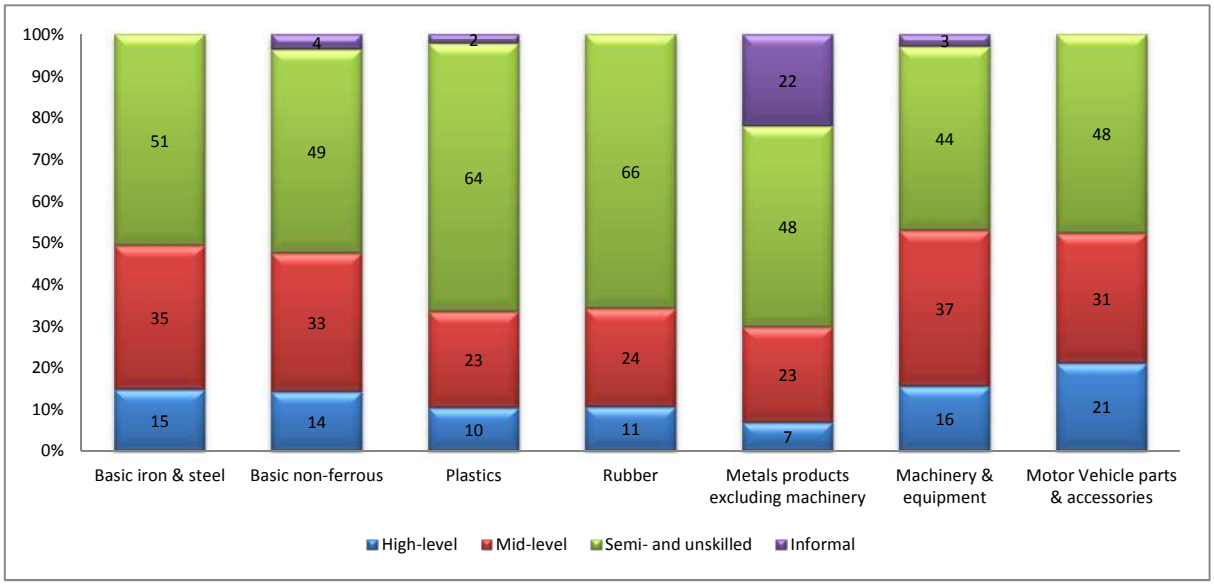
The machinery & equipment and metal products excluding machinery have the highest employee figures for 2011. For the machinery & equipment sector there has been an increasing trend over the years, from 94.5 thousand employees in 2000 to 113 thousand in 2011. The motor vehicle parts & accessories sector lost the greatest number of employees since 2000, declining from 109 222 to 86 391 employees in 2011. The plastics products subsector also recorded a decrease in number of employees from 51 437 in 2000 to 37 708 in 2011. Slight increases were recorded in the remaining subsectors.

4.1.1. Employment Profile

4.1.1.1. Skill levels and Occupational Profile

The sectors that have the greatest proportions of unskilled and semi-skilled workers are the plastics and rubber products sectors according to 2011 statistics. The motor vehicle parts & accessories subsector had the highest proportion of skilled workers of all the subsectors.

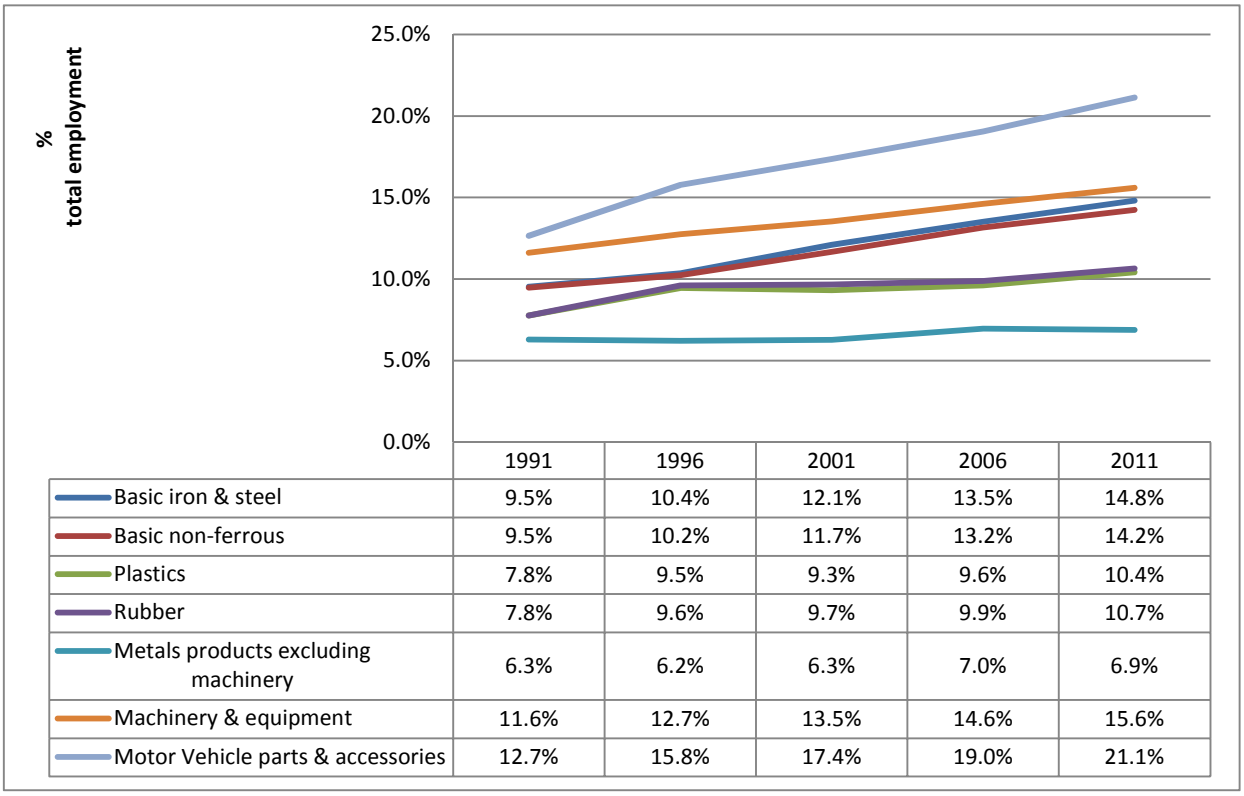
Figure 25: Skill level of workers per sub-sectors, 2011



Source: Quantec (2013)

An analysis of the trends in high-level skills per subsector shows an increase in the portion of skilled workers who make the workforce of the merSETA cluster. The portion of high-level skills has been increasing for the decade 1991 to 2011 but still constitute a minority in the profile of employees as shown in Figure 26 below. Semi-skilled, unskilled and mid-level skilled employees still constitute the majority of employees in all subsectors of the merSETA clusters.

Figure 26: Trends in high-level skills per subsector



	1991	1996	2001	2006	2011
Basic iron & steel	9.5%	10.4%	12.1%	13.5%	14.8%
Basic non-ferrous	9.5%	10.2%	11.7%	13.2%	14.2%
Plastics	7.8%	9.5%	9.3%	9.6%	10.4%
Rubber	7.8%	9.6%	9.7%	9.9%	10.7%
Metals products excluding machinery	6.3%	6.2%	6.3%	7.0%	6.9%
Machinery & equipment	11.6%	12.7%	13.5%	14.6%	15.6%
Motor Vehicle parts & accessories	12.7%	15.8%	17.4%	19.0%	21.1%

Source: Quantec (2013)

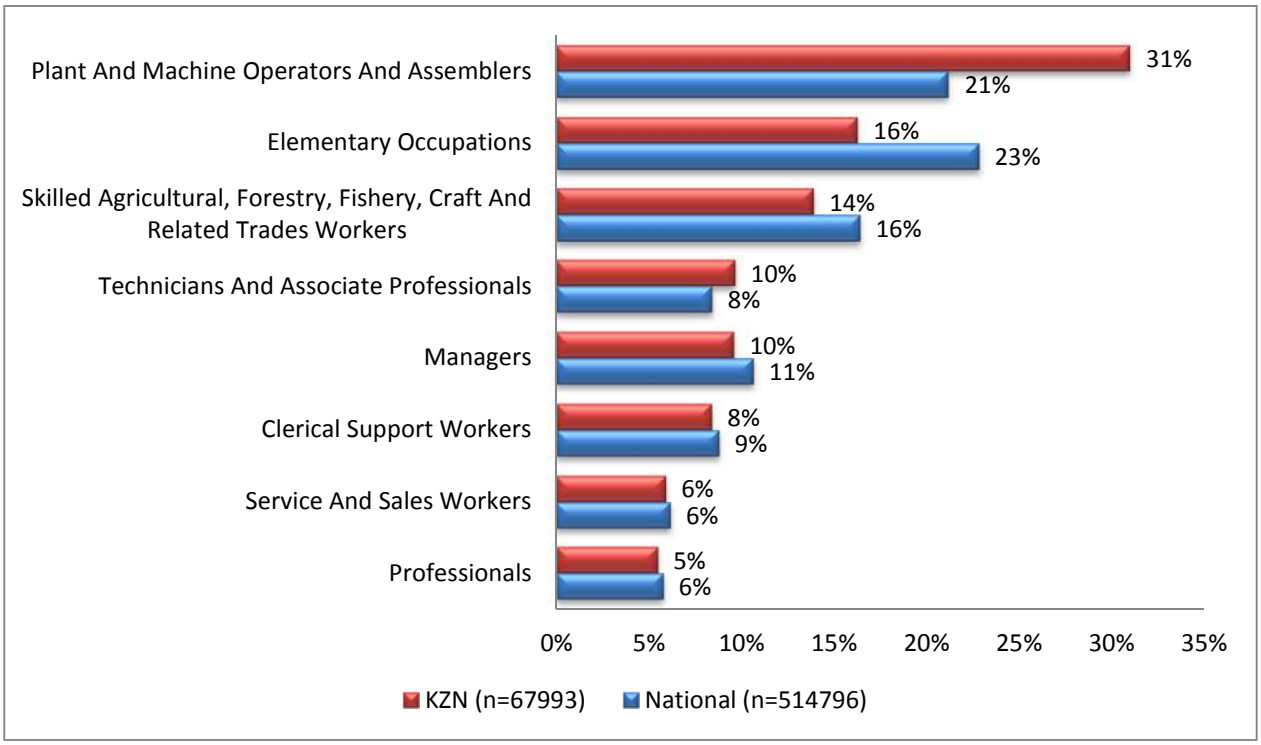
The portion of high-level skills has been increasing for the decade 1991 to 2011 but still constitute a minority in the profile of employees. Semi-skilled, unskilled and mid-level skilled employees still constitute the majority of employees in all subsectors of the merSETA clusters.

An analysis of the merSETA database showed the occupational profile shown in the graph below. 31% of the merSETA workforce in KZN falls under the plant and machine operators and assemblers category which is more than the national average of 21%. Elementary occupations makeup 16% of the workforce in KZN and this is less than the national average of 23%. The occupational profile and the skill level profile may also be used to infer the educational profile of the merSETA cluster employee. Elementary workers (22%) generally have only entry-level qualifications. Managers (11%) and professionals (6%) are likely to have high levels of formal education. The majority of technicians and associate professionals (9%) and the skilled agricultural, forestry, fishery, craft and related trade workers (17%) are likely to have trade-related qualifications.

