



**RESEARCH INTO THE SKILLS DEVELOPMENT SUPPORT FOR
EX-MINEWORKERS IN THE MINING AND MINERALS SECTOR
COVERING THE PERIOD 2015-2017**

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FINAL REPORT

Prepared for

Mining Qualifications Authority (MQA)

Prepared by

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ACRONYMS

Abbreviation	Definition
ABET	Adult Basic Education and Training
ALMP	Active Labour Market Programmes
AMCU	Association of Mineworkers and Construction Union
ASPASA	Aggregates and Sand Producers Association of Southern Africa
BEE	Black Economic Empowerment
CCMA	Commission for Conciliation Mediation and Arbitration
CEO	Chief Executive Officer
CET	Community Education and Training
CLAS	Cement, Lime, Aggregates and Sand
CNC	Computerized Numeric Control
CoM	Chamber of Mines
COSATU	Congress of South African Trade Unions
CV	Curriculum Vitae
DHA	Department of Home Affairs
DHET	Department of Higher Education and Training
DMRE	Department of Mineral Resources and Energy
DoL	Department of Labour
DRC	Democratic Republic of Congo
EU	European Union
FETC	Further Education and Training Certificate
FGD	Focus Group Discussion
GDP	Gross Domestic Product
HDPs	Historically Disadvantaged Persons
HDSA	Historically Disadvantaged South Africans
IDP	Integrated Development Plans
IFC	International Finance Corporation
ILO	International Labour Organization
IPAP	Industrial Policy Action Plan

Abbreviation	Definition
IRR	Institute of Race Relations
ISCOR	Iron and Steel Corporation of South Africa
ITAC	International Trade Administration Commission of South Africa
JSCI	Job Seeker Classification Instrument
KMF	Kalahari Manganese Fields
Kt	Kilotonne
KZN	KwaZulu-Natal
LEAP	Leadership Accelerator Action Programme
LED	Local Economic Development
LMI	Labour Market Intelligence
LMIP	Labour Market Intelligence Partnership
LRA	Labour Relations Act
M&A	Mergers and Acquisitions
MCSA	Minerals Council South Africa
MDA	Mineworkers Development Agency
MDP	Management Development Programme
MHSA	Mine Health and Safety
MMS	Mining and Minerals Sector
MPRDA	Mineral and Petroleum Resources Development Act
MQA	Mining Qualifications Authority
Mt	Metric tonne
MTSF	Medium-Term Strategic Framework
NDP	National Development Plan
NEDLAC	National Economic Development and Labour Council
NRC	Native Recruiting Agency
NSA	National Skills Authority
NSC	National Senior Certificate
NSDP	National Skills Development Plan
NSDS	National Skills Development Strategy
NUM	National Union of Mineworkers

Abbreviation	Definition
ODETDP	Occupationally Directed Education, Training and Development Practices
Oz	Ounce
PAIA	Promotion of Access to Information Act
PDI	Previously Disadvantaged Individual
PES	Public Employment Service
PGM	Platinum Group Metals
PoPI	Protection of Personal Information
PTM	Platinum Group Metals
RCPO	Retraining Centre for Precision Cutting located in Opava
RPL	Recognition of Prior Learning
RSA	Republic of South Africa
SA	South Africa
SADPMR	South African Diamond and Precious Metals Regulator
SAHRC	South African Human Rights Commission
SAMTRAC	Safety Management Training Course
SAQA	South African Qualifications Authority
SDA	Skills Development Agency
SDGs	Sustainable Development Goals
SDT	State Diamond Trader
SEDA	Small Enterprise Development Agency
SETA	Sector Education and Training Authority
SLP	Social and Labour Plans
SMART	Specific, Measurable, Achievable, Realistic, Timely
SMMEs	Small, Medium and Micro-enterprises
StatsSA	Statistics South Africa
TCA	Thematic Content Analysis
TCI	The Concrete Institute
TEBA	The Employment Bureau of Africa
TLS	Training Layoff Scheme
TOR	Terms of Reference

Abbreviation	Definition
TVET	Technical and Vocational Education and Training
UASA	United Association of South Africa
UCS	Underhill Corporate Solutions
UIF	Unemployment Insurance Fund
UK	United Kingdom
USA	United States of America
USGS	United States Geological Survey
VSP	Voluntary Severance Package
WANELA	Witwatersrand Native Labour Association
WDC	World Diamond Council
WEF	World Economic Forum
WGC	World Gold Council
WSP	Workplace Skills Plan

EXECUTIVE SUMMARY

1. Introduction and Background

The MQA is a public entity established in terms of section 45 of the Mine Health and Safety Act 29 of 1996 (MHSA) and is regarded as a Sector Education and Training Authority (SETA) in terms of the Skills Development Act 97 of 1998 (SDA). The National Skills Development Plan (NSDP) requires a new approach and has set a new path by encouraging various role players to “identify, foster and develop strategic opportunities, partnerships and ensure specialised technical support for new initiatives that focus on quality, throughput and scale”. The MQA has adopted a strategic approach that seeks to put research at the centre of planning and to inform decision making to address the NSDP requirements through:

- Monitoring external trends in education and training, nationally and internationally, and therefore, promote a learning and development culture in order to support continuous learning and improvement in the mining and minerals sector (MMS),
- Developing a robust and reliable sector Labour Market Intelligence (LMI) framework and institutional capacity in order to make informed planning decisions, and
- Identifying and leveraging research and skills planning partnerships.

Against this background, the MQA commissioned this study to explore, among other things, the skills development support for ex-mineworkers in the mining and minerals sector (MMS) for the period 2015 –2017. Its purpose is to ascertain the effectiveness of such interventions in improving and sustaining the livelihood of the ex-mineworkers.

2. Study Purpose and Objectives

The purpose of this investigation was to ascertain the impact of the skills development support initiatives that were offered to the ex-mineworkers from the MMS in South Africa for the period 2015–2017. This report assessed the socio-economic changes within the lives of ex-mineworkers post-skills development and the possibility of them re-entering the mainstream economy through self-employment or re-employment in other sectors. The specific objectives of the study were to:

- i. Provide the MQA with a better understanding of how ex-mineworkers survive beyond mining employment, especially after they have been provided with skills development support.
- ii. Assess the extent to which the skills development interventions/support and their implementation affect the livelihood of ex-mineworkers.
- iii. Assess the effectiveness of skills development support for the livelihood of these ex-mineworkers and the extent to which these interventions enable them to re-enter the mainstream economy (re-employment or entrepreneurship).

3. Study Methodology and Approach

The study employed mainly qualitative methods based on an ethnographic approach, where the ex-mineworkers were observed in their natural settings. Observations were done concurrently with in-depth interviews to better understand the challenges experienced post-mining. To produce rich triangulated conclusions pertaining to the research study, in-depth interviews were also conducted with other key stakeholders in each sub-sector. These included mining companies, labour representatives, policymakers, economic development agencies and sector experts. In addition, one focus group discussion was conducted for each province, incorporating the participation of all the stakeholders mentioned earlier. It is also important to note that all the interviews were digitally recorded, and ethical considerations were observed during the whole research process.

4. Study Findings

The findings from this study are summarised as follows:

Demographics

- i. Most ex-mineworkers were found to reside within the communities surrounding their last mining employer.
- ii. Most older people (above 50 years) exited on ill-health reasons (8 out of 11), whereas retrenchments mostly affected the 30-39year group (33 out 57). The voluntary severance package (VSP) was mostly taken by those above 50years (11 out 19).

What informs portable skills

- i. Companies were making efforts to provide portable skills to ex-mineworkers, with some conducting research using surveys and best practices in the industry to identify

a list of portable skills which employees will choose from. However, the study established that few efforts were made to align the skills with IDPs of local municipalities and also to evaluate individual needs of the ex-mineworkers.

- ii. Some companies offered their employees an option to either receive training or take the money meant to cover the training costs. This was found to affect the uptake of skills initiatives on exit.

Types of portable skills offered and their impact

- i. There was a general misconception of the what portable skills entail amongst companies and ex-mineworkers in the MMS. Occupational related courses were often mistaken for portable skills.
- ii. The study also established that most companies offered portable skills as a part of compliance with the SLPs regulations. However, most companies did not offer portable skills during the exit processes to the employees earmarked for retrenchments.
- iii. Most of the sub-sectors had the following options of portable skills for their employees who were identified for retrenchment: a driver's licence (Codes 10 and 14), basic electrical plumbing welding and motor mechanic skills; computer skills, communication skills, basic construction, bricklaying, painting, plastering, tiling, roofing and carpentry/furniture manufacturing skills; basic sewing, cooking, farming (animal and crop production) and chicken broiler (poultry) skills.¹ Other support services offered by some employers included counselling, financial advice and CV writing assistance.
- iv. For the jewellery manufacturing and diamond processing sub-sectors, the study found that these were specialised industries with different skills requirements. However, only the diamond processing sub-sector ex-employees were offered some of the following portable skills: A Safety Management Training Course (SAMTRAC) and assessors and moderators' courses. Additional courses were Occupationally Directed Education, Training and Development Practices (ODETDP) levels 4 and 5, business management skills, basic financial management, entrepreneurial skills and computer skills.²

¹ Refer to Appendix 1.

² SAMTRAC is an internationally accredited course focussing on occupational risk and health, safety and environment matters. According to SAQA, an ODETP course equips practitioners such as facilitators and SDFs with general education, training and development skills to fulfil roles such as skills development, design and conduct assessment as well as learning interventions.

- v. The portable skills were found to have had limited impact on the ex-mineworkers, since a majority (53 out of 91) were unemployed and struggling compared with 38 who were either self-employed (23), re-employed in other sectors (6) or re-employed in other mines (9).³ There were isolated success stories of re-employed ex-mineworkers in most of the sub-sectors due to portable skills. However, occupational related skills were found to be critical in sub-sectors with growth potential such as jewellery manufacturing due to its specialised nature. Self-employment cases were quite notable in most of the sub-sectors with portable skills such as driver's licence, basic welding, basic electrical, basic plumbing animal production (pig), crop production, sewing and business management being quite useful.

Perceptions of portable skills

- i. The voluntary nature of the portable skills was found to weaken their uptake amongst most of the ex-mineworkers, especially those without adequate appreciation of the importance of transferrable skills post-mining employment.
- ii. The unemployed did not see the value of portable skills, with some contemplating the option of taking money instead of training that they missed.
- iii. The structure of the portable skills raised a lot of concerns about their credibility for meaningful post-mining livelihoods. Some questions related to the quite short duration of some courses, the lack of mentorship or incubation and irrelevance of the skills offered in the local communities of ex-mineworkers.

Identified priority programmes

- i. Hi-tech based skills are aligned to the technologically advanced manufacturing procedures currently used in other jewellery manufacturing countries for both cost and operational efficiencies. Hence, the future of jewellery manufacturing and other industries in SA is technology driven (4IR) which requires that ex-employees should be prepared accordingly.
- ii. Skills relevant for emerging industries such as the renewable energies also require specialisation. The advent of renewable energies presents vast opportunities for the people in SA. This could be another way of refocusing the mindsets of the ex-employees from other sub-sectors onto these new and lucrative opportunities.

³ Refer to Appendix 2.

- iii. Transferrable skills enhance the chances of re-employment and self-employment such as business and entrepreneurial skills, basic trade related skills (e.g. basic welding, basic plumbing, basic electrical, basic mechanic skills, etc.), driver's licence (Codes 10 and 14) and other skills (e.g. sewing, catering, computer skills, etc.);
- iv. Mine related skills (e.g. plant operators, dozers, front-end loaders, etc). These skills enhance one's chances of re-employment in other mining sub-sectors which have growth potential. Experience, coupled with the right skills could make the ex-mineworkers competitive when opportunities arise at other mines; and
- v. Farming (plant and animal production) is most suitable for both rural and per-urban communities for both commercial and subsistence purposes.

5. Recommendations

Based on the findings, the following is recommended:

- i. There is a need for the MQA to develop a portable skills framework or guideline that will standardise the manner in which portable skills are offered by companies across the MMS. This will be informed by best practices as well as success stories identified in the study. The framework will provide guidance on the following:⁴
 - a. Define what is a portable skill, what should inform portable skills, and how/when they should be offered to employees exiting the mines.
 - b. Stipulate the necessary pre- and post-exit support interventions to address psychological issues and financial discipline such as trauma counselling for change management and financial/investment advice.
 - c. Stipulate the obligation of each stakeholder in the process. The option of money versus training will need to be removed and making the training compulsory might also be necessary.
 - d. Identify the relevant partnerships to involve in the process for each set of skills such as private sector partnerships, LEDs of local municipalities, development agencies and other non-governmental organisations (NGOs).

⁴ Refer to Figure 6.1 for the diagrammatic presentation of the proposed portable skills framework.

- e. Provide a clear monitoring and evaluation structure to improve compliance and ease the impact assessment process.
- ii. The MQA should spearhead the development of a reliable database for ex-mineworkers in the MMS. The database will improve efficiencies in tracking and tracing systems that support relevant interventions as well as guide the development of appropriate tools and techniques to achieve that. The MQA can facilitate this process through a more coordinated approach with all the relevant stakeholders across all the mining provinces.
- iii. The MQA should prioritise funding for skills development programmes in the following areas:
 - a. Skills that are aligned to the global technological focus (4IR) to enhance the relevance of people exiting the mines in the new operating environment. The curriculum for portable skills would need to be revised to accommodate the emerging skills within the 4IR space.
 - b. Skills that are relevant to emerging industries such as the renewable energies would prove critical in improving the socio-economic impact of the skills interventions. A lot of opportunities can arise for most ex-mineworkers in the emerging industries if their training is tailored at the right point of need. Therefore, there is a need for the MQA to ensure that their accredited training providers come up with a skill set suitable to meet the requirements of these emerging industries that can be modelled into portable skills.
 - c. Skills which promote the development of entrepreneurs and growth of SMMEs such as business management, entrepreneurial skills, basic trade related skills (e.g. basic welding, basic plumbing, basic electrical, basic mechanic skills, etc.), and other skills (e.g. sewing, catering, computer skills, etc.).
 - d. Skills which are mine related (e.g. plant operators, dozers, front-end loaders, etc.) could be also considered but specifically focused on mining regions or communities where there is potential for mining growth and opportunities.
 - e. Farming related skills in both plant and animal production which is most suitable for both rural and per-urban communities for both commercial and subsistence purposes. The courses should be aligned to the farming activities

which can thrive in each province as informed by the proposed destinations of ex-mineworkers post-mining.

- iv. The MQA needs to conduct post-mining career sessions across the MMS targeted at providing useful information on possible post-mining economic activities that mineworkers can consider and the appropriate skills and resources needed to succeed. The impact of skills interventions can only be improved if the programmes are targeted towards people with the same drive and vision with the policymakers.
- v. The MQA should provide funding for the development of centres of excellence across all provinces to train current mineworkers and ex-mineworkers on portable skills. The sustenance of these centres could be facilitated by contributions from the mining companies as well in accordance with a portable skills framework once instituted. Some of the idle mining infrastructure at closed mines could be utilised for this cause.
- vi. There is need for local municipalities, mines and other local industries to be encouraged to create opportunities for ex-mineworkers who possess portable skills. This process can be improved if ex-mineworkers were assisted in forming cooperatives after training so that their businesses can grow into SMMEs and assist in alleviating unemployment levels in the country. A bottom-up approach should be adopted by first mapping the area locality (district or locale) of ex-mineworkers. This will help to get a comprehensive picture of the main economic activities within the municipalities. It will assist in crafting interventions intended to sustain the livelihood of ex-mineworkers (alignment of interventions with socio-economic context of the municipalities). This should be done with the end in mind to create potential money generating activities without boxing interventions into rigid courses with no or little impact of the ex-mine workers.

1 INTRODUCTION

1.1 Introduction and Background

The MQA is a public entity established in terms of section 45 of the Mine Health and Safety Act 29 of 1996 (MHSA) and is regarded as a Sector Education and Training Authority (SETA) in terms of the Skills Development Act 97 of 1998 (SDA). The National Skills Development Plan (NSDP) requires a new approach and set of skills to identify and develop strategic opportunities and partnerships and ensure specialised technical support for new initiatives that focus on quality, throughput and scale. The MQA has adopted a strategic approach that seeks to put research at the centre of planning and inform decision making to address the NSDP requirements through:

- Monitoring external trends in education and training, nationally and internationally, and therefore promote a learning and development culture in order to support continuous learning and improvement in the mining and minerals sector (MMS),
- Developing a robust and reliable sector Labour Market Intelligence (LMI) framework and institutional capacity in order to make informed planning decisions, and
- Identifying and leveraging research and skills planning partnerships.

Against this background, the MQA commissioned the research study to explore, among other things, the skills development support for ex-mineworkers in the mining and minerals sector (MMS) for 3 years covering the period 2015 –2017.

1.2 Aim of the Study

The research study sought to assess the effectiveness of re-skilling initiatives implemented on ex-mineworkers in all subsectors of the MMS, excluding the services incidental to the Mining subsector. The overall aim was to assess the socio-economic changes in the lives of ex-mineworkers' post-skills development and the possibility of them re-entering the mainstream economy. This report came up with a set of feasible recommendations on how skills development can be better conducted among ex-mineworkers and which skills they require to ensure they re-enter the mainstream economy.

1.2.1 Main Objectives of the Study

The main objective of the study was to conduct an ethnographic case study for each sub-sector in the MMS (except the Services Incidental to Mining sub-sector) from both mining and labour sending communities to investigate the skills development support (re-skilling) given to the ex-mineworkers. This research focused on the skills development practices provided to the ex-mineworkers within the MMS [those who exited due to voluntary severance packages (VSP), those retrenched, and those medically incapacitated (ill-health & injured on duty)]. The specific objectives of the study were to:

- i. Provide the MQA with a better understanding of how ex-mineworkers survive beyond mining employment, especially after they have been provided with the skills development support.
- iv. Assess the extent to which the skills development interventions and their implementation affect the livelihood of ex-mineworkers.
- v. Assess the effectiveness of skills development support for the livelihood of these ex-mineworkers and the extent to which these interventions enable them to re-enter the mainstream economy (re-employment or entrepreneurship).

1.2.2 Specific Objectives of the Study

To answer these objectives, the study focused on the following:

- i. Investigate skills development interventions/initiatives that have been provided for the ex-mineworkers in each sub-sector of the MMS in the 3 years from 2015 –2017.
 - a. Listing the skills development interventions/initiatives – showing the top 5 and linking back to the identified programmes and their impact.
 - b. Listing the interventions/initiatives which need to be prioritised, based on their impact.
- ii. Investigate the effectiveness of the re-skilling of ex-mineworkers in contributing to their personal development, i.e. with respect to an overall improvement in their socio-economic status and as an enabler to related opportunities. This was achieved by:
 - a. Identifying portable skills that will be beneficial for the ex-mineworkers to re-enter employment or entrepreneurship in the MMS or other sectors.

- b. Investigating the approach that is used to assess the prospective candidates' inclinations, needs and abilities in order to enable the initiative or support successful.
 - c. Investigating the utilisation of these interventions by the recipients in gaining alternative employment or entrepreneurship in the 3 years from 2015 –2017.
- iii. Investigate the discourse and different perceptions of the value of ex-mineworkers' skills development support efforts within the MMS in general in the past 3 years from 2015 –2017.
- iv. Provide the MQA with specific, measurable, attainable, realistic and timely (SMART) recommendations on skills development initiatives that would add value to ex-mineworkers.

1.3 Structure of the Report

This report is structured as follows:

- Chapter 1 provides the introduction and background, and also details the research objectives.
- Chapter 2 summarises the literature review, where the legislative, theoretical and empirical insights related to skills development of ex-mineworkers are explored.
- Chapter 3 highlights the research methodology and approach used in the collection and analysis of data.
- Chapter 4 analyses and presents the findings in accordance with the objectives of the study through triangulation of submissions from the different stakeholders engaged.
- Chapter 5 concludes the study and presents recommendations based on the findings.
- The appendices which consist of the eight ethnographic sub-sector reports and other key tables are presented lastly.

2 LITERATURE, LEGISLATIVE AND POLICY CONTEXT

2.1 Introduction

Due to the finite nature of mineral resources, technological transformations as well as falling commodity prices internationally, there is a dire need for the mining and extractive sector to take cognisance of the tentative nature of employment (Robertson, et al., 2011). It is important that there exist comprehensive mechanisms aimed at ameliorating the personal and social crises that might befall mineworkers in the event of company closures or anything that results in job losses.

Equipping people with higher levels of skills and creativity, innovation and entrepreneurship is necessary for effective participation in the global market (Brown, et al., 2011). Therefore, this chapter reviews literature and legislative contexts related to the re-skilling of ex-mineworkers. The theoretical underpinnings behind the reskilling of employees exiting employment is explored. Lessons from other countries regarding how they prepare their ex-mineworkers for life after mining is also discussed. Lastly, an evaluation of the South African initiatives to address the socio-economic plight of ex-mineworkers post-mining is also conducted to ascertain their effectiveness.

2.2 Legislative and Policy Context

2.2.1 International Policies

2.2.1.1 The Sustainable Development Goals (SDGs)

The United Nations' (UN) 2030 Agenda for Sustainable Development is hinged on equitable, socially inclusive, and environmentally sustainable economic development until 2030 in the quest to achieve Sustainable Development Goals (SDGs). The SDGs include; inclusive growth and sustainable development, good governance, democracy, respect for human rights, justice and the rule of law. Therefore, mining companies have the potential responsibility of becoming leading partners in achievement of the SDGs through their operations (RSA Parliament, 2018).

This is because mining companies can generate profits, employment, and economic growth in low-income countries. In addition, mining companies and civil society can also ensure that benefits of mining extend beyond the life of the mine itself through partnerships with government, so that the mining industry has a positive impact on the natural environment, climate change, and social capital. Mining companies are also obliged to extract with responsibility, produce with less waste, use safer processes, incorporate new sustainable technologies, promote the improved wellbeing of local communities, curb emissions, and improve environmental stewardship. Hence, skills development support for ex-mineworkers also becomes one of the initiatives mining companies have to undertake in accordance with the SDGs' principle of improving the wellbeing of local communities.

2.2.2 National Legislations and Policies

2.2.2.1 The Constitution of the Republic of South Africa

The Constitution of the Republic of South Africa Act 108 of 1996 (Constitution), by way of section 23(1) (a), specifies that every person has a fundamental right to fair labour practices. This implies that employers cannot achieve a fair lay-off or retrenchment process without following the requirements of the Labour Relations Act (LRA) as it underlines the constitutional right to fairness.

