CHAPTER 4

INTERNATIONAL, REGIONAL AND LOCAL EXPERIENCES IN SMME DEVELOPMENT

4.1 SMMEs as major employment creators – evidence from industrialized countries

In many industrialized countries, 1970s and 1980s witnessed the re-emergence of the small business sector due to two major events. First, spectacular cases of large enterprises running into economic difficulties and shedding employment arose in nearly all industrialized countries, while the latter's small business sectors (or parts of it) went relatively well through the period of economic turbulences that started in the early 1970s. Second, Birch's (1979; 1987) finding that small businesses created the majority of new jobs in the United States, spread quickly around the world and provoked an upsurge in research on employment shifts towards smaller businesses.

The Organization of Economic Co-operation and Development (OECD) countries which accounts for over 75% of the world output, concluded in 1985 that, in several of its member states, a tendency towards the concentration of workers in small businesses could be found, even after accounting for shifts in industrial structure or sectoral composition (OECD, 1985). Reviewing data on employment shares by enterprise size for nine industrialized countries, Loveman and Sengenberger (1990:8) confirm that,

"[…] despite significant cross-national differences in the size distribution and despite methodological caveats, the employment share of small enterprises has reversed a downward trend that had prevailed for many decades and risen significantly […]. Taken together, the case studies present a convincing case for a shift in employment to smaller units of production".

According to Harrison (1994), it is important to guard against rushing into premature and overly general conclusions as to the economic implication of the shift toward smaller units. Job generation studies show that the employment dynamic accompanying *new* business formations and business *closures* is very important to net employment contribution of smaller businesses (Becattini, 1990; Koshiro, 1990; Mead, 1999). Many of the recent firm births in industrialized countries may have been induced by poor economic conditions in general and by high unemployment in particular. Those undertaken as "last-ditch" attempts to provide livelihood to the founder may rest on especially shaky ground and their failure rate might therefore be expected to be abnormally high as either good times draw the entrepreneur back into dependent employment or bad times topple the weak business (Sengenberger *et al*., 1990; OECD, 1993).

Nevertheless, it has now been acknowledged that a large majority of business units in industrialized countries are small, and even a conservative review of the job generation literature suggests that small businesses account for at least a proportional share of employment creation. The net new jobs created in small businesses, however, result from a very dynamic process of expansion and contraction within the small business castor. While some small businesses start and remain small throughout their existence, others experience stages of growth, and senescent businesses even decline (Timmons, 1994). Large employment gains occur seemingly only in a few small businesses (Sengenberger *et al*., 1990; Qualman, 1998; Mead, 1999). Research by the European Commission has shown that only enterprises characterized as fast growing contribute some 50% of net job creation (Papoutsis, 1996).

4.2 SMMEs as major employment creators - the experience in African countries

In Africa as well as in other less developed countries, SMMEs (and micro enterprises in particular which constitute their majority) have received mounting attention because of their labour absorptive capacity in times of both

shrinking public sector and private formal economy, and increasing numbers of new labour entrants. With the shift of industrial policy away from import substations and of trade policy towards liberalization, SMMEs are moreover expected to respond flexibly and thus withstand global competition (Hirst and Zeitlin, 1992; Bambara, 1995; Kalinsky, 1997; Schmitz, 1997). While the Latin American experience of both single and especially clustered SMEs confirms the dynamism associated with SMEs (Cortes *et al.,* 1987; Rabellotti, 1999; Schmitz, 1999), there has been little systematic evidence on the incidence micro-enterprise "graduation" or growth into larger ones in Africa (Mead and Liedholm, 1998; Mead, 1999). Indeed, one-person operations constitute the majority of small scale industry in Africa, and only about 1% succeeds in graduating to an intermediate-size (Mead, 1995; Dia, 1996; McPherson, 1996; Ferrand, 1997; Manu, 1999). It is argued that latest technologies are not yet available, but instead technology which has already been commercialized by foreign companies is implemented. Moreover, product specification is, in most cases, not a strategic answer to segmented markets, but lack of resources (Pedersen *et al.,* 1994; Amsden, 1997). Virtually all SMMEs operate in conditions of excess supply of relatively unskilled and unorganized labour, which allows them to transmit the burden of unstable markets on their employees and to base competition on squeezing labour costs rather than innovation or technological upgrading (Storper, 1991; Schmitz, 1995; McComick, 1999). Unlike in South Korea where large businesses function as catalysts of growth to their subcontractors, corporate subcontracting to small and mostly "informal" businesses in Africa is more than often a means to reduce costs by exploiting labour-surplus conditions and circumventing regulations and trade union organizations (Pedersen and McCormick, 1996). Clusters of sector-specific businesses exist in Africa, but their growth experiences vary and differ markedly from other developing countries cases, like the successful Sinos Valley shoe cluster in Brazil and the surgical instruments cluster in Sialkot, Pakistan, or from the "model" industrial districts of Italy (Dawson, 1992; Rasmussen, 1992; Sverrisson, 1992; Maldonado, 1993; Nadvi, 1994; 1997; Schmitz, 1993; 1995; Yankson, 1996; Advani, 1997; McCormick *et al.,* 1997; McCormick, 1999). Indeed, strong social ties and networking, reported to be essential for the success of industrial districts in

Europe, have ambiguous effects on firm growth in Africa: While being supportive amongst the Igbo in Nigeria, research in Kenya suggest that the successful African entrepreneur has loosened his networks based on kingship and social ties in general (Brautigam, 1997; Ferrand, 1997; McCormick *et al.,* 1997). Furthermore, formal institutions in Africa face crises of legitimacy and enforcement by not being rooted in local culture and therefore are far from conducive to enterprise growth (Steel, 1995; Dia, 1996).

The above suggests that models of competitions and growth trajectories of SMMEs vary across continents and countries (Khoza, 1993; Humphrey & Schmitz 1995; Amsden, 1997; Gordon, 1997; McCormick 1999). Research findings on SMMEs throughout Africa are diverse, albeit they show widely that it cannot be enterprise size as such which determines a firm's growth potential for success and failure of SMMEs to co-exist and instead point to the role of the entrepreneur (Sengenberger *et al.,* 1990; Späth, 1994; King and McGrath, 1999). The predominance of SMMEs in the industrial tissue, both in terms of numbers and employment opportunities generated, demonstrates that SMMEs form an important part of African economies and have found their own ways to deal with market instability and uncertainty. Nevertheless, the critical underlying issues of the viability of these small firms, and the sustainability and quality of the employment generated by them remain still unclear (Späth, 1994; Dia 1996; McCormick *et al.,* 1997).

4.3 Employment creation through SMMEs – South Africa's debate

4.3.1 Government's perspective: SMMEs as a vehicle to tackle the problem of unemployment

Since the elections of April 1994, the issue of black economic empowerment and a more equal income distribution have been placed high on the agenda of the government of South Africa (Rogerson and Rogerson, 1995). Nevertheless, the need to take the South African economy onto "a higher road", i.e. a diversified economy in which productivity and international competitiveness are enhanced, wage-levels are raised, investment is

stimulated and entrepreneurship flourishes, is recognized as a condition to address these issues successfully (RSA, 1994; 1995). In the 1995 White Paper on National Strategy for the Development and Promotion of Small Business in South Africa, the government assigns the SMME sector a key role in South Africa's socio-economic transition (RSA, 1995:10). In particular, SMMEs are seen as a vehicle to:

- Address the problem of high unemployment levels in South Africa as they have a high labour-absorptive capacity.

- Activate domestic competition by creating market niches in which they grow until they identify a new niche as a response to demand changes and to be internationally competitive because of their flexibility.

- Redress the inequalities from the apartheid period – in terms of patterns of economic ownership and restricted career opportunities for black employees.

- Contribute to black economic empowerment in that the majority of SMMEs is reported to be initiated, owned or controlled by those members of society who were discriminated against in South Africa's past.

- Play a crucial role in peoples' efforts to meet basic needs in the absence of social support systems during restructuring processes – which refers in particular to South Africa's micro-enterprise segment and especially survivalist activities characterized by low entry barriers for inexperienced job seekers.

4.3.2 Government initiative: Supply-side policy to promote SMMEs

The South African government suggests that the SMME sector – with the help of the government support – is capable of fulfilling these objectives and has introduced a number of supply-side measures to promote the formerly

neglected sector (RSA, 1995:10). The overall objective is “to create an enabling environment” and “to level the playing fields” in terms of national, regional and local policy frameworks for SMME development. More particularly, policy measures are aimed at:

- Addressing the obstacles and constraints that SMMEs face to promote (faster) growth.

- Enhancing their capacity to comply with the challenges of globalization and an internationally competitive economy.

- Strengthening their cohesion to increase the leverage of policy measures.