The Plastics Chamber Report (April, 2012) found that the majority (48.8%) of the plastics sector employees had Grade 12 (Matric) and 32% ABET 2-4 (Grade 1-9) as their highest qualifications. The findings from the New Tyre Chamber Report showed that the majority of employees categorised as artisans/craft workers have a Grade 12 or equivalent as their highest

qualification. They found very few artisans/craft employees with N4-6 (8%), or National Diplomas (7%) as their highest qualifications. Similar findings were found in the other occupational categories namely; professionals, associate professionals and even executives/senior management. The chamber report concluded that the tyre industry has relatively low-level qualifications relative to the positions they hold

Figure 27: merSETA employment by major occupational groups

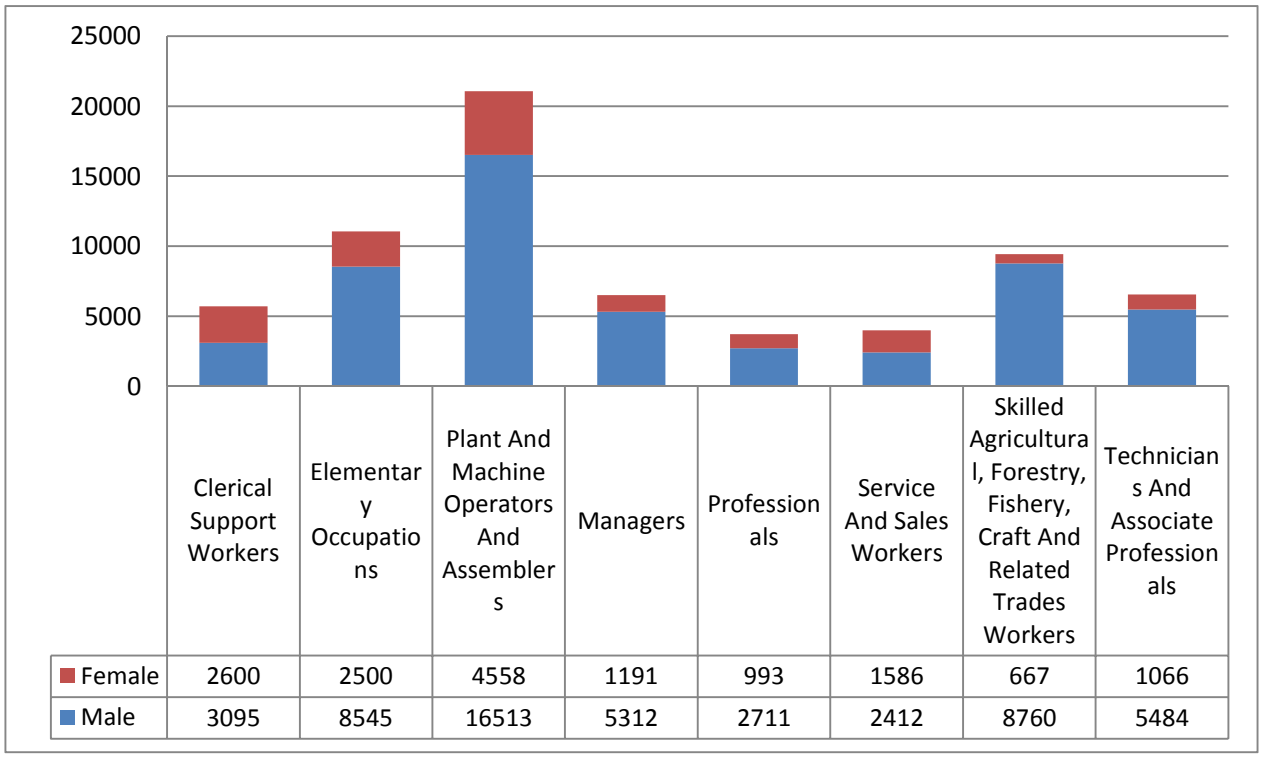


Source: merSETA database (2013)

4.1.1.2. Race and gender distribution of employees

The merSETA sector is dominated by male employees; the national database shows that 80% of employees are male and 20% are female. The situation for KZN is also similar with males being 78% of the total employees. There is no occupation where females outnumber males in the KZN region. Females also constitute a considerable portion (46%) of the clerical support workers and the sales and service workers (40%) category. As shown in the graph below the proportion of women is generally very low in the rest of the occupations.

Figure 28: Gender distribution of KZN employees in the sector according to occupational group

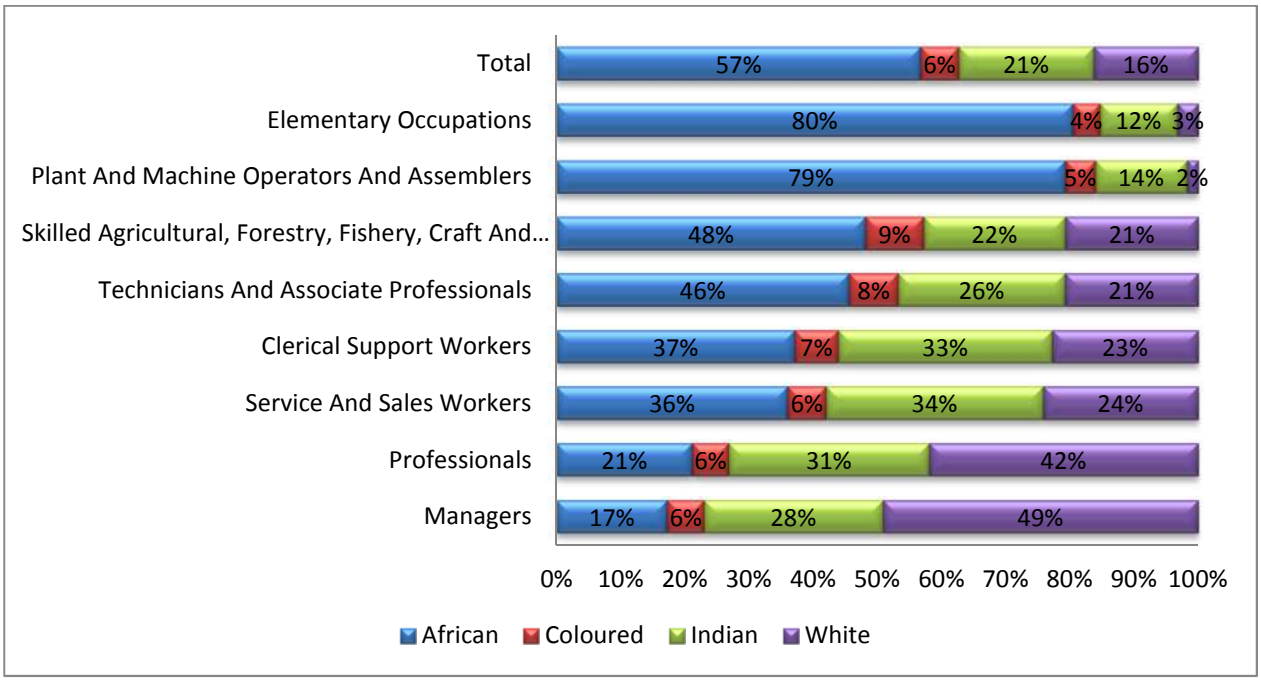


	Clerical Support Workers	Elementary Occupations	Plant And Machine Operators And Assemblers	Managers	Professionals	Service And Sales Workers	Skilled Agricultural, Forestry, Fishery, Craft And Related Trades Workers	Technicians And Associate Professionals
Female	2600	2500	4558	1191	993	1586	667	1066
Male	3095	8545	16513	5312	2711	2412	8760	5484

Source: merSETA database (2013)

The racial profile indicates that 57% of KZN merSETA employees are African, 16% are white and 21% are Indian. This racial distribution is not remarkably different from the national figures of 55% are African, 32% are white and 6% are Indian.

Figure 29: Racial distribution of KZN employees in the sector



Source: merSETA database (2013)

The occupations with the greatest proportion of African employees are the elementary occupations (80%) and the plan and machine operators and assemblers (79%) categories. Nationally Africans make up 79% of elementary occupations and 77% of plant and machine operators and assemblers. Whites make up 49% of managers in KZN as compared to 66% nationally. Indians represent 28% of managers and 31% of professionals in KZN in contrast to the national figures of 8% and 10% respectively.

4.1.1.3. Age distribution of employees

According to the merSETA data system, 45% of KZN employees are younger than 35 years whilst 47% are between 35 and 49 years and 8% are between 49 and 64 years. As expected only a minority (22%) of managers are less than 35 years because of the experience and expertise the positions require. The majority (48%) of skilled agricultural, forestry, fishery, craft and related trades workers are in the 35-49 age group and a considerable portion (45%) is younger than 35 years.48% of technicians and associate professionals are less than 35 years of age. Views gathered from our in-depth interviews show a concern for the lack of interest amongst young people to join the manufacturing industry as blue collar jobs are negatively perceived.

Table 9: Age distribution of merSETA employees by major occupational category

Occupational Group	Age group		
	<35	**35-49**	**50-64**
Managers	22%	63%	15%
Clerical Support Workers	43%	49%	8%
Professionals	44%	48%	8%
Service And Sales Workers	44%	48%	8%
Skilled Agricultural, Forestry, Fishery, Craft And Related Trades Workers	45%	48%	8%
Technicians And Associate Professionals	48%	45%	7%
Plant And Machine Operators And Assemblers	49%	45%	6%
Elementary Occupations	51%	44%	5%
Total	**45%**	**47%**	**8%**

Source: merSETA database (2013)

The age distribution amongst chamber employees is shown in the table below. The plastic sector has the largest portion (42%) of employees younger than 35 years. The recent Plastics Chamber report found that 62% of the employees from the companies profiled were between 18 and 39 years which indicate a relatively young workforce.

Table 10: Age distribution of merSETA employees by chamber category

Chamber	Age group		
	<35	35-49	50-64
Metal	38%	50%	11%
Auto	36%	53%	11%
Motor	34%	55%	11%
New Tyre	37%	54%	10%
Plastics	42%	48%	9%
Unknown	43%	47%	9%
Total	40%	49%	10%

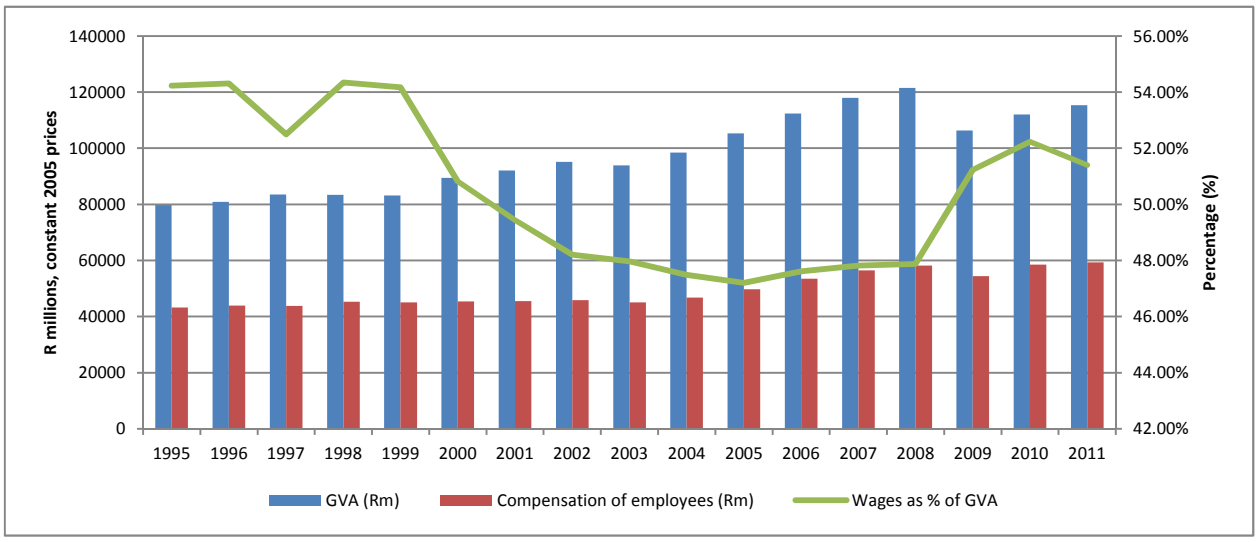
Source: merSETA database (2013)

An industry player in the motor industry was of the view that the average age of employees in the sector was around 55 years. *"It's worrying because now there are more people retiring than those coming into the industry."*

4.1.2. Remuneration Trends

The gross earning of the employees within the manufacturing sector has increased steadily despite a sustained contraction of the workforce. A review of previous SSPs indicated that employees in the manufacturing sector are likely to be permanently employed with employers who contribute to their pension fund and makes UIF contributions.

Figure 30: Employee remuneration as percentage of GVA



Source: Quantec (2013)

The increase in employee remuneration might be due to the changing skills profiles in the sector, with more highly skilled workers commanding higher wages and the impact of the highly unionised nature of the workforce.

4.2. Future Demand

To determine the future demand required for the merSETA sector in KZN it is important to consider the current economic conditions as well as economic growth forecasts. Replacement demand due to mortality, emigration, and emigration of employees should also be factored in.

The previous section profiled the current merSETA workforce in KZN highlighting the occupational figures and the age profile of the employees. The manufacturing sector has been characterised, on the one hand by declining employment due to the use of labour saving technology and economic challenges whilst on the other hand creating an increased demand for skilled employees who can operate increasingly sophisticated machinery.

Estimates of demand are usually derived from econometric forecasting models which use historical data along with assumptions about the future to predict how output and employment patterns over time. The researchers used the data and findings found in the merSETA SSP Update for 2012/2013 – 2016/2017. The data form that study was then disintegrated to give a regional outlook based on the current employment figures and distribution of manufacturing activity.

The economic growth rates, the associated employment growth rates, and the final employment growth rates used in the merSETA's labour demand model can be seen in the table below.

