

An Evaluation of the BAE/SAAB South African Royal Manufacturing Project in Virginia, Free State Province: A Case Study of the Implementation of the South African Defence Offsets.

By

Gwendolyn Wellmann

Submitted in fulfilment of the requirements for the degree of D. Phil in Development Studies at the Nelson Mandela Metropolitan University.

February 2010

Supervisor: Professor Richard Haines

Co-supervisor: Dr Mick Brookes

Abstract

This study is an evaluation of the BAE Systems/SAAB consortium National Industrial Programme project, South African Royal Manufacturers (SARM), which forms part of BAE Systems/SAAB's National Industrial Participation Programme (NIPP) obligations resulting from their participation in South Africa's 1998 Strategic Procurement Programme (popularly referred to as the 'arms deal').

SARM was a gold chain manufacturing plant, located in the Free State mining town of Virginia and which was implemented by the BAE Systems/SAAB consortium in partnership with the Harmony Gold Mining Company. Funding for the business was provided by the BAE Systems/SAAB consortium as part of their industrial participation obligation. This funding was supplemented with a loan obtained from the South African Industrial Development Corporation (IDC) to the value of 40% of the cash funds; while land and buildings, as well as loans in the form of gold granules and bars, were provided by Harmony Gold Company, as part of what they describe as their corporate social responsibility towards the Virginia area where they are the only mining company operating; and also simultaneously as their obligation towards gold beneficiation as required by law. The business failed after less than 12 months of operation amidst allegations of theft of gold and the sudden lay-off of approximately 500 poor black rural women. The company's liquidation appears to be on the backburner indefinitely.

The study was conducted over a period of 18 months, and this thesis written over several more. As part of this evaluation several issues were investigated. These issues are: the push for beneficiation of South African mined metals; the National Industrial Participation Programme; local government development; the BAE Systems/SAAB consortium and other similar companies which are involved in jewellery production for export as part of both the country's beneficiation drive, as well as the

NIPP. These other companies are used in this study as a 'control' group against which SARM's performance can be measured realistically.

Different research methods were used during the evaluation, including secondary document reviews, face-to-face and telephonic interviews with key-informants, the use of e-mail to contact key-informants, as well as conducting face-to-face questionnaires with random interviewees, and a focus group discussion with SARM ex-workers.

There were several limitations to this study. The primary limitation was the inaccessibility of official and legal documents pertaining to both SARM, and the 1998 arms deal. SARM no longer exists, and thus the evaluation results should be used as lessons learned for similar projects in the future.

Key words

- Arms deal
- Industrial participation
- Offsets
- BAE Systems/SAAB
- Beneficiation
- SARM
- Sustainable development
- Economy
- Jobs

Acknowledgements

I am very grateful for the kind and patient support from both Richard Haines and Mick Brookes over the past years. I am also particularly grateful for the assistance of Mr. Dumile Damane and Ms. Amanda van den Berg, who patiently answered all my queries and more often than not assisted me with finding my way through the bureaucratic morass (to be honest, they stormed, attacked and conquered the bureaucratic morass on my behalf - no small feat!).

Thank you also to all the key informants and focus group participants who took time to discuss the relevant issues with me and to provide me as much information as legally possible. Without them, this study would not have been possible.

I will always be indebted to my partner who constantly encouraged me to keep focused on the end-goal, even though the one sensation throughout the past few years was one of careening down a mountain road in a car without brakes, having no definite notion of what lay ahead and no certainty of success, knowing only that once the frantic descent had commenced, there was no alternative but to continue. *Mi do wo sen adie biara in this world. Mi dweni wo ho everyday. Mida si pi.*

I am very grateful for the funding received from the National Research Foundation.