The mechanisms used for small business support involve institutional and regulatory reforms. Ntsika enterprise Promotion Agency and Khula Finance Limited had been established to act as intermediaries to address SMME constraints such as access to finance and information. The DTI itself administers programmes aimed at increasing SMME competitiveness such as co-financing the acquisition of new technology, for example. Regulatory reforms include, for example, the procurement reform with an affirmative of small, medium and micro enterprises participation programme (RSA, 1997).

Nevertheless, so far, no clear differentiation between promoting dynamic firms on the one hand and survivalist activities on the other – which would rather be the focus of welfare than industrial policies – has been made. There are also indications that – in launching the implementation of several programmes – the South African government severely underestimated the problems of establishing a whole set of new support institutions, the capacity of these institutions to deliver, and the capacity of the existing NGO network in South Africa to become involved in the highly ambitious set of programmes that were to be implemented (Hirsch and Hannival, 1998; Rogerson, 1998; Bloch and Kesper, 2000).

4.4 Conclusion

This chapter outlined international, regional and local experiences with regard to SMME development with a major emphasis on SMMEs as major employment creators.

In the following chapter, the South African government's National Strategy for the development and promotion for the small business sector will be discussed; emphasizing on its evolution and the development of its institutional framework.

CHAPTER 5

SOUTH AFRICA'S STRATEGY FOR THE DEVELOPMENT AND PROMOTION OF THE SMME SECTOR

5.1 The evolution of the SMME policy framework

During apartheid, South Africa's SMME economy was either largely neglected by policy makers or, in case of black-owned enterprises, actively discouraged by repressive measures. In line with the political disinterest, small enterprises were wiped off the research agenda of most business schools and university commerce departments.

The establishment of the Small Business Development Corporation (SBDC) in the early 1980s was the first government initiative to support small firms, but only in the late 1980's did a racially unbiased political interest in the development of the small business sector in South Africa begin to take root. The political shift provoked an upsurge of literature on small businesses, in particular black-run micro-enterprises. Most surveys of the early 1990s focused on black-run micro enterprises and used cross-section surveys to identify their constraints. Nevertheless, the notion that it is the larger SMMEs that are more likely to contribute to employment creation and economic growth, gave impetus to a renewed (largely industry-specific) focus on established, albeit white-owned, SMEs in South Africa (Bloch and Kesper, 2000).

In months following the first South Africa's democratic elections in 1994, academics, politicians, small business agency representatives and foreign specialists started analyzing the problems affecting the small-enterprise sector, a few of which included the abolition of regulatory obstacles and lack of access to finance, infrastructure, advice and markets. In the time leading up

to the elections, position papers were circulated, workshops held and visits made to other countries.

Against this background, the Government of National Unity placed the reform of small-business support high on its agenda with the Reconstruction and Development Programme (RDP). By mid 1994, the then, Minister of Trade and Industry, Mr. Trevor Manuel, had appointed a special advisor for small business support and promised to have a government position paper prepared as early as possible.

Based on this work and contributions from many organizations, a discussion paper was released at the end of September 1994. This paper was widely discussed all over the country. Many organizations sent in comments and proposed amendments. This feedback led to substantial revisions and additions, which culminated in the White Paper on National Strategy for the development and promotion of the small business sector in South Africa, presented to cabinet and parliament. Simultaneously to the drafting of the White Paper, preparations were in progress for the President's Conference on Small Business, which was held in the last week of March 1995. From the outset, the directive of the conference was to heighten public awareness about the plight of small, medium and micro enterprises.

In the months following the White Paper, the newly established Center for Small-Business Promotion (CSBP) within the Department of Trade and Industry embarked on a vigorous campaign to determine delivery mechanisms to support the small, medium and micro-enterprise sector.

In May 1995, the Center for Small Business Promotion commenced with drafting the National Small-Business Enabling Act, as an instrument block to underpin government's commitment and strategy to facilitate a more enabling environment for small businesses in South Africa.

As its name indicates, the Act was to create a positive, enabling environment for emerging and expanding small, medium and micro-enterprises (SMMEs),

with particular emphasis on the impediments faced by black entrepreneurs and others disadvantaged in the past.

This 1995 White Paper on National Strategy for the development and promotion of small business in South Africa had been the first major effort by the South African government to design a policy framework particularly targeting the entire spectrum of the small enterprise sector.

The overall objective of the Strategy was to create an enabling environment for SMME growth in the country as a way of addressing basic inequalities in the economy. The mechanism for small business support outlined in the White Paper became constitutional through the National Small Business Act, which also provides the first comprehensive definition of SMMEs. The Act legalized the establishment of new institutions, affirmative procurement reform and the formation of an advisory board to review SMMEs' legal and regulatory environment.

In an attempt to overcome the historical definition of small enterprises as formal (which was due to apartheid white-owned only) and informal (mostly owned by blacks), the post-apartheid government put forward the first national and most comprehensive definition of SMMEs, which is manifested in the National Small Business Act.

The following characteristics of the four categories should help to justify particular policy stances outlined in the White Paper.

Survivalist enterprises

These are activities by people unable to find a paid job or to get into an economic sector of their choice. Income generated from these activities usually will fall short of even a minimum income standard, with little capital invested, virtually no skills training in the particular field and only limited opportunities for growth into a viable business. Poverty and the attempt to survive are the main characteristics of this category of enterprises. Support

strategies should primarily help these people – a large percentage of whom are women – to get out of this sector. Given the large number of people involved in survivalist activities, this constitutes a vast challenge, which has to be tackled within the broader context of the Reconstruction and Development Programme (RDP).

Micro-enterprises

These are small businesses, often involving only the owner, some family member(s) and at least one or two paid employees. They usually lack "formality" in terms of business licenses, value-added tax (VAT) registration, formal business premises, operating permits and accounting procedures. Most of them have a limited capital base and only rudimentary technical or business skills among their operators. However, many micro-enterprises differ widely, depending on the particular sector, the growth phase of the business and access to relevant support.

Small enterprises

These constitute the bulk of the established businesses, with employment ranging between 5 and about 50. The enterprise will usually be owner-managed or directly controlled by the owner-community. They are likely to operate from business or industrial premises, be tax-registered and meet other formal registration requirements. Classification in terms of assets and turnover is difficult, given the wide differences in various sectors like retailing, manufacturing, professional services and construction.

Medium enterprises

These constitute a category difficult to demarcate vis-à-vis the "small" and "big" business categories. It is still viewed as basically owner/manager controlled, though the shareholding or community control base could be more complex. The employment of 200 and capital assets (excluding property) of about R15 million are often seen as the upper limit. In terms of this study we

are concerned with medium-sized enterprises which face obstacles and constraints which can not be solved through normal market forces and private-sector action.

It follows from these distinctions and it is a fundamental principle of the government's SMME support strategy that the problems of each of these four categories need somewhat different policy stance.

Equally important for small business support in South Africa is the recognition of the particular problems and needs of enterprises initiated, owned or controlled by those who are disenfranchised and/or otherwise discriminated against in the past. Aside from the racial dimension, i.e. enterprises owned and controlled by black South Africans, reference should also be made to women and all other disadvantaged and marginalized groups, including those in remote rural areas as well as disabled, elderly people and the youth. Such enterprises are found in all four of the above categories.

Since publicly funded support for small enterprises should only be granted to those really needing it, the government created the mechanism to identify types of enterprises based on sectoral, size and developmental criteria.

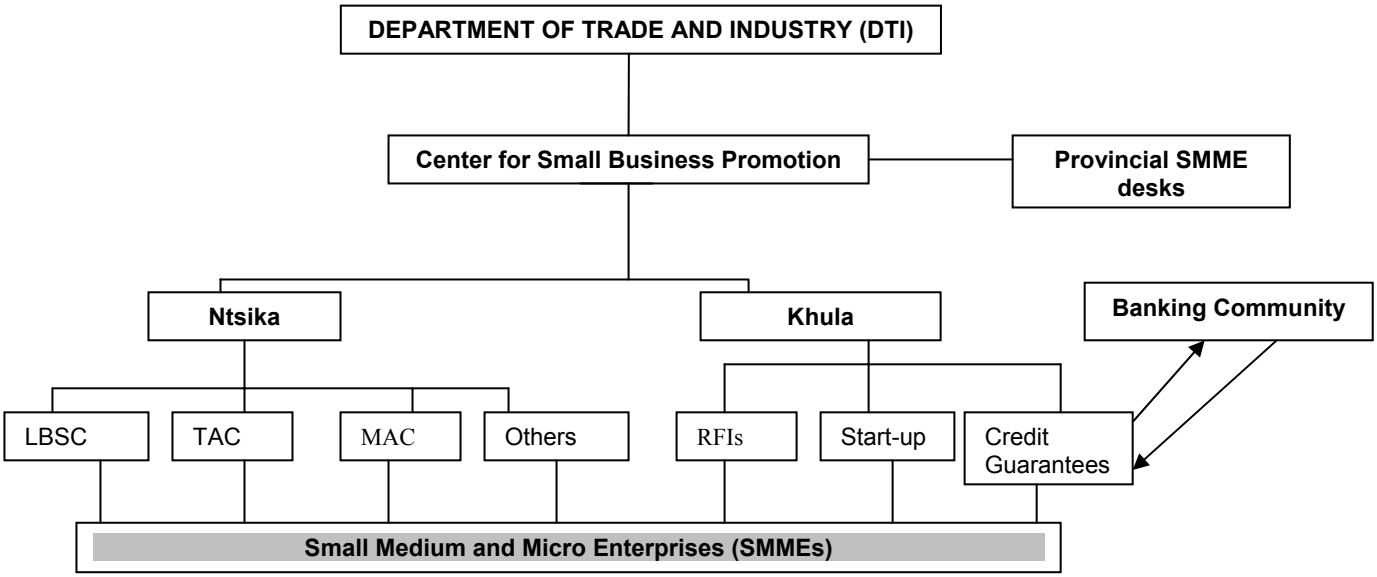
5.2 The development of institutions to facilitate SMME growth