Table 11: Average GVA and employment growth figures

Subsector	Low growth		Baseline		**High Growth**	
	GVA growth (%)	**Employment growth (%)**	**GVA growth (%)**	**Employment growth (%)**	**GVA growth (%)**	**Employment growth (%)**
Rubber products	-0.2	-1.0	1.5	-0.6	3.5	0.7
Plastic products	2.0	2.6	2.5	3.2	3.0	3.8
Basic iron & steel	-3.6	-0.9	4.0	0.6	10.4	2.6
Basic non-ferrous metals	1.1	0.6	3.5	2.1	6.3	3.7
Machinery & equipment	1.5	0.9	3.2	1.9	5.1	3.0
Motor vehicles, parts & accessories	-1.1	-0.7	3.3	2.2	8.7	5.2
Sales & repair of vehicles; fuel stations	2.6	0.9	5.4	1.9	8.5	2.9
Total economy	**1.9**	**0.8**	**3.8**	**1.7**	**6.2**	**2.6**

Source: merSETA SSP Update 2012/13-2017/18

Table 12: Employment growth figure used in the merSETA's labour demand projection

merSETA sectors	Low growth	Baseline	High growth
	%	%	%
Auto	0.5	2.0	3.5
Metals	0.4	1.6	3.0
Motor	0.5	2.0	3.5
New Tyre	-1.0	-0.6	0.7
Plastics	2.6	3.2	3.8
Unknown	0.4	1.6	3.0

Source: merSETA SSP Update 2012/13-2017/18

Based on the analysis and the projections of the merSETA SSP Update 2012/2013-2017/18 the demand projections for the KZN region for the baseline, negative and positive scenarios would be as follows:

Table 13: Demand projections 2014 to 2018: baseline scenario for KZN

New Positions to be Created in Period					
Occupational Group	2014	2015	2016	2017	2018
Managers	275	281	286	292	298
Professionals	195	200	204	208	212
Technicians and Associate Professionals	386	395	401	410	418
Clerical Support Workers	128	130	132	134	137
Service and Sales Workers	307	311	317	323	330
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	92	95	95	97	99
Plant and Machine Operators and Assemblers	674	689	701	716	731
Elementary Occupations	563	575	586	599	609
Total	**2 621**	**2 675**	**2 722**	**2 778**	**2 833**
Replacement Demand					
Occupational Group	2014	2015	2016	2017	2018
Managers	510	521	529	540	548
Professionals	305	311	317	321	328
Technicians and Associate Professionals	470	479	487	496	506
Clerical Support Workers	153	158	160	162	166
Service and Sales Workers	351	357	363	370	376
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	109	111	113	116	118
Plant and Machine Operators and Assemblers	794	809	823	838	853
Elementary Occupations	596	607	617	630	641
Total	**3 289**	**3 352**	**3 410**	**3 471**	**3 534**
Total Positions That Need to be Filled					
Occupational Group	2014	2015	2016	2017	2018
Managers	785	800	815	830	846

Professionals	502	510	519	529	538
Technicians and Associate Professionals	857	874	888	905	922
Clerical Support Workers	281	286	292	296	302
Service and Sales Workers	657	668	680	693	706
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	202	204	208	212	216
Plant and Machine Operators and Assemblers	1 468	1 495	1 525	1 554	1 583
Elementary Occupations	1 159	1 182	1 203	1 226	1 250
Total	5912	6019	6130	6245	6363

Source: merSETA SSP Update 2012/13-2017/18

According to demand projections for the baseline scenario shown in the above table, KZN would require 2 621 to fill new positions and 3 289 to meet replacement demand needs which results in a total demand of new skills of5 912 people in 2014. The total demand for the four year period (2014-2018) would be 30 668 new skills.

Table 14: Demand Projections 2014 to 2018: negative scenario KZN

New Positions to be Created in Period					
Occupational Group	2014	2015	2016	2017	2018
Managers	82	84	84	86	86
Professionals	55	55	57	57	57
Technicians and Associate Professionals	116	116	118	118	120
Clerical Support Workers	36	36	36	36	36
Service and Sales Workers	80	80	82	82	82
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	25	25	25	27	27
Plant and Machine Operators and Assemblers	225	229	233	235	239
Elementary Occupations	181	183	185	187	189
Total	**798**	**806**	**819**	**827**	**836**
Replacement Demand					
Occupational Group	2014	2015	2016	2017	2018
Managers	491	496	498	500	504
Professionals	294	296	298	298	300
Technicians and Associate Professionals	454	456	458	462	464
Clerical Support Workers	149	149	149	151	151
Service and Sales Workers	338	338	340	342	344
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	105	105	107	107	107
Plant and Machine Operators and Assemblers	764	771	775	779	785
Elementary Occupations	575	578	582	586	588
Total	**3 171**	**3 188**	**3 207**	**3 226**	**3 245**
Total Positions That Need to be Filled					
Occupational Group	2014	2015	2016	2017	2018
Managers	573	580	582	586	590

Professionals	349	351	355	355	357
Technicians and Associate Professionals	569	571	575	580	584
Clerical Support Workers	185	185	185	187	187
Service and Sales Workers	418	418	422	424	426
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	130	130	132	134	134
Plant and Machine Operators and Assemblers	989	1 000	1 008	1 014	1 025
Elementary Occupations	756	760	767	773	777
Total	3 969	3 994	4 026	4 053	4 080

Source: merSETA SSP Update 2012/13-2017/18

According to the demand projections for the negative scenario, KZN will need 798 new skills to fill new positions and 3 171 for replacement demand positions in 2014. The total demand for the four year period 20 122 and most of these would be from replacement demand and not new positions.

Table 15: Demand Projections 2014 to 2018: positive scenario KZN

New Positions to be Created in Period					
Occupational Group	2014	2015	2016	2017	2018
Managers	506	523	540	557	575
Professionals	368	378	391	403	416
Technicians and Associate Professionals	712	735	758	783	809
Clerical Support Workers	235	244	250	258	267
Service and Sales Workers	578	594	613	634	653
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	172	176	183	189	195
Plant and Machine Operators and Assemblers	1 214	1 254	1 294	1 336	1 380
Elementary Occupations	1 023	1 054	1 090	1 124	1 161
Total	**4 807**	**4 958**	**5 118**	**5 284**	**5 456**
Replacement Demand					
Occupational Group	2014	2015	2016	2017	2018
Managers	531	548	567	584	603
Professionals	317	328	338	349	359
Technicians and Associate Professionals	489	506	521	538	554
Clerical Support Workers	160	166	170	176	183
Service and Sales Workers	365	376	389	401	414
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	113	118	122	124	128
Plant and Machine Operators and Assemblers	825	851	878	905	935
Elementary Occupations	620	641	659	680	704
Total	**3 421**	**3 532**	**3 644**	**3 757**	**3 879**
Total Positions That Need to be Filled					
Occupational Group	2014	2015	2016	2017	2018
Managers	1 037	1 071	1 107	1 140	1 178
Professionals	685	706	729	752	775

Technicians and Associate Professionals	1 201	1 241	1 279	1 321	1 363
Clerical Support Workers	395	410	420	435	449
Service and Sales Workers	943	970	1 002	1 035	1 067
Skilled Agricultural, Forestry, Fishery, Craft and related Trades Workers	286	294	305	313	323
Plant and Machine Operators and Assemblers	2 039	2 104	2 171	2 241	2 314
Elementary Occupations	1 642	1 695	1 749	1 804	1 865
Total	**8 228**	**8 490**	**8 761**	**9 041**	**9 335**

Source: merSETA SSP Update 2012/13-2017/18

According to the demand projections for the positive scenario KZN would need 4 807 new people for newly created positions and 3 421 new skills for replacement demand. In the positive scenario the demand from newly created positions outweighs those from replacement demand. For the four year period total projected demand is 43 854 people.

The majority of positions will be in the plant and machine operators and assemblers and elementary occupations categories. All three scenarios point to a substantial amount of mangers, professionals and technicians and associate professionals required. It is therefore necessary for the current workforce to be up-skilled where possible or for bursaries to be provided for higher educational qualifications.

4.3. Conclusion

The manufacturing sector is the fourth largest employer in the nation and its continued growth would contribute to lowering the unemployment rate. The data from the merSETA database indicates a figure of 67 993 for the KZN region and this is 13% of the national figure. An analysis of the 2011 labour data shows that the majority of employees in the merSETA sectors fall under the semi-and unskilled workers category. The decade 1991-2011 has seen an increase in the portion of high-level skills in the industry and this is likely to continue as technological innovations are implemented in the coming years. This means the current workforce has to be up-skilled to meet the demands of the industry and new entrants also need the adequate skills to meet the changes in the industry.

The merSETA database shows that currently the majority of employees in the sector are plant and machine operators and assemblers (31%) and elementary occupations (16%) for the KZN region. The sector is dominated by male employees (80%) and the racial profiles shows that 57% of employees are African. 45% of KZN employees are younger than 35 years whilst 47% are between 35 and 49 years and 8% are between 49 and 64 years. It is vital that enough

young people with the requisite skills enter the work force to replace those that might retire in the next decade.

Demand forecasting based on the merSETA SSP Update 2012/13-2017/18 showed the numbers required from new positions and from replacement demand for the period 2014-2018. 25% of these positions are from the plant and machine operators and assemblers category and 14% are from the technicians and associate professionals category. The region should therefore ensure that it prepares for the projected demand by collaborating with supply-side institutions, companies and the merSETA for adequate training and planning to be done.

5. LABOUR SUPPLY

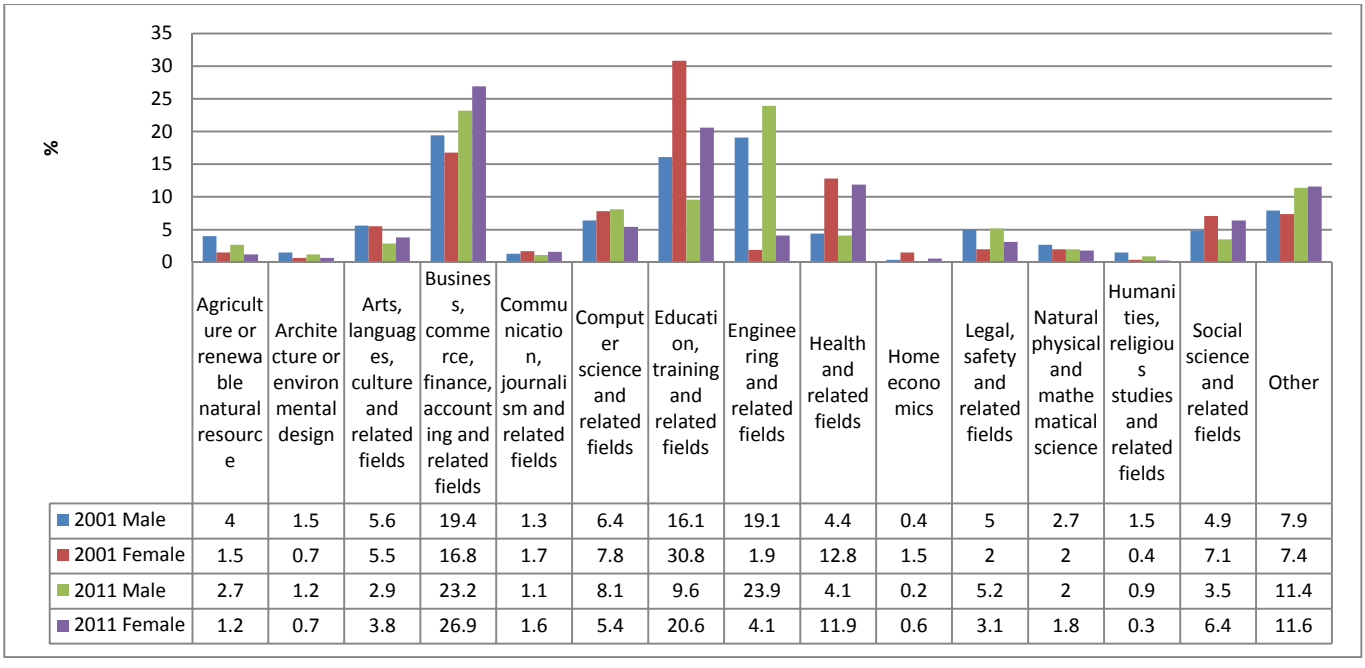
5.1. Introduction

The future growth prospects of a sector are dependent on the availability of appropriate and affordable skills and an analysis of the supply-side is necessary. This chapter analyses the supply of skills to the merSETA sector both within a national context and regional context. Trends from both the secondary and tertiary education sectors are analysed.