TABLE OF CONTENTS

ACRONYMS	9
1 Introduction.....	11
1.1 Background.....	11
1.2 Motivation of the study	13
1.3 Definition of concepts.....	15
1.3.1 Industrial Participation.....	16
1.3.2 Poverty	32
1.3.3 Sustainable Development.....	42
1.3.4 The Reconstruction and Development Programme (RDP)	45
1.3.5 The Growth, Employment and Redistribution (GEAR) Strategy	51
1.3.6 Local Economic Development.....	56
1.3.8 Government Procurement	62
1.3.9 Corporate Governance and Corporate Social Responsibility.....	65
1.3.11 Precious metals beneficiation	72
1.4 Goals and Objectives of the Study.....	74
1.5 The value of the study	75
1.6 Outline of the Study	76
2 The Research Design and Process	82
2.1 Research Hypothesis.....	82
2.2 Research Question.....	83
2.2.1 The Research Plan and Process.....	83
2.2.2 Data collection methods.....	86
2.2.3 Designing the key-informant interview	89
2.2.3.2 Focus Group Discussions.....	91
2.2.4 Data Analysis.....	94
2.3 Limitations.....	94
3 The South Africa Situation	96
3.1 Introduction	96
3.2 A brief history of the South African arms industry	96
3.2.1 Pre 1989	96
3.2.2 1989-1996.....	99
3.3 The 1998 arms deal	103
3.3.1 The Defence Review.....	108
3.3.2 The Financial Cost of the Deal	112
3.4 Industrial Participation	123
3.4.1 General background to offsets	123
3.4.2 The WTO Agreement on Government Procurement	124
3.4.3 South Africa's offsets history	125
3.4.4 Current South African Industrial Participation	126
3.4.5 Corruption.....	137
3.5 Conclusion.....	146
4 Gold Beneficiation and NIPP.....	148
4.1 Introduction	148

4.2	<i>Why beneficiation?</i>	148
4.2.1	Legislation	150
4.3	<i>What is Beneficiation?</i>	155
4.3.1	Definition	155
4.3.2	Historical background to beneficiation in South Africa	155
4.3.3	Current gold beneficiation	157
4.4	<i>NIPP Beneficiation Projects</i>	161
4.4.1	Background	161
4.4.2	Musuku Beneficiation Systems	164
4.4.3	Harmony Jewellery School	170
4.4.5	Oro-Maska	171
4.4.6	Silplat	173
4.4.7	Gold Advance Scheme	176
4.4.8	Filk Gold Chains of South Africa	181
4.5	<i>The South African Jewellery Industry</i>	189
4.5.1	Background	189
4.5.2	South African Jewellery Exports	199
4.5.3	Employment in the Jewellery Manufacturing Sector	199
4.5.4	Jewellery Manufacturing and the Mining Scorecard	203
4.6	<i>Conclusion</i>	203
5.	South African Royal Manufacturers	205
5.1	<i>Introduction</i>	205
5.2	<i>Provincial Context</i>	205
5.2.1	Economy	207
5.2.2	Employment statistics	211
5.2.3	Local Economic Development	213
5.3	<i>District and Local Context</i>	214
5.3.1	District Location and Population	214
5.3.2	Economy	216
5.4	<i>Virginia</i>	218
5.5	<i>SARM</i>	219
5.5.1	Harmony Gold Mining Company	221
5.5.2	BAE Systems/SAAB Consortium	222
5.5.3	Industrial Development Corporation (IDC)	227
5.5.4	Royal Chain Canada Inc.	228
5.5.6	Ownership post-2004	228
5.5.7	SARM Exports	229
5.5.8	SARM Employment	230
5.5.9	Theft and Fraud at SARM	230
5.5.10	The court case	233
5.5.11	SARM's Liquidation	233
5.6	<i>Conclusion</i>	234
6	Findings	236
6.1	<i>Foreign investment into South Africa</i>	236
6.1.1	Direct cash foreign investment	236
6.1.2	Foreign technology transfer	238
6.2	<i>New foreign trading partners and sustained exports</i>	241
6.2.1	Export Credit Calculations	243
6.3	<i>Job creation</i>	245
6.3.1	SARM	246
6.3.2	Silplat and Filk Gold Chains	247

6.3.3 Unionization	249
6.4 Sustainable economic growth.....	250
6.4.1 Skills development.....	250
6.5 Sustainable growth.....	254
6.6 Conclusion.....	259
7 CONCLUSION	261
8 References.....	268
<i>Newspapers/internet news sites:</i>	300
<i>Websites</i>	302