2.2.2.2 The Labour Relations Act

Section 189 of the Labour Relations Act ("LRA") allows employers to terminate an employee's services on grounds of operational requirements. However, this can only be done following an unbiased procedure and for a fair reason. Fair reasons may include economic, technological, structural or similar needs of the employer. In order to comply with the rule of fairness, the Act requires the employer to comply with specific procedural requirements. These include consultation, notification, opportunity for feedback, agreeing on criteria for selection, notices of termination, severance pay⁵, and payments. However, the Act does not specifically provide guidance on the nature of training and other support to be provided to retrenched employees.

⁵ In terms of Section 41 of the Basic Conditions of Employment Act ("BCEA").

2.2.2.3 National Development Plan (NDP)

The National Development Plan (NDP) is founded on 6 pillars which represent the broad objectives of the plan to eliminate poverty and reduce inequality and unemployment. The NDP is aimed at uniting South Africans of all races and classes around a common programme to eliminate poverty, unemployment and reduce inequality. To meet the needs of a fast-changing economic environment envisaged in the NDP, development must focus on skills that are reported to be in demand. In line with the NDP, both the Department of Higher Education and Training (DHET) and the Department of Home Affairs (DHA) have identified skills considered to be scarce and critical.⁶

2.2.2.4 National Skills Development Strategy (NSDS) III

The National Skills Development Strategy (NSDS) III is one of the documents established to enhance skills development capabilities of the South African government, with an emphasis on empowering historically disadvantaged persons between April 2011-March 2016 (extended to March 2020). The NSDS III points to the skills problem within companies, where they retrench workers whose skills are no longer relevant to the job description, instead of retraining them (DHET, 2011). According to the DHET (2011), NSDS III was developed as a strategy to respond to a number of challenges in the skills development space. These include the high number of desperate, long-term unemployed individuals who either lack basic numeracy skills or do not possess the entry level skills to get accepted into jobs. They also include the failure of employers to retrain their workers and equip them with valuable new skills which are relevant in the changing socio-economic and technological environments.

2.2.2.5 National Skills Development Plan (NSDP)

The National Skills Development Plan (NSDP) which replaced the NSDS III was gazetted in February 2019 and promulgated in March 2019. It provides the roadmap upon which SETAs are to align their planning and implementation goals and objectives over the coming years

⁶ A scarce skill is a qualification or job for which there are too few available people in South Africa to do the job. Scarcity in a specific qualifications or job can be attributable to the fact that the occupation is newly created and therefore, very few people have studied in that direction. Critical skill refers to particular capabilities needed within an occupation, for example, general management skills, communication and customer handling skills, teamwork skills, and communication technology skills.

until 2030. The NSDP seeks to ensure that South Africa has adequate, appropriate and high-quality skills that contribute towards economic growth, employment creation and social development (DHET, 2019). It starts with understanding and determining the demand of the labour market and national priorities that can be interpreted as interventions from education and training institutions through their planning processes on the supply side. In the context of this study, the relevant outcomes of the NSDP include: Outcome 3- improving the level of skills in the South African workforce; Outcome 4- increase access to occupationally directed programmes; and Outcome 6- skills development support for entrepreneurship and cooperative development.

2.2.2.6 Industrial Policy Action Plan (IPAP)

The Industrial Policy Action Plan (IPAP) focuses on transversal as well as specific sectoral programmes, linking energy to mineral based solutions such as fuel cells and energy storage in support of the use of non-petroleum fuels in response to climate change. Industrial policy has the over-arching objective of enhancing the productive capabilities of the economy. In other words, industrial policy aims to increase the economy's ability to produce more and more complex and high value-added products with greater efficiency. South Africa has a comparative resource endowment which calls for beneficiation of products, into a global competitive advantage such as minerals. The IPAP is aimed at developing effective instruments for public-private sector cooperation and identifying key investment opportunities. Hence, value-adding beneficiation and entrepreneurship are considered to play a pivotal role in the success of the economy through innovation, investment and job creation opportunities.

2.2.2.7 The Medium-Term Strategic Framework (MTSF)

The Medium-Term Strategic Framework (MTSF) is government's strategic plan for the five-year implementation phase of the NDP. The MTSF 2014-2019 seeks to address spatial imbalances in economic opportunities through targeting the economic development of rural areas (the former "homeland" areas). It focuses on workers' education and skills development to meet economic needs through correcting inequalities. It further creates a macroeconomic and financial framework to support employment opportunities emanating from emergence and growth of entrepreneurs in existing and new sectors.

2.2.2.8 The Presidency Strategic Plan

The Presidency is the custodian of the NDP and the MTSF. Therefore, the administration of The Presidency is about supporting the President and Deputy President so that they can effectively lead government towards the realisation of a better life for all as envisioned by Vision 2030 of the NDP. In relation to this study, the Presidency also contributes indirectly to the following: Outcome 4 - decent employment through inclusive economic growth; and Outcome 5 – a skilled and capable workforce to support an inclusive growth path.

2.2.2.9 The Skills Development Act (SDA)

The Skills Development Act (SDA) provides the national framework for skills development. In particular, it provides for the National Skills Authority (NSA) as well as the establishment of SETAs. The mandate of the SDA shows that the South African government is concerned about workers' welfare as well as the socio-economic development. Through workplace learning programmes, workers are constantly equipped with more dynamic skill sets which protect their jobs by responding to the changing socio-economic and technological environment. In addition, promoting self-employment is also a critical provision applicable to ex-mineworkers as they need to be fully equipped to venture into entrepreneurship. In addition, subsection 1(g)(ii) of the SDA also provides that retrenched workers should be assisted with skills that enable them to re-enter the labour market.

2.2.3 Sector-specific Legislation and Policies

2.2.3.1 The Mineral and Petroleum Resource Development Act (MPRDA)

To redress historical inequalities, and thus give effect to section 9 (equality clause) of the Constitution, the government enacted, among other legislation, the Mineral and Petroleum Resource Development Act 28 of 2002 (MPRDA). Significantly, the objectives of the MPRDA include promoting equitable access to minerals resources and expanding opportunities for historically disadvantaged persons (HDPs) to benefit from the mining industry. The MPRDA promotes employment and advances the social and economic welfare of all South Africans as well as ensuring that those holding mining rights contribute to socio-economic development in their operating areas.

2.2.3.2 The Mining Charter 2018

The Mining Charter, also known as the Broad Based Black Socio-Economic Empowerment Charter for the Mining and Mineral Sector, is based on the need to ensure greater equality in the mining industry by promoting participation of previously disadvantaged groups. The mining charter's vision is to reflect a non-racial South Africa by ensuring that all races participate and benefit from the country's mineral resources. Some of the objectives of the Charter are to utilise the existing skills base to empower HDSA's, expand the skills base of HDSA's for the benefit of their communities, promote employment and advance the social and economic welfare of mining communities. The Mining Charter also mandates the MQA to engage in pre-retrenchment skills enhancement exercises by retraining workers while they are still in their workplaces.

2.2.3.3 The Social and Labour Plan

In accordance with the MPRDA's objective of an effective transformation, the submission of the Social and Labour Plan (SLP) is a pre-requisite for the granting of mining or production rights.⁷ The SLP system, in particular, is meant to channel benefits into mine-affected communities to ensure that impacted areas are not left destitute and impoverished by mining (CALS, 2018). The programmes are meant to stimulate the local economy and ensure mine-affected communities are left better off by mining. The main components addressed in the SLP are:

- i. The Human Resource Development Programme - to ensure the availability of mining and production operation specific skills and competencies of the workforce, and skilling of employees for portable skills utilisable by the employees outside the life in the mining or production industries.
- ii. The Local Economic Development Programme - to provide local economic development programmes in line with the integrated development plan of the district municipality within which the operation takes place and in areas from which the majority of the workforce is being sourced.
- iii. Processes Pertaining to Management of Downscaling and Retrenchment - companies should make sure that all other viable options available to achieve operational

⁷ A Social and Labour Plan lodged with the Regional Manager or Designated Agency is valid until a closure certificate has been issued in terms of Section 43 of the Act.

requirements are exhausted before resorting to retrenchments/ downscaling of workers.

2.3 The Conceptual Framework

2.3.1 The Conceptual Framework on Downscaling

Different terminologies can be used interchangeably to imply job losses such as displacement, retrenchment, redundancy, downsizing or lay-off. The term "displaced workers" refers to persons permanently separated from their jobs and connotes the disappearance of the job as well as the dislocation of the worker from the enterprise (Klock, et al., 1998). According to Redman (2001), the different forms of job loss can be categorised into the following:

- i. Layoffs- Layoffs are a workforce reduction strategy concentrating upon the elimination of headcount per se and the reduction of the overall number of employees (Ryan & Macky, 1998).
- ii. Natural attrition- Natural attrition or wastage is the process of employees leaving their jobs because they want to retire or move to other jobs, rather than because their employer makes them leave (Cameron, et al., 1991).
- iii. Ill-health retirement- This is when a worker is considered permanently incapable of efficiently carrying out their duties of your employment due to permanent illness or injury or disability.
- iv. Compulsory retrenchment- This occurs when employees are forced or listed for retrenchment even without their consent due to the considerations made by the employer and this method is normally the last resort strategy used by employers.
- v. Induced Redeployment- This is the process of securing suitable alternative employment for an employee who it is identified will be displaced at a stated future date from their post as a result of organisational change, or following application of formal processes relating to capability (whether due to ill-health or performance), or in advance of the non-renewal of a fixed term contract upon expiry (Cameron, 1994).⁸

⁸ The term 'induced' emanates from the fact that the process is mainly driven by the employer after considering some or all of the factors highlighted.

- vi. Voluntary retirement- This is when an employee volunteers or chooses to offer their names for retrenchment.
- vii. Early retirement – This is when a person stops working earlier than at the usual statutory retirement age.

2.3.2 The Contextual Definition of 'Ex-mineworker'

The term former or ex-mineworkers accommodates a bigger group of those exiting the mine, rather than only those retrenched as a result of downscaling (Akooje, et al., 2015). According to Akooje et al. (2015), it is important that the context of ex-mineworkers should focus on the skills development component of those former mineworkers who have exited mines for various reasons. The terms of reference (TOR) for this study clearly specify that ex-mineworkers are to include those who left employment on voluntary severance packages (VSP), who were retrenched, or due to ill-health and being injured on duty.⁹ While some ex-mineworkers have been prepared by initiatives that have been accommodated by the Social and Labour Plan (SLP), the reality of the sector suggests that a number of them were not adequately prepared for their post- mining employment reality (Akooje, et al., 2015).

2.3.3 The Contextual Definition of 'Portable Skill'

The term skill relates to a combination of social, communication, technical and vocational, cognitive/problem-solving and personal behavioural abilities possessed by an individual that make them employable or able to run a business (ILO, 2007). The ILO (2007) states that skills are highly varied in different sectors such that often times, some skills are more applicable to one economic sector than another. This limits labour mobility between sectors. In the context of this study, the skills development support initiatives for ex-mineworkers are expected to be portable. According to the ILO (2007:2), a skill is portable if it "can be used productively in different employment contexts, jobs and enterprises." According to ILO (2007:1), skills are portable when they can be transferable between jobs and are easily recognized by employers. The portable skills differ from occupationally related skills which are needed for a specific job or occupation. Therefore, it is important to note that this study focused mainly on portable

⁹ This is our working definition of ex-mineworker for this study.

skills that were offered by mining companies to their employees in preparation for their life after mining. It purposed to ascertain their impact on enabling a successful re-integration of the ex-mineworkers into the mainstream economy.

2.4 Skills Development Initiatives for Ex-Mineworkers

2.4.1 Interventions for Ex-mineworkers

There are different reasons that cause companies to adjust their business plans or processes which commonly results in job losses, and in some cases, it may be the only way for a company to move forward and thrive. According to the IFC (2005), the injection of new capital, changes in ownership, or changing economic circumstances can often lead to reorganization and restructuring within a company. Loss of employment may also be caused by total closure of a workplace with the total or near-total loss of jobs job losses arising from a reduction in staffing requirements. This may be due to efficiency gains, or falling demand for the company's products or services, job losses arising from a downsizing in operations or restructuring of the workforce following privatisation (IFC, 2005).

According to Klock *et al.* (1998), interventions for ex-workers can be classified into active and passive responses. Active labour market programmes for laid-off workers include supply side (e.g. job search assistance, job placement and retraining programmes) and demand side (e.g. job creation and employment subsidies) measures. Active labour market policies are designed to improve the employability of the laid-off workers and assist them in finding a new job or venture into self-employment. In practice, active responses are applied when unemployment is due to major structural change and fall in demand for the unskilled. Under such circumstances measures designed to prepare workers for new kinds of jobs in growing industries may be more effective. However, re-employment status was found to vary by education level, area unemployment rates, and age as well as by gender (Richards, 1991).

On the other hand, passive response generally refers to unemployment benefits and subsidies for early retirement (Klock *et al.*, 1998). The passive responses are usually passed as a sufficient assistance to help laid-off workers remain close to their earlier living standards while

nonetheless encouraging their active search for replacement jobs. However, Klock *et al.* (1998) established that unemployment insurance and supplemental benefits are essential for income maintenance but are not designed to provide sufficient assistance to workers affected by plant closures and permanent layoffs. Examples of such passive responses include social security systems such the Unemployment Insurance Fund, Mineworker Provident Fund, Occupational Diseases in Mine and Work Act and Compensation for Injuries and Diseases Act.

2.4.2 Skills Development for Ex-mineworkers in Other Countries

It is important to appreciate the ways in which skills development programmes are designed for employees exiting employment across the world. Therefore, some lessons were extracted from the experiences from other countries such as Australia, China, the United Kingdom (UK), the Czech Republic, Egypt, Lesotho and Botswana. It is also important to note that not all the countries reviewed had instituted programmes which were specific to ex-mineworkers but rather to ex-employees who were victims of mass retrenchments which occurred in these countries. However, important insights were learnt which can also be applied in the context of ex-mineworkers in South Africa.

2.4.2.1 Australia

Australia responded to industrial restructuring and consequent worker displacement that occurred in the automotive industry in 2004 by outsourcing public employment service (PES) as a toolkit of the ILO (ILO, 2013). About 1400 workers lost their jobs when the Mitsubishi Motors Australia Limited (MMAL) closed its foundry and engine manufacturing plant. According to the ILO (2013), the government focused mainly on getting job seekers employed in the short term as well as more community and social/psychological support rather than equipping them with training and skills to meet local employers' needs. According to ILO (2013), Australia also created indigenous programmes and the new Job Seeker Classification Instrument (JSCI) designed. This helped to achieve a fuller, more balanced and holistic assessment of the individual job seeker's circumstances, whether they resided in remote, regional or metropolitan areas. Identification of barriers to employment experienced by individual job seekers were done, and counselling was only offered to job seekers at high risk of remaining unemployed, whereas low-risk job seekers were eligible for job-search training

only after a few months. In 2009, newly redundant workers had immediate access to training leading to higher vocational qualifications.

The programmes in Australia provided the following learning points:

- i. Community action plan to address community and health issues to deal with depression, more sedentary lifestyles and less social interaction. Those who lost jobs were encouraged to join local community groups and/ become volunteers. They were provided with counselling resources at the early stages of retrenchment. This helped them to address issues such as their mental well-being as they moved into the reality of a new job or confronted the potential loss of social networks associated with retirement or unemployment.
- ii. Customised employment-related interventions relevant to the needs of the client group (including highly skilled workers).
- iii. The development of an education and skills forum or task force specifically focused on the needs of laid-off workers was crucial and linked to identified skills needs and shortages in the region.
- iv. On self-employment, those who would have considered that option needed continued mentoring and financial counselling. Mechanisms on assisting them to establish a good work/life balance were identified to be crucial, since self-employed people typically tend to work longer hours than employed workers to achieve a reasonable income.

2.4.2.2 China

In China, a study was done to evaluate the training interventions aimed at laid-off workers in the two cities of Shenyang (regional capital of Liaoning) and Wuhan (regional capital of Hubei) (Bidani & et al., 2009). According to the ILO (2013), a range of active labour market programmes (ALMPs) were put in place and made available via the PES centres in the two regions. These included: career guidance, employment counselling, and job brokerage; training for new jobs (partly through social partners) to improve the employability of unemployed workers. It involved provision of subsidies and loans to enterprises and social partners as incentives to employ redundant workers and support for redundant workers to become self-employed. Provision of support and information was made available to enterprises; internships/work trials in companies of three to six months for redundant workers;

and development of community employment programmes and opportunities in the services sector (“tertiary industries”) for unemployed workers.

The study findings suggested that unless training programmes are carefully designed and targeted, there are no guarantees that impacts will be positive” (OECD, 2006). The ILO (2013) concluded that China’s experience corroborated with many international studies, and a range of country experiences. These indicated that job counselling and guidance with job search, good labour market information and action planning through the mediation of PES are the most efficient and effective ALMPs in responding to worker displacement. According to the ILO (2013), the Chinese Government perceives that these interventions have encouraged the development of an economy with diverse forms of ownership and have broadened access to employment. It has encouraged the development of private SMEs with good employment capacity (by 2008 this type of enterprise accounted for 80 per cent of new employment in urban areas). This massive job creation has allowed China to redeploy retrenched workers in the context of an expanding economy and the resultant expansion in the demand for labour (ILO, 2013).

2.4.2.3 United Kingdom

The United Kingdom (UK) coal industry went through a transformation between the 1980s and early 1990s which led to 216 000 job losses and closure of 194 companies in just a decade (Coates & Barrat-Brown, 1997). This resulted in employment shifting from the manufacturing and extractive industries towards service employment (increased part-time work mostly for women, deregulation of the labour market, and more flexible labour contracts) (Fieldhouse & Hollywood, 1999). However, the unemployment in the coal mining areas was officially low due to people being absorbed in other sectors and hidden unemployment in the form of registered permanently sick (Beatty & Fothergill, 1996).

The youngest age groups among the 1981 casualties were slightly more likely to hold full-time jobs than their peers (Beatty, et al., 1997). But, according to Fieldhouse and Hollywood (1999), there was lack of transferable skills for the affected specialised workers in closed industries. According to Guy (1994), ex-miners with transferable skills are much less likely to be unemployed than partly skilled. However, not all ex-miners were re-employed in inferior

occupations (Guy, 1994). Popular jobs were drivers (of buses, goods vehicles etc), transport and storage related activities, building and construction work, metal related activities, caretaking and road sweeping and catering. According to Fieldhouse and Hollywood (1999), ex-miners mostly filled jobs with long and solitary hours which might have been considered undesirable. Therefore, success in these areas reflected a lack of competition rather than a demand for the skills or experience offered by unemployed miners.

In the context of solutions to ex-workers, the ILO (2013) indicates that there was a successful “Skills Hub” programme in the UK which the UK MG Rover also implemented to enable worker mobility. This facilitated ex-workers’ access to jobs outside the immediate locality, perhaps as part of a “skills hub”, in order to avoid the loss of manufacturing and engineering experience from the region. In the MG Rover case, the package included a travel subsidy per worker for up to 20 weeks. Training was provided to National Vocational Qualification level for each redundant worker taken on by a new employer, plus one other existing employee. A wage induction subsidy was given per week per employee for 12 weeks. According to the ILO (2013), the “Skills Hub” provided not just travel subsidies but established a skill matching service whereby employers could register vacant positions they were trying to fill. The “Skills Hub” was given the task to find suitably qualified ex-Rover workers for the position.

2.4.2.4 Czech Republic

The ILO (2013) reports that the industrial restructuring of the Czech Republic affected the Moravian–Silesian region’s coal mining and heavy industries after 1993. Plant closures occurred which resulted in a huge increase in unemployment in the region, from a base of 35,300 to 88,800 between 1993 and 2000. A number of industrial zones were created using new investment incentives such as tax breaks and financial subsidies for new jobs. However, a skills mismatch occurred because there was need for people with computer skills to get employment in the new industries. The government therefore introduced the Retraining Centre for Precision Cutting located in Opava (RCPO), a town in the Moravian–Silesian region of the country. This was a retraining programme for the regionally demanded computerised numeric control (CNC) machine operators. In addition, a public–private partnership was created in 2005 to bring together a precision engineering company, the Czech authorities and

EU (European Union) funding with the goal of retraining laid-off workers to meet local skills shortages.

According to ILO (2013), key lessons from the Czech experience included the proven feasibility of a public–private partnership approach as a labour adjustment measure. A combination of theoretical and practical elements added considerable value to the initiative and increased the employability of the trainees.

2.4.2.5 Egypt

The case of Egypt involved the effect of modernisation on employment. According to the ILO (2013), the Egyptian textile industry employed 100,000 people in 2005 but was lossmaking, inefficient and in need of modernisation. This resulted in the government's decision to adopt a downsizing strategy coupled with new investment in modern production equipment. A partnership with the EU was established and a package for the employees was developed. This was carefully planned, with emphasis on providing sufficient time for the process and on gaining the agreement of the social partners to the model (ILO, 2013). Close cooperation between the industry's trade union and management was key to its success. A "labour pool" was established on an "employability centre" model managed by advisory committees. The project and its approach were furthermore designed to suit Egyptian culture, which has a long tradition of public industries. Its focus on redundant workers who had at least 19 years of service, and thus were eligible for the public sector pension scheme, was an important factor in encouraging workers to accept a redundancy package which could be combined with a pension. The fact that many workers already had second jobs to generate some income also contributed to the success of the project.

The package on offer to workers included a pension; a lump sum that had to be either put on deposit in a bank or invested in an enterprise start-up; three guidance and counselling sessions; a training voucher; and access to other training options such as job-search techniques and job clubs (ILO, 2013). A unique feature was that the training voucher could be assigned to a family member, if the worker did not want to use it personally. This had an interesting added supportive effect on workers' families. The strong emphasis on training encouraged both the redundant workers themselves and their family members to think in

terms of gaining relevant skills for future employment. The trainings involved the innovative use of visual materials for functionally illiterate workers, and group sessions were followed up by three individual sessions so as to reassure workers that the process was designed to give them positive help.

2.4.2.6 Lesotho

In Lesotho, ex-mineworkers who had returned from neighbouring South Africa constituted 45% (including hidden unemployment) of the Lesotho population which called for measures to address the problem (Nkhets'e, 2015). These ex-miners from South Africa had skills and technical expertise required in the construction industry, but their certificates were not in English or local languages which made it difficult for the certificates to be presented as proof of qualifications. A number of mechanisms were therefore suggested to address these challenges. They included the following:

- i. Opening up employment opportunities e.g. in the Lesotho Highlands Power Project (2012-2027); construct dams, reservoirs and weirs in both highland and lowland rivers; building roads and bridges in the country and re-employment in emerging Diamond Mines in the highlands such as in Let'seng, Kao and Liphobong etc.
- ii. The Ministry of Labour taking the initiative of translating the certificates of the ex-mineworkers into English and Sesotho.
- iii. Giving financial literacy training to ex-mineworkers to use the money productively for the benefit of the Lesotho economy; offering business and other skills training for entrepreneurship and self-employment.
- iv. Arranging for a National Dialogue with all the stakeholders dealing with the Social Benefit issue of the mineworkers, ex-mineworkers and their families.