The current supply of skills to the sector should also include those that are currently unemployed but where previously employed in the sector. The Q1 LFS of 2013 states that 230 000 people who were unemployed previously worked in the manufacturing sector. The Q1 LFS of 2013 shows of the total 1 879 000 who are now unemployed but have worked in the past 5 years; 307 000 worked as craft and related tradesmen; 158 000 as plant and machine operators and 94 000 as technicians.

Data from the 2011 census shows that for those aged 20 years and above the most common field of education is business and commerce field as shown in the graph below. It is however interesting to note that the portion of males holding educational qualifications in engineering and related fields has increased from 19.1% to 23.9%. There has also been an increase in women holding engineering and related fields' qualifications from 1.9% to 4.1%.

Figure 31: Field of education for persons aged 20 years and above by sex, 2001 and 2011



	Agriculture or renewable natural resource	Architecture or environmental design	Arts, languages, culture and related fields	Business, commerce, finance, accounting and related fields	Communication, journalism and related fields	Computer science and related fields	Education, training and related fields	Engineering and related fields	Health and related fields	Home economics	Legal, safety and related fields	Natural physical and mathematical science	Humanities, religious studies and related fields	Social science and related fields	Other
2001 Male	4	1.5	5.6	19.4	1.3	6.4	16.1	19.1	4.4	0.4	5	2.7	1.5	4.9	7.9
2001 Female	1.5	0.7	5.5	16.8	1.7	7.8	30.8	1.9	12.8	1.5	2	2	0.4	7.1	7.4
2011 Male	2.7	1.2	2.9	23.2	1.1	8.1	9.6	23.9	4.1	0.2	5.2	2	0.9	3.5	11.4
2011 Female	1.2	0.7	3.8	26.9	1.6	5.4	20.6	4.1	11.9	0.6	3.1	1.8	0.3	6.4	11.6

Source: Stats SA, Census 2011

As shown in the graph above the majority of women have business, commerce and related fields (27%) and in education, training and related fields (21%). In contrast to the females, the engineering and related fields qualifications are the most (24%) common amongst men followed by business, commerce and related fields.

The issue of 'quality' of supply was greatly emphasised by the Task Team respondents. Employer representatives pointed out that the focus should not only be on the quantities supplied but on the employability and relevance of supply to industry. *"If I have 200 vacancies and I can't find the right people with the right skills, I will not fill those positions. The 20% unemployed will remain unemployed. Even if they are unemployed qualified people, I will not take lesser skilled people than the ones I need just to fill in positions. Our company has standards, and if you don't meet our minimum criteria, psychometric assessment and mobility assessment we can't and won't employ."*

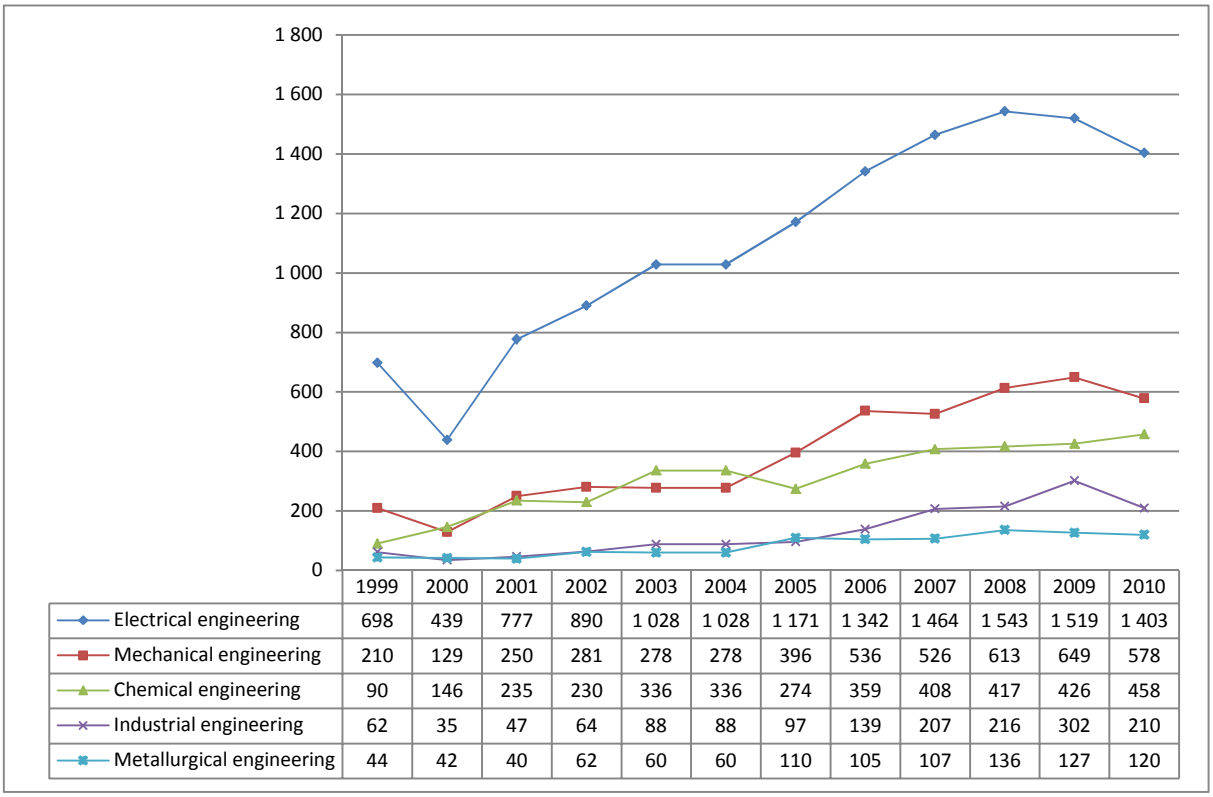
5.2. Supply of new skills to the sector

5.2.1. Higher education and training

Qualifications and output figures of most relevance to the merSETA cluster is the output of engineers and, in particular, electrical engineers, mechanical engineers, chemical engineers, industrial engineers, and metallurgical engineers. The merSETA sector also benefits and utilises skills from other areas like finance, accounting and human resources but of most importance are the engineering skills that sustain the sector.

The graph below shows the graduations with national diplomas in selected engineering fields between 1999 and 2010. These graduates become available to the national economy as engineering technicians in the relevant engineering disciplines. Electrical engineering has the highest output (1 403 in 2010), followed by mechanical engineering (578 in 2010) and chemical engineering (458 in 2010). Output from all fields has increased substantially over the eleven-year period, although a slight drop in output was reported in all fields except chemical engineering in 2010.

Figure 32: Number of national diplomas awarded in selected engineering fields: 1999-2010, South Africa

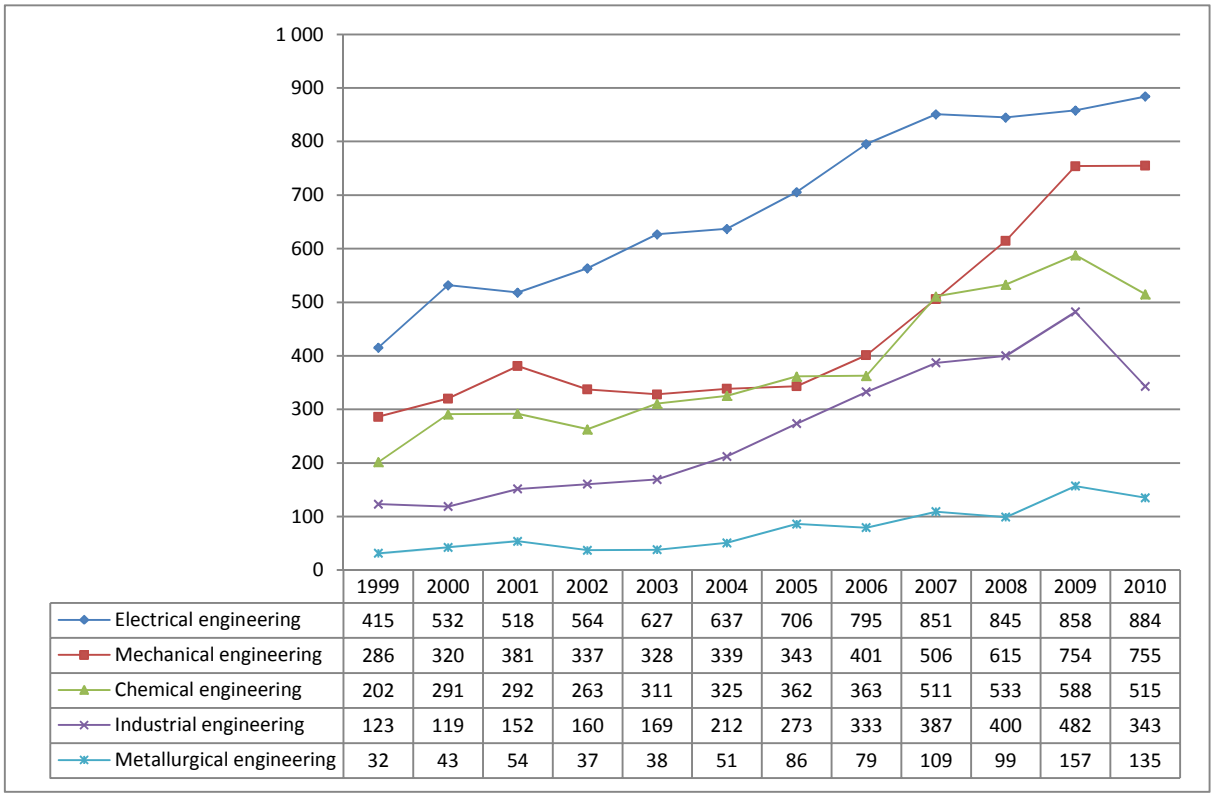


	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Electrical engineering	698	439	777	890	1 028	1 028	1 171	1 342	1 464	1 543	1 519	1 403
Mechanical engineering	210	129	250	281	278	278	396	536	526	613	649	578
Chemical engineering	90	146	235	230	336	336	274	359	408	417	426	458
Industrial engineering	62	35	47	64	88	88	97	139	207	216	302	210
Metallurgical engineering	44	42	40	62	60	60	110	105	107	136	127	120

Source: merSETA SSP Update 2012/13-2016/2017

The graph below shows the number of first degrees awarded in the same selected engineering fields. These graduates become available to the national economy as engineers or engineering technologists and can, after a minimum of three years' work experience (during which certain criteria must be met), register as professional engineers or engineering technologists in their respective fields. In 2010 a slight drop in output (7% in total) was reported in the fields of chemical-, industrial- and metallurgical engineering. Output in 2010 was the greatest in electrical engineering (884), followed by mechanical engineering (755), and chemical engineering (515).

Figure 33: First degrees awarded in selected engineering fields: 1999-2010, South Africa

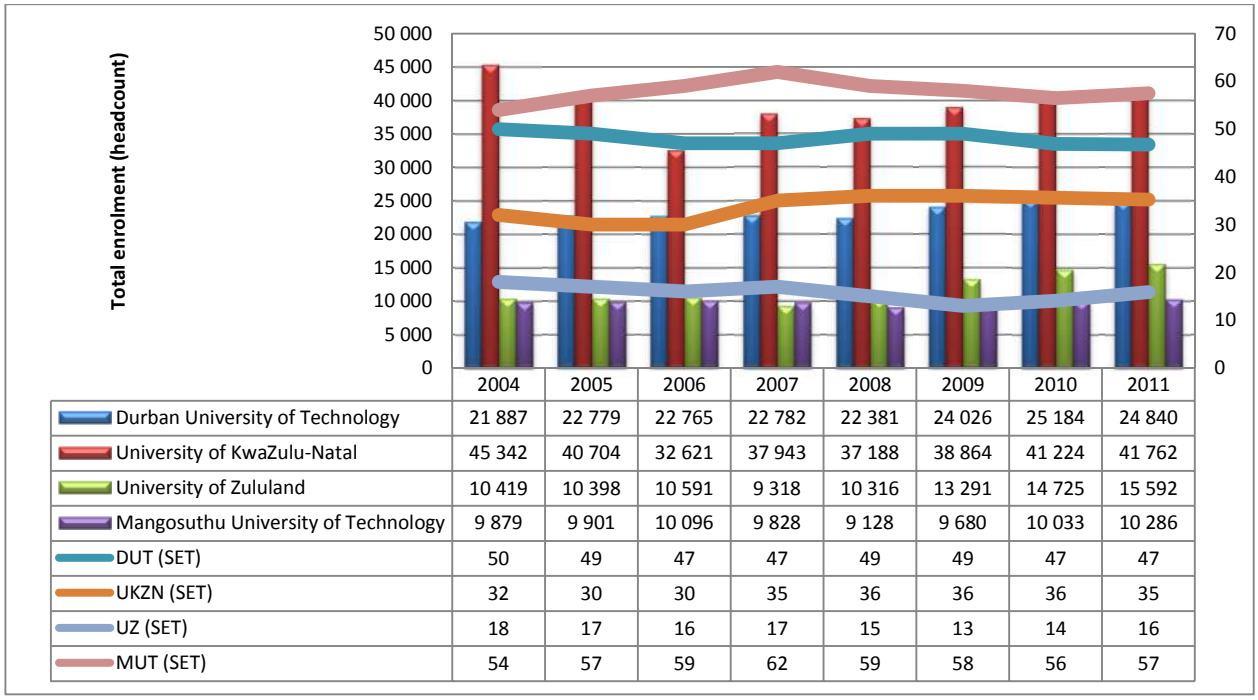


	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Electrical engineering	415	532	518	564	627	637	706	795	851	845	858	884
Mechanical engineering	286	320	381	337	328	339	343	401	506	615	754	755
Chemical engineering	202	291	292	263	311	325	362	363	511	533	588	515
Industrial engineering	123	119	152	160	169	212	273	333	387	400	482	343
Metallurgical engineering	32	43	54	37	38	51	86	79	109	99	157	135

Source: merSETA SSP Update 2012/13-2016/2017

At a regional level KZN has two universities; University of KwaZulu-Natal (UKZN) and University of Zululand and two universities of technology; Mangosuthu University of Technology and Durban University of Technology. The total enrolment figures and the proportion of enrolments in science engineering and technology fields are illustrated in the graph below. As clearly seen in the graph below University of KwaZulu-Natal has the highest enrolment figures and on average 34% of these have been for the science, engineering and technology (SET) fields.