LIST OF TABLES

Table 1	Industrial development indicators for South Africa.....	68
Table 2	The offsets of the South African 1998 arms deal.....	122
Table 3	Methodology of IP credits	136
Table 4	Free State Basic Facts	206
Table 5	Gross Geographic Product per Province and per Head.....	208
Table 6	Free State Province economy compared to that of South Africa nationally	209
Table 7	Growth trends in the manufacturing industry of the Free State, 1970 – 2002.....	209
Table 8	Unemployment rate per province.....	212
Table 9	Matjabeng Municipality Population	215
Table 10	Free State Municipal Gross Domestic Product for 2002.....	216
Table 11	Matjabeng Municipality Employment Data.....	217
Table 12	BAE Systems/SAAB’s NIPP projects’ geographic spread ...	226
Table 13	SARM NIP project as reported in 2004.....	220
Table 14	Global Gold Production in 2004.....	150
Table 15	Beneficiation stages of precious metals.....	157
Table 16	Fine gold usage in SA in 2004.....	158
Table 17	Regional Data of the IP programme: the projected values from the Portfolio Committee Report, 2003	162
Table 18	Silmar Platinum Jewellery NIP project.....	173
Table 19	Arms Deal details.....	184
Table 20	Gold Usage in Fabrication	190
Table 21	Comparative look at costs of loans for gold jewellery finance as of mid-2005.....	195
Table 22	Valid Jewellery Permits in South Africa in 2003 and 2004..	201
Figure 1	The IDP Process	61
Figure 2	The on-going IDP process	62
Figure 7	South Africa Gold Value Chain.....	158
Figure 8	Value-add along the gold value chain.....	177
Figure 9	Gold Jewellery sales from 2004-2006	188
Figure 10	Gold Usage in jewellery fabrication and retail.....	190
Figure 11	South African jewellery exports in 2004.....	193
Figure 3	Free State Municipalities	214
Figure 4	Matjabeng Municipality Population	215
Figure 5	Matjabeng Municipality Employment Data.....	217
Figure 6	Map of Virginia area	218

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	African National Congress
AGOA	African Growth and Opportunity Act
BEE	Black Economic Empowerment
CEMD	Confidential Enquiries into Maternal Deaths
CSIR	Council for Scientific and Industrial Research
COSATU	Congress of South African Trade Unions
DIP	Defence Industrial Participation
DoD	Department of Defence
DTI	Department of Trade and Industry
EU	European Union
FDC	Free State Development Corporation
GDP	Gross Development Product
GEAR	Growth, Employment and Redistribution
GGP	Gross Geographical Product
HDI	Human Development Index
HDSA	Historically Disadvantaged South African
IDP	Integrated Development Plan
IPCC	Industrial Participation Control Committee
JSCD	Joint Standing Committee on Defence
LED	Local Economic Development
LUH	Light Utility Helicopters
GDP	Gross Domestic Product
IDC	Industrial Development Corporation
IP	Industrial Participation
M&E	Monitoring and Evaluation
NALEDI	National Labour and Economic Development Institute
NCACC	National Conventional Arms Control Committee

NCCEMD	National Committee on Confidential Enquiries into Maternal Deaths
NIP	National Industrial Participation
NIPP	National Industrial Participation Programme
MPRDA	Minerals and Petroleum Resources Development Act
NQF	National Qualifications Framework
RDP	Reconstruction and Development Programme
SPP	Strategic Procurement Programme
SA	South Africa
SAAF	South African Air Force
SADC	Southern African Development Community
SADF	South African Defence Force
SANDF	South African National Defence Force
SARM	South African Royal Manufacturers
SCOPA	Select Committee on Public Accounts
SDP	Strategic Defence Package
SETA	Sector Education and Training Associations
SME	Small and medium enterprise
SMME	Small, medium and micro enterprise
SOE	State Owned Enterprise
WTO	World Trade Organization

1 INTRODUCTION

1.1 Background

In its 1998 Strategic Procurement Programme (SPP) – herein after referred to as ‘the arms deal’ - , South Africa purchased warships and military aircraft from various European-based companies in an effort to re-equip its navy and air force, creating in the process what has been termed a ‘complicated beast’ (Holden, 2008). This ‘beast’ has generated over ten thousand newspaper articles, several court cases - including a court case involving Jacob Zuma, the current president, who was at the time of the court case the former deputy president of the country -, conferences, books, and some academic articles and theses.