2.4.2.7 Botswana

Botswana is largely dependent on diamonds mineral resource accounting for one-quarter of GDP, approximately 85% of export earnings, and about one-third of the government's revenues.¹⁰ Nearly all diamond production is controlled by the Debswana Diamond Company,

¹⁰ https://www.indexmundi.com/botswana/economy_profile.html

a joint venture firm equally owned by De Beers and the government of Botswana (Wyk, 2009).¹¹ In Botswana, Debswana adheres to the government's economic stance towards entrepreneurship and local enterprise development (Debswana, 2012). Several projects have been implemented in Botswana to support the development of commercially viable enterprise. They contribute towards the creation of sustainable employment; promote beneficiation; facilitate transfer of entrepreneurial skills; and avail resources to support citizen entrepreneurs. For instance, Debswana introduced the Leadership Accelerator Action Programme (LEAP) training which is targeted at leadership development in partnership with Organisational Solutions of Singapore. It is aimed at equipping learners with business skills and coaching (Debswana, 2012). In addition, the company's apprenticeships are taken through entrepreneurial courses during their training covering topics such as how to secure financing for small businesses, management skills and basic finance.

2.4.3 The Reskilling of Ex-mineworkers in South Africa

2.4.3.1 The Training Layoff Scheme

South Africa, through its social partners (Presidential Economic Joint Working Group, namely organised Labour, Business and Government), in the form of the National Economic Development and Labour Council (NEDLAC) came up with a response to the challenges the country was facing due to the global economic crisis of 2007/8 (DoL, 2009). This response was in the form of the Training Layoff Scheme (TLS), which was a temporary suspension of the work of a single worker or group of workers which was used for training purposes. During this temporary suspension of work, the employer was supposed to continue with the contract of employment for the affected workers. The scheme was supposed to benefit distressed employers through (i) reducing payroll costs during the layoff, (ii) build the skills of their workers at little cost, and (iii) reabsorb the skilled workers during the economic turnaround. On the other hand, workers facing the threat of retrenchment were offered an opportunity to (i) remain employed, though receiving social benefit packages only; (ii) gain further skills through a training programme; (iii) have an opportunity to be re-employed after the recession.

¹¹ www.mbendi.co.za

The employers were supposed to work with relevant Sector Education and Training Authorities (SETAs) to provide training during the layoff period (Rasool, et al., 2017).

2.4.3.2 The Labour Market Intelligence Partnership (LMIP)

The South African government made a commitment to prioritise skills planning in 2009 based on Outcome 5.1.1 which aims to, “establish a credible institutional mechanism for skills planning” (DHET, 2010). In response to this need, the Department of Higher Education and Training (DHET) established the Labour Market Intelligence Partnership (LMIP) project in 2012 (DHET, 2013). One of the key objectives of the LMIP project was to analyse the current and future demand of skills and provide a better understanding of the skills set of the unemployed to assist planning for appropriate training programmes for them (Reddy, et al., 2016). The LMIP project concluded that South Africa’s skills planning focus should not only be for a small number of skilled people in the workplace. It should also benefit the unemployed, the youth, low-skilled people, the marginalised, and those in vulnerable forms of employment, including people who work for themselves. Hence, the need to expand the provision of Community Education and Training (CET) college programmes and enhance the capacity of CET colleges to deliver basic skills training linked to the labour market.

2.4.3.3 The National Union of Mineworkers (NUM)

According to Philip (2018), the National Union of Mineworkers (NUM) set up a development programme aimed at supporting people in alternate forms of livelihoods to sustain themselves. This was because the ex-mineworkers were unlikely to access formal employment opportunities resulting from their strike in 1987 which resulted in the dismissal of 40 000 workers. The vision of NUM was to focus on local economic development and employment creation for ex-miners and their communities. It envisaged the private sector, government and labour all investing in the development of mining communities across Southern Africa (Philip, 2018).

Initially four cooperatives were established in the Eastern Cape and Lesotho. The challenge at this stage was for cooperatives to provide a consistent income for members. Over time, 30 cooperatives were established. A range of factors, both internal and external to the cooperatives in the prevailing economic climate and the repressive state, meant that many of

them did not become sustainable (Philip, 2018). The NUM decided that cooperatives were insufficient in supporting ex-miners and that more inclusive and community-based strategies were needed to have a greater impact. There was a therefore shift from cooperatives to a service-delivery approach. The NUM established the Mineworkers Development Agency (MDA) and seven development centres aimed to supporting the growth of the local economy by providing a range of services, including training to local enterprises.

2.4.3.4 The Mining Qualifications Authority (MQA)

The re-skilling of retrenched mineworkers has been at the core of the MQA's concerns for more than a decade. In a 2004/5 annual report, the MQA (2005) outlined practical interventions that had been taken in the previous year to ensure that ex-mineworkers were equipped with new and useful skills. One of these was to ensure that mineworkers who were employed in manual positions became more equipped with the analytical skills needed in higher positions in mining organisations (MQA, 2005). Consequently, ex-mineworkers were trained in skills disciplines such as mining engineering, electrical engineering, extraction metallurgy and geology among others. In addition, the MQA (2005) made a significant investment through assisting retrenched miners with skills planning, skills development and financial support to start and grow their own Small Medium Micro Enterprises (SMMEs). Up to 1 995 small scale miners were trained through this programme (MQA, 2005), but despite these efforts, skills development support for Ex-mineworkers is still a concern for virtually all stakeholders in the South African mining sector. With the continued retrenchment of mineworkers due to technological and economic reasons, it is crucial to ensure a 'fall-back' occupation is obtained by each of them so they can continue to support their families post-mining occupation.

At a Parliamentary Committee hearing in August 2014, a submission by the Association of Mineworkers and Construction Union (AMCU) reiterated the importance of re-skilling ex-mineworkers with portable skills (PMG, 2015). Such skills are the solution in the ex-mineworker's case due to their ability to be applied in different industries as well as both in employment and business ownership. In pursuit of proactive approaches to reskilling of workers, a white paper by the World Economic Forum (WEF) (2017) explores the methods of reskilling workers in the advent of the fourth industrial revolution. This has created an urgent need across the world for ensuring that employees become reskilled in different industries.

The interventions require a review of skills demanded in local communities to determine which are most likely to benefit both the reskilled employees and the societies in which they reside (World Economic Forum, 2017). Rather than simply retraining employees to be better at executing work in their current positions, considerations should be given to equip employees with skills in small business management, entrepreneurship, resilience and development. This is corroborated by the MQA's attempts to equip portable skills among ex-mineworkers, thus making them more independent and not relying on the re-opening of their former mine which will require their services (MQA, 2005).

2.4.3.5 Evidence of skills development support in South Africa

Different mines institute different mechanisms to support their skills development obligations as prescribed in the SLPs. Worthy of attention is the case study of the program to mitigate the social and economic impacts of retrenchment at Placer Dome's South Deep mine (Dunn, 2001). A total of 2560 workers were retrenched between July-October 1999. In August 1999, the company introduced a Care Project as part of the Social Plan. Apart from the standard packages, the Care Project involved training and empowerment of families of beneficiaries and involvement of other stakeholders in providing community development support (MDA, TEBA, Experts and Financial Partners). The process involved an exit meeting (training and counselling), home visits, community development facilitation, development of an implementation strategy and the implementation. Career fairs were held for retrenched employees and their families, economic life skills workshops, business skills training as well as job hunting skills, business counselling and support and microfinance solutions. This is one of the successful structured reskilling programmes implemented for retrenched ex-mineworkers in South Africa.

2.4.3.6 Challenges faced in reskilling of Ex-Mineworkers

According to Ngcwangu (2019), the reskilling of ex-mineworkers is often not a simple process due to the complexities in implementation and sustainability issues. Due to economies that are depressed and communities with little purchasing power, it is often very difficult for reskilled miners to be able to sell their products and services they would have been empowered to sell (Ngcwangu, 2019). Further, an approach to reskilling of workers which overlooks the fact that retrenchments themselves are a sign of hard economic times. Giving

former mineworkers skills in plumbing or landscaping for example, therefore does not help if the communities they live in cannot afford those services (Ngcwangu, 2019).

As noted by Akooje *et al.* (2015), while the benefits of acquiring portable skills are not too great for beneficiaries, they are highly instrumental in ensuring that ex-mineworkers can better take care of their families while waiting for their mine to reopen. However, learning of portable skills is not necessarily a reliable means of improving Ex-Mineworkers' lives in the long term if the underlying economic problems are not addressed (Akooje *et al.*, 2015). As corroborated by Ngcwangu (2019), the reskilled workers in self-employment will ultimately be selling their products to non-existent markets if they continue to trade their products and/services in their poor communities. Therefore, investment in portable skills is more effective where the reskilled workers are welcomed into a functioning economy and well-off society which will be in a position to receive and benefit from their new skills.

2.5 Summary and Conclusion

This chapter was aimed at reviewing the policy framework and literature relating to skills development initiatives focusing on Ex-Mineworkers. The review has revealed that there are multiple international and local policies and legislations in place to ensure that the rights of ex-mineworkers are respected. These include the SDGs, the Constitution, NDP, IPAP, MTSF, The Presidency Strategic Plan, LRA, MPRDA, SDA, NSDS III, NSDP, Mining Charter and SLPs. The review also showed that there are several mechanisms to support ex-mineworkers who also depend on circumstances (e.g. retrenchment, ill-health, work injuries, severance package) behind the lay-off. These include individual characteristics such as age, gender, level of skill, level of education a requisite for trainability, years in employment among others. Various methods of supporting laid-off workers were explored from the supply side to include retraining and job search assistance. On the demand side, the support initiatives were focused more on creation of job opportunities through promotion of job creation schemes, local and regional development initiatives as well as local economic development. On the other hand, the World Bank calls for a just transition process that brings together workers (gendered approach), communities, employers, and government in social dialogue for a fast and fair transformation.

This chapter has explored lessons from other countries across the world regarding their approach towards laid-off workers. A balanced analysis was made of cases from Europe, Australasia, and African countries. It was established that systematic and properly managed programmes yield the best results. Thus, implementing of training programmes that are carefully designed and targeted to specific individual needs and economic environments are key to successful implementation. In addition, adequate information is necessary in tailoring the right interventions, given the economic characteristics of an area, country or region. Experiences in most countries also indicate that job counselling and guidance with job searches, good labour market information and action planning are the most effective active labour market programmes in response to worker layoffs. Equally important was the issue of involving the community in the process as well as other private-public partnerships in the process. Some of the local experiences revealed that there has been an attempt to emulate international practice.

3 RESEARCH METHODOLOGY AND APPROACH

3.1 Introduction

This chapter outlines the methodology which was used to meet the study objectives. The study employed a qualitative ethnographic research approach to analyse the ex-mineworkers' lives as they evolve in the wake of the skills development programmes they have undergone. It was crucial in this assignment to establish the extent to which lives of ex-mineworkers have been impacted by the various skills development interventions provided. This was achieved through evaluating changes in their occupations, income and reliability of income, family trends, emotional well-being and other key socio-economic considerations.

3.2 Study Approach and Methodology

3.2.1 Research Paradigm

This study followed the interpretivist research paradigm. This is based on a qualitative research approach to data collection. It assesses what people think and do, what kind of problems they are confronted with and how they deal with them through interviews and observations. This study employed an ethnographic approach to understand the situation in which ex-mineworkers were living in and the perspectives of other stakeholders who were mainly the employers, labour representatives and policy makers as stipulated by the interpretivist paradigm. Given the nature of the study, it was important to go inside the culture being investigated in order to develop a very deep understanding of it. Through observations, this study managed to gain appreciation of the living conditions and challenges faced by ex-mineworkers in the mainstream economy. On the other hand, interviews provided an in-depth analysis of the impact of various skills development support initiatives that were offered to ex-mineworkers.

3.2.2 Research Methodology

The research methodology was anchored within an ethnographic case study which looks for patterns, describes local relationships (formal or informal) and meanings while trying to make sense of a case in relation to its entire social setting and all social relationships. Ethnographic research calls for field observations of the phenomenon under investigation. Crucially, this research approach enables the researcher to be inside the culture enough to observe it while, at the same time, being outside enough to document it in an objective way. The key advantage of ethnographic research is its ability to gather in-depth information about a target group. In addition, this approach makes use of a combination of observations, interviews and focus groups. By so doing, the approach promotes triangulation of findings, a key aspect of credible research.

The following stakeholders were identified as key: ex-mineworkers, mine employers, labour unions, training providers, policy makers (Premiers' offices, local economic development departments), development agencies and sector experts. Whilst some stakeholders made up part of the research population, others were partners for the duration of the study. These partners provided valuable assistance especially during the fieldwork phase by ensuring that the ex-mineworkers could be accessed to participate in the study. Due to the sensitivity and possible socio-political implications envisaged on this study; fieldwork proceeded with the guidance of key informants who were knowledgeable about the dynamics in the mining industry.

3.2.3 Research Techniques

The following research techniques were applied to achieve the study objectives according to the research method used:

3.2.3.1 In-depth interviews

The in-depth interviews were done with all the key stakeholders as identified in Section 3.2.3 and were recorded. They were used to extract a deeper understanding of the forms of skills development support that was extended to ex-mineworkers and how and when the skills were offered. The interviews ascertained the impact these skills interventions have had on the ex-

mineworkers for their re-integration into the mainstream economy. They revealed socio-economic changes in ex-mineworkers' lives as a result of the skills development, the different perceptions the stakeholders have on the value of the interventions, possible areas for skills prioritisation by the MQA and lessons that have been learnt. Triangulation was then used to compare the different stakeholders' perceptions with the reports from other key informants and information from secondary sources. It is also important to note that all the interviews were recorded, subject to consent from the participants.

3.2.3.2 Observations

These are central to the ethnography research approach. Through observations, researchers were able to notice phenomena which may not have been noticeable from interviews. The observations were used to establish the socio-economic status of ex-mineworkers in their living and/or working environments without basing the participants' word-of-mouth or secondary data. To ensure all observations were exhaustively made, fieldworkers spent at least 3 hours with each ex-mineworker and a week among the participants in the area where the ex-mineworkers were located. These observations were then triangulated with interviews and focus group notes in compilation of the consolidated report.

3.2.3.3 Focus Group Discussions

One focus group discussion (FGD) was held in each of nine (9) provinces by gathering all the relevant stakeholders for this study. These discussions assessed the participants' experiences on the skills development initiatives offered to ex-mineworkers to prepare them for life after mining. The focus group discussions targeted a minimum of ten (10) participants and a maximum of twenty (20) participants per province. Input from the discussions was triangulated with interviews and observations according to the study objectives.

3.2.4 Study Sampling

Sampling is the process of selecting a representative group from the population under study and involves the two main strategies of non-probability and probability sampling. Non-probability sampling is used where the odds of any member being selected for a sample cannot be calculated whereas probability sampling involves random selection. The sample sizes for this study were primarily informed by the qualitative nature of the study. It is

important to note that there was no available database for ex-mineworkers in the country which could be used to determine the sample sizes per sub-sector.¹² Therefore, the convenience and snowball non-probability sampling techniques were applied. The nature of mineworkers is that once they are out of the mining systems, most mining companies would not keep their details which makes tracking or tracing them difficult. According to the terms of reference (TOR), at least the following samples per subsector were targeted:

Table 3.1: Targeted sample sizes per sub-sector

Sub-sector	Sample of Ex-mineworkers	Sample of Companies
Coal Mining	10	2
Gold Mining	10	2
PGM Mining	10	2
Diamond Mining	10	2
Other Mining	10	2
CLAS	10	2
Diamond Processing	10	2
Jewellery Manufacturing	10	2
Total	80	16

Source: MQA Study (2019)

Given that labour unions, other key stakeholders and focus group discussions could not be classified per sub-sector, the targeted sample sizes were classified provincially as follows:

¹² Please kindly refer to the limitations of the study under Section 3.4.

Table 3.2: Targeted samples for per province

Sub-sector	Labour Unions	Focus Group Discussions	Other Key Stakeholders
Gauteng	2	1	2
Limpopo	2	1	2
North West	2	1	2
Free State	2	1	2
Western Cape	2	1	2
Eastern Cape	2	1	2
Northern Cape	2	1	2
Mpumalanga	2	1	2
KwaZulu-Natal (KZN)	2	1	2
Total	18	9	18

Source: MQA Study (2019)

3.2.5 Research Tools

The following research tools were developed and used for the study:

- i. In-depth interview guide for ex-mineworkers, mining companies and labour unions. These guides were used to extract information from these stakeholders regarding the type of portable skills offered to ex-mineworkers. They captured the processes employed by mining companies in selecting and offering the skills, the socio-economic status of the ex-mineworkers as well as challenges and possible suggestions for improvement;
- ii. Focus group discussion guide for the multi-stakeholder discussions on the research topic to answer the objectives. All stakeholders of the study (i.e. ex-mineworker, mining companies, labour unions, training providers, policymakers, development agencies, community leaders and sector experts) were involved in the discussions to understand the impact of skills development support initiatives on ex-mineworkers' life after mining; and
- iii. Recording gadgets- recorders and cell-phones were used to record all the conversations during in-depth interviews and FGDs. The recordings were then used to produce interview transcripts word-for-word as per the requirements in the TOR.

3.3 Data Collection, Capturing and Analysis

3.3.1 Data Collection Procedure

The data collection procedure was as follows:

- i. Identification of key stakeholders in each Sub-sector (mining companies, labour unions such as NUM and UASA, Minerals Council South Africa, DMRE Regional Offices, Local Municipalities' LEDs, Office of the Premier, provincial development agencies, community leaders).
- ii. Obtaining the contact details for the identified key stakeholders to formulate an ex-mineworker's database.
- iii. Setting up appointments with each of the key stakeholders with mining companies, labour unions, local municipalities, DMRE Regional Offices and Offices of Premiers being priorities.
- iv. Soliciting for ex-mineworker's databases from the mining companies and labour unions as well as obtaining leads on how best to reach out to the ex-mineworkers in their respective communities.
- v. Spending at least 2 weeks conducting data collection in each province.
- vi. Inviting stakeholders for the Focus Group discussions during interviews and through emails in each province.

3.3.2 Ethical Considerations

Following an outline by Tripathy (2013), the MQA worked within the bounds of common ethical considerations involved in studies which use primary data collected through interviews, observations and focus group discussions. The following ethical considerations were observed:

- i. Requesting permission to conduct the study from the respective local authorities and labour unions. Given the sensitivity of the study and nature of respondents targeted, getting permission from the local leaders would increase their willingness to participate. An introductory letter signed by the MQA Chief Operating Officer was availed to introduce the research team, the project needs and the fact that all responses were protected.

- ii. Obtaining informed consent from participants (ex-mineworkers, mining companies or any other stakeholders) which was reflected by the participants' signatures and the date of the interview on the consent forms. No names of participants were captured on the instruments.
- iii. Participation was completely voluntary in nature.
- iv. No rewards were extended to participants. This ensured that the results were not biased.
- v. Observing the strict confidentiality clause to build trust with the participants. The information from the participants was only meant for the purposes of this research.
- vi. Observing confidentiality and the non-disclosure clause throughout the entire research process (data analysis, report writing and presentation).

3.3.3 Fieldwork Reflections

The actual sample sizes for the fieldwork were as follows:

Table 3.3 : Actual ex-mineworkers and mining companies interviewed

Subsector	Ex-Mineworkers		Mining Companies	
	Target	Achieved	Target	Achieved
Gold Mining	10	28	2	2
PGM Mining	10	18	2	4
Other Mining	10	9	2	2
Coal Mining	10	12	2	3
Diamond Mining	10	6	2	3
CLAS	10	3	2	5
Jewellery Manufacturing	10	4	2	4
Diamond Processing	10	11	2	¹³
Total	80	91	16	25
Overall Achievement Rate	113.8%		156.3%	

Source: MQA Study (2019)

¹³ The companies in this sub-sector were not cooperative to the call for meeting by the research team. Most of the companies engaged cited that the study was not relevant to their sub-sector because they do not operate at primary level but rather secondary level (value addition or beneficiation). In addition, security concerns also contributed to the reluctance of these companies to entertain researchers.

Table 3.3 shows that the ex-mineworkers targets were exceeded in only 4 sub-sectors, Gold Mining, PGM Mining, Coal Mining and Diamond Processing. The least representation was from the CLAS sub-sector. On the company's side, CLAS, Jewellery Manufacturing and PGM Mining sub-sectors had the highest number of companies that participated in the study. However, there was limited cooperation from the Diamond Processing companies. In terms of the provincial targets, the following actual sample sizes were realised:

Table 3.4: Actual provincial sample sizes

Subsector	Labour Unions		Focus Discussions		Group Other Stakeholders		Key
	Target	Achieved	Target	Achieved	Target	Achieved	
Gauteng	2	2	1	1	2	4	
Limpopo	2	-	1	1	2	4	
North West	2	2	1	1	2	2	
Free State	2	1	1	1	2	2	
Western Cape	2	1	1	1	2	2	
Eastern Cape	2	-	1	1	2	5	
Northern Cape	2	1	1	1	2	1	
Mpumalanga	2	1	1	1	2	4	
KwaZulu-Natal (KZN)	2	1	1	-	2	-	
Total	18	9	9	8	18	24	
Overall Achievement Rate	50%		88.9%		133.3%		

Source: MQA Study (2019)

Table 3.4 shows that there was a very high participation of key stakeholders in the study particularly in Limpopo, Gauteng, Mpumalanga and Eastern Cape provinces. Regarding the FGDs, only the one for the KZN province failed to materialise. This was due to the nature of the mining sector in the province and the fact that that jewellery manufacturing is mainly done by small enterprises. With regard to unions, NUM was cooperative across all the provinces. In areas where AMCU is dominant, for instance in the Gauteng and North West provinces, efforts were also made to engage them, and they cooperated.

3.3.4 Data Capturing and Analysis

Qualitative data obtained from the in-depth interviews, observations and focus group discussions with key informants was captured in an online platform on Survey Monkey. The data were then exported to an excel file and analysed using a technique known as Thematic Content Analysis (TCA). The thematic content analysis was performed using an analytical structure linked to the overall objectives of the study. Meanings emerging in the analysis of interview transcripts were grouped into themes using a grouping procedure based on both similarities and differences; and the principles of internal homogeneity and external heterogeneity. Use of thematic content analysis permitted the research team to identify theme cores and nodes that emerged from the data, thus allowing the researchers to proceed from the particular to the general. The definitions of the analytical themes were based on the research tools design which were mainly targeted at ascertaining the training adequacy, processes in re-skilling of ex-mineworkers. They also identified challenges in re-skilling, changes in socio-economic status after skills development and any issues surrounding the re-entering of ex-mineworkers into the mainstream economy. In addition, all interview recordings were transcribed in Microsoft Word, where direct quotes from participants and any extracts from field observations were attached in the reports to strengthen the analysis and discussion of results.