In response to the challenges set out in the White Paper, the Centre for Small Business Promotion (CSBP) of the DTI and the National Small Business Council (NSBC), as well as Ntsika Promotion Agency (in short Ntsika or NEPA) and Khula Enterprise Finance Limited were established to drive the National Small Business Strategy. While the NSBC had the task of "democratizing" the issue of small business development (although it was closed in 1997 due to allegations of misuse of funds) and the CSBP was mandated to "coordinate, monitor and evaluate the implementation of the government's Strategy", Ntsika and Khula are expected to build the technical and financial capacity of non-financial and financial retail services providers (RSA (1995), Ntsika (1997), DTI (1998) and Hirsch and Hanival (1998)). The

DTI, together with the Industrial Development Corporation (IDC), have introduced a number of specific programmes aimed at increasing the competitiveness of the formal SMME manufacturers. From interviews conducted, there are, however, indicators that, despite their good intentions, these policy measures suffer from sub-optimal implementation due to a general distrust of external agencies by SMMEs on the one hand, and the incapacity of support institutions to persuasively raise awareness about their existence and effectives on the other.

The institutional framework i.e. the SMME support network developed under the National Small Business Act for the development and promotion of SMMEs is as shown in figure 5.1.

Figure 5.1: Institutional framework structure of the South African's National Strategy for the development and promotion of the SMME sector



5.2.1 Department of Trade and Industry and its related institutions

A number of DTI Incentive Schemes were designed exclusively for (registered) SMME industrialists and include the following:

- **Standard Leased Factory Building Scheme**

This scheme is of the Industrial Development Corporation (IDC), which makes general purpose factory buildings available for lease to SMEs.

- **Small/Medium Manufacturing Development Programme (SMEDP)**

This consists of a tax-exempt establishment grant as a percentage of the investment for the first two years and a Skills Support Programme (SSP) if the business has an approved training programme as outlined in the 1998 Skills Development Act.

- **Economic Empowerment Scheme**

This is for the expansion or establishment project of previously disadvantaged Individual (PDI) SMME entrepreneurs to which the IDC contributes the majority of capital outlay.

- **Venture Capital Schemes**

In this scheme the IDC co-finances viable product ventures.

- **Normal Finance Scheme**

This scheme provides for low-interest IDC-administered finance during expansion.

- **Import Finance Scheme**

This scheme provides credit and guarantee facilities for importing capital goods and services.

- **Short-Term Export Finance Guarantee Facility**

This facility is through which the Credit Guarantee Insurance Corporation (CGIC) can provide pre- and post-shipment export finance guarantee.

- **Export Marketing and Investment Assistance Scheme (EMIA)**

This scheme provides funding of primary market research, outward selling and inward buying trade missions and assistance to take part in exhibitions. Moreover, Ntsika has established the European Union Trade and Investment Programme under the auspices of the DTI to enable SMMEs through technical assistance to become exporters.

5.2.1.1 Center for Small Business Promotion

The Center for Small Business Promotions was conceived as the central policy-making, coordinating, and performance-monitoring group of the government's National Strategy. Specifically, the White Paper states the following:

"Within the national government the DTI is the coordinating body for all policies related to the small business sector and for all SMME-supported programmes directly or indirectly assisted by the government, it is also responsible for the coordination of small business strategies pursued by the provincial government within the national policy framework".

The White Paper states that *"a Chief Directorate for Small Business will be responsible for all matters related to the government's support for small, medium, micro and emergent enterprises".* Thus, the White paper gives the CSBP a large measure of authority to lead the entire government's programme related to the National Strategy.

5.2.1.2 Ntsika Enterprise Promotion Agency

Under the National Strategy, Ntsika was given the mandate to provide a wide range of non-financial services to local service delivery groups on a "wholesale" basis, meaning delivery of resources to local providers that work directly with SMMEs. These services include institution building of these organizations, training programmes for entrepreneurs, mentoring of individual firms, marketing and procurement advice, technology assistance, among others. Given the sheer range of these activities, it is clear that Ntsika's mandate is critical to the success of the government's National Strategy.

Ntsika has the following institutional framework:

- **Market access and business division**

This division runs the Tender Advice Centers (TACs), the Business Opportunities National Initiative and the International Competitiveness programme. The Tender Advice Centers have constituted the most promising element to using public procurement to assist small business with entering in new markets. Indeed, it is through the procurement system that Ntsika can link its activities with the many government departments able to offer market opportunities to small business and ultimately create new jobs.

- **Targeted assistance division**

This division is responsible for working with previously disadvantaged sectors, primarily women, youth, disabled people and the rural population. Targeted assistance has a clear social and development focus by working with those elements of the population who are least easily served. The division is clearly focused on objectives of assisting the Previously Disadvantaged Individuals (PDIs) category, particularly rural women, and addressing the issues of disempowerment of these groups. The programme is also one that reaches deeper into the rural areas than other Ntsika-sponsored initiatives. Its

objectives are clearly social and development, with limited impact on larger scale job creation.

- **Management and entrepreneur development division**

This division runs the following programmes:

  - Training and Organizational Capacity Building.
  - SMME Contracted Training Programme.
  - Development/Sourcing of Training Materials.

- **Technology division**

The division runs the Technopreneur and Manufacturing Advisory Centers (MACs). The Technopreneur programme has the most clearly integrated operation with complementary programs and institutions outside Ntsika, and provides the greatest amount of follow through with individual companies through the incubator and cocoon programmes. The two existing Manufacturing Advisory Centers similarly focus on a more integrated assistance to companies than is typical in other Ntsika operations.

The focus of the division tends to be on small to medium size firms where job creation potential is greater.

- **Business development division**

This division manages:

  - Services Provider Development Programme.
  - Services Provider Network Development Programme.

- Empretec Program.
- Local Business Service Center (LBSC) Programme.

- **Policy, research and information division**

The division runs:

- National Small Business Data Programme.
- Programme Development and Implementation Support.
- National Small Business Research Programme.
- National Small Business Regulatory Review.

This division is intended to be the policy arm for Ntsika, which was initially conceived as the policy center for the National Strategy.

5.2.1.3 Khula Enterprise Finance Limited

Khula Enterprise Finance Limited was mandated to undertake an ambitious task for the country, namely, improving access to finance for the country's large SMMES sector, with special emphasis on its previously disadvantaged population. Khula's mission is a critical composition of the National Strategy's long-term success.

Since its establishment in 1996, a number of loan schemes to increase access to finance SMMEs through Retail Financial Institutions (RFIs), which are SMME departments for commercial banks or accredited NGOs were introduced. RFIs apply their own minimum lending criteria (the most basic is provision of a business plan) as the responsibility of risk assessment lies entirely with the RFIs. This might explain why only four out of every 300

applications had been granted a loan (Khula Website report for 1999). The schemes currently existent can be grouped as follows:

- **Business Loan Schemes**

Loans to the value of R1 million to R100 million are forwarded to RFIs to capacitate them or increase their willingness to provide loans to SMMEs.

- **Guarantee schemes**

Guarantees are underwritten by Khula to reduce the risk of lending to SMME without sufficient collateral. The Emerging Entrepreneur Scheme, for example, targets existing SMMEs which need up to R75 000 of which Khula guarantees up to 80%, while the maximum amount covered by Khula under the Standard Scheme is R600 000. A special product called "Siza Bantu" was introduced in 1999 for micro-loans up to R10 000, which are 95% guaranteed by Khula. "Khula Start" is a progressive loan guarantee scheme targeting an enterprise venture of groups in peri-urban or rural areas of up to ten individuals. Initially, between R300 to R600 are lent monthly and repayable in four months. After the successful completion of this phase, larger loans with longer repayment periods are granted.