The arms deal is estimated to cost between R30 billion and R60 billion (February, 2004), and remains steeped in controversy. The cost of the deal is but one of the controversies. The total cost of the deal cannot be calculated with total accuracy as the foreign loans procured for the deals were pegged to the exchange rate and the costs of the deal changes as the value of the Rand fluctuates against the value of the foreign currency used (February, 2004; Crawford-Browne, 2007; Feinstein, 2007; Holden, 2008). Other controversies include the debate of whether a country at peace, with no imminent threat of war, but plagued with what often appears to be insurmountable socio-economic problems, should be spending billions on military equipment.

However, the biggest controversy surrounding the deal has been the use of offsets as part of the deal. Local and international media and academic criticism of the inclusion of offsets as part of the arms deal include the over-optimistic foreign direct investment claims by obligors; instances of promised investment that failed to materialize; the disappearance of a number of projects on the initial offset project list; and the filing of claims of export earnings by obligors without any

significant foreign investment in local firms (Haines, 2006). At the time of the signing of the arms deal, offsets were estimated to result in between R104 billion and R110 billion (US\$20 billion), as well as the creation of approximately 65,000 jobs over an eleven year period (Modise, 1999; Business Times, 07 March 1999; Haines, 2004, Crawford-Browne, 2002; 2007; Feinstein, 2007; Holden, 2008). Subsequent assessments based on the actual awards judged, have found that the economic benefit will actually be about US\$12 billion over an 11 year period, with about 20% of the benefit accruing to local defence firms, 45% from counter-purchase of commercial products, and 35% from foreign investments in South African companies (Engelbrecht, 17 September 1999).

The suppliers of the military equipment¹ (and the obligors of the offsets) are:

- (i) the United Kingdom's BAE Systems, who is supplying 24 Lead-in Fighter Trainer aircrafts (popularly known as 'Hawks');
- (ii) a joint venture between BAE and Sweden's SAAB is supplying 28 Advance Light Fighter aircrafts (popularly known as Gripen);
- (iii) a consortium between Germany's Thyssen and Ferrostaal, France's Thomson CSF (now called Thales) and the South African based African Defence Systems are providing the four Corvettes (Meko A200) – while Thyssen and Ferrostaal provides the ship platform, Thales and African Defence Systems are providing the combat suite for the Corvettes; and
- (iv) Italy's Augusta which is supplying 30 Light Utility helicopters (Agusta A109M).

At approximately the same time as the arms deal was designed and concluded, South Africa's legislation guarding the country's mineral wealth and mining operations changed significantly and the local beneficiation of minerals became a legislated obligation. Mining companies were scrambling for ways and partners to beneficiate its

¹ A full description of the purchases is included as Appendix C.

products, while the arms deal obligors were searching for investment opportunities. It is thus not surprising that since 1999, six NIP precious metal beneficiation-related projects have been established. Of these six, four are gold and platinum jewellery manufacturers, and of these four, only two are still operational. They are the Filk Gold Chains of South Africa, an Augusta NIP obligation, and Silplat, a BAE Systems/SAAB consortium NIP obligation. The failed factories, Oro-Maska and SARM, were both located in the mining town, Virginia, in the Free State Province goldfields, and both were BAE Systems/SAAB consortium National Industrial Programme (NIP) projects implemented together with Harmony Gold Mining Company (DTI, 2002b; 2003b; 2007, 2008; Wellmann, 2004; Wellmann and Haines, 2005; Wellmann, 2005).

1.2 Motivation of the study

This study is an evaluation of one of the gold beneficiation projects implemented by the BAE Systems/SAAB consortium as part of their National Industrial Programme (offsets) obligations. The project was a gold chain manufacturing plant, called the South African Royal Manufacturers (commonly referred to as SARM), which was located in the Free State mining town of Virginia and which was implemented in partnership with Harmony Gold Mining Company. Funding for the business was provided by the BAE Systems/SAAB consortium as part of their industrial participation obligation, as well as a loan obtained from the South African Industrial Development Corporation (IDC); while land and buildings, as well as gold loans were provided by Harmony Gold Company. The business failed after less than 12 months of operation and is under liquidation.