3.4 Study Limitations

The following are the main challenges encountered in the data collection with regard to ex-mineworkers and mining companies:

- The absence of a reliable ex-mineworker's database remained a key challenge in reaching out to this target group. The database developed by the research team through engagements with some of the companies, the Mineworkers Development Agency (MDA) and some NUM offices was not enough to cover all the expected sub-sectors of the MMS. The Gold and PGM Mining subsectors were the only subsectors where contact details of ex-mineworkers were mostly available from the sources. For all the other sub-sectors, the field team relied on the snowballing technique which proved useful but was restricted mainly to the extent of the ex-mineworkers' circles.

- In addition, compliance with the Protection of Personal Information (PoPI) Act made it difficult for some companies and unions to release the databases of ex-mineworkers who were laid-off between 2015 and 2017. Companies and unions were citing that they needed to receive the consent from individuals first before they could share their personal information for any other purpose.
- There was generally a poor cooperation from most of the mining companies in the Diamond Processing subsector. Most of these companies did not respond to the call for interviews or had reservations, citing that they did not qualify to participate in the study. They were not mining companies per se but beneficiating of value adding organisations without mineworkers per se. In addition, security concerns are high within the sector due to the nature of their products.

3.5 Conclusion

This section highlighted the model used to provide answers to the research problem under study. The research paradigm, methodology, techniques and tools used in the study were explained. In addition, the sample sizes in terms of the scope of the study were also highlighted. Data collection procedures as well the ethical considerations observed during the study were also provided. Lastly, the actual samples, data capturing and analysis, and challenges encountered during the data collection process were presented.

4 SECTOR PROFILE

4.1 Introduction

This chapter presents the profile of the all the sub-sectors (except for the Services Incidental to Mining) evaluated in this study. An overview and the retrenchment dynamics were analysed to provide insights into the importance of skills development support in each of the sub-sectors.

4.2 Cement, Lime, Aggregates and Sand (CLAS) Mining

4.2.1 CLAS Sub-sector Overview

The CLAS mining sub-sector comprises cement manufacturing, limestone mining, and the aggregates and sand mining. These are discussed as follows:

4.2.1.1 Cement

The major cement producers in the country are PPC, Afrisam, Lafarge, Sephaku Cement and Natal Portland Cement. These companies are represented locally by The Concrete Institute (TCI). A review of annual reports from some cement manufactures makes it clear that companies are swimming in troubled waters (PPC, 2019). The cement industry was affected by subdued local demand especially after the completion of major constructions such as the large power stations of Medupi and Kusile. In addition, the decreased government expenditure on infrastructure projects affected most of the industry's civil engineering projects.¹⁴ Not only were the companies subjected to a lacklustre economic environment, but they also faced an unprecedented assault from cheap imports out of Asia (China and Vietnam). Apparently, there is excess capacity locally with annual cement production at about 19 to 20 million tonnes against a demand of 13 million tonnes. This has prompted the TCI to call on the International Trade Administration Commission of South Africa (ITAC) for tariff protection. These twin

¹⁴ According Webster Mfebe (CEO of Safcec), there was a 15% decline in 2018 in the estimated value of construction tenders awarded compared with 2017 (Venter, 2019).

challenges have resulted in a shrinking market for local cement producers, a situation that predicts accelerated retrenchments in the sub-sector. Implicitly, therefore, there is an urgent need for effective portable skills training for the sub-sector.

4.2.1.2 Limestone

In South Africa, limestone products are mainly used in the following industries: Cement manufacturing, metallurgy (steel refining), agriculture (fertilizers, fungicides, animal feed), aggregate and lime manufacture, construction (mortar, whitewash, building stone) and manufacturing (glass, water treatment, food and rayon processing, papermaking, leather, explosives, coal dusting, etc.). According to Duncan Baker, SA produced 20.4 million tonnes of limestone in 2015 against a demand of 19.4 million tonnes (Baker, 2017).¹⁵ Baker also provided evidence that South Africa's cement industry uses 75% of the limestone annually, 9% is used by the metallurgical industry and 5% by agriculture related operations. The balance of 11% is used in other industries including paper and paint manufacturing. In comparison to the challenges faced by cement manufactures alluded to above, limestone miners seem to be faring relatively better. However, like all companies operating in the local economy, they have been negatively affected by the depressed economic environment which has impacted their operational performance.

4.2.1.3 Aggregate and Sand

Aggregates are granular raw materials used to make construction products for building houses, schools, roads, hospitals and other developments in urban and rural environments. One characteristic of aggregates is that they are low in value and heavy materials, factors that affect transportation costs. As a result, aggregates may only be transported within a 100-kilometre radius from the mine to the customer. A report by the Aggregates and Sand Producers Association of Southern Africa (ASPASA) reveals that small quarrying operations throughout the country are carrying the back-breaking burden of supplying South Africa's entire building and construction industry, with up to 70% of building materials used to construct infrastructure and housing (ASPASA, 2018). According to ASPASA, the real problem faced by aggregates and sand producers was that regulation of quarries is lumped into the

¹⁵ Extracted from an report by Duncan Baker published in Who Owns Whom (Who Owns Whom, 2017) (Who Owns Whom, 2017) (Who Owns Whom, 2017).

same legislative framework as mining; therefore, the same rules apply for small quarries as they do for large gold or platinum mines. According to stakeholders in the sub-sector, this is promoting illegal operation of quarries and sand mining in the country.

4.2.2 Retrenchment Dynamics in the CLAS Sub-sector

As discussed earlier, the sub-sector is facing a myriad of challenges emanating mainly from the subdued performance of the economy and lower government infrastructure spending as well as import competition on cement. As a result, 5 of the prominent companies have undergone business rescue or exited the economy within the past 5 years. Murray & Roberts (M&R) exited in 2016 whilst Aveng, Basil Read, Liviero and recently Group Five have gone under business rescue.¹⁶ This is likely to negatively affect employment numbers in the short-term. According to Bryan Perrie, The Concrete Institute's Managing Director, "Jobs will be on the line if the government does not step in to protect the local cement industry."¹⁷ Aggregates & sand and limestone are still performing well, even though the state of the economy has a multiplier. The outlook for limestone is also relatively positive, given the fact that there is market for the mineral. Generally, the sub-sector has not suffered significant job losses over the research period of 2015 to 2017.

4.3 Coal Mining

4.3.1 Coal Mining Sub-sector Overview

Coal mining is central to the South African economy. Not only is coal a source of energy, but it also provides a livelihood for thousands of employees and their families, as well as service providers and support industries in its value chain. The Coal Mining Sector Report of 2019 notes that the South African coal mining sector produced 252.3 million tons of coal and contributed 2%, to the country's gross domestic product in 2017 (Research and Markets, 2019). The combined value of local sales and exports reached R139.4bn in 2018. The country was ranked as the seventh largest coal producer in 2017, accounting for 3.3% of the world's coal production.

¹⁶<https://www.dailymaverick.co.za/article/2019-03-13-group-five-another-sa-construction-giant-buckles-under-the-pressure/>

¹⁷Bryan Perrie quoted in IOL article published on the 14 August 2019 (IOL, 2019).

According to MCSA (2018), investment in the coal sub-sector has declined at a rate of 10% per year from R7.3 billion in 2009 to R3.8 billion in 2017. This gives a pointer on the future of the industry and, significantly, future employment trends. Some analysts already label it as a sunset industry due to the advent of cleaner energy sources which will reduce the demand for fossil fuels in the export markets. According to the Integrated Resource Plan (IRP2019), use of coal in the energy mix is projected to decline by 17 percentage points from the current 77% to 60% by 2030 (DoE, 2019). In addition, the sector is also significantly affected by developments at Eskom, including its investment in cost-plus mines. However, MCSA (2018) states that SA has enough reserves to satisfy its needs for more than a century. However, the focus of coal production will likely shift from Mpumalanga's Emalahleni (Witbank) old shafts to the new coal fields in the Waterberg and other areas in Limpopo province. This change of focus will have implications for the mining communities in Mpumalanga, a fact that should not escape policy makers in crafting appropriate interventions for portable skills for miners.

4.3.2 Retrenchment Dynamics in the Coal Mining Sub-sector

In a 2017 Facts and Figures Report, the Minerals Council of South Africa highlights that in 2017 the coal sub-sector employed 82 248 persons, a 5.8% increase from 77 747 in 2015 (MCSA, 2018). Retrenchments during the period largely occurred at mines that had reached the end of their life. This includes, for instance, the Glencore operated South Witbank Mine and Witcons coal processing plants as well as at Optimum Mine which was initially sold but eventually closed due to operational problems. However, the employment numbers for the sub-sector increased due to the positive effect from new coal fields in Limpopo province as discussed earlier in the report.

4.4 Diamond Mining

4.4.1 Diamond Mining Sub-sector Overview

Diamonds are considered to be the hardest natural substance which is chemically resistant and with the highest thermal conductivity of any natural material.¹⁸ These properties make it suitable for use as a cutting tool and for other uses where durability is required. Diamonds can be classified into gem and industrial diamonds. Gem diamonds have colour and clarity, making them suitable for jewellery or investment use. On the other hand, industrial diamonds are often crushed to produce micron-sized abrasive powders. Most of the global diamond production is done in Russia, Canada, Australia, Democratic Republic of Congo (DRC), Angola, Botswana and South Africa (Bain & Company, 2018).

In 2017, SA was the 6th largest diamond producer by volume, with an output of 9.7Mct. It was the 4th largest in the world by value in 2017, producing US\$1.304 billion worth of diamonds (DMRE, 2019). According to the DMRE (2019), diamond mining contributed R652 million to the state revenues which was 3.3% of all the revenue contributions from the mining sector (DMRE, 2019). However, there was a 12.6% decline in total diamond revenues from R20.8 billion in 2016 down to R18.2 billion in 2017.

4.4.2 Retrenchment Dynamics in the Diamond Mining Sub-sector

The Diamond Mining sub-sector is still among the major employers in South Africa. The sub-sector experienced a significant growth in employment of 38.8% between 2013 and 2016 (DMRE, 2019). According to the DMRE (2019), average employment in the sub-sector rose by 9% from 17 246 in 2015 to 18 804 in 2016. However, the numbers plummeted by 4.3% in 2017 to an average of 17 991 (DMRE, 2019). This was mainly attributed to retrenchments at De Beers Voorspoed mine, Petra's Finsch mine and Trans Hex's alluvial operations (DMRE, 2019).

¹⁸ <https://geology.com/minerals/diamond.shtml>

4.5 Diamond Processing

4.5.1 Diamond Processing Sub-sector Overview

The transformation from a rough stone into a gem set in an item of jewellery consists of 4 different phases in diamond processing. These are drawing/marketing, cleaving/sawing, bruting and polishing.¹⁹ Gem quality diamonds are usually distributed to one of the main diamonds cutting and trading centres in Antwerp, Mumbai, Tel Aviv, New York, China, Thailand or Johannesburg. Diamond experts (known as 'diamantaires') cut and polish the rough diamonds into shapes using computer-aided design systems to avoid any unnecessary waste of the stone. According to the World Diamond Council (WDC), the value of diamond jewellery sold each year is approximately US\$72 billion. The US represents the largest market (50%), followed by Japan (15%), Italy (5%), India (3%), China (2%), The Gulf (2%) and other countries (23%).

The South African diamond processing industry consists of 221 licenced diamond manufacturers (MQA, 2018), with De Beers as the major supplier of rough diamonds. The Master Diamond Cutters' Association has 80 registered members employing 95% of the employees in this subsector. The subsector is regulated by the South African Diamond and Precious Metals Regulator (SADPMR). South Africa's State Diamond Trader (SDT) was launched in February 2008 and is mandated to purchase 10% of South Africa's rough diamond production to sell to local beneficiaries.

Beneficiation refers to the transformation of a mineral (or a combination of minerals) to a higher value product which can either be consumed locally or exported. The sales of diamonds to the local market indicates the level of beneficiation being done on diamonds. According to DMRE (2019), the proportion of local to total sales of diamonds increased by 3.6 percentage points between 2016 and 2017 even though the absolute amounts for 2017 were lower.

4.5.2 Retrenchment Dynamics in the Diamond Processing Sub-sector

The diamond processing subsector was reported to employ 10 867 people in 2017 (MQA, 2017). Since the sector is also composed of small companies and a few large ones, levels of

¹⁹ <https://www.awdc.be/en/diamond-processing>

employment had been quite stable over the years. The subsector also employs people with better levels than other subsectors in MMS. However, the retrenchments which were witnessed at the De Beers' Voorspoed mine in Kroonstad (Free State province) negatively affected the employment numbers, since the company is one of the largest in the subsector. Generally, there is scope for growth in the sector with more investments on value addition given that exports are still higher than local sales of the diamonds.

4.6 Gold Mining

4.6.1 Gold Mining Sub-sector Overview

South Africa's gold reserves remain has the third largest gold reserves in the world (6 000 tonnes) after Australia (9 500 tonnes) and Russia (8 000 tonnes) (MCSA, 2019). According to MCSA (2018), SA's gold production contributed 3.3% to global gold production in 2018. Despite over 130 years of gold production, the Wits Basin still holds the world's largest reserves covering the Free State, North West and Gauteng provinces. Most of the gold produced in South Africa is exported, though the proportion of local sales to the total has been increasing gradually owing to beneficiation. In 2015, 2016 and 2017, local sales contributed 11.8%, 19.8% and 21.5% of the total sales, respectively.

4.6.2 Retrenchment Dynamics in the Gold Mining Sub-sector

There are 52 gold mines operating in SA including those undergoing rehabilitation, care and maintenance (Nicol, 2018). As a consequence, the production of gold has been declining gradually over the years as reflected by the output for 2015, 2016, and 2017 of 147 tonnes, 142 tonnes and 137 tonnes, respectively (MCSA, 2019). A number of reasons could be attributed to this catastrophe including the suppressed commodity prices or the need for modern sophisticated machinery to extract mineral deposits which are at depth underground. This has resulted in a loss of employment in the sub-sector through retrenchments over the years. Between 2015 and 2017, 2 128 jobs were lost in the gold mining sub-sector as employment fell from 115 029 to 112 901. Given the loss of employment, the skills development drive should be directed towards portable and the secondary gold beneficiation industry.

4.7 Jewellery Manufacturing

4.7.1 Jewellery Manufacturing Sub-sector Overview

Jewellery manufacturing is often combined with the wholesale or retail sale of jewellery products, and the Jewellery Council plays a diverse role in representing the interests of wholesalers, manufacturers and retailers. In its June 2019 Report on the Jewellery Industry in South Africa, the Research and Markets publication notes that, while the country remains one of the leading producers of gold, diamonds and platinum, the jewellery industry remains very small (Research and Markets, 2019). The report observes that in 2017/19, the jewellery manufacturing industry grew by 4.1% to R5,3 billion.

The SA jewellery manufacturing industry is currently reliant on hand-made jewellery for items such as chains. However, this is changing due to the introduction of technologically advanced manufacturing techniques used for grading of diamonds, sorting, measurement, cutting and polishing. Such developments have implications on the type of skills required by the industry. Though many initiatives have been implemented to encourage the competitiveness of this industry and increase beneficiation, this highly regulated industry operates in an environment characterised by challenging trading conditions, a shortage of skilled labour, rising input costs, decreasing disposable incomes and cheaper imports. Between 2004 and 2013 the value of imports increased from R280m to more than R1bn. In the same period, the number of jewellery permit holders decreased by almost 70%, from 2,600 to 875, and employment in the manufacturing sector halved.

4.7.2 Retrenchment Dynamics in the Jewellery Manufacturing Sub-sector

The challenges bedevilling the industry have had negative effects on employment levels. Due to the fact that most of the players in the industry are predominantly small and owner-managed businesses, the level of job losses would not be alarming. However, it will be a tragedy if decision-makers do not act with speed and re-focus training approaches for the long-term benefit of the sub-sector and country. The advent of technologically driven production methods will definitely affect employment numbers if appropriate interventions

are not put in place to make employees relevant. The industry is currently importing specialised skills from Pakistan and India for the sustenance of the sector. This surely points to the direction in which skills development interventions should point regarding the jewellery manufacturing sub-sector. There are hardly any alternatives left if the country wants to re-assert its position on beneficiation as one of the jewellery manufacturing economies in the world.

4.8 Other Mining

4.8.1 Other Mining Sub-sector Overview

The Other Mining subsector of the MQA includes the mining of iron ore, chrome, manganese, copper, phosphates and salt.²⁰ These are reviewed as follows:

4.8.1.1 Chrome

As at 2017, South Africa remained the largest producer of chrome ore in the world with total production of 16 573kt (a 71.5% increase from 2007 production level of 9 663kt), however, average employment in South Africa's chrome industry stood at 17 143 in 2017 which was a 7% decline from the 18 449 employed in 2015 (DMRE, 2019). With a projected increase in prices of chrome (a minimum of around \$150/t, but rising to about \$172/t in quarter 4 of 2018) and increased demand for the commodity from China, South African chrome exports to China were forecasted to rise by 7.6 percent to 10.8Mt by the end of 2018 (DMRE, 2019).

4.8.1.2 Copper

In terms of copper, USGS (2018) reported that South Africa accounted for 1.4% of the total world reserves of 790mt in 2017. However, the country experienced a major 32% slump in copper production from 97mt in 2008 to 66mt in 2017 with employment numbers at 3 476 (DMRE, 2019). According to the DMRE (2019), the reprioritising of infrastructural investment in South Africa, which supports growth and job creation, was likely to drive the demand for copper higher. In addition, rising production of electric vehicles as well as infrastructural

²⁰ An overview of the salts commodity could not be done since it is a very small component of the sub-sector. However, in this research report, Other Mining analysis was mainly focused on iron ore and manganese given that the ex-mineworkers and mining companies interviewed were from these two commodities.

developments in major countries such as China and India were also expected to play a significant role in driving the copper consumption higher (DMRE, 2019).

4.8.1.3 Phosphate

In terms of phosphate rock mining, the country experienced an increase both in production and employment for the period 2015-2017. According to DMRE (2019), South Africa produced 2 078kt of phosphate rock in 2017 up from 1 852kt in 2015. The DMRE also reported some positive employment outlook for this commodity over the period under consideration, with a 25% increase in people employed from 2 809 in 2015 to 3 516 in 2017. The future of mining of this commodity in South Africa was projected to be positive due to the Glenover phosphate exploration project happening in Thabazimbi as well as the new Elandsfontein Mine which was opened in the Western Cape mid-2019 (DMRE, 2019). In addition, the continued demand for fertilisers underpinned by the need for more food reserves due to a growing population places a positive outlook on the mining of phosphate rock in South Africa.

4.8.1.4 Iron Ore

Iron ore is the key ingredient of steel which constitutes 95% of all metal used in the world today making it the most frequently used metal. Iron ore mining is a capital-intensive industry because of the costs associated with both mining and milling the ore together with the costs of rail transportation to ports and by sea to importing countries. In 2017, the highest producing iron ore country in the world was China and SA was the 7th highest producer.²¹ Many African countries have vast ore deposits that have not been mined. Production for export and local use are most prevalent in South Africa, Algeria and Mauritania. Production for local use takes place in Zimbabwe and Morocco. Nearly 70% of South African production is controlled by Anglo American's Kumba Iron Ore Limited. Kumba operates two mines in the Northern Cape, Kolomela and Sishen, and one in Thabazimbi in the Limpopo Province. Assore (50% shareholder in Assmang), Rio Tinto and Evraj make up the other producers.

²¹ www.worldatlas.com

4.8.1.5 Manganese

Manganese is used to strengthen steel, so its fortunes tend to be bound to developments within the iron ore industry. Manganese is a crucial commodity for infrastructure and industrialisation, and research is being done on its application for battery metals in electric vehicles. According to the Department of Mineral Resources and Energy (DMRE), South Africa hosts about 75% of the world's identified manganese resources and about 24% of the world's reserves. Over 90% of these reserves are found in the Kalahari Manganese Fields (KMF) located in the Northern Cape (DMRE, 2019). The ore is also mined in Australia, China, India, Gabon, Ukraine and Brazil and South Africa is endowed with the best quality in the world. Manganese is a crucial commodity for infrastructure and industrialisation, and research is being done on its application for battery metals in electric vehicles. Manganese mining in SA has largely been controlled by Assmang and Samancor, which today is controlled by BHP Billiton the world's largest diversified miner. Remote locations, costs of mining, lack of infrastructure and distance to transport hubs for exports has inhibited development of the manganese industry.

4.8.2 Retrenchment Dynamics in the Other Mining Sub-sector

The first major retrenchments in the domestic steel industry took place soon after the democratic elections. In 1995, the Iron and Steel Corporation of South Africa (ISCOR) with a total workforce of 56 000 workers, faced with bankruptcy and low productivity undertook a major restructuring over the next five years. The total workforce was reduced by 33 000. Despite this attempt to reduce costs and boost productivity, Iscor continued to experience problems.

In 2016, following drops in sales and with the ebbs and flows of the international price of iron ore, Kumba's massive open pit Sishen mine embarked on a major retrenchment plan. The mine is the biggest employer, but it is not the only one that issued Section 189 notices. The Kimberly region of the National Union of Mineworkers (NUM) received more than 8700 retrenchment notices of which 4000 were from Sishen, Kolomela and South 32's Hotazel mine. Workers at the Diro Manganese mine in Postmasburg also faced retrenchments. Solidarity in Kathu received 7000 such notices. Kumba's Thabazimbi mine, was closed affecting more than 400 workers.

4.9 PGM Mining

4.9.1 PGM Mining Sub-sector Overview

The suite of platinum group metals (PGMs) is made up of six metals (Palladium, platinum, iridium, osmium, rhodium, and ruthenium), all of them are silvery-white in appearance (MCSA, 2019).²² These metals occur together in PGM-bearing ore. The durability, quality, and aesthetic appeal of silvery-white platinum and palladium has for centuries contributed to its high demand in jewellery manufacture.²³ PGMs are highly recyclable and they are used, rather than consumed because they are essential in many industrial applications including in computer hard disks, mobile phones and glass.