- **Equity funds**

Through the Internet-based Emerging Enterprise Zone (EEZ) as part of the Johannesburg Securities Exchange (JSE), SMMEs are expected to gain access to equity funding (up to R250 000, constituting less than 45% of total equity and to be re-capitalised within five years) from private investors with whom Khula might partner. This scheme has seen four (out of 36) successful applications. Unclear business plans or problems to determine the willingness or ability to repay have been two of the reasons for rejection (Khula Annual Website Report for 2002)' while only a minority of SMMEs has access to the internet (Ntsika, 2002:10).

In addition, Khula Institutional Support Services Limited offers seed loans to organizations that aim to become RFIs. Khula also runs a capacity building programme for existing RFI staff.

Khula's Institutional Support Services (ISS) division was established in 1997 as a section 21 company to assist in capacity building for the RFIs. The ISS was a direct response to the lack of institutional infrastructure within the RFI network to conduct onward lending to SMMEs using Khula capital. A range of needs was identified in the early years of Khula which are to be addressed by ISS, namely, strategy, and board development, loan officer training, management information systems, accounting and auditing, legal issues, and human resources. The ISS delivers these activities directly to the RFIs by contracting with consultants to undertake specific assignments.

5.2.1.4 Provincial SMME desks

The provincial SMME desks were established to ensure provincial representation of SMME interests as well as to contribute to the implementation of the government's National Strategy. Their main task is to link national or sectoral programmes with local or regional implementation bodies and to establish a comprehensive SMME database on which national policy changes can be based. Nevertheless, the capacity of these Desks varies. In 1997, Mpumalanga's SMME desk had established SMME database and synergistic network of SMME service of SMME providers, while the Northwest SMME desk had undertaken no such action (Rogerson, 1997). In 2000, only two of the nine provinces organized annual Service Provider Forums (Block and Daze, 2000).

Besides these SMME-specific institutions and programmes, the (formal) SMME economy is surrounded by a rich body of sector and industry-specific institutions (Dune, 1998; Kaplinsky and Morris, 1999 and Bloch and Kesper 2000).

5.3 Conclusion

This chapter outlined the government institutional framework of the National Strategy for the development and promotion of the small business sector in this country, with a specific emphasis on the institutions created within that framework.

The following chapter will tend to discuss the South Africa's mining industry focusing on its general overview.

CHAPTER 6

SOUTH AFRICA'S MINING INDUSTRY OVERVIEW

6.1 Introduction

For more than a century, South Africa's mining industry, largely supported by gold, diamond, coal and platinum production, has made an important contribution to the national economy (Department of Mineral and Energy: South Africa's Mineral Industry Review, 2004/2005). It has provided the impetus for the development of an extensive and efficient physical infrastructure and has contributed greatly to the establishment of the country's secondary industries.

According to the same review the South African mining industry is a well-established and resourceful sector of the economy, and has a high degree of technical expertise and the ability to mobilize capital for new development. Mining is South Africa's largest industry sector, followed by manufacturing. Other sectors, which contribute significantly to the country's economy, are oil and gas, chemicals, agriculture and tourism. The clothing and textiles, financial services and banking sectors have also had significant growth in recent years.

South Africa is a leading world supplier of a range of minerals and mineral products of consistently high quality. According to South Africa's Mining Industry Review (2004/2005), in 2004, some 59 different minerals were produced from 993 mines and quarries, of which 49 produced gold, 28 platinum-group minerals (PGMs), 64 produced coal and 145 produced diamonds. Mineral commodities were exported to 82 countries.

6.2 Structure of the South African mining industry

Democratic change in South Africa during the 1990s resulted in the endorsement of the principles of private enterprise within a free-market system, offering equal opportunities for all the people. The State's influence within the mineral industry was confined to orderly regulation and the encouragement of equal opportunities for all citizens.

Discriminatory policies excluded a large sector of the population from fully participating in the South African mining industry during the pre-1994 period, before democracy was realised. The new Minerals and Petroleum Resources Development Act, which came into effect on 1st May 2004, legislates the official policy concerning the exploitation of the country's minerals. The Act addresses many issues, including the following:

- Transformation of the minerals and mining industry in South Africa.
- Promotion of equitable access to South Africa's mineral resources.
- Promotion of investment in exploration, mining and mineral beneficiation.
- Social-economic development of South Africa.
- Environmental sustainability of the mining industry.

Previously in South Africa, mineral rights were owned either by the State or the private sector. This dual ownership system represented an entry barrier to potential new investors. Government's objective is for all mineral rights to be invested in the State within the next five years, with due regard to constitutional ownership rights and security of tenure.

6.2.1 The private sector

Corporate restructuring of the South African mining industry, which has been in progress for over a decade, continued throughout 2004. Mining houses were transformed into focused mining companies by shading their non-core industrial holdings. The transformation included the consolidation of ownership through minority buy-outs, the transfer of primary listings (and corporate head-offices) offshore, as well as the purchase of South African mining assets by foreign companies.

As the South African mining industry is still controlled predominantly by white males, emphasis is being placed on stimulating black and women economic empowerment in the industry. Several black-owned firms are now beginning to play an important role in the industry. Mining has thus become a focus of the Reconstruction and Development Programme in terms of entrepreneurial development, black economic empowerment and stimulating employment and growth.

The broad-based social-economical empowerment Charter for the South African mining industry was promulgated in May 2004. The Charter calls for Historically Disadvantaged South Africans (HDSAs) to control 15% of mines within five years, rising to 26% within ten years. The mining empowerment Charter stresses commitment to pursue a shared vision of a global competitive mining industry that draws on the human and financial resources of all South Africa's people, and offers real benefits to all South Africans. The goal of the Charter is to create an industry that will reflect the government's promise of non-racial South Africa.

In order to give effect to the provisions contained in the Broad-Based Socio-Economic Empowerment Charter for the mining and mineral's industry, a scorecard was released. The score card is designed to facilitate the application of the Charter in terms of the Minerals and Petroleum Resources Development Act requirements for the conversion of all the "old order rights"

into “new order rights” within a five year conversion window period, but recognizing the full 10-year period.

During 2004, the Department of Minerals and Energy drafted proposals for a Precious Metals and Diamond General Amendment Bill with the intention to improve access to rough diamonds and precious metals for the purpose of local mineral beneficiation or value adding.

6.2.1.1 Black economic empowerment mining companies

The first notable activity in the operating and developing black economic empowerment mining companies in South Africa was when African Rainbow Minerals (ARM) acquired several shafts from AngloGold’s Vaal Reefs Mine in 2001. ARM also jointly developed a platinum mine with Anglo Platinum, as well as entering into a joint venture with Harmony Gold to exploit several Free State assets acquired from AngloGold.

Black economic empowerment (BEE) mining deals worth about R6.5 billion were concluded in 2004 and new giants such as African Rainbow Minerals and Mvelaphanda Resources are shaping the new South African mining landscape. Most of the BEE deals are taking a form of mergers and acquisitions. Prominent deals in 2004 include the purchase of 18 percent of Lonplats by Incwala Resources amounting to R3 187 billion, the JCI unbundling totaling R1 840 billion and the R1 276 billion merger of Pelawan Investments and Anooraq Resources Corporation.

Other black economic empowerment mining companies’ initiatives include the following:

- The empowerment mining company Khumo Bathong Holdings closed a deal with Durban Roodepoort Deep, South Africa’s fourth largest gold producer. Khumo Bathong also closed a deal with Durban Deep’s Crown Gold Recoveries operations.

- Mvelaphanda Resources closed a deal with De Beers. The two companies are jointly searching for new kimberlites, or primary sources of diamond. The joint venture will focus on the Limpopo and Mpumalanga provinces, an area for which De Beers already has a considerable database.

- Mmakau mining is also a black empowerment mining company with interests in platinum.

- Eyesizwe coal formed a joint venture with AngloCoal, creating a new black empowerment company producing 18 million tons of coal per year.

- The DeBeers diamond company has several outsourcing and joint venture operations with black economic empowerment companies.

- Harmony Gold and a black-owned mining company, African Vanguard Resources concluded a deal for Gold explorations and mining.

- Angloplatinum nominated a consortium headed by the black empowerment group, New Mining Corporation (NMC), as its partner in a R1.7 billion Der Brochen platinum project. The mine is expected to produce an average of 160 000 ounces a year between 2005 and 2012.

- AngloCoal has identified a number of coal reserves, which are suitable for black economic empowerment (BEE) mining ventures and is also in the process of reviewing its total Base Metals and Industrial Minerals Rights Database with a view of releasing certain rights suitable for BEE mining ventures.