Figure 34: University enrolment figures and percentage science, engineering and technology enrolment, 2011



	2004	2005	2006	2007	2008	2009	2010	2011
Durban University of Technology	21 887	22 779	22 765	22 782	22 381	24 026	25 184	24 840
University of KwaZulu-Natal	45 342	40 704	32 621	37 943	37 188	38 864	41 224	41 762
University of Zululand	10 419	10 398	10 591	9 318	10 316	13 291	14 725	15 592
Mangosuthu University of Technology	9 879	9 901	10 096	9 828	9 128	9 680	10 033	10 286
DUT (SET)	50	49	47	47	49	49	47	47
UKZN (SET)	32	30	30	35	36	36	36	35
UZ (SET)	18	17	16	17	15	13	14	16
MUT (SET)	54	57	59	62	59	58	56	57

Source: Quantec and EMIS database (2013)

The Mangosuthu University of Technology, though it has the lowest intake figures has the highest proportion of its enrolment being for the SET fields which averaged 58% from 2004 to 2011. The total enrolment figures for the period 2004 to 2011 have remained largely stable.

In terms of absolute figures University of KwaZulu-Natal had the greatest number (14 617) of SET students in 2011; followed by Durban University of Technology (11 675) and Mangosuthu University of Technology (5 863). An employer from Mpumalanga indicated they recruit from the University of KwaZulu-Natal especially from the Metallurgy graduates.

5.2.2. FET colleges

FET colleges form a critical component of the current training capacity of artisans. FET colleges offer training for the NQF Level 4 National Certificate Vocational (NCV). One of the four routes to becoming an artisan is by doing an internship or skills programme on top of having a relevant NCV. The Minister of Higher Education and Training Minister Blade Nzimande stated in 2012 that enrolments in FET colleges had risen substantially in recent years and were exceeding projected demand[44]. Over 600 000 students enrolled in SA's 50 FET colleges in 2012[45].The department has set an enrolment target of one million by 2014 and has launched some urgent interventions into the sector. The department aims to have 4 million enrolments in FET colleges and other no-university post school institutions by 2030. According to the National Skills Accord

[44] http://www.citypress.co.za/news/young-jobless-and-desperate-will-fet-colleges-fix-our-future-20120623/
[45] http://www.fm.co.za/economy/2013/02/01/department-on-track-to-improve-fet-colleges

between industry and government, SETAs will have to facilitate the placement of FET and university students in industry.

KwaZulu-Natal has 9 FET colleges and these together with the programmes are listed in Appendix A.

Table 16 gives the regional enrolment figures for FET colleges for 2013. KwaZulu-Natal FETs accounted for 16.9% of the N1-N3 enrolment and 18.9% of N4-N6 enrolment.

Table 16: FET enrolment figures by region, 2013

Row Labels	Sum of NCV	Sum of Eng_N1_N3	Sum of Eng_N4_N6	Sum of Bus_N4_N6	Sum of Total
Eastern Cape	19656	4016	1454	9742	34868
Free State	7074	5896	1695	12405	27070
Gauteng	31671	17700	9804	22487	81662
Kwa-Zulu Natal	31487	9800	5435	23213	69935
Limpopo	22684	4157	5517	10149	42507
Mpumalanga	10079	5384	2049	3433	20945
North West	10044	4906	1087	5003	21040
Northern Cape	2950	1156	114	3356	7576
Western Cape	16872	5002	1502	10776	34152
Grand Total	152517	58017	28657	100564	339755

Source: DHET, The State of FET Colleges in South Africa

The targeted national certification rate for N1-N3 part-qualifications in Engineering Studies was 33% for the 2012 academic year. Twenty public FET Colleges and 12 private FET Colleges achieved the targeted certification rate of 33% and higher on N1, 18 public FET Colleges, 32 public FET Colleges on N3[46]. The targeted national certification rate for N4-N6 part-qualifications in Engineering Studies was 40% for the 2012 academic year. Twenty-five public FET Colleges achieved a certification rate of 40% and higher on N4, 12 public FET on N5 and 13 public FET Colleges on N6. The table below shows the national certification rates for FET colleges for the November 2012 examinations cycle.

[46] DHET, The State of FET Colleges in South Africa; Presentation at HRD FET College Indaba; 7 March 2013

Table 17: Certification rate of FET colleges, 2012

Qualification/Programme	Certification Rate
1. Report 190/1 Engineering Studies	
National N3 Certificate	37.5%
National N6 Certificate	36.2%
2. Report 190/1 Business Studies	
National N6 Certificate	31.9%
3. National Certificate (Vocational)	
Level 4	39.3%

Source: DHET, The State of FET Colleges in South Africa

From our in-depth interviews with employer representatives regarding FET colleges, industry seem to be willing to work with FETs to ensure more rounded and capable students are produced. Some employers did mention that FET colleges are strong on the theory but do not adequately equip the students practically. Focus on FET, should therefore not be on the numbers but rather on the quality of students coming through to ensure their employability and acceptance by industry. *"All the people trained should be employable and should not be unemployed. If the supply is not meeting industry standard then we should fix the quality, we cannot train people for unemployment."*

Employers interviewed also mentioned that quality of FET students might not be up to their standards because of the quality of lecturers used specifically using non-tradesmen to teach trades. Greater cooperation between industry and FETs is required to help feedback into the curriculum and also to provide workplace exposure to both the lecturers and students.

MerSETA in its role as a Training Authority in the sector has helped to forge relationships between FETs and employers in the industry to address the concerns raised. This collaboration has led to workplace exposure being given to lecturers and students from FET colleges. The merSETA has also helped to design programmes that give structure and accountability for the experiential learners and work exposure periods. *"We have to design a structured programme to ensure that in those two weeks they get relevant and adequate exposure."* It was recommended that the continuous communication between FET colleges and host employers should be done during the learnership process and *"not dump the learner on companies".* An ongoing relationship will ensure that companies input into the curriculum and feedback into the gaps found in the learners.

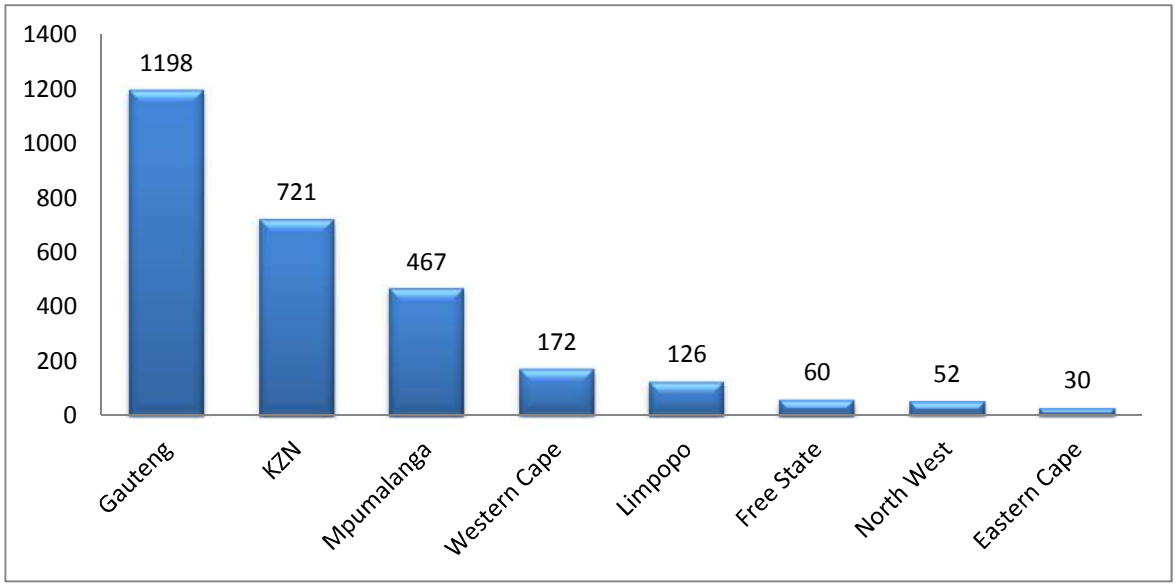
5.2.3. Learnerships and apprenticeships

Since its inception in November 2001 the merSETA has registered 69 000 apprentices on apprenticeships and more than 45 000 learners on learnerships. In the same period a total of 43 000 apprentices qualified as artisans in the sector and another 24 000 learners successfully completed their learnerships.

According to the merSETA's 2011/12 Annual report, 3775 learnerships and 2559 skills programme were completed and the organisation exceeded its targets. 6051 Learnerships and 5808 learners entered into skills programmes in the 2011/12 financial year. 5168 apprenticeship contracts were registered in the 2011/12 period.

The Accelerated Artisan Training Programme (AATP) is about pacing and structuring the development of competent apprentices over a period of two to three years. The programme was initiated to address the scarce skills needs of the merSETA sector. The structure and exposure to the curriculum is highly regulated, structured and monitored. An analysis of the merSETA (database accessed in August 2012) for phases 1 to 4 of the programme indicates the majority of the recipients are from Gauteng and KZN.

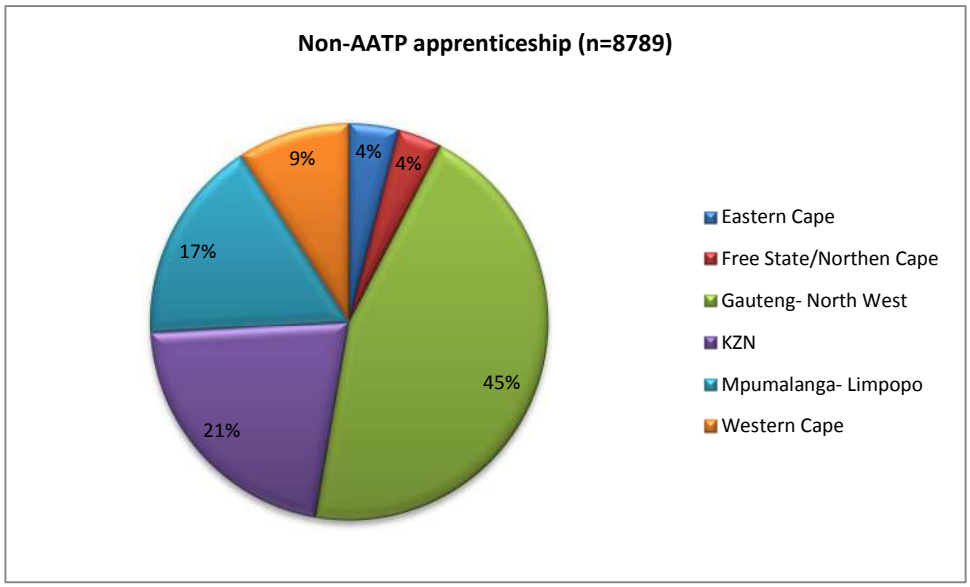
Figure 35: Distribution of registered AATP candidates for Phase 1 to 4, 2012



Source: merSETA Database, August 2012

The non-AATP apprenticeship training is also heavily skewed towards Gauteng and KZN and this is not surprising as the merSETA companies are similarly geographically represented.