Much remains to be investigated regarding offsets' theoretical, potential and actual economic benefits and costs. In particular, there are few empirical studies of the actual implementation and economic impact of offsets in the recipient country. Brauer and Dunne (2009) found that a

literature search for the period from 2004 and 2009 yielded no new empirical research on international arms trade offsets. In South Africa several macro-level studies have been conducted looking at the industrial participation programme over the past few years (see Dunne and Haines, 2001; Hosking, Haines and Bank, 2002; Hosking and Haines, 2003; Haines, 2004; Haines and Wellmann, 2005), but micro-level studies on the National Industrial Participation (NIP) projects are still somewhat scarce although the literature is growing. There has been some small-scale research on specific NIP projects and geographical regional NIP projects (see Dunne and Haines, 2001; Haines, 2002, 2003, 2004; Haines and Wellmann, 2005), as well as work done by journalists, but little has been done in the way of an evaluation of a particular NIP project, apart from an evaluation of the Augusta Westland Filk Gold Chains in South Africa NIP project (see Wellmann, 2004).

The lack of empirical research and evaluations on offsets, especially those linked to the South African arms deal; leave a dearth in the understanding of the actual fulfilment of individual offset contracts and whether the fulfilment of an offset contract has also resulted in the fulfilment of a country's long-term policy goals. The evaluation of SARM will add to academic literature and knowledge on offsets, as well as the literature and knowledge on the socio-economic aspects of precious metal beneficiation in South Africa.

Only a few countries have tried to conduct evaluations of their offset programmes, among them Finland, Sweden and Belgium (Sköns, 2004, Struys, 2004). There are several obstacles in the way of doing an evaluation of this kind, including access to data (Martin, 1996) and finding instruments to measure offsets (Willet and Anthony, 1998). Also, the term "offsets" does not refer to a well-defined homogenous activity but to a broad range of transactions and activities, each with different economic, social and environmental effects (Hall and Markowski, 1994; Martin, 1996), making it easier to focus an evaluation on a specific

project within the programme, instead of the programme as a whole, which is what I have done.

SARM is evaluated in the context of the 1998 arms deal; the South African NIPP; the decentralization of government and the powers, obligations and needs of local government in the country; the increasing need for companies to be good corporate citizens; the fast changing mining industry and mining legislation; and the drive for local beneficiation of minerals and metals. The evaluation is an “ex-post evaluation” (Bowden, 1988) that aims to assess the project’s effectiveness and efficiency (Rossi and Friedman, 1993) and is knowledge-oriented (Scriven, 1980) in order to contribute to the debate on military offsets and the South African NIPP in general.

The importance of this specific offset deal lies in that it encapsulates all the possible pitfalls of offset projects, i.e. rushing into a huge financial deal without conducting due diligence and in so doing opening up the possibility of illegal activities such as theft and corruption; sourcing the majority of the funding from local sources, instead of the obligor; awarding of credits for failed projects; and exposing the lack of monitoring and auditing of these projects, as well as the lack of political will to investigate the failure of such projects. The project also highlights the lack of understanding of terms such as ‘sustainability’ when implementing economic projects that are linked to socio-economic policies.

1.3 Definition of concepts

The context in which any project is implemented is important when evaluating such a project. An industrial participation (or offsets) project, or a project that is a beneficiation project, is not different. The South African Royal Manufacturers (SARM) project was implemented, and failed, within the context of a developing country plagued with social

inequality and poverty; a decentralized government system; a declining gold industry operating within a new legislative environment; international pressure for businesses to behave and conduct their business as socially responsible entities that strive towards sustainable development in their outputs; and last but not least, as part of an offset in a controversial weapons deal. The evaluation required a thorough understanding of all of these issues and concepts.

Conceptualisation is the process through which researchers specify what is meant when they use particular terms (Babbie, 2004:118). Although it is a continuing process throughout the thesis, I will at this point specifically describe and contextualize the leading concepts used and referred to in this study.