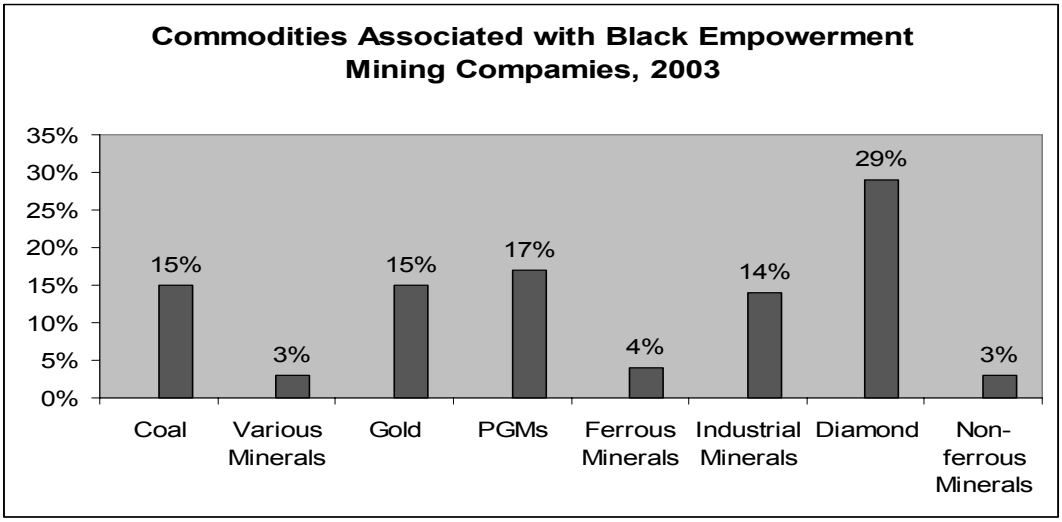
Numerous smaller groups and companies also carry out mining and beneficiation activities. Not only do they contribute towards the creation of employment opportunities, but they also exploit the relatively smaller mineral deposits which may not be considered economically attractive to the larger groups. The National Small-scale mining development framework established

in 1999 is contributing to the development of the junior mining sector. The unique mechanism of the framework was designed to assist first-time entrepreneurs in overcoming the many obstacles faced by small-scale miners. Many co-operative organisations protect and serve the interests of the smaller groups and independent operators, or specific sectors of the industry. These include the aluminium Federation of South Africa, the South African Copper Development Association, the Ferro-Alloy Producers Association, the Engineering Industries Federation of South Africa, the Southern Africa Stainless Steel Development Association and the Aggregate and Sand Association of South Africa.

According to the Department of Minerals and Energy, the database of black empowerment companies reached 72 in number by 2000 but its current official database (2004) has 44 black empowerment companies. These 44 black economic empowerment mining companies are the sample of the second phase of this study.

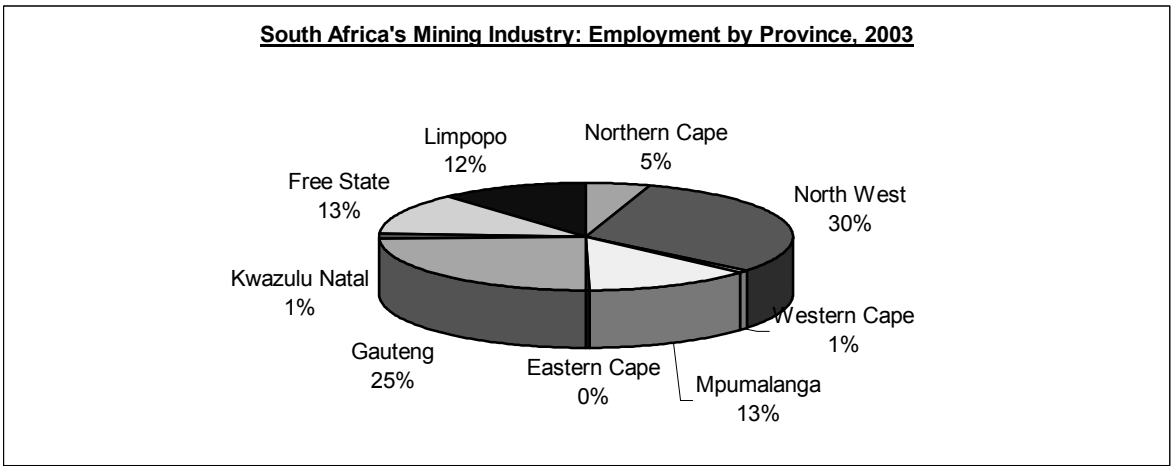
These black empowerment mining companies are actively involved in a number of mineral commodities and their geographic distribution covers the entire country as figures 6.1 and 6.2 depict:

Figure 6.1: Commodities associated with small black economic empowerment mining companies, 2003.



Source: Department of Minerals and Energy: South Africa's Mineral Industry (2002/2003): Director Mineral Economics, Pretoria.

Figure 6.2: Geographical distribution of small black economic empowerment mining companies, 2003.



Source: Department of Minerals and Energy: South Africa's Mineral Industry (2002/2003): Directorate: Mineral Economics, Pretoria.

6.2.1.2 Chamber of mines

The Chamber of Mines of South Africa is a voluntary, private sector employer's organization founded in 1889 – three years after gold was discovered on the Witwatersrand. The Chamber is an association of mining companies and mines operating in gold, coal, diamond, platinum, lead, iron ore, manganese, antimony, zinc and copper mining sectors. According to the Department of Minerals and Energy (2003), in recent years the Chamber's role and functions have undergone a substantial change in view of the developments unfolding in the external environment (macro environment). Today the Chamber acts as the principal advocate of the major policy positions endorsed by mining employers. The Chamber represents the formalised views of its membership to various organs of South Africa's national and provincial governments, and to other relevant policy-making and opinion-forming entities, both in and outside the country.

6.2.1.3 South African Mining Development Association

The South African Mining Development Association (SAMDA) is a new organization established with a vision to be a vehicle for the development of a vibrant and sustainable junior mining sector.

6.2.2 The government

The State's involvement in the mineral industry is of a complementary and supportive nature, and seeks to provide and maintain:

- A legal and fiscal environment which will allow unimpeded exploration for, as well as mining, beneficiation and marketing of the country's minerals.

- An efficient physical infrastructure including road, rail, air, and harbour facilities, communications and health services, and the supply of electricity and water.

The Department of Minerals and Energy (DME) is responsible for the administration of the Minerals and Energy Act, 28 of 2002, which came in effect on 1st May 2004. This Act replaces the Minerals Act, 50 of 1991 and regulates the prospecting for, and optimal exploitation and utilization of minerals. It also provides for safety and health in the mining industry; and controls the rehabilitation of land disturbed by exploration and mining. The Act created associated institutions which are responsible for the administration of the mining laws and for promoting the development of the industry. The following divisions of the Department of Minerals and Energy and the associated institutions are responsible for the administration of the mining laws and for promoting the development of the industry.

The office of Director General, the permanent head of the Department of Minerals and Energy, is located in Pretoria. The Mine Health and Safety Inspectorate of the Department ensures the safe mining of minerals, under

health working conditions and is represented by Principal Inspectors. The Energy branch promotes the optimum utilization of energy resources. The Minerals Development Branch (MDB) promotes the orderly and optimal mining utilization of mineral resources and is represented in the provinces by Regional Directors. The MDB consists of a Mineral Resources Management Chief Directorate to controls mineral resources management, a Mineral Development and Administrative Chief Directorate to direct and administer regional offices on economic growth and development and a Mineral Policy Investment Directorate to promote minerals development and advise on trends in the mining industry. The Directorate Mineral Economics promotes mineral exploitation and beneficiation in South Africa and collects, classifies and analyses mineral data in order to advise both Government and private sector on matters related to local and international mineral-economic developments. The Directorate also disseminates mineral-ralated information through publications and by participating in local and international conferences.

The Council for Geoscience undertakes geological mapping and carries out studies relevant to the identification, nature, extent and genesis of ore deposits and also maintains a national database of the country's geoscientific data and information.

Mintek's aim is to enable the minerals industry to operate more effectively by developing and making available the most appropriate and cost-effective technology. It is engaged in the full spectrum of minerals research, from the mineralogical examination of ore to the development of extraction and refining of technologies, the manufacturing of end products, and the feasibility and economic studies. Much of this work is carried out in close liaison with the minerals and metallurgical industries, both locally and internationally.

South Africa's Nuclear Energy Corporation (NECSA) undertakes and promotes research and development in the field of nuclear energy and radiation sciences and technology in order to process source material, special

nuclear material; and restricted material; and to co-operate with persons in these fields.

The Council for Scientific and Industrial Research (CSIR) conducts, *inter alia,* research related to specific minerals, brownfields minerals exploration, air quality, water pollution and purification, and mining and mineral processing. The CSIR's division of Mining Technology serves primarily, the local gold and coal-mining industries, but increasingly also other mining sectors and international markets. Major research activity is concerned with solving the most crucial problems that impact on profitability in the mining industry. Services range from fundamental research, technology development and general advice and assistance, and cover the areas of improving the underground environment, strata control, reducing the hazardous conditions associated with rock pressure in the mining operations and developing new or improved mining systems and equipment.