Figure 36: Distribution of non-AATP apprenticeship by region, 2012



Source: merSETA Database, August 2012

As shown in Figure 36 above 45% of non-AATP apprentices were from the Gauteng-North West region and 21% were from the KZN region. The apprenticeship programmes implemented by the merSETA have helped the sector and provided employment opportunities to the previously unemployed.

5.2.4. General education and training

The output of the general education and training (GET) sector is important to the supply of skills to merSETA sector because the number of learners graduating with maths and physical science at grades that support entry and success at higher education level in qualifications such as engineering has a direct impact on the ultimate availability of these high-level skills for the national economy and the merSETA sector.

Table 18: Candidates' Performance in Mathematics by province and level of achievement 2010-2012

Province	Total Wrote			Total achieved at 30% and above			% achieved at 30% & above			Total achieved at 40% and above			% achieved at 40% & above		
	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
Eastern Cape	38 801	38 067	37 038	14 457	12 752	14 114	37,3	33,5	38,1	8 280	7 469	8 124	21,3	19,6	21,9
Free State	11 003	10 001	9 512	5 321	5 395	6 167	48,4	53,9	64,8	3 422	3 462	4 114	31,1	34,6	43,3
Gauteng	40 024	32 665	33 682	23 839	20 027	23 899	59,6	61,3	71	17 465	14 706	17 638	43,6	45	52,4
Kwazulu- Natal	**65 973**	**61 483**	**63 168**	**31 407**	**24 284**	**30 408**	**47,6**	**39,5**	**48,1**	**19 425**	**14 235**	**18 676**	**29,4**	**23,2**	**29,6**
Limpopo	49 192	35 118	35 044	19 469	15 618	18 346	39,6	44,5	52,4	11 757	9 580	11 926	23,9	27,3	34
Mpumalanga	24 167	19 899	18 835	10 007	9 199	9 998	41,4	46,2	53	6 429	5 947	6 539	26,6	29,9	34,7
North West	12 703	9 818	10 344	6 782	5 282	6 160	53,4	53,8	59,6	4 458	3 361	3 901	35,1	34,2	37,7
Northern Cape	3 627	3 280	2 864	1 896	1 656	1 572	52,3	50,5	54,9	1 259	1 022	1 045	34,7	31,2	36,5
Western Cape	17 544	14 304	15 387	11 571	9 820	11 306	66	68,7	73,5	8 879	7 759	8 753	50,6	54,2	56,9
National	**263 034**	**224 635**	**225 874**	**124 749**	**104 033**	**121 970**	**47,4**	**46,3**	**54**	**81 374**	**67 541**	**80 716**	**30,9**	**30,1**	**35,7**

Source: Department of Basic Education, NSCE School Subject Report

The table above shows that the number of students sitting for mathematics at NSC level in KZN decreased by 4% from 65 973 in 2010 to 63 168 in 2012. The percentage of those who achieved 30% and above has remained stable for the period 2010 (47.6%) to 2011 (48.1%). It is a concern that the majority of students could not achieve more than 30%. In 2011 only 29.6% achieved more than 40% in Mathematics. These figures are worrying because the minimum entry requirements for most engineering studies are at least a 50% pass in Maths.

In physical sciences, the other subject which allows students to enter into the SET field at university, the number of students who sat for the subject in KZN decreased from 47 323 to 45 951 between 2010 and 2012. The pass rate has increased from 50.4% in 2010 to 58.3% in 2012 as the table below shows.

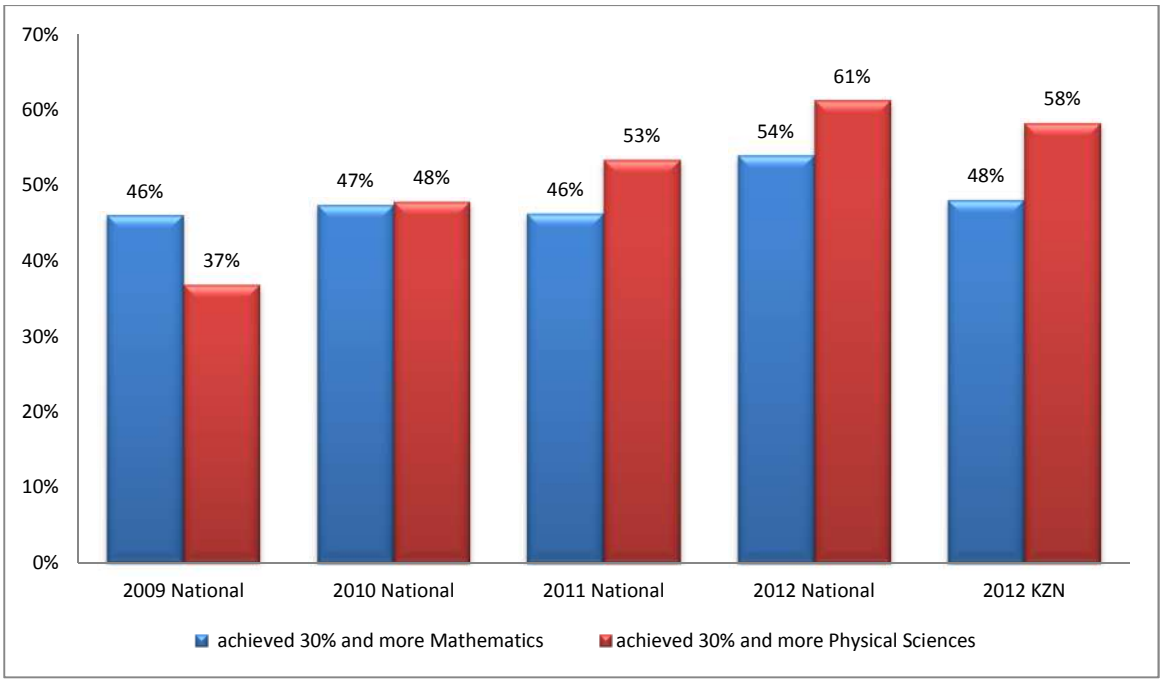
Table 19: Number of candidates who achieved in Physical Sciences by province and level of achievement, 2010-2012

Province	Total Wrote			Total achieved at 30% and above			% achieved at 30% & above			Total achieved at 40% and above			% achieved at 40% & above		
	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
Eastern Cape	27 163	26 367	25 603	11 753	12 123	12 911	43,3	46	50,4	6 371	6 831	6 922	23,5	25,9	27
Free State	10 592	9 901	8 487	4 656	5 466	5 820	44	55,2	68,6	2 853	3 467	3 748	26,9	35	44,2
Gauteng	33 763	28 605	29 001	18 777	17 069	20 335	55,6	59,7	70,1	12 969	12 142	14 649	38,4	42,4	50,5
Kwazulu- Natal	**47 323**	**45 340**	**45 951**	**23 856**	**23 516**	**26 783**	**50,4**	**51,9**	**58,3**	**14 322**	**13 965**	**16 163**	**30,3**	**30,8**	**35,2**
Limpopo	39 523	30 874	30 975	16 328	16 079	18 566	41,3	52,1	59,9	9 417	9 569	11 194	23,8	31	36,1
Mpumalanga	20 139	17 280	16 493	8 352	9 025	10 426	41,5	52,2	63,1	4 980	5 747	6 842	24,7	33,3	41,4
North West	11 270	8 624	9 225	5 662	4 853	5 769	50,2	56,3	62,5	3 481	3 103	3 593	30,9	36	38,9
Northern Cape	2 965	2 667	2 202	1 352	1 173	1 324	45,6	44	60,1	827	736	840	27,9	27,6	38,1
Western Cape	12 626	10 927	11 257	7 524	7 524	7 984	59,6	65,3	70,9	5 697	5 549	6 125	45,1	50,8	54,4
National	**205 364**	**180 585**	**179 194**	**98 260**	**96 441**	**109 918**	**47,8**	**53,4**	**61,3**	**60 917**	**61 109**	**70 076**	**29,7**	**33,8**	**39,1**

Source: Department of Basic Education, NSCE School Subject Report

A comparison of KZN and South Africa shows that KZN has a lower percentage of students achieving 30% or more compared to the nation in general. 48% of students in KwaZulu-Natal who wrote mathematics achieved 30% or more compared to 54% in the South Africa.

Figure 37: Percentage of students who achieved 30% and more in selected subjects 2009-2012



Source: Department of Basic Education, NSCE School Subject Report

Although the number of students qualifying with mathematics and science has gone up at GET level, some employers we spoke to said they still struggle to get students who are competent enough based on their own internal aptitude tests. Furthermore the minimum requirement for the merSETA sectors is a 50% pass rate in both Maths and Physical science which is higher than the national pass mark of 30%.

The employees we spoke to also raised concerns at the lack of career orientation happening at GET level. Not enough is being done to ensure young people are made aware of the career paths that are available in the manufacturing sector. The perception of blue collar jobs amongst young people was also a concern as they are negatively perceived. This has the effect of employees only joining the sector out of desperation and not genuine interest which leads to an unmotivated workforce.

The merSETA has a Mathematics and Science Project that provides weekend and holiday classes in Mathematics, Science and English. The project aims to address problems experienced in the learner pipeline that results in shortages of appropriate candidates for entry into merSETA learning programmes[47]. The 2011 results for the 300 students in the project were good as 99% of the learners passed, 219 with university entrance and 69 with university of technology entrance. The merSETA has entered into agreements with five FET Colleges and two universities in seven provinces for pre- and post-matric Maths, Science and Technology interventions, targeting 1440 learners and more than 20 schools.

5.3. Training and Development of the Current Workforce

Companies in the merSETA sector are involved in a range of training and development initiatives that focus on developing the skills of their employees. Such initiatives supplement, but also build on, the training that supplies new skills to the sector. This training and development of the current workforce forms a critical source of skills supply.

Companies with more than 50 employees are recommended to have a training committee with representatives from both labour and management to ensure that relevant and adequate training is being planned. The workplace skills plans (WSPs) require signature from a labour representative to ensure that the input of labour has been considered. Skills audits are necessary to determine the training needs of a company.

Some of the companies interviewed in this study mentioned that they are training in adequate numbers to meet the future needs and for their succession planning. As a result of the current

[47] MerSETA Annual Report 2011/12

economic climate it is unlikely that companies would be training over and above their needs. Interviews with some players in the motor industry showed that there is fear that the numbers that are currently being trained and supplied are not enough to meet the industry needs in the coming years.

From the labour unions point of view not enough is being done to train and up-skill the current workforce. Labour union representatives expressed the view that training should impart transferable skills to employees and should ensure that employees become multi-skilled. It was emphasised that employers be made aware of the importance and rational of training their own employees. *"The major problems in terms skills development in the region is that merSETA doesn't push the employer to ensure that the current workforce is upgraded. The current level of training in the industry is not adequate e.g. a company with 10 people will only have 1 or 2 people being upgraded."*

Labour unions also pointed out that merSETA should be cognisant of the challenges faced by SMEs with regards to training their employees. *"Small and medium companies are the most problematic. merSETA agents are not visible and are not promoting skills development especially amongst SME"*

The merSETA through the allocation of Discretionary grants is heavily involved in efforts to train and develop the current workforce. For the financial period 2011/12 the merSETA implemented Memoranda of Agreement (MoAs) for[48]:

- 6 937 apprentices
- 9 537 learners on learnerships
- 10 650 skills programmes
- 3 136 ABET learners
- 1 474 sector specialists
- 772 interns; and
- 3 028 experiential learners.

The merSETA through the regional offices has projects where they give guidance and support on the implementation of various skills interventions to Small Micro Enterprises (SMEs).

5.4. merSETA Initiatives in the Region

The regional office works with various other parties (companies, local government etc) to advance the goal of skills development in the region.

[48] MerSETA Annual Report 2011/12

Project Name	Project Description
SSACCI – Post NCV 4 Graduate Internships	Best NCV 4 graduates sourced through FET colleges for placement in a 6 month internship, with a possibility of converting to an accelerated apprenticeship
NSF Funded Initiative – AATP Project	To structure and pace the development of high quality competence of the apprentice over a period of 2 to 3 years ending in a Trade Test.
The Training Layoff Scheme (TLS) –merSETA, CCMA, NSF	A training layoff is a temporary suspension of the obligation to work of a worker or group of workers that is used for training purposes. Workers remain employed during the training layoff period but forego their normal wage for a training allowance. Participation in a training layoff is voluntary and must be by agreement while it is voluntary. Training is flexible but linked to skills needs of the employer.
merSETA/UIF Artisan Development Project	Qualifying candidates who meet the requirements are to be sourced from the Department of Labour's Employment Service of South Africa (ESSA) database.