The leading domestic use for PGMs was in catalytic converters to decrease harmful emissions from automobiles (USGS, 2019). Furthermore, Palladium can be substituted for platinum in most gasoline-engine catalytic converters because of the historically lower price for palladium relative to that of platinum (USGS, 2019). Rhodium is the only metal that is suitable for nitrogen oxide emission control in petrol autocatalysis (Mamaila, 2019). As there is increased focus on reducing carbon dioxide and nitrogen oxide emissions in Europe and China with the advent of real-world emission standards, rhodium loadings in emission control technologies are expected to increase, hence increasing the demand for the metal.

According to USGS (2019), the world resources of PGMs are estimated to total more than 100 million kilograms. The largest reserves are in the Bushveld Complex in South Africa hosting approximately 80% of PGM-bearing ore. In 2017, SA was the largest producer of platinum in the world followed by Russia, Canada, Zimbabwe and the U.S., respectively (USGS, 2019). According to the DMRE (2019), Implats, Amplats and Sibanye-Stillwater are the main players in this sub-sector which are also responsible for producing up to 80% of the world's PGM supplies. The production of PGMs in SA (including ruthenium and iridium) in 2017 amounted to 283.1 metric tonnes (DMRE, 2019). However, most of the PGMs produced in SA are

²² Platinum (Pt), Palladium (Pd), Iridium (Ir), Osmium (Os), Rhodium (Rh) and Ruthenium (Ru).

²³ China accounts for 50% of the world's platinum jewellery offtake.

exported. According to the DMRE (2019), the proportion of local to total sales for PGMs were 11.5% and 12.3% in 2016 and 2017, respectively. This implies that there is still scope for beneficiation in the sector if more value is to be realised from the PGMs mining.

4.9.2 Retrenchment Dynamics in the PGM Mining Sub-sector

The SA PGMs industry has experienced repeated restructuring over the period past 5 years as low Platinum prices persisted. This was due to depressed demand which emanated from the European ban on diesel vehicles, where platinum is used as catalytic converter in engines (World Bank, 2018). The switch to alternative catalytic converters also affected the demand for rhodium in car manufacturing. According to the DMRE (2019), a number of acquisitions were witnessed as some producers sold mines or stakes, in operations they no longer considered profitable. Others chose to put operations under care and maintenance, with a view of restarting them once the market conditions improve. A total of 5 220 jobs were lost in the sub-sector between 2015 and 2017, reducing the numbers of employees from 177 391 to 172 171.

Major acquisitions over the period were witnessed when Sibanye-Stillwater acquired Lonmin due to some old unprofitable shafts (DMRE, 2019). Other major transactions in the PGM subsector involved the acquisition of the Platinum Group Metals (PTM)'s concentrator plant and surface assets of PTM's Maseve mine by Royal Bafokeng Platinum (RBPlat). The PTM/RBPlat deal was necessitated by the fact that the PTM concentrator was shut down in 2017 due to underperformance and hence a new mining plan was needed to preserve jobs. In addition, Impala Platinum (Implats) also acquired PTM's Waterberg resources division. Atlatsa Resources JV Bokoni mine was idle, as the company was placed under care and maintenance pending the eventual acquisition by Amplats (DMRE, 2019; DoL, 2009; DoL, 2009). According to DMRE (2019), potential growth in the sector lies in the new developments at Ivanhoe Mines' Platreef project and Wesizwe's commissioning of the main and service shafts as well as the ore-handling system at Wesizwe's Bakubung Platinum Mine project.

4.10 Conclusion

The sub-sector analysis provided key insights into the state of the mining industry in South Africa. It was noted that there were myriads of factors affecting the performance of the mining sector. Most of the minerals were affected by falling global commodity prices, subdued local demand, unprofitability of old shafts as well as import competition from countries producing minerals by the most efficient means. As a result, downscaling of employment numbers was one of the methods employed by most mining companies to remain in business. It was noted that several restructuring processes were done in most of the sub-sectors through M&A which culminated in the laying off of mineworkers. All these factors place skills development initiatives for the victims of downscaling at the centre stage as a way of preparing them for life after mining. On the other hand, positive prospects were also noted through the several exploration projects which were underway in different sub-sectors. This also presents hope for more opportunities to the ex-mineworkers with the right skills and experience in mining. Therefore, other occupationally related skills may still be relevant for some workers at the new mines in future.

5 RESEARCH FINDINGS AND DISCUSSION

5.1 Introduction

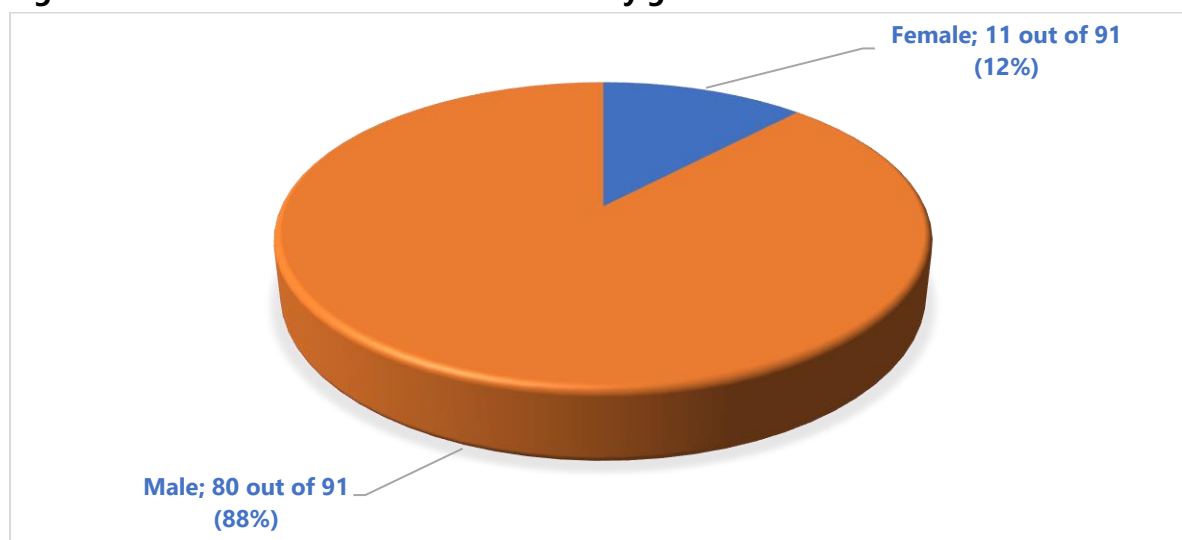
This chapter presents and analyses the data obtained through the in-depth interviews, observations and FGDs with various stakeholders including ex-mineworkers, mining companies, labour unions, training providers, policymakers (Offices of Premiers, DMRE Regional offices, Local Municipalities' LEDs), development agencies and sector experts.

5.2 Profile of the Ex-mineworkers

The profile of respondents analysed in this section were the 91 ex-mineworkers who participated in this study. The demographic information of these ex-mineworkers was as follows:

5.2.1 Distribution of Ex-mineworkers by Gender

Figure 5.1: Distribution of ex-mineworkers by gender



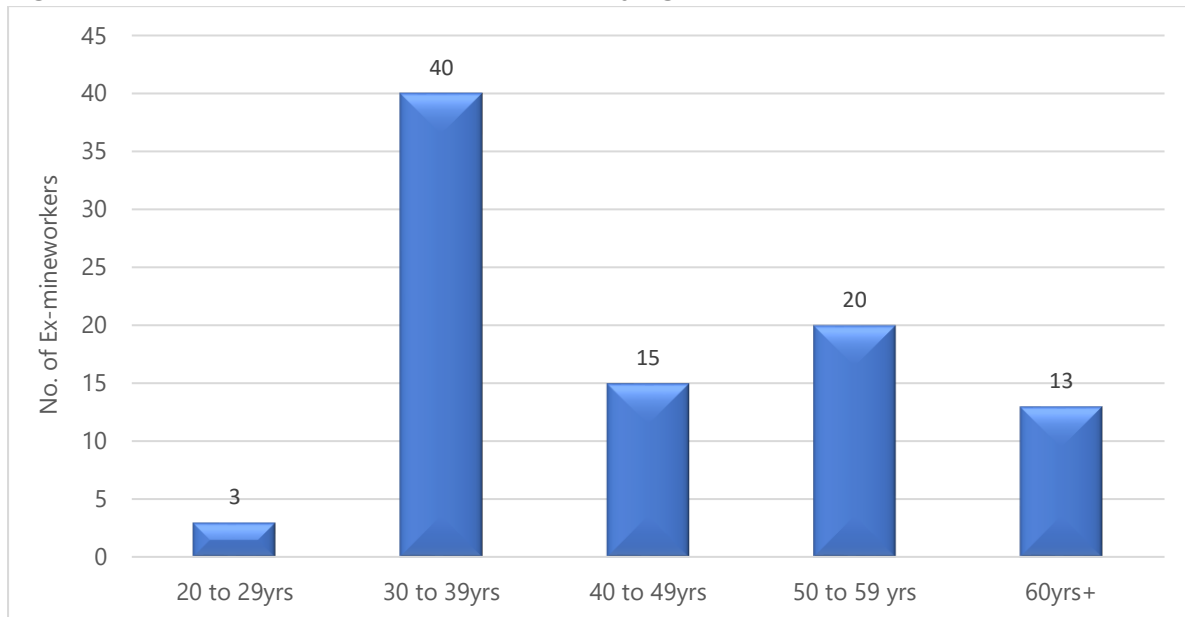
Source: MQA Study (2019)

Of the 91 ex-mineworkers and ex-employees who participated in the study, 80 were males and 11 were females. This also indicates the gender disparity within the MMS in general.

5.2.2 Distribution of Ex-mineworkers by Age

Figure 5.2 shows that most of the ex-mineworkers/ex-employees were between 39 to 39yrs of age (40 out 91) followed by the 50 to 59-year age group (20 out of 91). Very few were less than 30 years old (3 out 91).

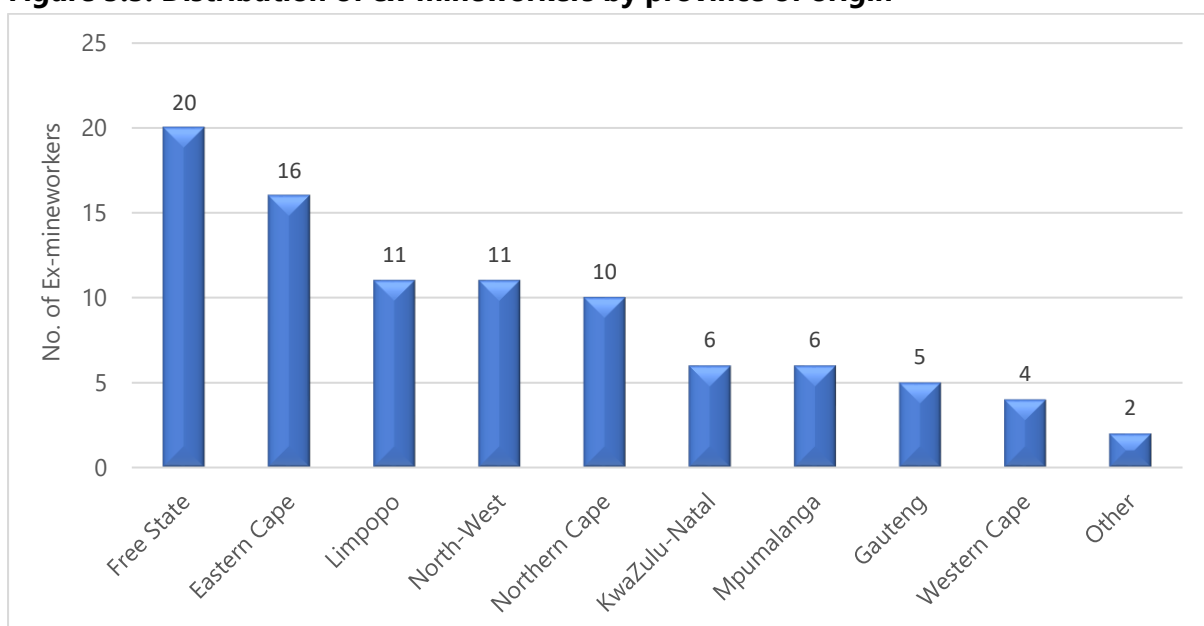
Figure 5.2: Distribution of ex-mineworkers by age



Source: MQA Study (2019)

5.2.3 Distribution of Ex-mineworkers by Province of Origin

Figure 5.3: Distribution of ex-mineworkers by province of origin

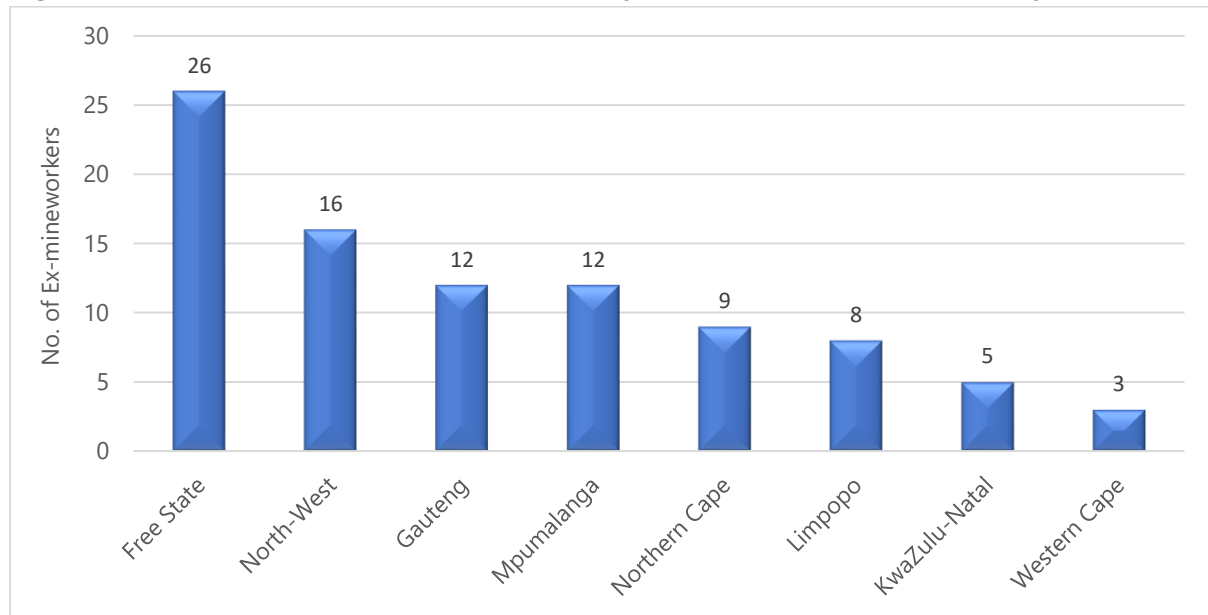


Source: MQA Study (2019)

Most of the ex-mineworkers who participated in the study originated from Free State, Eastern Cape, Limpopo, North West and Northern Cape provinces compared to other provinces. Only 2 participants originated from outside South Africa (Lesotho).

5.2.4 Distribution of Ex-mineworkers by Province of Last Mine Employed

Figure 5.4: Distribution of ex-mineworkers by province of last mine employed



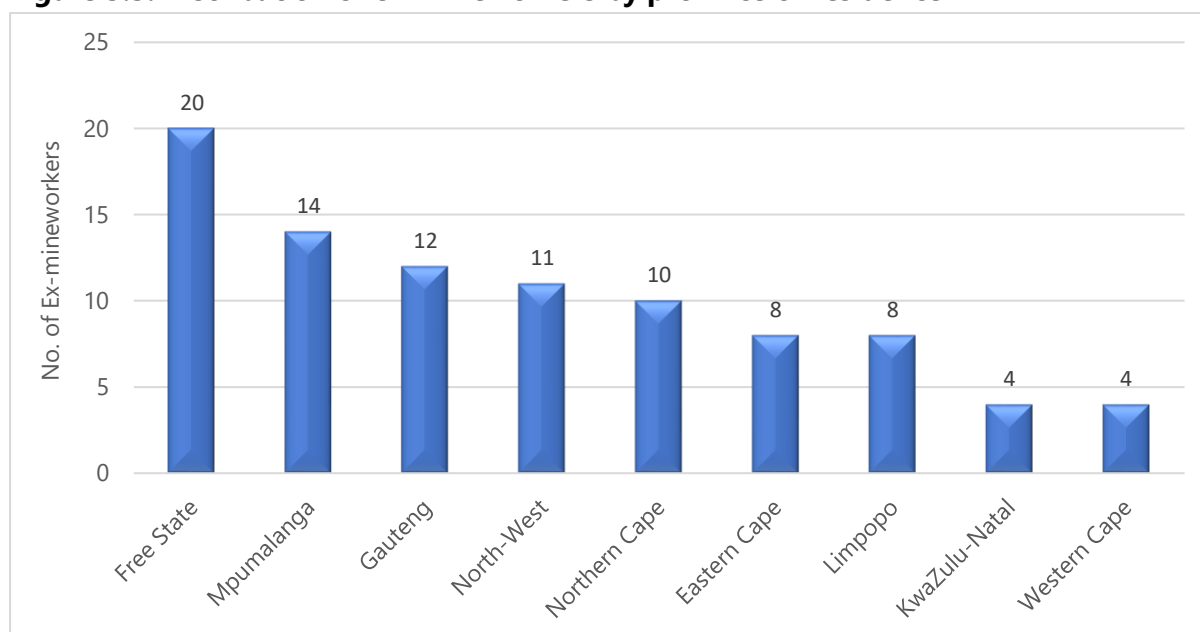
Source: MQA Study (2019)

Figure 5.4 shows that most of the ex-mineworkers/ex-employees worked in mines from the Free State, Mpumalanga, Gauteng, North West, the Northern Cape and Limpopo provinces. There is a high concentration of mining activity in these provinces which was also reflected by the high numbers of ex-mineworkers who participated in the study. However, these results also show that the Eastern Cape province is mainly a labour sending area.

5.2.5 Distribution of Ex-mineworkers by Province of Residence

Figure 5.5 shows that most employees generally reside within the communities surrounding their last mining employer. However, there were some isolated cases of ex-mineworkers migrating back to their provinces of origin or other provinces where there are re-employment prospects.

Figure 5.5: Distribution of ex-mineworkers by province of residence



Source: MQA Study (2019)

5.2.6 Age Against Reason for Exit

Table 5.1: Age and reason for exit

Age	Ill-health	Injured duty	on Retrenchment	Voluntary Severance Package
20 to 29yrs	0	0	3	0
30 to 39yrs	1	3	33	3
40 to 49yrs	2	0	9	4
50 to 59yrs	4	0	9	7
60yrs+	4	1	3	5
Grand Total	11	4	57	19

Source: MQA Study (2019)

Table 5.1 shows that most older people (above 50 years) exited for reasons of ill-health (8 out of 11), whereas retrenchments mostly affected the 30-39year group (33 out 57). A voluntary severance package (VSP) was mostly taken by those above 50years (11 out 19).

5.3 Main Study Findings

The main findings below were classified per sub-sector as follows:

5.3.1 Cement, Lime, Aggregates and Sand (CLAS)

5.3.1.1 How portable skills are offered on exit

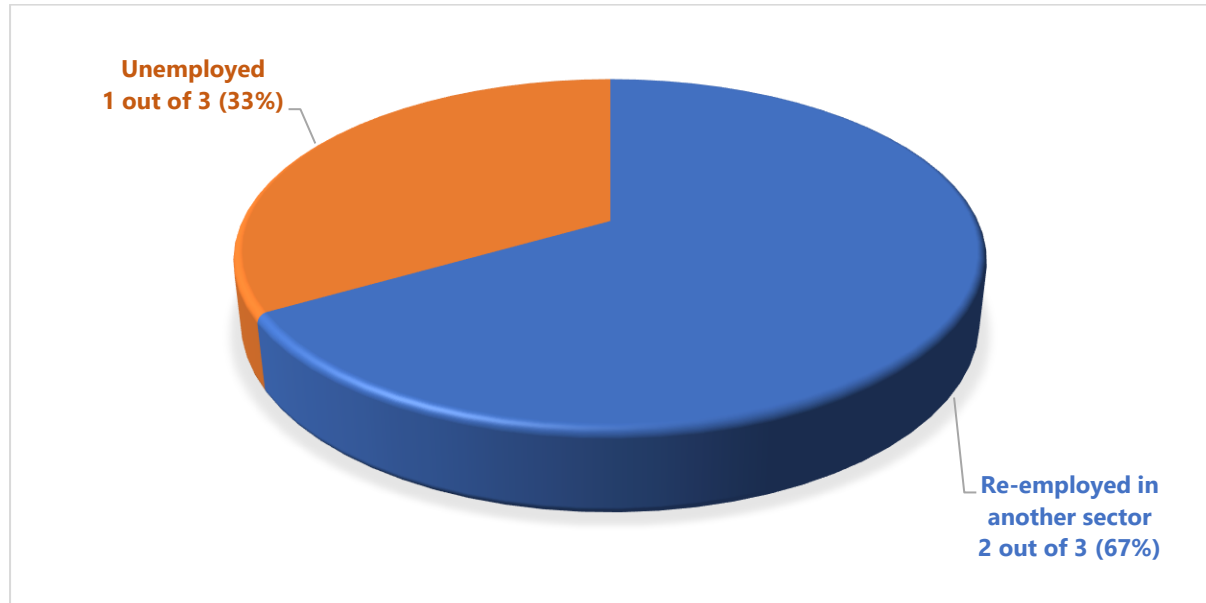
The mining companies interviewed in this sub-sector provided information that they complied with the provisions of Section 189 of the LRA regarding retrenchments. However, the study found that the LRA was not clear on how the portable skills training should be structured to clearly inform the mining companies on the process. Most of the mining companies clarified that choices of courses were offered to ex-mineworkers from a list provided by the companies. The study established that most of these might have been either SLP related or job-related training predetermined by the companies themselves. Companies were unable to provide a clear procedure followed in offering the skills when they prepare their employees for life after mining. This implies that the skills offered were neither informed by any research nor linked to any integrated development plans (IDPs) of local municipalities. The study also found that there were misperceptions by most companies about what constitutes a portable skill versus an occupational skill and the best way to offer it. This identified the need for a framework or guideline on how to implement portable skills training in this sub-sector.

5.3.1.2 Type of portable skills offered and their effectiveness

The employers interviewed indicated that the top portable skills they offered included computer skills, diesel mechanic skills, farming, basic plumbing and sewing skills. The mining companies also indicated that all their courses were offered through the services of external and accredited training providers. However, the study established that these skills were mainly provided during employment either as part of compliance with the SLPs or related to mining occupations. Furthermore, the sample of ex-mineworkers revealed that none of them received any portable skills training prior to their exit from employment. For instance, Ex-Mineworker 1 said that, *"I got nothing, I have asked they didn't give me anything, they said there was nothing available after working for them for so much years."* Another ex-mineworker said that he only

received occupationally related training, “just an operator training as part as my job. Front end loader, excavator, scamper,” Ex-Mineworker 2.