Most of South Africa's institutions of higher education also undertake mineral and/or mining research and are responsible for the training of professional and technical personnel required by the mineral industry.

6.3 South Africa's mining industry strengths

According to the Department of Minerals and Energy (2004), South Africa's mineral wealth is found in the diverse geological formations, some of which are unique and extensive by world standards. Some of them include the following:

- The best known geological formation is the unique and wide-spread Witwatersrand basin, hosting a considerable portion of the world's gold reserves, as well as those of uranium, silver, pyrite, and osimiridium and yields some 98 percent of South Africa's gold output.

- The Transvaal Supergroup contains resources of manganese and iron ore.

- The Bushveld complex, also a uniquely important geological formation, contains more than half of the world's chrome ore and platinum-group metals (PGMs). Additionally, the complex hosts ores of vanadium, iron, titanium, copper, nickel and fluorspar.

- The coal and anthracite beds of the Karoo basins in Mpumalanga, KwazuluNatal and Limpopo.

- The Phalaborwa Igneous Complex, which hosts extensive deposits of copper, phosphate, titanium, iron, vermiculite and zirconium ores.

- Diamond (kimberlitic, alluvial and marine) deposits and heavy mineral and occurrences containing titanium minerals, iron and zircon.

- Heavy mineral sand occurrences containing titanium minerals, iron and zircon.

- Large deposits of lead/zinc ores with associated copper and silver in the Northern Cape.

According to the South African Mining Industry Review (2004/2005), South Africa holds the world's largest reserves of ore of platinum-group metals (87.7 percent), manganese (some 80 percent of the total world reserves), chromium (72.4 percent), gold (40.1 percent) and allumino silicates (37.4 percent). It is also prominent in terms of titanium, vanadium, zirconium, vermiculite and fluorspar.

As a result of its large reserve base, South Africa is a mineral producer of note: for alumino-silicates, chrome ore, ferro-chrome, PGMs, vanadium and vermiculite, the country is not only the leading world supplier, but contributes in excess of 30 percent of the world's total of these commodities. South Africa is also the foremost world producer of gold of which its contribution is almost

16 percent. For many other commodities, namely zirconium, titanium, antimony, manganese and ferro-manganese, it is one of the world's leading suppliers.

The domestic market for most of the mineral commodities produced in South Africa is relatively small. Hence, South Africa's mineral industry is export orientated. According to Department of Minerals and Energy (2004), it contributes 95.0 percent of world vermiculite exports, for vanadium 71.3 percent, for alumino-silicates 45.9 percent, for ferro-chromium 49.5 percent, for ferro-manganese and manganese ore 24.2 percent and 21 percent respectively. In terms of the most of these commodities, as well as for gold, zirconium and antimony, it is the world's largest exporter. Other commodities include coal and titanium minerals.

6.4 Minerals exploration

Although the existence of large reserves of a variety of minerals has been proven in South Africa, the country cannot be considered over-explored. According to the Department of Minerals and Energy (2004), experts in this field generally agree that there is considerable potential for the discovery of other world-class deposits in areas, which have not yet been exhaustively explored. According to this general belief there is still ample potential for exploration programmes in certain areas.

Expenditure on exploration is subject to many decision variables, tied to ongoing results and business, economic and political factors and therefore, may vary considerably from the projected investments. Exploration success in South Africa has encountered substantial investment in key primary minerals such as gold, platinum, diamonds, heavy minerals and base metals. Several major South African companies have also adopted aggressive exploration strategies beyond the borders of the country. This strategy has resulted in a far-reaching internalization exercise that has changed the structure of these companies.

Although exploration has been increasing since 2002, South Africa is losing out in the race for international exploration dollars. By contrast Australia and Canada continue to attract new investment in exploration. According to the Department of Minerals and Energy (2004), a total amount of R5 736 million was spent on exploration in South Africa between 1998 and 2003. Of this amount, R769 million was laid out in 2001, R670 in 2002 and R1 201 million in 2003.

The Limpopo, Northern Cape, Gauteng, Northwest and Mpumalanga provinces figured prominently in terms of exploration. Most of the exploration activities took place in the Bushveld Complex. The northern limb of the complex has become the focus of recent exploration activities by both junior and senior companies, domestic and international.

Exploration for diamonds in South Africa continues to draw worldwide attention. According to the Department of Minerals and Energy (2004), South Africa's major diamond companies spent a total amount of R534 million on diamond exploration between 1998 and 2003. Six kimberlites, which account for over 80 percent of De Beers' and Debtwana's diamond production (equivalent to 30% of world output by value), were discovered in the past by De Beers' in-house exploration teams in South Africa and Botswana.

6.5 Communication, infrastructure and labour

The South Africa's communication system is well developed with 5.1 million installed telephones and 4.3 million installed exchange lines. The network is almost entirely digitized with digital microwave and fibre optic serving as the main transmission media.

The country's transport infrastructure is highly developed with extensive road and rail networks. And for many years, has also been utilized by other countries in Southern Africa, to as far as the Democratic Republic of Congo. According to the Department of Minerals and Energy (2004), the national and provincial road network consists of 63 027 km of paved and 471 104 km

unpaved roads. The rail nexus extends over more than 30 000 kilometers. This includes dedicated railway lines; one of them for iron ore from Sishen, in the Northern Cape, to Saldanha Bay on the east coast, and another for transporting coal from the coal fields of Mpumalanga to the port of Richards Bay on the east coast. Of the five major ports through which most of South Africa's minerals are shipped, the largest are Richards Bay (capacity 81.0 Mt, mainly for coal and other minerals), Saldanha Bay (30.9 Mt, chiefly for iron ore) and Durban (29.7Mt, mainly for liquids, containers and break bulk cargoes).

Electric power is largely generated by the country's giant electricity utility, Eskom, and according to the Department of Minerals and Energy (2004), it is among the cheapest available anywhere in the world. This low electricity cost has been instrumental in the establishment of sizeable ferro-alloys, stainless steel and aluminium beneficiation industries, and has also contributed to the economic exploration of the country's deep gold reserves.

Most importantly, the country enjoys political stability and has a fundamentally sound economy compared to most African countries. Its banking and finance infrastructure is excellent, on par with those in most developed and developing countries, which assist global trade through a network of international links.

South Africa has a sizeable labour pool, although to a large extent unskilled. The government is, therefore, actively pursuing a higher level of education, training and productivity in the nation. The labour force, whilst unionised, welcomes the inflow of foreign investment.

According to the Department of Minerals and Energy, the implementation of the new minerals policy, it is envisaged, will lead to increased investment in South Africa's mineral industry, by ensuring a competitive business environment and the lowering of barrier to entry. This, and the creation of a national mineral promotion system ("one-stop shop), furthermore, will stimulate small-scale mining and job creation. Other measure proposes to

intensify mineral beneficiation. The whole of the subcontinent will also benefit from anticipated improved regional co-operation.

6.6 The industry's role in the national economy

According to the Department of Minerals and Energy (2005), in 2004, mining contributed US$13.5 billion or 7.1 percent to gross value added. This contribution increased by R2.93 billion from that of the previous year. The contribution as a percentage of the total has ranged from between 6,5 in 1997 and 8.7 in 2002 over the last decade, largely due to the growth experienced in the secondary and tertiary sectors of the economy and the contraction in the gold mining industry. However, if one should add the Gross value added contribution of processed minerals (presently included in the manufacturing sector's figures) to that of mining and quarrying, the impact on the national accounts will be significantly higher. During 2004, mining and quarrying contributed 9.9 percent to Total Fixed Capital Formation. This sum of R22.3 billion is equal to 25.6 percent of the sector's gross value-added contribution.