The office has plans to work with the Top Gear festival organisers in October to help drive interest amongst young people for the automotive sector. The mobile Career Bus will go to the schools in the province to help inform career choices for students in Grade 8 and upwards. The office is also involved in educating the subject advisors at schools to ensure that students are informed from grade 8 about subject choices and the pass marks required for certain fields of study.

Considerable in-roads have been made in forging relationships with FET colleges. Apollo Tyres, a tyre manufacturing company, have formed a partnership with a local FET college and they have given learners and lectures exposure during the yearly shutdown period. MerSETA has also stepped in to ensure lecturers get workplace exposure and have helped educators close the gap in their qualifications to enable them to go for trade tests. The merSETA is also partnering with FET's to help unemployed people who do not have the minimum requirement to enter any learning interventions apprenticeships programmes to increase their pass marks for maths and science

The partnerships that have been formed between FET and industry through the initiation of merSETA are geared to take advantage of the geographical location of the FETs. The cluster of companies in the surrounding areas will ensure the FET students do not struggle to find host employers for experiential learning. "*This cluster model will go a long way in addressing the quality issues raised by industry. The MoA will allow the companies to capacitate the lectures ensure that quality learning is taking place in the FET. The advantage of the cluster mechanism is that learners and lectures will get exposure to different types and strengths of manufacturing*

processes. The engineering and technical abilities of companies always differ and this rotation will help bring more rounded lectures and learners."

5.5. Conclusion

The KwaZulu-Natal region has to universities and two universities of technology. The total enrolment figures for the Science Engineering and Technology (SET) fields for these four institutions have increased from 89 531 in 2004 to 94 491 in 2011. Graduates from universities find employment countrywide with some finding employment in other provinces and not staying in the province. There is competition for engineering amongst various sectors e.g. mining and the energy sectors and it important that the output from HEI meets the requirements of all these sectors.

There are 9 FET colleges in KZN region offering a variety of engineering programmes under the Nated and NCV offerings. At the General Education and Training level the number sitting for Maths and Physical Science has decreased by 4% from 65 973 in 2010 to 63 168 in 2012. In 2011 only 29.6% achieved more than 40% in Mathematics this is major concern as the minimum entry requirement for most engineering studies is a 50% pass mark.

Companies in the merSETA sector are involved in a range of training and development initiatives that focus on developing the skills of their employees. MerSETA advises that this training be a consultative process with input from labour. Companies with more than 50 employees are recommended to have training committee with representatives from both labour and management to ensure that relevant and adequate training is being planned. The merSETA is involved in a number of initiatives in the region to help address the skills shortages facing the region; these include the Artisan Development project in collaboration with the UIF and the Training Layoff Scheme.

6. SKILLS NEEDS OF THE MERSETA SECTOR

6.1. Introduction

The graph below shows the percentage of employers who felt that labour was a constraint on their operations for the period 1995-2012. The graph shows the level of concern cited for semi-skilled and unskilled labour was lower than for skilled labour.

Figure 38: Manufacturing Constraints: Percentage who said Labour in KZN

Source: Quantec and BER (2013)

As of September 2011 more than 50% of employers identified shortage of skilled labour as a manufacturing constraint. Less than 10% of employers consider unskilled labour a constraint.

6.2. Factors affecting of Skills Development Needs in the region

6.2.1. Lack of plastic related trades training in institutions

There is a critical shortage of Setters in the plastics industry. This shortage is exacerbated by the fact that they are no FET colleges that train for plastic related trades. There are also no universities or universities of technology that offer undergraduates studies in plastics.

As an industry the sector has relied on skills programmes and learnerships to build up their current employees. The skills shortages experienced by the industry are largely due nature of

the industry in that it is SME dominated. These are mostly (about 80%) small business and if they don't get funding from merSETA they will not train their people. In recent years there has been more and more focus on apprenticeships. They will much rather poach someone that is already skilled, that another company has spent money on than developing the people from within. For the plastics industry they only have learnership and skills programmes available to them for skills unique to their industry.

Recommendation: The plastics sector should be treated differently from the other manufacturing sectors that already have apprenticeships running in their sectors. The funding should be cognisant of the fact that the skills required and critical to the sector are made available through skills programmes and learnerships and not apprenticeships.

From the primary interviews, it was also pointed out to the researchers that in some cases it competent and skilled people that are lacking i.e. qualified people are there but competent and skilled are scarce. This has led to a lot of poaching in the industry of the few skilled and competent employees

6.2.2. Lack of interest among young people for engineering related trades

It was noted amongst the respondents that there seems to be a lack of interest and awareness amongst young people for manufacturing related career paths. There was some fear amongst respondents that there are not enough young people coming into the industry in the face of a perceived aging workforce.

An employer in the motor industry said for their company mathematics and science passes of at least 50% are non-negotiable for apprenticeships. They feel that given the high technological innovations happening in the industry it is crucial that their recruits be competent in maths, science and English. On the other hand another motor industry player felt that there is overemphasis on maths and science in the industry. He was of the view that some learners might not have the required maths and science but they gifted with their hands and should be given opportunities to enter the industry.

Recommendation: It is important that career guidance, orientation and awareness be done in schools regarding careers in the manufacturing industry.

6.2.3. Curricula and Training

To ensure that the industry has the correct skills in it is imperative that curricula and training meets the needs of industry. The quality of training and the curriculum determines the quality

of artisans. A respondent from the metal industry made mention of the fact that when it came to training, institutions and employers had different motivation, training for production purposes and training for academic purposes were worlds apart.

It is vital that institutional training be kept up to date with technological innovations in the industry. The big five retail motor industry players after observing the inadequacies of the curriculum for their industry have come together to come up with a curriculum more aligned to the industry needs. Their modern curriculum has actually made the apprentices know more than the artisans and creates better artisans

The perspective for some employers is that FET colleges and training centres are not capacitated enough to train learners up to competence level. Some students will have N6 qualifications and appear to be the best candidates on paper but their practical knowledge is very minimal. "*The difference between qualified and capable is huge".* The industry perspective was that FET colleges do not have the machinery, equipment and expertise to produce the calibre required on the practical side.

In terms of higher level skills, a metal company struggled to get metallurgy graduates 10 years ago but since partnering with a local university they no longer struggle. This highlights the need for industry-institutional partnerships to address training shortfalls in the region.

Recommendation: It is important that industry and educational institutions work closely together to ensure that quality of learning meets industry standards.

6.2.4. Legislative Issues

Skills development in the merSETA sector is not restricted to training providers only but overlaps into the employers and a consented effort is required from all parties to improve the quality of skills in the sector. One of the reasons cited by employers for their lack of participation in skills development/training was the legislation governing employees and learners in the workplace.

An informant from the Motor chamber was of the view that the legislative issues surrounding training have led to reluctance amongst employers in the sector to take on learners. "*The moment a person starts to render a service to an employer that person becomes an employee and that student must be registered with the bargaining council and minimum wages start to apply. So employers become reluctant to take on trainees and give them workshop experience*." The motor industry is dominated by SMEs and if such obstacles were removed they might be willing to take on more trainees.

The lack of clarity and information on insurance and stipend issues related to FET learners has also contributed to the scepticism and reluctance to give workplace exposure to learners. Assurance needs to be provided to companies that training will not be cumbersome legal process they are just giving practical experience and they have no legal obligations for stipend and insurance. *"I foresee a number of legal and financial obstacles that would discourage employers from providing practical workshop experience. If merSETA and the industry are serious about tacking the skills shortage, with the participation of employers, my suggestion would be that merSETA should approach (the parties to) MIBCO at a national level to open discussions on the way forward."*

Recommendation: merSETA and MIBCO should at a national/regional level have an agreement that enables companies to take on trainees but be exempt from having to consider them as employees.

6.3. Specific Scarce and Priority Skills

Scarce skills are defined as 'those occupations in which there is a shortage of qualified and experienced people, currently or anticipated in the future'.[49] Priority skills as a concept refers to the scarce and critical skills that are needed at a point in time; and are established through scarce skills identification processes.

The national scarce skills list obtained for the metal chamber is shown in the table below. The list were used as an initial discussion point for the research and the primary interviews

Table 20: National Scarce skills in the metals chamber, 2012

Occupation	Organising Framework of Occupations (OFO) Code
Production / Operations Manager (Manufacturing)	132102
Bricklayer	641201
Plumber	642601
Welder	651202
Sheet Metal Worker	651301
Metal Fabricator	651401
Structural Steel Erector	651402
Toolmaker	652201

[49] *Scarce & Critical Skills 2009/10*

Metal Machinist	652301
Fitter and Turner	652302
Metal Polisher	652401
Automotive Motor Mechanic	653101
Precision Instrument Maker and Repairer	661101
Electrician	671101
Millwright	671202
Lift Mechanic	671204
Manufacturing Machine Setter and Minder	712102
Engineering Production Systems Worker	718905
Metal Engineering Process Worker	832901

Source: merSETA National SSP- Scarce & Priority Skills 2012/13

These 3 occupations comprised 77% of the skills needs in the sector in the 2009/2010 period. Other occupational categories which are on demand for the sector are engineering production system workers, welders, toolmakers and metal engineering process workers.

Table 21: National Scarce skills in the Auto sector, 2012

Occupation	Organising Framework of Occupations (OFO) Code
Personnel / Human Resource Manager	121201
Supply and Distribution Manager	132401
Industrial Engineer	214101
Mechanical Engineer	214401
Chemical Engineer	214501
Electrical Engineer	215101
Accountant (General	241101
Marketing Practitioner	243103
ICT Systems Analyst	251101
Mechanical Engineering Technician	311501
Chemical Engineering Technician	311601
Retail Buyer	332301
Purchasing Officer	332302
Toolmaker	652201
Metal Machinist	652301
Fitter and Turner	652302
Electrician	671101
Millwright	671202
Mechatronics Technician	671203

Electronic Equipment Mechanician	672104
Special Class Electrician	672107
Machinery Assembler	721101

Source: merSETA National SSP- Scarce &Priority Skills 2012/13

According to merSETA, the Auto Chamber's skills needs by OFO category indicates considerable demand in the Technicians and Trades Workers category, followed by Professionals and then Managers.

Table 22: National Scarce skills in the Motor sector, 2012

Occupation	Organising Framework of Occupations (OFO) Code
Industrial Engineer	214101
Industrial Engineering Technologist	214102
Mechanical Engineer	214401
Mechanical Engineering Technician	311501
Motor Vehicle Licence Examiner	335401
Vehicle Painter	643202
Welder	651202
Toolmaker	652201
Metal Machinist	652301
Automotive Motor Mechanic	653101
Motorcycle Mechanic	653103
Diesel Mechanic	653306
Panel Beater	684904
Vehicle Body Builder	684905
Technical Customer Liaison Agent	+
Automotive Electronics Fitter	+
Vehicle Component Fitter and Repairer	+

Source: merSETA National SSP- Scarce &Priority Skills 2012/13

NB: +No codes for OFO 2012 CODE even OFO 9 CODE

There is dominance for demand of management skills within the Motor chamber. Sector specific technical skills include panel beaters, automotive auto mechanic and motor cycle/scooter mechanics.

Table 23: National Scarce skills in the New Tyre sector, 2012

Occupation	Organising Framework of Occupations (OFO) Code
Quality Systems Manager	121908

Production / Operations Manager (Manufacturing)	132102
Production / Operations Manager (Mining)	132201
Supply and Distribution Manager	132401
Operations Manager (Non Manufacturing)	134915
Industrial Engineer	214101
Industrial Engineering Technologist	214102
Mechanical Engineer	214401
Mechanical Engineering Technologist	214402
Chemical Engineer	214501
Chemical Engineering Technologist	214502
Electronics Engineer	215201
Organisation and Methods Analyst	242102
Training and Development Professional	242401
Occupational Instructor / Trainer	242402
Assessment Practitioner	242403
Sales Representative / Salesman (Industrial Products)	243301
ICT Systems Analyst	251101
Manufacturing Technician	311904
Integrated Manufacturing Line Technician	313904
Purchasing Officer	332302
Office Administrator	334102
Fitter and Turner	652302
Electrician	671101
Rubber Production Machine Operator	714101
Plastics, Composites and Rubber Factory Worker	832902

Source: merSETA National SSP- Scarce &Priority Skills 2012/13

The rubber production machine operator occupation is the main category of scarce skills on demand in the new tyre sector. Skills which are in high demand within this occupation are tyre builders, steel & fabric calendaring and rubber moulding machine operators. Other important occupations in the sector are; fitters, electricians, product examiners, sales representatives and mechanical engineering technologists in plastics.