Figure 5.6: Socio-economic status of ex-mineworkers from CLAS Sub-sector



Source: MQA Study (2019)

Figure 5.6 shows that 2 out of 3 respondent ex-mineworkers had been re-employed in other sectors (those who did computer skills and basic electrical) whilst 1 who did farming is still unemployed is doing subsistence farming at his rural home.

5.3.1.3 Perceptions of stakeholders in CLAS Sub-sector on portable skills

The study established that most of the ex-mineworkers did not appreciate or see the value of undertaking portable skills training before exiting the mines. The psychological trauma associated with losing one's job affects people's appreciation of any endeavours by the companies to offer meaningful interventions on people earmarked for exit apart from the packages. The study found that most ex-mineworkers did not respond to the call for portable skills training which resulted in a low uptake of the courses offered by their respective companies. One of the companies said that; *"The uptake from the employees was low due to the voluntary nature of the programmes."* From this input, it can be concluded that companies seemed to believe that ex-mineworkers were not placing much importance on the portable skills, since it was not compulsory to undertake the training when exiting employment.

On the other hand, low employee uptake of portable skills training may be indicative of poor choices being offered to employees. Therefore, the mindset of the mineworkers needs to be remodelled for them to think beyond mine employment even during employment, so that any skills interventions will be meaningful in preparing their future. According to Company B, *“Capacity building through continuous internal training helps open the minds of individuals...Individual capacities should be ascertained first so that training offered will be impactful. Proper needs analysis should be done prior to offering options to employees so that courses offered are not prescribed.”* According to the input from this company, there was not enough effort being made by companies to capacitate their employees for other economic opportunities outside mining which could sustain one’s life post-mining. Such information asymmetry was believed to be contributing to the low uptake of portable skills courses by ex-mineworkers. In addition to that, the input from Company B also suggested that the portable skills offered to ex-mineworkers might be ineffective because of the absence of a proper alignment of an individual ex-mineworker’s choice of skills related to their ability and personal goals. This was found to be a huge shortfall in the system, where mining companies were believed to be prescribing the portable skills to the ex-mineworkers without any meaningful assessment done priori to inform decision making.

5.3.1.4 Top programmes to be prioritised in the CLAS Sub-sector

To establish which skills programmes needed prioritisation, the study asked the ex-mineworkers, mining companies and stakeholders about their preferences, given the economic activities within their local municipalities. The stakeholders managed to highlight the following:

- i. Skills are needed which are cross-cutting in terms of sectoral relevance and allow for self-employment such as basic trades (e.g. basic plumbing skills, basic electrical skills, basic welding skills, basic mechanics etc.). These basic skills were found to be critical in promoting the relevance of ex-mineworkers in the mainstream economy due to various opportunities that may arise for the different trades in both rural and urban environments. However, to promote a positive impact from these basic trade related skills, the study found that the people who are trained should be assisted with the

necessities such as starter-packs (basic tools or equipment specific to the trade), opportunities (contracts), workshop space, etc.;

- ii. Skills are needed which prepare ex-mineworkers psychologically to adapt to new realities of the mainstream economy such as change management (pre-exit counselling). The study found that most of the ex-mineworkers were not prepared for unfortunate circumstances such as retrenchments. Hence, any eventuality that makes them lose their jobs would not be acceptable mentally, considering that they were used to going to work every day and receiving their wages every month. Even though packages are offered as a lump sum, the change of circumstances is not taken lightly by most people, who require proper psychological counselling as well as investment advice so that better choices are made by ex-mineworkers before they re-integrate into the mainstream economy;
- iii. Skills are necessary for development and growth in the current operating environment such as computer skills, business management skills and entrepreneurial skills. The reality of the modern business or work environment is hinged on computer literacy. Basic IT skills were found to be critical to enhance the competency of ex-mineworkers on the job market given the added of work experience they already possess from the mines; and
- iv. Skills are necessary for self-sustenance and commercial purposes in both rural and peri-urban set-ups such as farming (plant and animal production). It is important to note that farming will always remain relevant to the livelihoods of people in both urban and rural environments. Hence, there is always a market for crops, vegetables, poultry and meat products. With proper skills, operating space and facilities, farming can be a lucrative business that generates significant income and food for a family as well as creating employment opportunities within communities.

5.3.2 Coal Mining

5.3.2.1 How portable skills are offered on exit

The study found that the choices of portable skills training were largely driven by employee needs and what the companies could offer. This shows that there was neither any in-depth research to establish skills gaps in the local communities nor efforts by the mining companies

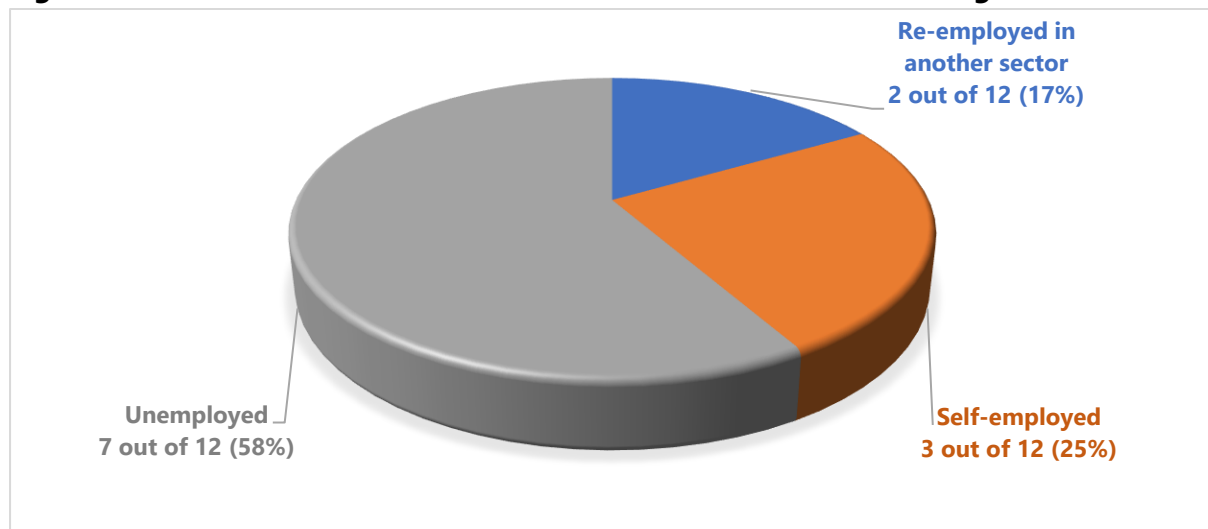
to link the list of portable skills to the LEDs of local municipalities. In addition, none of the employers have a program of follow-up on employees who received portable skills training and who left the mine. However, ex-mineworkers submitted that the skills training they received were imposed on them. One of the ex-mineworkers retorted that, *"No, we were not given any choice."* It can be concluded that employers mistakenly take decisions on which portable skills to offer without effective consultation.

5.3.2.2 Type of portable skills offered and their effectiveness

The employers were asked to provide a list of portable skills training they have implemented during the period under consideration. The following list was established; ABET, Financial Awareness, First Aid, Operator Training (Dozer, FEL, ADT etc), agriculture training and Code 10 and 14 driver's licences. This list shows that there is a general misconception of the portable skills issue to the extent that employers are failing to distinguish between occupational related training and transferable skills. From the list, only agriculture training and Code 14 driver's licence could fall under portable skills.

Of the ex-mineworkers interviewed, 4 out of 12 indicated that they received the following skills on exit; plant operator, dump truck operator, sheet metal and basic welding. The other 8 were trained during employment in the following; diesel mechanical skills, safety (Competent A), driver's licence, computer skills, catering, surveying and farming. Therefore, only basic welding, driver's licence, computer skills, diesel mechanical skills, catering and farming can be identified as portable skills. The rest were occupationally related.

Figure 5.7: Socio-economic status of ex-mineworkers from Coal Mining Sub-sector



Source: MQA Study (2019)

From Figure 5.7, it was established that 2 out of 12 ex-mineworkers were re-employed in other sectors. They received basic welding and sheet metal training during their employment at the coal mines. There were 3 out of 12 ex-mineworkers who were self-employed. Two of them created a joint venture in commercial farming (animal and plant production) and one of them had received training in catering whilst the other one did farming. The third ex-mineworker did not receive any portable skills but managed to set-up small business enterprises to earn a decent living. Ex-Mineworker 3 submitted that, *"I run a business of Brick manufacturing/production, and I've now partnered with the municipality. My take home is around R9 000 per month."* Lastly, the rest of the respondent ex-mineworkers in the sub-sector were unemployed and struggling to make ends meet or barely making it. They were surviving on spousal and family support as well as social grants.

5.3.2.3 Perceptions of stakeholders in Coal Mining on portable skills

There was a general misconception of the portable skills in this sub-sector from both employers and ex-mineworkers. Occupational related training was often mistaken for portable skills. However, the study also established that most of the ex-mineworkers were more inclined to training which enhanced their chances of being re-employed in the coal mines again. This could be due to a lack of knowledge about other career options outside mining among most of the ex-mineworkers, especially those with lower levels of education. On the other hand, some of the ex-mineworkers who received portable skills training were concerned that the

programmes had no workplace exposure, and job opportunities were limited for them to utilise their acquired skills.

5.3.2.4 Top 5 programmes to be prioritised in the Coal Sub-sector

From the analysis of different inputs from stakeholders in the Coal Mining Sub-sector, the top 5 skills programmes identified for prioritisation in the sector included the following:

- i. Farming (plant and animal production)- most suitable for both rural and peri-urban communities (commercial and subsistence) given that agriculture in the Mpumalanga province is also favourable for agriculture. Agriculture is one of the industries with a ready market in both urban and rural communities. With the right skills and self-determination, crops, vegetables and animals can be produced on a commercial basis to enable an ex-mineworker to sustain their families properly. However, necessary support mechanisms also need to be put in place such as mentoring programmes with successful farmers so that ex-mineworkers can appreciate the processes and get assistance with how to access the markets;
- ii. Business/entrepreneurial skills- to enhance business management skills for the success of all self-employment ventures. Proper knowledge on how to run and manage a business was found to be critical. Many people fail to nurture their businesses because they lack basic business management skills such as costing, quoting and managing their finances. Therefore, equipping ex-mineworkers with business/entrepreneurial skills could enhance the level of successful entrepreneurs in the country which in turn can also create more employment opportunities;
- iii. Plant operators (Dozers, Front End Loaders, etc.)-these skills enhance one's chances of re-employment in the mining or other heavy industries given new opportunities arising in Limpopo province in the sub-sector. Experience and the right skills could make the ex-mineworkers competitive at these mines;
- iv. Basic trade related skills (e.g. basic welding, basic plumbing, basic electrical, basic mechanic skills, etc.)-these are transferrable in nature which enhances chances of re-employment in other sectors as well as self-employment. However, for the success of self-employment ventures, ex-mineworkers would need to be supported with starter packs, working spaces as well as contracts within their communities so that they can grow; and

- v. Skills for the emerging industries- the advent of renewable energies presents vast opportunities for the people in SA. There is a need for a comprehensive analysis of the skills profile in the emerging industries so that the courses offered to ex-mineworkers would be aligned with their different levels of academic qualifications. With the advantage of work experience, ex-mineworkers would stand a better chance of getting employment in these industries if trained on the relevant skills required at different operating levels of the emerging industries.

5.3.3 Diamond Mining

5.3.3.1 How portable skills are offered on exit

The companies which were interviewed from this sub-sector were employing better methods in identifying and offering portable skills to their exiting mineworkers. One of the companies said that they conduct market analysis first to determine the skills shortages in different communities before engaging the employees to select their choices. This process will then be followed by other support services such as counselling, financial advice and CV writing assistance sessions before employees are informed of any retrenchments. According to Company B, *"Market analysis to determine shortage of skills, interests indicated by employees, costs and Skills Development Committee members' input. Before termination, we also offer counselling, consider alternative positions, financial assistance from financial institutions, portable skills training, and assistance with CV updates."*

In addition, the other company in this sub-sector conducts career days annually which inform their employees of the different opportunities that can be pursued post mine employment. This process forms the basis of the courses that are offered to employees earmarked for exit. *"We engage employees to select their courses from a pool of courses provided. The courses are more of what the employees choose. However, as a company we conduct a career day every year where employees are informed of the different opportunities which they can pursue post mine employment. From these engagements the employees can then choose what they want to do in life and how to go about it,"* Company A. However, there are other companies which also conduct an internal evaluation of their employees to determine their ability to undertake the different trainings on offer. This process proves critical if the skills offered are to be impactful.

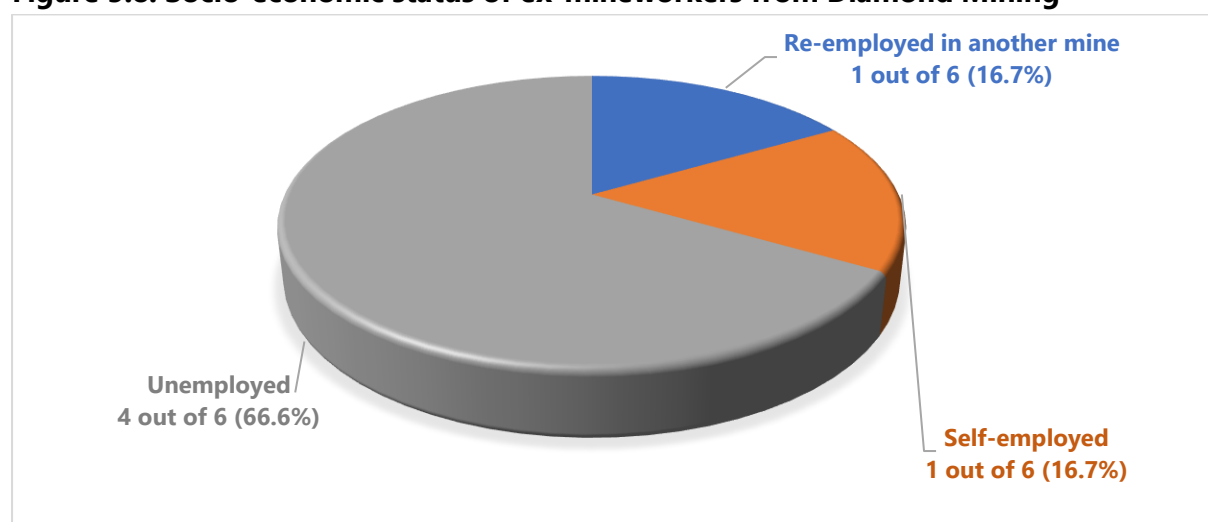
"We evaluate literacy level, current skills set of employee, mind-set and willingness to be developed. For the medically incapacitated, we review employee for 2 years. Momentum Insurance will pay for reskilling employee in area suitable for employee. Momentum is paid by Petra Diamonds," Company C.

Therefore, the skills offered in this sub-sector were informed by initiatives such as market analysis, career days, individual assessment and choices of the ex-mineworkers. In addition, the companies asserted that accredited training providers were also used for training purposes.

5.3.3.2 Type of portable skills offered and their effectiveness

Interviews with companies unearthed that there was also a misunderstanding of what portable skills imply. The companies provided the following list of courses: Computer skills, farming, driver's licence (Codes 10 and 14), basic welding, mobile equipment skills, tiling and painting skills, carpentry, and gardening. Out of the 6 ex-mineworkers interviewed, there was only one who was trained on exit. The rest of the ex-mineworkers said that the training they received was related to their occupational requirements during employment. According to the ex-mineworker, he chose to do a management development programme (MDP) since he was at supervisory level to widen his chances for re-employment in future. The skills interventions resulted in the following outcomes on ex-mineworker's socio-economic life post mining:

Figure 5.8: Socio-economic status of ex-mineworkers from Diamond Mining



Source: MQA Study (2019)

From Figure 5.8, only 1 ex-mineworker who received an MDP training on exit was re-employed in another operational mine. It is important to note that this ex-mineworker also possessed a National Diploma and work experience which was then augmented by the MDP training on the job market resulting in him getting re-employed by another mine. Another 1 of the ex-mineworkers was self-employed providing welding services, a career related to his boiler-making profession. The 4 unemployed ex-mineworkers were surviving on spousal and family support, social grants and subsistence farming.

5.3.3.3 Perceptions stakeholders in the Diamond Mining on portable skills

There were different perceptions about the skills development issue in this sub-sector. According to some of the stakeholders, training which is offered to someone who will not use the skills obtained is not useful since it tends to become a compliance issue with the companies. One of the companies said that, *"This is not an easy subject especially if the skills are not used soon after the training. Most people lose these portable skills in the process because we are not retrenching. It's now just like a tick-box issue."* Other stakeholders believed the efforts by companies alone was not enough to warrant positive impact to the socio-economic lives of ex-mineworkers' post mining. *"There is need to improve stakeholder relations in the process. All partners need to play a part in augmenting what the companies would have initiated i.e. government (local municipalities), training providers and the individuals themselves. Opportunities need to be opened for people to gain the necessary experience on the skills they had acquired from e.g. local community projects. In addition, the individuals should also show their commitment to grow in the different skills they would have chosen. That personal drive is critical if they are to become successful entrepreneurs post-mining,"* Stakeholder 1.

In addition, the study established that some ex-mineworkers did not value their training as most of them do not turn up for training which they would have requested, whilst some would expect to be paid to attend the training. According to Company B, *"Employees tend to request training, but then do not attend the training initiatives, low interest in upskilling, request to provide salaries for period of training, request to be provided with transport for period of training, unrealistic expectations of possible training that can be attended."*

5.3.3.4 Top 5 programmes to be prioritised

The following top 5 priority programmes were identified by stakeholders from this sub-sector:

- i. Basic trade related skills (e.g. basic welding, basic plumbing, basic electrical, mechanical skills, etc.) due to their transferrable nature which enhance chances of re-employment or self-employment. These basic skills were found to be critical in promoting the relevance of ex-mineworkers in the mainstream economy due to various job opportunities that may arise for the different trades in both rural and urban settings. To foster the effectiveness of these skills, the necessary support equipment such as starter packs (basic tools or equipment specific to the trade), working spaces and opportunities (contracts) should be availed;
- ii. Farming (plant and animal production) because it is suitable for both rural and per-urban communities (commercial and subsistence). Small-scale farming skills can go a long way in promoting successful ventures in crop, vegetable and animal production (such as pig, poultry, sheep and goats). With proper training and necessary support systems at the initial stages (mentoring, start-up equipment), ex-mineworkers can become successful agropreneurs;
- iii. Building skills (e.g. bricklaying, carpentry, tiling, plastering etc.) due to their transferrable nature which enhances chances of re-employment or self-employment. The construction industry presents job opportunities for many people which ex-mineworkers can tap into either as workers or contractors themselves. There are several construction projects happening in the country at local, provincial and national levels which require people with the right skills. However, it would be necessary for national projects to prioritise their recruitments from the pool of ex-mineworkers who possess the relevant construction qualifications to alleviate unemployment levels. Therefore, necessary support structures would need to be established at local levels so that such skills obtained by ex-mineworkers are put into practice;
- iv. Business management and entrepreneurial skills to enhance the success of all self-employment ventures. Proper knowledge of how to run and manage a business was found to be critical. Many people fail to nurture their businesses, because they lack basic business management skills such as costing, quoting and managing their finances. Therefore, equipping ex-mineworkers with business/entrepreneurial skills could

enhance the level of successful entrepreneurs in the country which in turn can also create more employment opportunities; and

- v. Driver's licence (e.g. Codes 10 and 14) to enhance potential for re-employment or self-employment. The transport sector presents vast opportunities for employment in both public (taxis and busses), trucks and other private vehicles. Lately, the industry has witnessed the booming of the e-hailing services (e.g. Uber, Bolt formerly Taxify, etc) which presents employment opportunities for people with valid driver's licences. In addition, driver's licences can also enable ex-mineworkers to be self-employed through provision of transportation services to people within their communities if they could own a car (bakkie or pick-up truck, sedan, etc.).

5.3.4 Diamond Processing

5.3.4.1 How portable skills are offered on exit

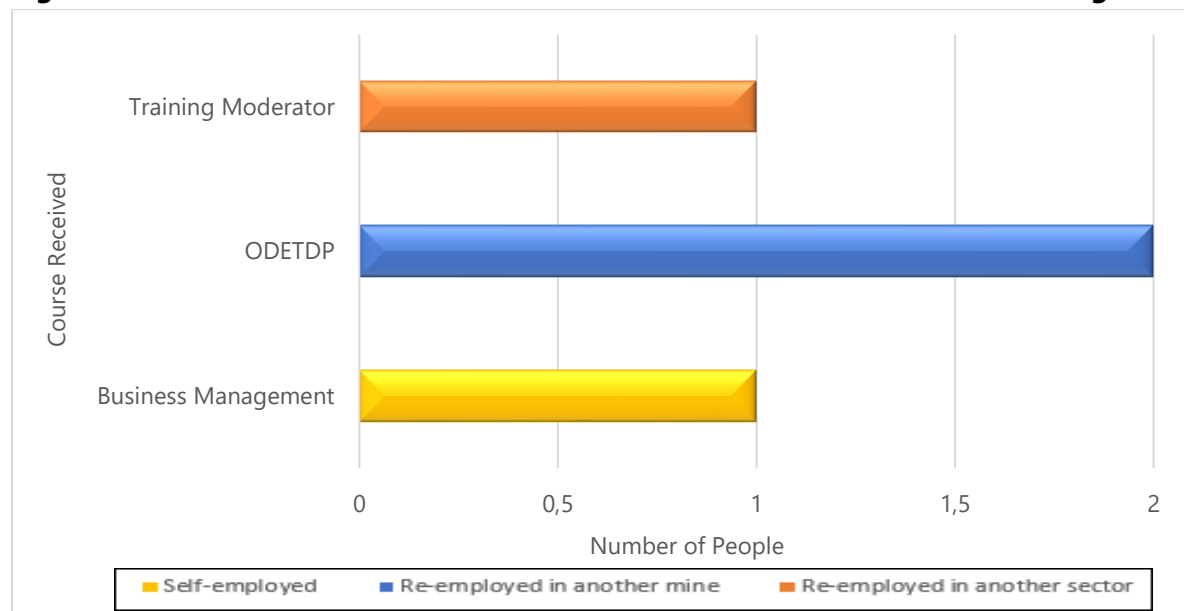
Even though the companies in the Diamond Processing sub-sector were not cooperative about participating in the study, it was established that ex-employees were generally satisfied with the process undertaken by their former employers in offering portable skills. Though the study could not ascertain what informed the selection of skills offered, it was found that the ex-employees who were earmarked for exit asked to select courses in line with their intended post-employment career options. However, the company offered different options to the ordinary portable skills, given the specialised nature of diamond processing industry and the high literacy levels of the ex-employees.