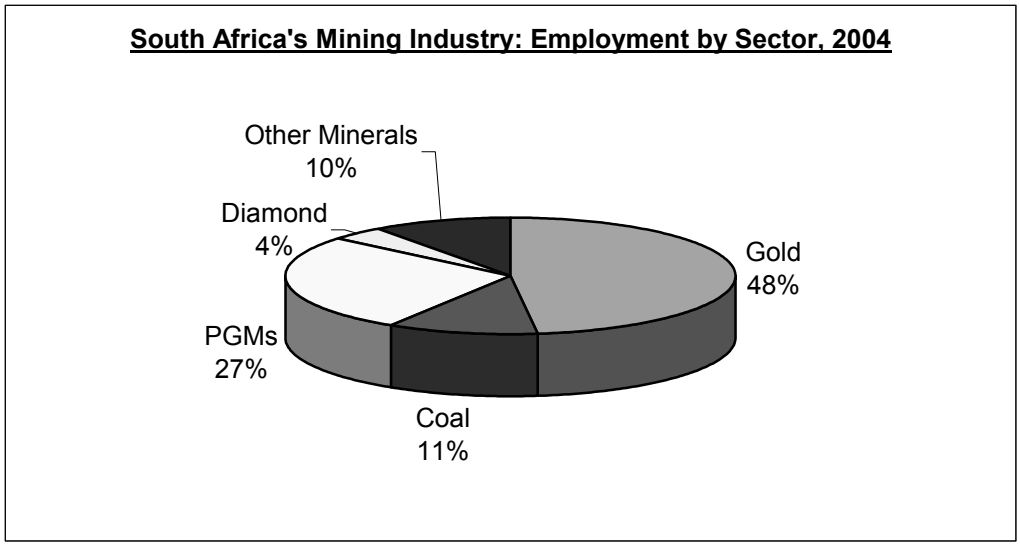
Sales of primary mineral products accounted for 34.3 percent of South Africa's total export revenue during 2004, while gold's contribution decreased further to 10.9 percent. The declining trend over the last two decades in both these indicators was the result of the contraction in the gold mining industry, increased local beneficiation and relatively weak commodity prices across the board. The inclusion of various processed mineral products, such as ferro-alloys, aluminium and carbon and stainless steel, raised the contribution of the minerals sector to above 40 percent.

During 2004, the mining industry employed 2.9 percent of South Africa's economically active population or some 5.4 percent of all workers in the non-agricultural formal sectors of the economy. The average number of workers employed in the mining industry increased by 16 139, or 3.7 percent, from 434 859 in 2003. A total of 147 125 mineworkers lost their jobs over the ten-year period from 1995 to 2004 as a result of, among others, the shrinking gold sector and improvements in productivity of the domestic mineral industry.

Nevertheless, taking into account the multiplying effect with regard to the supply and consuming industries, as well as the related dependants, many millions of people still rely on the mining industry for their livelihood. Wage income amounted to R33.1 in 2004, or 27.0 percent of total mining revenue, an increase in nominal terms of 9,8 percent when compared with 2003. The average annual income per worker was R74 958 in 2004, registering an increase in real rand terms in excess of 4.4 percent year-on-year.

As figure 6.3 depicts, the gold mining sector, despite its declining economic contribution, was the largest employer with some 48 percent of the total mining industry's labour force. The PGMs industry employed 27 percent, with coal industry in third place with 11 percent.

Figure 6.3: South Africa's mining industry: Employment by Sector, 2004.



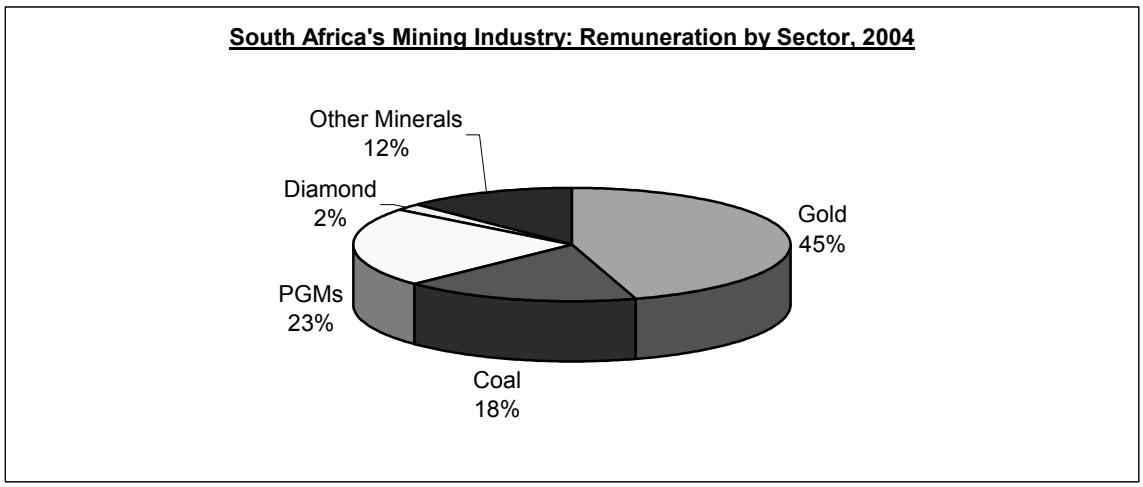
Source: Department of Minerals and Energy: South Africa's Mineral Industry (2004/2005): Directorate: Mineral Economics, Pretoria.

The employment crisis caused by the low gold price resulted in the inception of the Gold Crisis Committee (GCC) during 1998. Through a concerted effort, actual retrenchment by gold mines has been kept down to below 12 000 in 2004. The mining Summit, an initiative born out of the GCC and hosted by the Department of Minerals and Energy in early 2000, had as its main objective to

address key issues critical to the survival of the industry, among them being labour concerns.

According to the Department of Minerals and Energy (2004), the gold industry was responsible for some 45 percent of the total remuneration and the PGMs industry for 23 percent as figure 6.4 on the following page depicts.

Figure 6.4: South Africa's Mining Industry: Remuneration by Sector, 2004.



Source: Department of Minerals and Energy: South Africa's Mineral Industry (2004/2005): Directorate: Mineral Economics, Pretoria.

The higher degree of mechanization in the coal sector is reflected by its contribution of 11 percent in terms of the labour force, but 18 percent in terms of remuneration.

6.7 Mineral production and sales in 2004

Most of the world's economy entered a period of subdued growth in 2001 and 2002; however some economies, most notably that of China, continued to grow strongly and increased their demand for commodities. As the United States and, to a lesser extent, the rest of the world entered a period of strong economic growth in 2003 and 2004, the demand for commodities outstripped supply and as a result commodity prices began to increase sharply. According to the Department of Minerals and Energy (2004), it seems unlikely that world

commodity prices will be sustained at these levels indefinitely because the present high prices substantially exceed the cost of production.

Both demand for minerals and prices showed positive movement from the low levels experienced during 2003. Despite the large increase in gold and platinum prices and moderate increases in those of most other mineral commodities, the strong rand/dollar exchange rate, resulted in only a moderate increase in South African sales revenue in rand terms during 2004.

South Africa's total primary mineral sales revenue increased by 6.5 percent from R117.6 billion in 2003 to R125.2 billion in 2004. When the total sales and total export sales are expressed in US dollars, the annual changes reflect increase of 26.0 percent (from US$15.4 billion to US$19.4 billion), and 20.9 percent (from US$11,5 billion to US$13,9 billion) respectively. The moderate increase in revenue in rand terms was due to the strengthening value of the rand, which achieved an average of R6.4499 in 2004, compared with R7.5647 in 2003. The major foreign revenue earners in 2004 were platinum-group metals (33.0 percent), followed by gold (32.4 percent) and coal (16 percent).

Domestic mineral sales proceeds increased in rand terms by 15.1 percent, and 32.7 percent in dollar terms. Improvements in local sales income were recorded for all the minerals that make a meaningful contribution to the total. Coal remained the major local income earner, accounting for 38.2 percent of total domestic sales, followed by metallic commodities with 31.2 percent and miscellaneous mineral commodities with 16.5 percent. Industrial commodities accounted for 14.1 percent.

Of South Africa's nine provinces, North West, Mpumalanga, Limpopo, and Northern Cape contributed the bulk of the total mineral revenue, together generating 87.1 percent of the total primary mineral sales income. The same five provinces accounted for 89.6 percent of export revenue, while Mpumalanga, North West and Limpopo accounted for 67.2 percent of local sales earnings in 2004. North West is mainly dependent on PGMs as the major contributor towards minerals revenue, Gauteng on gold, Mpumalanga

on coal and the Limpopo on diamonds, copper and coal. The economies of North- West, Limpopo, the Northern Cape and Mpumalanga are particularly dependent on the contributions from their respective mining industries

6.8 Minerals beneficiation

Beneficiation or value-added processing involves the transformation of primary material (produced by mining and extraction process), to a more finished product, which has a higher export sales value. Beneficiation involves a range of different activities including large-scale, capital-intensive activities such as smelting, and sophisticated refining plants as well as labour-intensive activities, such as craft jewellery and metal fabrication. Each successive level of processing permits the product to be sold at a higher price than the previous product or original raw material and adds value at each stage.

Beneficiation is a process that starts at the rock-face where the ore is liberated. This process can have many varied steps along the way, but the ultimate aim is to add value to the product, implying financial value, so as to get the greatest possible benefit out of the initial advantage of having the mineral.

The concept of beneficiation is old in South Africa, but it took major steps forward during 1990s. The key has been to envisage South Africa as a base for adding value to raw material input from anywhere in the world, not only from domestic resources.