Table 24: National Scarce skills in the Plastics sector, 2012

Occupation	**Organising Framework of Occupations (OFO) Code**
Quality Systems Manager	121908
Production / Operations Manager (Manufacturing)	132102
Industrial Engineer	214101

Technical Director	265405
Mechanical Engineering Technician	311501
Manufacturing Technician	311904
Vehicle Painter	643202
Fitter and Turner	652302
Boatbuilder and Repairer	684907
Plastic Cablemaking Machine Operator	714201
Plastics Fabricator or Welder	714203
Production Machine Operator (General	714204
Rotational Moulding Operator (Plastics)	714206
Thermoforming Machine Operator	714207
Plastics Manufacturing Machine Minder	714208
Reinforced Plastics and Composite Trades Worker	714209
Product Assembler	721901

Source: merSETA National SSP- Scarce &Priority Skills 2012/13

Demand for operators of plastics production machinery surpasses other occupational categories in the sector.

6.4. Scarce and Priority Skills by Chamber

6.4.1. Plastics Sector

The industry is characterised by small to medium enterprises and most do not have the capacity or resources to prioritise training and development of the workforce. This has led to a lot of poaching in the industry and all the good skills just rotate the companies that can afford them.

The table below lists the scarce and priority skills for sector, obtained from primary interviews.

Table 25: Plastic Sector Research Findings

Chamber	Scarce Skills	Priority Skills
Plastics Sector	Plastics Manufacturing Machine Setter and Minder	Plastics Manufacturing Machine Setter and Minder
	Rubber, Plastic and Paper Products Machine Operators	
	Rubber Products Machine Operators	
	Rubber Production Machine Operator	
	Plastic Cablemaking Machine Operator	
	Plastics Fabricator or Welder	

	Plastics Production Machine Operator (General)	
	Production / Operations Manager (Manufacturing)	
	Industrial Engineer	

Plastics welders/fabricators will now also be required in the construction industry due to the changes in the industry of replacing steel with plastics. It is therefore important that the nation prioritises the training of this skill.

Challenges in the Plastics Sector

- No FET colleges offering plastic related trades
- No universities offering undergraduate programmes in plastics.
- The recent mandatory grant regulations changes might greatly reduce the amount of training occurring in the sector as the industry is SME dominated.
- The merSETA's/government's emphasis on apprenticeship greatly disadvantages their sector. For the plastics sector skills development is primarily achieved through skills development and learnerships but accessing funding for that is difficult since apprenticeships are given priority.
- Lack of urgency in implementing the Setter trade which would immediately address the most pressing concern for the plastic sector

6.4.2. Metal Sector

The demand for skills in the metal sector is highly dependent on the economic climate as the industry is very cyclical. The current big projects specifically Khusile and Medupi have increased the demand for boilermaking and welding. An employer in the industry stated that the outlook for the industry looks good up to 2017 as they are major infrastructure projects lasting till then. Big infrastructure projects should be put in place to sustain the industry after 2017. The metal industry was affected by the recent recession. The companies we visited had managed to avoid retrenchment but had to restructure and cut costs to do so.

The increase in training in recent years by the merSETA has helped to address the skills shortages that were plaguing the sector

Table 26: Metal sector Research Findings

Chamber	Scarce Skills	Priority Skills
	Welders	

Metal Sector	Moulders	
	Boilermakers	
	Patternmakers	
	Toolmaker	
	Fitter and Turner	
	Electrician	
	Millwright	
	Manufacturing Machine Setter and Minder	

Findings from in the Metal sector interviews

- Poaching is rife in the sector especially at senior management and professional levels. BEE requirements have made competent black professionals highly sought after and because of their scarcity they move jobs easily
- A perceived work ethic problem amongst South African employees and the highly unionised nature of the workforce has led to some companies in the industry hiring foreign labour e.g. from Thailand. The Thailand workers are considered more productive than their South African counterparts
- Quality of training from both private and FET colleges is problematic. Institutional training needs to be aligned with technological innovations in industry. Learners are not competent enough practically when they are recruited from FET colleges and companies have to spend additional money to train them
- Some trades are difficult to recruit for e.g. Patternmaking because they do not adequately advertise in the skills development arena and in schools.
- Mechanical and Electrical trades are now oversupplied with learners. Students should be made aware of the other trades in the industry so that there is a balance in supply
- Quality of secondary education with regards to mathematics is very poor.

Recommendation: Prioritise skills development of professional skills and not just artisans and technicians. Ensure practical implementation of programmes geared towards up-skilling current employees for career progression

6.4.3. New Tyre Sector

The big companies in the sector have their own training centres and make use of their own facilities. As with the other sectors there is a shortage of practical skills but an oversupply of people with theoretical knowledge only. An employer highlighted the difficulty of recruiting in this sector; due to the high unemployment rate they get thousands of applications from completely unsuitable people desperate for jobs.

As shown in the table below Finance Professionals, Accountants and Business and Administration professionals were also mentioned as scarce skills. The reasons they are considered scarce is the high turnover for these positions as they jump from employer to employer. *"Some companies who want to get their BBBEEE certificate rating up, rather than training people they go the short route and poach from other companies"*

Table 27: New Tyre Research Findings

Chamber	Scarce Skills	Priority Skills
New Tyre	Sales, Marketing and Development Managers	Sales, Marketing and Development Managers
	Supply, Distribution and Related Managers	
	Supply and Distribution Manager	
	Business and Administration Professionals	
	Finance Professionals	
	Accountants	
	Accountant (General)	
	Occupational Instructor / Trainer	
	Assessment Practitioner	
	Retail Buyer	
	Fitter and Turner	Fitter and Turner
	Millwright	Millwright
	Rubber Products Machine Operators	
	Rubber Production Machine Operator	

	Tyre Fitters	

Findings from the New Tyre sector interviews

- There is a mismatch of skills in this country. They are a lot of unemployed people with paper qualifications who could not get jobs in their fields of study and are now forced to seek for any kind of job. This may be due to lack of career orientation and counselling at high school level.
- Young people have no interest in being artisans, the jobs are looked down upon
- The Education system is not meeting industry needs. The quality of secondary education, and the quality of FET graduates is not meeting industry's expectation
- Managing expectations is difficult as graduates from university expect to become managers and directors and are not willing to start at the bottom
- South Africa is losing artisans to the rest of the African continent. Some have left for Angola, Namibia and Tanzania. *"The system is not producing this people for us and you have the same crowd and because of money they jump around for more money if that is not enough they immigrate and become experts in some other country."*
- Employee motivation and lack of work readiness is a major concern
- It is difficult to find trainers/teachers for their training centres

6.4.4. Motor and Automotive Sector

The motor industry is growing steadily. They are indications that they will 20 million cars on the road by 2020 in South Africa. Analysing backwards that would mean people are needed to service these cars and artisans have to be trained to handle those cars. The skills that were of primary concerns to our respondents are listed in the table below.

Table 28: Motor Sector Research Findings

Chamber	Scarce Skills	Priority Skills
Motor and Auto Industry	Motor mechanics	
	Automotive machinist	
	Diesel Mechanic	
	Spray-painters	Spray-painters

The reasons given for the shortage of competent artisans are:

- An out-of-date curriculum. Top five players now addressing it
- Closure of all technical schools after 1994
- Perception of blue collar jobs by the youth. Very few of them are interested in this industry

Similar to the New Tyre companies there is difficulty in recruiting trainers for the workshops.

Findings from the Motor sector interviews

- The current structure of apprentices falling under the department of Labour instead of under the Higher Education makes the process of recruiting and indenturing apprentices very complicated. Legislation should make it easier for companies to take on apprentices
- The curriculum is fundamentally flawed and should be reviewed. The technological changes in the industry require that the curriculum be overhauled in order for it to produce more knowledgeable and specialised artisans. An example in the Diesel Mechanic trade which has modules which should now be trades on their own
- Some training that is relevant to the motor industry is not accredited and there some companies might not get a rebate on it yet it very vital to the industry.

6.5. Conclusion

A number of structural constraints were identified from the primary interviews and discussions with industry players regarding skills development in the merSETA sector. For the plastics sector the major concern was the lack of FET colleges and training providers training for the sector which has led to a critical shortage of Setters.

Across chambers, employers interviewed are of the view that not enough young people are interested in trades and this can become a concern in future years as the current workforce ages. It is important that career guidance, orientation and awareness be done in schools regarding careers in the manufacturing industry.

It was also emphasised that the curriculum and training be kept up to date with technological innovations to ensure competent artisans and employees are produced. It is important that industry and educational institutions work closely together to ensure that quality of learning meets industry standards.

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APPENDIX A

FET COLLEGES IN KZN

FET College	Engineering programmes offered
Coastal KZN FET College	• Civil Engineering & Building Construction NCV • Electrical Infrastructure Construction NCV • Engineering and Related Design NCV • Civil Engineering – NATED • Multi Disciplinary Drawing Office Practice – NATED • Electrical Engineering – NATED • Mechanical Engineering - NATED • Computer Studies – Skills Programme
Elangeni FET College	• Civil Engineering and Building Construction – NCV • Electrical Infrastructure Construction – NCV • Engineering and Related Design – NCV • Information Technology and Computer Science – NCV • Civil Engineering – NATED • Electrical Engineering - NATED • Mechanical Engineering - NATED
Esayidi FET College	• Civil Engineering & Building Construction NCV • Electrical Infrastructure Construction NCV • Information Technology and Computer Science NCV • Engineering & Related Design NCV • Mechanical Engineering – Skills Programme • Agriculture – Skills programme • Refrigeration – Skills Programme • Electrical Engineering – Skills Programme • Motor & Electrical Engineering – Skills Programme • Civil Engineering – Skills Programme • Engineering Studies Nated
Mnambithi FET College	• Electrical Infrastructure Construction - NCV
Mthashana FET College	• Electrical Engineering NATED • Civil Engineering NATED • Mechanical Engineering NATED • Electrical Infrastructure Construction NCV • Engineering and Related Design – NCV • Civil Engineering and Building Construction - NCV
Thekwini FET College	• Electrical Engineering – NATED • Mechanical Engineering - NATED • Electrical Infrastructure Construction - NCV • Engineering and Related Design – NCV • Information Technology and Computer Science - NCV
Umfolozi FET College	• Civil Engineering and Building Construction - NCV • Electrical Infrastructure Construction – NCV • Engineering and Related Design - NCV • Information Technology and Computer Science – NCV • Process Plant Operations - NCV • Electrical Engineering – NATED • Mechanical Engineering – NATED

	• Electronics – NATED • Electromechanical – NATED • Instrumentation – NATED • Instrumentation – NATED • Production – NATED • International Computer Driving License – Skills Programme • Manufacturing & Engineering Boilermaking - Skills Programme • Plant Production – Skills Programme • Vehicle Service – Skills Programme • Welding – Skills Programme
Umgugundlovu FET	• Civil Engineering and Building Construction – NCV • Electrical Infrastructure Construction – NCV • Engineering and Related Design – NCV • Information Technology and Computer Science – NCV • Civil Engineering – NATED • Electrical Engineering Light C – NATED • Mechanical Engineering – NATED • Electrical Engineering Heavy C – NATED • Auto Electrical – NATED • Motor – Skills Programme • Electrical – Skills Programme • Welding – Skills Programme
Majuba FET College	• Civil Engineering and Building Construction NCV • Electrical Infrastructure Construction NCV

List of participants in research

Name	Role/Designation	Organisation/Area of specialisation	Nature of contact
Ray van Heerden	Training Manager - Electrical	Shukela Training Centre	Primary interview
David van Rooyen	Labour Relations Consultant	RMI	Primary interview and Task Team
Roger Margach	Group After-Sales Manager	CMH Group	Primary interview
Nkanyezi Khowa	Skills Development Facilitator	CMH Group	Primary interview
C H Nzimande	Assistant Director: Curriculum Development	Coastal KZN FET College	Primary interview
T Ndlela	Project Manager: Tooling Centre of Exellence	Coastal KZN FET College	Primary Interview
Mandla Ngubane	Operational Representative	UASA (Labour Union)	Primary interview
Chrissy Berichon	Group HRD Planning & Regulation	Toyota SA Motors (Pty) Ltd	Task Team
Mervin Govender		Apollo Tyres	Task Team
John Smith	Organiser: Metal and Engineering Industry	Solidarity (Labour Union)	Task Team
Musa Mtshali	Client Relationship Manager	KZN Regional Office	Task Team
Gerald James	HR	Defy Appliances	Email