5.3.4.2 Type of portable skills offered and their effectiveness

The ex-employees submitted that they were offered the following courses on exit: safety management training course (SAMTRAC), assessor and moderator course, Occupationally Directed Education, Training and Development Practices (ODETDP) levels 4 and 5, business management skills, financial management 101, entrepreneurial skills and computer skills. In addition, the ex-employees were also assisted with counselling, financial advice and CV writing sessions so that they could cope with the realities of the mainstream economy. Some of the ex-employees were quite pleased with the effort to reskill them on their preferred choices as indicated by Ex-employee 1; *"I chose financial management. Financial management is good*

even in your daily life, for example doing a budget, how to spend money especially after the mine because you have only a percentage of resources and its running out. Without a steady income coming, you cannot afford to be irresponsible.”

Figure 5.9: Socio-economic status of ex-mineworkers from Diamond Processing



Source: MQA Study (2019)

Figure 5.9 shows that 1 was self-employed (did business management course), 2 were re-employed in another mine (one did ODETDP Level 4 and the other did Level 5), 1 was re-employed in other sector (did training moderator course) whilst 7 out of 11 of the ex-mineworkers were unemployed.

5.3.4.3 Perceptions of ex-employees from the Diamond Processing on portable skills

The study found that some of the ex-employees wanted to continue their careers in professions similar to what they were doing at the mines, as explained in the following quote; *“If I can obtain the job that requires the same skills I received at the mine, or start a business that is related to what I was doing at the job,”* Ex-employee 2. However, there were also other ex-mineworkers who noted that the process missed the element of mentorship to be relevant and be able to increase the competency levels of the ex-employees in the mainstream economy. Ex-employee 3 said that; *“We need mentorship, if MQA can link us with a company where they can use us such as internships and volunteers, and then from there we will be set.*

There is a community here we can train and take them to close mines and show them. We have experience in the field we want to do manuals."

On the other hand, there were also some stakeholders who were not pleased with the duration of the training. According to the stakeholders, just giving people attendance certificates instead of a proper qualification leaves trainees incompetent in the skills offered. *"Companies should try to have qualifications for their employees instead rather than just giving them certificates, I think that would make a difference. When the mines are closing you will know that you have a qualification maybe in metallurgy or mining processes, than to have those short courses,"* Ex-employee 4.

5.3.4.4 Top 5 programmes to be prioritised

The following skills priority areas were established from the Diamond Processing Sub-sector:

- i. Trade related skills (e.g. basic welding, basic plumbing, basic electrical, mechanic skills, etc.) are transferrable in nature which enhances chances of re-employment or self-employment. These basic skills were found to be critical in promoting the relevance of ex-mineworkers into the mainstream economy due various job opportunities that may arise for the different trades in both rural and urban set-ups. To foster the effectiveness of these skills, the necessary support equipment such as starter packs (basic tools or equipment specific to the trade), working spaces and opportunities (contracts) should be availed;
- ii. ODEDTP is a relevant qualification for those who would want to pursue training careers. Given the higher levels of education of ex-mineworkers from this sub-sector, pursuing training careers would be most ideal, given the various training opportunities available in both public and private organisations. However, there would also be a need to provide such people with the necessary support systems (e.g. accreditation and registrations) for this intervention to be successful;
- iii. Financial management skills- financial knowledge is transferrable in nature and critical for self-employment as well as personal discipline. The study found out that in so far as most of the ex-mineworkers were unemployed, they were surviving through different ventures some of which they were not at liberty to disclose in this study.

Therefore, proper financial management skills remain critical if ex-mineworkers were to sustain their packages, pensions and incomes from any economic activity;

- iv. Business and entrepreneurial skills – these skills promote the success of self-employment ventures. Proper knowledge on how to run and manage a business was found to be critical. Many people fail to nurture their businesses because they lack basic business management skills such as costing, quoting, marketing and managing their finances. Therefore, equipping ex-mineworkers with business/entrepreneurial skills could enhance the level of successful entrepreneurs in the country which in turn can also create more employment opportunities;
- v. Moderation certificate is an important accreditation for those who would want to pursue careers conducting quality assurance in relation to the assessments carried out by assessors. However, there would be a need to provide support to these ex-mineworkers such that they can be registered as assessors and also meet the requirements of the Conduct Moderation of Outcomes-Based Assessments unit standard.

5.3.5 Gold Mining

5.3.5.1 How portable skills are offered on exit

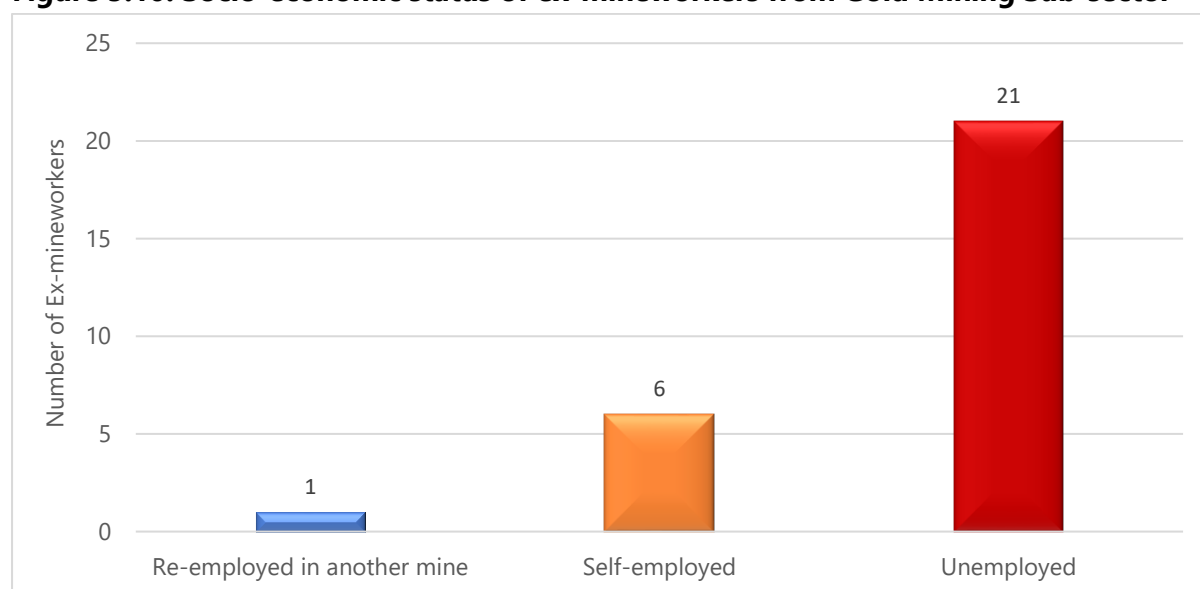
The study established that the portable skills offered to the ex-mineworkers by companies were mostly informed by surveys amongst mineworkers to establish what skills they would be interested in acquiring, best practice, the local municipality integrated development plans (IDPs) and funding available. In addition, the companies said their list of portable skills emanated from their annual SLP targets which have to be met for compliance and do not wait until the mineworker exits the mine. However, companies said they provided choices of portable skills training to mineworkers on a voluntary basis. According to Company A representative, *"We ensure that people receive training. We are doing it as long as we are operating. This is happening every day. We have allocated funds to give people alternative skills called portable skills. Currently we have R4 000 per employee for training. So, in terms of social and labour plan regulations we set targets each year and every year in terms of SLP compliance we try to meet those targets. We don't wait until there are retrenchments. Portable skills training*

is voluntary. The mine advertises a list of portable skills and miners have to choose. We send out a questionnaire to employees. No employee is forced to go for training on portable skills.”

5.3.5.2 Type of portable skills offered and their effectiveness

The study also tried to establish the type of skills development interventions that had been provided to the ex-mineworkers from this subsector through their engagements with other ex-mineworkers, the companies and trade unions. Ex-mineworkers, labour unions and mining companies in the sub-sector provided the following list of portable skills (most of which were known to be SAQA accredited): home maintenance; basic electrical; chicken broiler; sewing; basic plumbing, communication skills, brick laying, basic welding, basic motor mechanic, sewing, carpentry, cooking, computer skills, farming (animal and crop production), basic welding, basic construction and carpentry/furniture manufacturing. From the interviews conducted, 10 of 28 ex-mineworkers said that they were the beneficiary of the portable skills provided towards exiting the mines in the following courses: poultry, basic electrical, sewing, basic plumbing, home maintenance, small-scale farming, timber skills, bricklaying and communication skills. The other 18 said they only received occupationally related training during employment at the mines in the following: plant operation, explosives, glazing, safety (Competence A and B), painting, SAMTRAC and Further Education and Training Certificate (FETC): Mining Operations.

Figure 5.10: Socio-economic status of ex-mineworkers from Gold Mining Sub-sector



Source: MQA Study (2019)

Figure 5.10 shows that only a small proportion of ex-mineworkers were applying the skills received post-mining. One was re-employed in another mine (did home maintenance and communication skills), and 2 were self-employed (one did basic electrical whilst the other did small-scale farming). The other 4 self-employed ex-mineworkers were entrepreneurs. The majority of the ex-mineworkers were unemployed (21 out of 28).

5.3.5.3 Perceptions of stakeholders in the Gold Mining on portable skills

There were different perceptions of the value of the skills offered. In the case of ex-mineworkers, a significant majority of whom are unemployed, their lived experience of the difficulties and inability of having a livelihood brings into question the relevance of the skills received and the lack of post-training support. Labour unions explained difficulties in dealing with retrenchments and perceptions of portable skills. According to a union representative, *"We fight to ensure that consultations over retrenchments start six months before so that mineworkers can prepare themselves. In some cases, the mining companies rush the process. They do this knowing they did not do right to the miners. The unions have learnt that during this time to talk about portable skills do not help as the workers feel it would not help assist them further."* Other stakeholders were also concerned with the nature of portable skills which are not pro-entrepreneurship development, *"I never heard someone say I am a businessman today because of portable skills"*. These sentiments were also supported by the unions in the following quote, *"Unions have also learnt that portable skills do not assist the miners to the level that would assist them further."*

5.3.5.4 Top 5 programmes to be prioritised

From the discussions with stakeholders, the following list of priority programmes was produced:

- i. Trade related skills (e.g. basic welding, basic plumbing, carpentry, bricklaying, basic electrical, etc.) because they are cross-cutting and have higher prospects of enabling self-employment or re-employment. These basic skills were found to be critical in promoting the relevance of ex-mineworkers in the mainstream economy due to various job opportunities that may arise for the different trades in both rural and urban settings. To foster the effectiveness of these skills, the necessary support equipment

such as starter packs (basic tools or equipment specific to the trade), working spaces and opportunities (contracts) should be availed;

- ii. Mechanical related skills (e.g. basic mechanic, auto electrician skills and diesel mechanic skills) because these are highly demanded services within communities since most people have cars and some cannot afford the charges at established garages for services. Hence, prospects of self-employment are high as well as re-employment (especially if fully qualified);
- iii. Farming (plant and animal production) is a transferrable business with markets in both rural and urban environments as well as for a family's subsistence. Crops and vegetable production are marketable both in towns and rural areas and so are pig, goat, sheep and poultry production. If these skills can be offered together with a good mentorship programme, most of the ex-mineworkers can manage to sustain themselves post-mining;
- iv. Drivers licence (Codes 10 and 14) can provide opportunities for self-employment (delivery of goods) and re-employment opportunities across many sectors. The transport sector presents vast opportunities for employment in both public (taxis and busses), trucks and other private vehicles. Lately, the industry has witnessed the booming of the e-hailing services (e.g. Uber, Bolt formerly Taxify, etc.) which present employment opportunities for people with valid driver's licences. In addition, driver's licences can enable ex-mineworkers to be self-employed through provision of transportation services to people within their communities if they could own a car (bakkie or pick-up truck, sedan, etc.); and
- v. Other courses (e.g. business skills, computer skills, sewing, and catering/cooking) are relevant particularly for self-employment or establishing own business due to the demand for such services within communities.

5.3.6 Jewellery Manufacturing

5.3.6.1 How portable skills are offered on exit

The study established that there was no portable skills training being offered by the employers, nor were the ex-employees afforded an opportunity to choose what they would have preferred as portable skills. One of the main reasons was that most of the employers were small and

owner-managed businesses who had no idea of what portable skills are. Mostly, the employees in this sub-sector usually exit on ill-health reasons or retirement. In the event of retrenchments, the ex-employees easily find alternative employment within the sub-sector due to the specialised nature of the skills needed.

5.3.6.2 Type of portable skills offered and their effectiveness

The study established that employees in this sub-sector are mostly offered occupational related training such as jewellery manufacturing skills and leadership skills. Given that there were no portable skills offered. It was apparent that this sub-sector had not implemented any significant portable skills training during the period under consideration. As a result, it was not possible to assess the effectiveness of portable skills training offered. For their part, most employers clearly indicated that because their operations are very small (more than 90% employ less than 10 people) they do not have the resources or the know-how to implement portable skills training. Employees also indicated that because of the size of their employers, they were not organised and had not received any guidance on portable skills training.

The study also managed to confirm that re-employment of ex-employees was not very difficult in this sub-sector due to the specialised nature of skills required. Out of the 4 ex-employees who were interviewed, 3 of them were already re-employed by another jewellery manufacturer within a period of a year.

5.3.6.3 Perceptions of stakeholders in Jewellery Manufacturing on portable skills

Most of the ex-employees interviewed were actually concerned about being re-employed by other companies in the sub-sector. The study tried to determine their portable skill preferences only to find out that most of them wanted only to be employed in the sub-sector and continue doing what they used to do.

5.3.6.4 Top programmes to be prioritised

Though the issue of portable skills was found to be uncommon within the jewellery manufacturing sub-sector, the study managed to identify the following list of skills priority programmes:

- i. Hi-tech based skills that are aligned to the technologically advanced manufacturing procedures being used by other countries in jewellery manufacturing for both cost and operational efficiencies. Hence, the future of jewellery manufacturing and other industries in SA is technology driven (4IR), and ex-employees should be prepared accordingly.
- ii. Specialised skills targeted for emerging industries such as renewable energies which also require specialisation. This could be another way of refocusing the mindsets of the ex-employees from this sector to other new and lucrative opportunities.
- iii. Farming (plant and animal production) was found to be useful for both subsistence and commercial purposes especially in the KZN province where the ex-employees were residing. Crop and vegetable production are marketable both in towns and rural areas and so is pig, goat, sheep and poultry production. If these skills can be offered together with a good mentorship programme, most of the ex-employees can manage to sustain themselves post-mining; and
- iv. Business and entrepreneurial skills to promote more jewellery manufacturers who can take part in the beneficiation process. Proper knowledge on how to run and manage a business was found to be critical. Many people fail to nurture their businesses because they lack basic business management skills such as costing, quoting, marketing and managing their finances. Therefore, equipping ex-employees with business/entrepreneurial skills could enhance the level of successful entrepreneurs in the country which in turn can also create more employment opportunities.

5.3.7 Other Mining

5.3.7.1 How portable skills are offered on exit

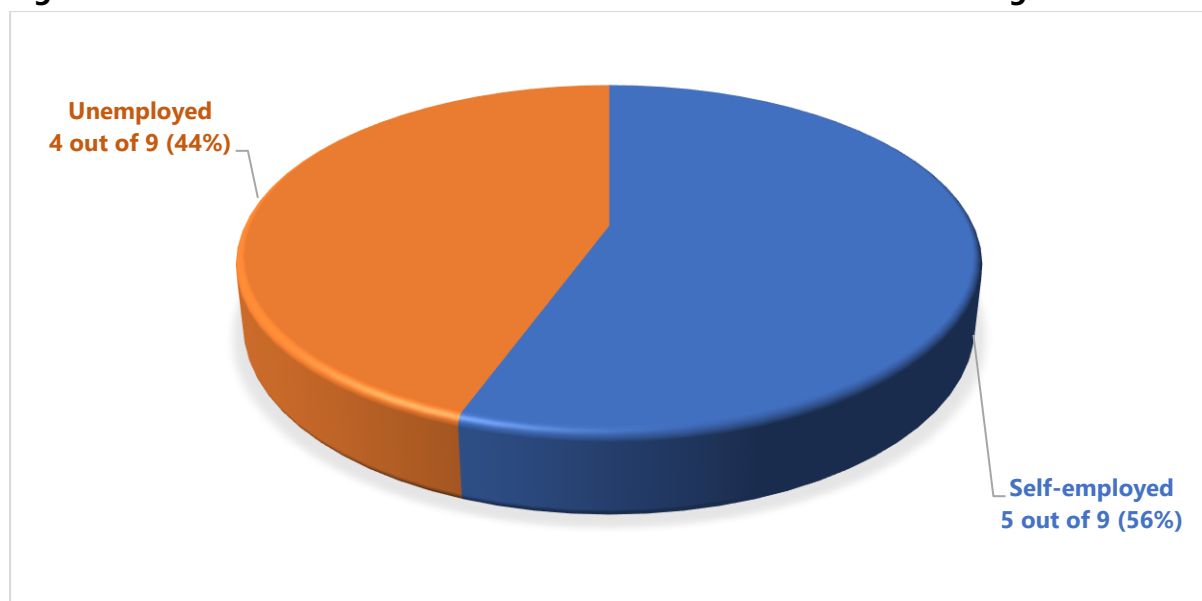
According to the two companies interviewed, portable skills were voluntary for mineworkers and undertaken in their own time after working hours. One of the companies said that programmes offered were informed by research using surveys, best practice and IDPs to align portable skills offered to the needs in the local communities where ex-mineworkers reside or would reside post-mining employment. The outcomes would then be discussed during Future Forums, where the company sits with key stakeholders such as the union and community

representatives to decide on which skills to offer. The ultimate list of portable skills offered will therefore be driven by the choices of employees based on their respective community needs.

5.3.7.2 Type of portable skills offered and their effectiveness

From the companies interviewed, there was a range of training programmes that were offered to employees earmarked for exit during the study period. These included both occupationally related and portable skills as follows; occupationally related skills (e.g. safety-Competence A and B, plant operator, dump truck, tool handling etc.) and portable skills (e.g. Code 10/ 14 driver's licence, bricklaying, painting, carpentry, roofing, tiling, basic electrical, basic welding, basic plumbing and computer skills). However, none of the ex-mineworkers interviewed were trained on portable skills during their exit process which implies that they were probably trained during employment on either occupational or portable skills.

Figure 5.11: Socio-economic status of ex-mineworkers from Other Mining



Source: MQA Study (2019)

Figure 5.11 shows that 5 out of 9 of ex-mineworkers interviewed were self-employed (using skills obtained such as driver's licence, basic welding, painting, basic plumbing and tiling). The self-employment activities included: transport (e.g. taxi services and delivery of goods); welding and making cattle feeding troughs; part-time safety assessor; part-time plumbing and

tiling. The remaining 4 were unemployed and surviving on grants and spousal and/ family support.

5.3.7.3 Perceptions of stakeholders in Other Mining on portable skills

Though the ex-mineworkers interviewed had not received portable skills training as part of their exit process, they generally believed that acquisition of portable skills relevant to their context and interests would have been helpful in their lives post-mining.

5.3.7.4 Top 5 programmes to be prioritised

The following set of skills were identified for prioritisation in this sub-sector:

- i. Trade related skills (e.g. basic welding, basic plumbing, basic electrical, basic mechanic skills, etc.) due to their transferrable nature which enhances chances of re-employment or self-employment. These basic skills were found to be critical in promoting the relevance of ex-mineworkers in the mainstream economy due to various job opportunities that may arise for the different trades in both rural and urban settings. To foster the effectiveness of these skills, the necessary support equipment such as starter packs (basic tools or equipment specific to the trade), working spaces and opportunities (contracts) should be availed;
- ii. Farming (plant and animal production) which is most suitable for both rural and per-urban communities for both commercial and subsistence purposes. Crop and vegetable production are marketable both in towns and rural areas and so is pig, goat, sheep and poultry production. If these skills can be offered together with a good mentorship programme, most of the ex-mineworkers can manage to sustain themselves post-mining;
- iii. Driver's licence (codes 10 and/14) is crosscutting which enhances chances of re-employment in other sectors or self-employment. The transport sector presents vast opportunities for employment in both public (taxis and busses), trucks and other private vehicles. Lately, the industry has witnessed the booming of the e-hailing services (e.g. Uber, Bolt/Taxify, etc.) which present employment opportunities for people with valid driver's licences. In addition, driver's licences can also enable ex-mineworkers to be self-employed through provision of transportation services to

people within their communities if they could own a car (bakkie or pick-up truck, sedan, etc.);

- iv. Business and entrepreneurial skills are necessary to assist on how manage the day-to-day operations for the success of all self-employment ventures. Proper knowledge on how to run and manage a business was found to be critical. Many people fail to nurture their businesses because they lack basic business management skills such as costing, quoting, marketing and managing their finances. Therefore, equipping ex-employees with business/entrepreneurial skills could enhance the level of successful entrepreneurs in the country which in turn can also create more employment opportunities; and
- v. Mine related skills (such as plant operators) could be useful when opportunities arise at other operational mines considering that in the Northern Cape, iron ore and manganese production has stabilised, and future growth is projected. Experience and the right skills could make the ex-mineworkers competitive at these mines.

5.3.8 PGM Mining

5.3.8.1 How portable skills are offered on exit

The study showed that even though some companies are conducting market analysis and offering choices to employees, there was very little effort being made on individual assessment and market needs analysis for the interventions to be effective. Most companies were offering portable skills but without linkages with the economic activities of the respective local municipalities of ex-mine workers. However, the study found that companies provide their employees earmarked for exit with a list of skills to make their choices based on the opportunities that they identify in their respective communities. "I did a sewing course and yes, it was my choice. When I chose it, I saw an opportunity because there was a demand for it in the community." Ex-mineworker 1.