The government is committed to the promotion of beneficiation and, the Mineral and Petroleum Resource Development Act includes provisions that will ensure that the Minister promotes the establishment of secondary and tertiary mineral-based industries, aimed at adding maximum value to mineral raw materials, where economically justifiable.

According to the Department of Minerals and Energy (2004), export revenue comprised 76.0 percent of total sales in 2002; it improved by 3.8 percent

compared to 2001, from R18.2 billion. However, when expressed in dollar terms, it showed a decrease of 15.3 percent, from $2.6 billion in 2000 to $2.2 billion in 2002. Substantially lower dollar prices for most commodities were only partly offset by higher export sales volumes. The biggest contribution to export sales were chromium alloys (25.0 percent), aluminium (30.0 percent) and manganese alloys (12.3 percent).

The value of local sales of processed mineral products rose to 29.5 percent, from R4.4 billion in 2000 to R5.7 billion in 2001. Aluminium, with a 50.3 percent contribution, was the major revenue earner in 2001, with phosphoric acid and zinc metal contributing substantially as well (South Africa's Mineral Review: 2004/2005). And according to the same review, the provinces, KwazuluNatal and Mpumalanga, contributed 74.5 percent of the total processed minerals sales revenue in 2002.

Aluminium and titanium slag dominate the KwazuluNatal contribution, whilst nearly two-thirds of Mpumalanga's total sales were derived from chromium alloys. These two provinces dominated export and local sales revenues as well, with respective combined contributions of 76.7 and 67.5 percent. No beneficiation of the selected minerals occurred in the Eastern Cape, the Northern Cape, and the Free State. Several minor commodities such as cobalt, antimony, arsenic and semi-precious stones are omitted from the analysis. Most of these commodities are beneficiated to a considerable degree, some entirely.

6.9 South Africa's imports of minerals products

As a result of its vast mineral resource base, South Africa is, to a large degree, self-sufficient with respect to the supply of minerals. However, some minerals and mineral products need to be imported due to an insufficiency of local resources or the fact that deposits in South Africa are not economically viable; another factor is that certain specialized grades and products are not produced in South Africa. According to the Department of Minerals and

Energy (2004), the value of the more significant imports during 2002 increased by 7.2 percent to R12.8 billion.

6.10 Forecast of minerals exports for 2004 to 2009

South Africa's mining industry is primarily export driven, with 71.6 and 74.8 percent of primary and processed mineral sales during 2004 respectively, destined for world markets. Therefore, it is pertinent to estimate future earnings from mineral exports. Since gold, coal, the p[platinum-group metals and diamond together contribute about 90 percent of total primary mineral export revenue, forecasts in respect of these commodities are the most critical.

For the purpose of forecasting South Africa's mineral export revenue from 2005 to 2009, the Department of Minerals and Energy assumed that the major economies of the world would enjoy sustainable expansion over the medium term, providing a stable base for the smaller economies to achieve relatively high growth. This should filter through to mineral commodity markets, with volumes increasing moderately and significant price increase from 2004 to 2005. In 2006 and 2007 prices may again come under pressure as production of minerals is likely to start outpacing consumption.

Based on these broad assumptions, as well as a detailed analysis of the supply and demand for each of the significant commodities, the value of South Africa's export of primary minerals according to the Department of Minerals and Energy, is forecast to increase by 6.8 percent per annum, which compounded from US$13 607 million in 2004 will reach US$19 965 million in 2009. The sectors with the highest expected growth rate are coal (11.4 percent), gold (8.8 percent) and ferrous (7.4 percent).

Export Earnings from gold are expected to decrease from US$4 494 million in 2004 to US$4 250 in 2006 as a result of continued drop in output, despite higher US dollar price. A rise in US dollar price should see the export revenue grow to US$7 455 million by 2009, despite a possible decline in gold

production. The export of revenue from gold is forecast to increase by 8.8 percent per annum.

South Africa's export earnings of platinum group metals (PGMs) are expected to increase from US$4 578 million in 2004 to US$5 429 million in 2005, as a result of continued rise in output as well as higher US dollar prices of the constituent metals. Export revenue is forecast to decrease to US$4 622 million in 2007 due to lower platinum price, despite higher production, before climbing to US$5 735 in 2009 in 2009 on the back of the rising platinum price. The weighted average price for the basket of PGMs is expected to average US$644 per ozt in 2005.

The export value of coal is expected to increase by 41.3 percent, to US$3 169 million in 2005 from the US$2 243 million recorded in 2004. Export revenue for coal is likely to show an increase of 11.4 percent per annum rising from US$2 243 million in 2004 to US$4 280 million in 2009. Europe and the Middle East are still South Africa's major customers and coal demand is rising in those regions. Furthermore, this increase in forecast export volumes is influenced mainly by the increase number of exporting mines created as a result of the implementation of the Mineral and Petroleum Resources Development Act (MPRDA) and the willingness on the bigger coal mining companies to allow economic empowerment companies to mine coal blocks wits in their mining concession areas.

Export earnings for ferrous minerals (US$751 million in 2004) are foreseen to rise by 3.8 percent annually. By 2009 the value is expected to be almost US$939 million. The sector's share of total primary mineral export earnings is expected to almost remain constant from 5.5 percent in 2004 to 4.7 percent in 2009.

Primary nonferrous mineral export revenue is expected to increase from US$355 million in 2004 to US$373 million in 2005. Export income is also anticipated to increase to US$386 million in 2009, reflecting a compound growth rate of 1.4 percent per annum.

The forecast for primary industrial minerals export earnings indicates a possible increase of 1.8 percent from US$163 million in 2004 to US$166 million in 2005. The export revenue of these minerals is anticipated to increase by 3.1 percent per annum, to US$196 million over the five-year period to 2009.

The contribution of processed mineral products to foreign exchange earnings is expected to grow to a rate of 4.8 percent per annum, fromUS$4 349 million in 2004 to US$5 748 million in 2009, compared with a 6.8 percent per annum increase for primary minerals. The ratio of primary to processed minerals is foreseen to increase from 3.1 percent to 3.5 percent over the forecast period.

6.11 Regional co-operation - SADC

On 17th August 1992, the Declaration and Treaty establishing the Southern African Development Community (SADC), was signed at the Summit of Head of States of Governments, in Windhoek, Namibia. This declaration and Treaty replaced those regarding the South African Development Coordination Conferences established on 1 April 1980, following the Lusaka Declaration.

Today, the SADC comprises of the following member states: Angola, Botswana, DRC, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Seychelles, Tanzania, Zambia and Zimbabwe.

The Treaty establishing the SADC was designed to lead to higher levels of co-operation and integration in the region. Member States pledged commitment to pursue common approaches and policies and also effective participation by the people of the region and their institutions in the formulation and execution of policies, strategies and programmes. The SADC vision for mining is hence in harmony with the overall objectives of the Community, which include "to achieve development and economic growth, alleviate poverty, enhance the standard and quality of life of the peoples of Southern Africa and support the socially disadvantaged through regional integration". Another of the objectives

of the SADC is support for small scale mining which has been recognized by nearly all the countries in the region as a means of alleviating poverty and empowering local communities. A number of support programmes have been established in various member States, ranging from provision of loans and grants, to equipment and plant hire schemes and making provisions that will enhance and support small scale activities.

The SADC Mining Sector Programmme of Action is subdivided into six sub-sectors, namely Information, Geology, Mining, Marketing, Mineral processing, Environment and Human Development.

During the last decade, a number of countries made efforts to reform their mineral policies and regulatory environment, aimed at encouraging private sector participation, attracting new capital investment, technology and skills and stimulating exploration.

Mining continues to be the major foreign exchange earner in most of the economies of the SADC region. According to the Department of Minerals and Energy, the mining sector in the region contributes approximately 10 percent of the Gross Domestic Product while accounting for 60 percent of foreign exchange earnings. The major minerals supplied to the World markets by the SADC include asbestos, chrome ore, coal, cobalt, copper, diamonds, gold, nickel, the platinum group metals, lead and zinc.

Mine development in the region has primarily been focused on gold, diamonds, PGMs and base metals. There is still great scope for more investment in these sectors, and others.

During 2001, the total expenditure on exploration programmes in the SADC region was approximately US$100 million (South Africa's Mineral Industry Review: 2002/2003). Exploration Programmes continued to be carried out by companies in almost all member states.

According to the Department of Minerals and Energy (2004), during 2002, the total labour force in the SADC industry stood at 1 535 642, compared with the 2000 figure of 1 978 845. The decrease in employment was largely due to rationalization of the workforce after privatization of previously state-owned mining companies, and declining world demand for production of minerals like asbestos.

6.12 Conclusion

This chapter discussed the overview of the mining industry in South Africa, where the structure and the economic contribution of the industry was outlaid. The chapter also discussed the small-scale mining as a sector and the government's commitment to develop that particular sector.

The following chapter will discuss the type of this study, specifically how the data was collected and analyzed.