The study also established that portable skills training was normally done by accredited external training providers. Most of the courses offered were found to carry academic credits ranging between 3 to 33.5 aligned with unit standards pitched at NQF levels 1 and 2 and which took between 2 to 20 days to complete depending on the modules covered. Some of the

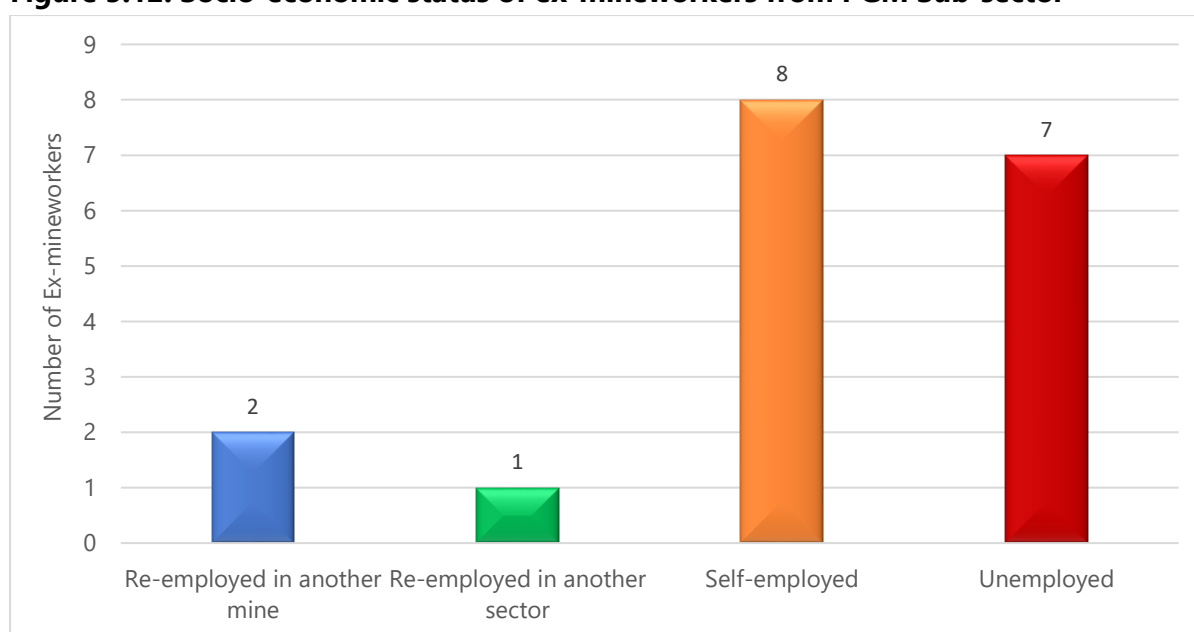
training providers or companies were also found to provide starter equipment for their exiting employees upon completion of training.

5.3.8.2 Type of portable skills offered and their effectiveness

Through engagements with the stakeholders, i.e. ex-mineworkers, mining companies and training providers, the study established that the portable skills were indeed offered. However, there was a mixture of both portable and occupationally related skills as follows:

- i. Portable skills e.g. driver's licence (Code 10), SAMTRAC, farming (animal and crop production), basic plumbing, basic welding and sewing.
- ii. Occupationally related skills e.g. diesel mechanic artisan learner, box controller, fitter and turner, civil engineering, legal liability, belt attendant, dump truck, utility vehicle and safety (Competence B).

Figure 5.12: Socio-economic status of ex-mineworkers from PGM Sub-sector



Source: MQA Study (2019)

The study found that 8 out of 18 ex-mineworkers were self-employed. Some had done portable skills (sewing, basic welding, basic plumbing, farming, and SAMTRAC) whilst others did occupationally related training (legal liability, fitter and turner and civil engineering). Only 1 ex-mineworker was re-employed in the transport sector as a taxi driver (driver's licence). Two ex-mineworkers were re-employed in other mines, one of them had done a box-controller

course (occupationally related) whilst the other 7 out of 18 ex-mineworkers were still unemployed and the study established that they did mine related courses. They were all surviving on spousal and/family supports, pension and social grants. The study also found that a portable skill is not adequate of itself to sustain the life of an ex-mineworker, unless one has a chance to be re-employed. Some of the successful ex-mineworkers diversified their business to increase their sources of income and also invested part of their packages to kick-start their businesses.

5.3.8.3 Perceptions stakeholders in PGM Mining on portable skills

The study revealed different perceptions on the skills being offered on exit. Given that there is an option to either be trained or take the money, it was not surprising that those ex-miners who do not see value in upskilling would take the money. Other ex-mineworkers were believed to be selling the starter packs they were given once they became broke, *"Because once these ex-miners get portable skill training, they are so happy. And they are so happy to get the tool...and they are so happy for learning the skill...but that's where it stops. The next moment the severance package has been used...and the next thing that goes is the tools box itself,"* Stakeholder C.

However, there were other ex-mineworkers who wanted to work in the mines only because that is what they had been accustomed to all their lives. These are the ex-mineworkers who see value in mine related skills to enhance their chances of re-employment. The study also found that some of the courses were deemed too short to result in any meaningful benefit to the ex-mineworkers. Hence, some of stakeholders did not consider the certification to be attesting competence but just like certificates of attendance which most employers do not consider for employment. It was also found that the courses offered are not being taken seriously due to lack of mentorship and incubation training.

5.3.8.4 Top 5 programmes to be prioritised

The following list of skills priority programmes was established from this study:

- i. Generic engineering courses (e.g. basic welding, basic electrical, basic plumbing etc.) because they are cross-cutting and easy for self-employment. These basic skills were found to be critical in promoting the relevance of ex-mineworkers in the mainstream

economy due various job opportunities that may arise for the different trades in both rural and urban settings. To foster the effectiveness of these skills, the necessary support equipment such as starter packs (basic tools or equipment specific to the trade), working spaces and opportunities (contracts) should be availed;

- ii. Plant and animal production (e.g. poultry, pig, vegetables, landscaping & gardening) because they enable income generation in both rural and urban settings. However, the ex-mineworkers would need assistance with access to land and mentoring for them to understand the dynamics of plant and animal production (seasonal trends, farm management, access to inputs and markets, marketing, etc.);
- iii. Building courses (e.g. brick laying, plastering, roofing, tiling and painting) because they fit across all sectors and also enable self-employment. The construction industry presents job opportunities for many people which ex-mineworkers can tap into either as workers or contractors themselves. There are many construction projects happening in the country at local, provincial and national levels which require people with the right skills. However, it would be necessary for national projects to prioritise their recruitments from the pool of ex-mineworkers who possess the relevant construction qualifications to alleviate unemployment levels. Therefore, necessary support structures would need to be established at local levels so that such skills obtained by ex-mineworkers are put into practice;
- iv. Business and entrepreneurship skills due to their relevance on business management, marketing and tendering processes. Proper knowledge on how to manage a business was found to be critical. Many people fail to nurture their businesses because they lack basic business management skills such as costing, quoting, marketing and managing their finances. Therefore, equipping ex-employees with business skills could enhance the level of successful entrepreneurs in the country which in turn can also create more employment opportunities; and
- v. Change and financial management courses, because the mindsets of ex-mineworkers need to be modified to realities of the mainstream economy, and sound investment decisions are also critical in developing a progressive citizenry. The study found that psychological trauma was common in most ex-mineworkers when they are put on the retrenchment list. This results in their failure to even accept opportunities for reskilling from their employers before they exit. On the other hand, sound investment decisions

were found to be critical at the point of exit, because that is where success and failure is determined. It would be proper to align investment advice to the ex-mineworkers' choices of portable skills.

6 CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Findings

The findings from this study were summarised as follows:

Demographics

- i. Most ex-mineworkers were found to reside within the communities surrounding their last mining employers.
- ii. Most older people (above 50 years) exited on ill-health reasons (8 out of 11) whereas retrenchments mostly affected the 30-39year group (33 out 57). The voluntary severance package (VSP) was mostly taken by those above 50 years (11 out 19).

What informed portable skills

- i. Companies were making efforts to provide portable skills to ex-mineworkers with some conducting research using surveys and best practices in the industry in coming up with a list of portable skills which employees could choose from. However, the study established that little or no efforts were made to align the skills with IDPs of local municipalities and also evaluating individual needs of the ex-mineworkers.
- ii. Some companies offered their employees an option to either receive training or take the money meant to cover the training costs. This was found to affect the uptake of skills initiatives on exit.

Types of portable skills offered and their impact

- i. There was a general misconception of what portable skills entail amongst companies and ex-mineworkers in the MMS. Occupational related courses were often mistaken for portable skills.
- ii. The study also established that most companies offered portable skills as part of compliance with the SLPs regulations. However, most companies did not offer portable skills to the employees earmarked for retrenchments during the exit processes.
- iii. Most of the sub-sectors had the following options of portable skills for their employees earmarked for retrenchment: driver's licence (Codes 10 and 14), basic electrical, basic plumbing, basic welding basic motor mechanic, computer skills, communication skills,

basic construction, bricklaying, painting, plastering, tiling, roofing, carpentry/furniture manufacturing, sewing, cooking, farming (animal and crop production) and chicken broiler (poultry).²⁴ Other support services offered by some employers included counselling, financial advice and CV writing assistance.

- iv. For the jewellery manufacturing and diamond processing sub-sectors, the study found that these were specialised industries with different skills requirements. However, only the diamond processing sub-sector ex-employees were offered some of the following portable skills: Safety Management Training Course (SAMTRAC), assessor and moderator course, Occupationally Directed Education, Training and Development Practices (ODETDP) levels 4 and 5, business management skills, basic financial management, entrepreneurial skills and computer skills.²⁵
- v. The portable skills were found to have had limited impact on the ex-mineworker since a majority (53 out of 91) were unemployed and struggling. This was compared to 38 ex-mineworkers who were either self-employed (23), re-employed in other sectors (6) or re-employed in other mines (9).²⁶ There were isolated success stories of re-employed ex-mineworkers in most of the sub-sectors due to portable skills. However, occupational related skills were found to be critical in sub-sectors with growth potential such as jewellery manufacturing due to its specialised nature. Self-employment cases were quite notable in most of the sub-sectors with portable skills such as driver's licence, basic welding, basic electrical, basic plumbing animal production (pigs), crop production, sewing and business management being quite useful.

Perceptions of stakeholders on portables skills

- i. The voluntary nature of the portable skills was found to weaken their uptake amongst most of the ex-mineworkers, especially those without adequate appreciation of the importance of transferrable skills post-mining employment.
- ii. The unemployed did not see the value of portable skills with some contemplating the option of taking money instead of training that they missed.

²⁴ Refer to Appendix 1.

²⁵ SAMTRAC is an internationally accredited course focussing on occupational risk and health, safety and environment matters. According to SAQA, an ODETP course equips practitioners such as facilitators and SDFs with general education, training and development skills to fulfil roles such as skills development, design and conduct assessment as well as learning interventions.

²⁶ Refer to Appendix 2.

- iii. The structure of the portable skills raised a lot of concerns on their credibility for meaningful post-mining livelihoods. Some questions regarded the short duration of some courses, the lack of mentorship or incubation and irrelevance of the skills offered in the local communities of ex-mineworkers.

Identified priority programmes

- i. Hi-tech based skills that are aligned to the technologically advanced manufacturing procedures currently used in other jewellery manufacturing countries for both cost and operational efficiencies. Hence, the future of jewellery manufacturing and other industries in SA is technology driven (4IR) which requires that ex-employees should be prepared accordingly.
- ii. Specialised skills relevant for emerging industries such as the renewable energies which also require specialisation. The advent of renewable energies presents vast opportunities for the people in SA. This could be another way of refocusing the mindset of the ex-employees from other sub-sectors to these new and lucrative opportunities.
- iii. Transferrable skills which enhance chances of re-employment and self-employment such as business and entrepreneurial skills, basic trade related skills (e.g. basic welding, basic plumbing, basic electrical, basic mechanic skills, etc.), driver's licence (Codes 10 and 14) and other skills (e.g. sewing, catering, computer skills);
- iv. Mine related skills (e.g. plant operators, dozers, front-end loaders, etc.)-these skills enhance one's chances of re-employment in other mining sub-sectors which have growth potential. Experience, coupled with the right skills could make the ex-mineworkers competitive when opportunities arise at other mines; and
- v. Farming (plant and animal production) which is most suitable for both rural and peri-urban communities for both commercial and subsistence purposes.

6.2 Conclusion

This study sought to assess the effectiveness of re-skilling initiatives implemented on Ex-mineworkers in all subsectors of the MMS, excluding the Services Incidental to Mining subsector. The overall aim was to assess the socio-economic changes of the lives of Ex-mineworkers post-skills development and the possibility of them re-entering the mainstream economy. The study found that mining companies were offering portable skills though the

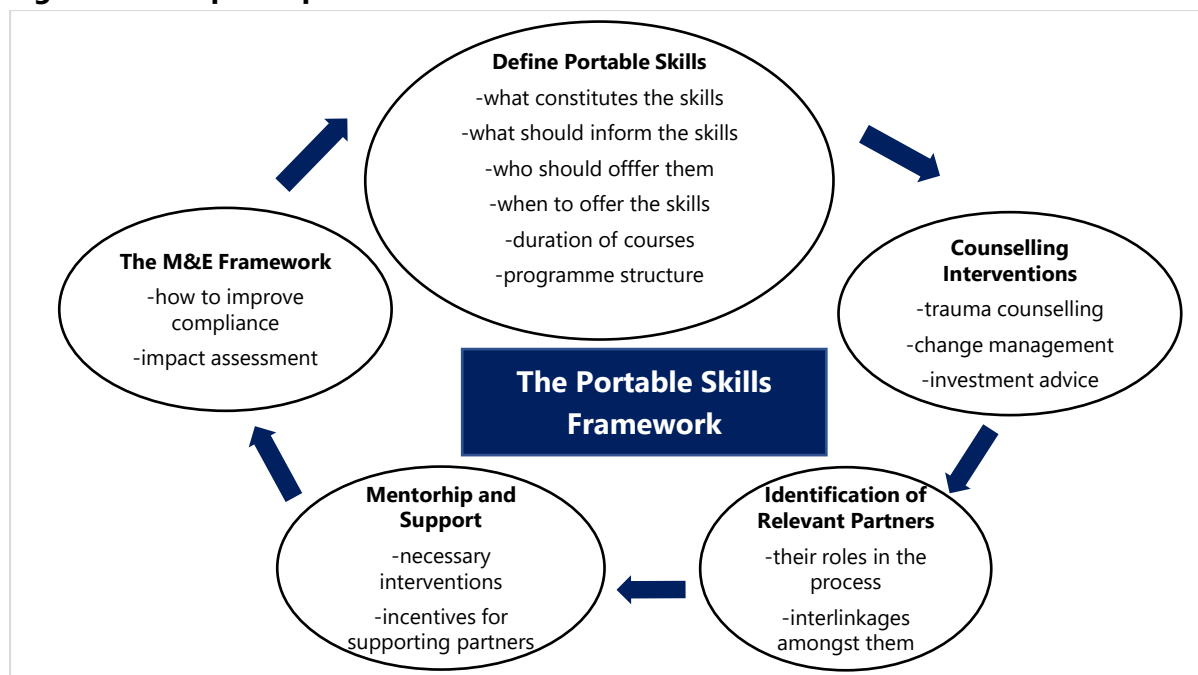
programmes were not linked to IDPs of local municipalities. It was also established that the skills development interventions were not very impactful on the lives of most ex-mineworkers post-mining as reflected by the majority who are unemployed.

6.3 Recommendations

Based on the findings, the following is recommended:

- i. There is need for the MQA to develop a portable skills framework or guideline that will standardise the manner in which portable skills are offered by companies across the MMS. This will be informed by best practices as well as success stories identified in the study. The framework will provide guidance on the following:

Figure 6.1: Proposed portable skills framework



Source: MQA Study (2019)

- ii. The MQA should spearhead the development of a reliable database for ex-mineworkers in the MMS. The database will improve efficiencies in tracking and tracing systems that support relevant interventions as well as guide the development of appropriate tools and techniques to achieve that. The MQA can facilitate this process through a more coordinated approach with all the relevant stakeholders across all the mining provinces.

- iii. The MQA should prioritise funding for skills development programmes in the following areas:
- a. Skills that are aligned to the global technological focus (4IR) to enhance the relevance of people exiting the mines in the new operating environment. The curriculum for portable skills would need to be revised to accommodate the emerging skills within the 4IR space.
 - b. Skills that are relevant to the emerging industries such as renewable energies would prove critical in improving the socio-economic impact of the skills interventions. A lot of opportunities can arise for most ex-mineworkers in the emerging industries if their training is tailored at the right point of need. Therefore, there is a need for the MQA to ensure that their accredited training providers come up with a skill set suitable to meet the requirements of these emerging industries that can be modelled into portable skills.
 - c. Skills which promote the development of entrepreneurs and growth of SMMEs such as business management, entrepreneurial skills, basic trade related skills (e.g. basic welding, basic plumbing, basic electrical, basic mechanic skills, etc.), and other skills (e.g. sewing, catering, computer skills, etc.).
 - d. Skills which are mine related (e.g. plant operators, dozers, front-end loaders, etc.) could be also considered but specifically focused on mining regions or communities where there is potential for mining growth and opportunities.
 - e. Farming related skills in both plant and animal production which is most suitable for both rural and per-urban communities for both commercial and subsistence purposes. The courses should be aligned to the farming activities which can thrive in each province as informed by the proposed destinations of ex-mineworkers post-mining.
- iv. The MQA should conduct post-mining career sessions across the MMS targeted at providing useful information on possible post-mining economic activities that mineworkers can consider and the appropriate skills and resources needed to succeed. The impact of skills interventions can only be improved if the programmes are targeted towards people with the same drive and vision with the policymakers.
- v. The MQA should provide funding for the development of centres of excellence across all provinces to train current mineworkers and ex-mineworkers on portable skills. The

sustenance of these centres once instituted could be facilitated by contributions from the mining companies as well in accordance with portable skills frameworks. Some of the idle mining infrastructure at closed mines could be utilised for this cause.

- vi. There is a need for local municipalities, mines and other local industries to be encouraged to create opportunities for ex-mineworkers who possess portable skills. This process can be improved if ex-mineworkers were assisted in forming cooperatives after training so that they can grow into SMMEs and assist in alleviating unemployment levels. A bottom-up approach should be adopted by first mapping the area locality (district or local) of ex-mineworkers to get a comprehensive picture of the main economic activities within the municipalities so as to craft interventions intended to improve and sustain the livelihood of ex-mineworkers (alignment of interventions with socio-economic context of the municipalities). This should be done with an end in mind to create money generating activities without boxing interventions into rigid courses with no or little impact of the ex-mine workers.

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APPENDICES

Appendix 1: Types of Portable Skills Provided to Ex-Mineworkers

Course	Specialisation	Credits	NQF Unit Standards	Level(s) of	Duration in Days
Engineering Skills	Pumps	20	2		20
	Globe Fitting	20	2		20
Basic Engineering	Alarm Systems	20	2		20
Basic Motor Mechanics	Motor Repair	20	2		20
	Motor Exhaust Repair	20	2		20
Welding & Torch Cutting	Cutting and Welding	33,5	2		20
Electrical Appliances	Basic Electrical Training	25	2		20
Air Conditioner Systems	Maintenance	20	2		20
Electrical Cables	Maintenance	26	2 and 4		20
Building Skills	Brick Laying	19	1 and 2		20
	Carpentry- Finishing	22	1 and 2		20
	Carpentry- Roofing	22	1 and 2		20
	Painting	25	1 and 2		20
	Plastering	18	1 and 2		20
	Plumbing	19	1 and 2		20
	Tiling	18	1 and 2		20
Short Programs	Fencing	9	2 and 3		10
	Brick/Block Making	3	2		5
	Glass Fitting	3	2		5
Road Repair Skills	Road Repair	21	2		20
Animal Production	Large Stock (Cattle)	22	1 and 2		10 to 15
	Small Stock (Sheep, Goats, Pigs)	22	1 and 2		10 to 15
	Poultry (Broilers & Layers)	17	1 and 2		10 to 15
Plant Production	Cash Crops (Maize, Sunflower, Wheat)	20	1		10 to 15
	Cash Crops (Subtropical & Deciduous Fruit)	20	1		10 to 15
	Hydroponics	13	1 and 2		20
	Vegetable Cultivation	20	1		10 to 15

Course	Specialisation	Credits	NQF Level(s) of Unit Standards	Duration in Days
	Landscaping & Gardening	25	1	10
Mechanical Training	Tractor & Implement	5	2	10
Forestry	Chainsaw & Brush Cutter	11	2	10
Computer Skills	Level 1-3	13	3	20
Entrepreneurial	Business Development			
	Entrepreneurship	1	1	2
	Principals of Business Management	1	1	5
	Advanced Entrepreneurship	8	2	10
	Basic Bookkeeping & Accounting	5	3	5
Sewing	Sewing & Manufacturing	20	1	15
Hospitality	Cooking and Baking	17	1, 2 and 3	20
Driver's License	Driver's License	-	-	20

Source: MQA Study (2019)

Appendix 2: Impact of Portable Skills

Subsector	Re-employed in another mine		Re-employed in another sector		Self-employed		Unemployed		Grand Total
	No. of Ex-mineworkers	Skills obtained	No. of Ex-mineworkers	Skills obtained	No. of Ex-mineworkers	Skills obtained	No. of Ex-mineworkers	Skills obtained	
Cement, Lime, Aggregates and Sand (CLAS)			1	Computer skills & Basic electrical			1		3
			1	Farming					
Coal Mining			1	Basic welding	2	Farming	7		12
			1	Sheet metal training	1	Catering			
Diamond Mining	1	MDP training			1	Basic welding	4		6
Diamond Processing	2	ODETDP	1	Moderator course	1	Business management course	7		11
Gold Mining	1	Home maintenance and Communication skills			1	Basic electrical	21		28
					1	Small-scale farming			
					4	Entrepreneurship			
Other Mining					1	Code 14 driver's licence	4		9
					1	Basic welding			
					1	Painting			
					1	Basic plumbing			
					1	Tiling			

Subsector	Re-employed in another mine		Re-employed in another sector		Self-employed		Unemployed		Grand Total
	No. of Ex-mineworkers	Skills obtained	No. of Ex-mineworkers	Skills obtained	No. of Ex-mineworkers	Skills obtained	No. of Ex-mineworkers	Skills obtained	
PGM Mining	1	Artisan Learner (Diesel Mechanic)	1	Driver's licence	1	Sewing	1	Belt Attendant	18
	1	Box Controller			1	Basic welding	1	Code 10 drivers' licence	
					1	Basic plumbing	1	Dump truck	
					1	Farming	2	LHD Dump Truck	
					1	SAMTRAC	1	Pump Attendant	
					1	Fitter and turner, Civil engineering	1	UV (Utility Vehicle)	
					1	Legal liability	1	Safety (Competence B)	
Jewellery Manufacturing	3	-					1	-	4
Grand Total	9		6		23		53		91

Source: MQA Study (2019)

Key:

	Portable Skills
	Occupational Skills