1.3.1 Industrial Participation

Industrial participation (also known as ‘offsets’ and referred to as such in this thesis) is viewed increasingly as an inevitable part of the international arms trade, even though the January 1996 World Trade Organisation’s Agreement on Government Procurement generally forbids the use of offsets in government procurement: “Entities shall not, in the qualification and selection of suppliers, products or services, or in the evaluation of tenders and award of contracts, impose, seek or consider offsets” (World Trade Organisation, 1996). The World Trade Organisation describes offsets on their website as “measures to encourage local development or improve the balance-of-payments accounts by means of domestic content, licensing of technology, investment requirements, countertrade or similar requirements” (www.wto.org/english/tratop_e/gproc_e/gpa_overview_e.htm)².

In order to fully understand industrial participation it is important to define the various aspects of such economic trade. Barter, countertrade,

² Downloaded on 06 August 2009.

buybacks and offsets are not new concepts or activities. One could even speculate that money was invented to alleviate many of the more obvious inconsistencies of these forms of trade.

1.3.1.1 Barter

Barter is the process of trading goods and services for other goods and services, for example the exchange of a thousand barrels of crude oil for a specific quantity of, for example, chemical solvents. It is a simple method of transaction in which no money is exchanged.

The enduring persistence of barter over the centuries has always been acknowledged, but it was usually located in situations of political disorder or disorder brought about by natural disasters, and presumed to disappear as soon as normalcy had been restored. However, in recent decades, barter and its varieties, such as countertrade, offsets and buybacks, have become common in international trade (de Miramon, 1982; Cohen and Zysman, 1986).

1.3.1.2 Countertrade

Countertrade is similar to barter, but there are many forms of countertrade and often money is exchanged. The practice of countertrade is sometimes called industrial participation, industrial co-operation, economic compensation agreements, co-production agreements, and offsets. Just as the terminology used to describe them, these deals are elaborate, inventive and extremely diverse.

Definitions of the countertrade practice as used by industry, or those definitions found in literature, are inconsistent. Sometimes countertrade is used as an umbrella term for a broad range of industrial and commercial “offsetting” practices, such as those related to government procurements of high-cost defence or non-military hardware - Gauchery (undated) describes it as a range of reciprocal or compensatory trade

mechanisms including barter, compensation, counter-purchase, buyback, offsets, switch-trading, and tolling with the main objective to oblige the seller to generate foreign exchange for the buyer -; while at other times, use of the term is restricted to contractually linked imports and exports.

Rowe (1989) describes countertrade as one of the oldest methods of payment in international trade and that it generally involves the exchange of goods and/or services as a condition of purchase, or as financing of purchases. The *Legal Guide on Countertrade Transactions* (1993) published by the United Nations also provides an extensive countertrade terminology and sets out general guidelines, which are however not mandated, leaving the terms of each deal to be negotiated individually by the particular buyer and seller.

Notwithstanding this myriad of definitions, I will try to define countertrade in its simplest form. Countertrade is similar to barter, except that the seller is given a broader choice of products that s/he can choose from in exchange for whatever s/he is selling. For example: a seller is obliged to take payment of up to 100% (although more and more this is reportedly as high as 150%) of the value of the product being sold in the form of a product produced by the purchaser. In some instances, the result of these agreements has been amusing. An article published in IMF (January 1984) reports how McDonnell Douglas³, in partial payment for aircraft equipment sold to Romania, found itself with, amongst other countertraded items, a huge supply of canned ham, which the firm's staff was expected to munch its way through at the company's canteen for years to come. Similarly, Caterpillar found itself inundated with Algerian wine it could not sell, and that was served in the company's cafeterias for many years (Yoffie, 1984).

³ McDonnell Douglas was a major US aerospace manufacturer and defence contractor. It merged with Boeing in 1997.

Although countertrade practices were long associated primarily with East-West trade, there has been a significant spread to North-South and South-South countertrade since the early 1980s (OECD, 1985; Wülker-Mirbach, 1990). The Organisation for Economic Co-operation and Development (OECD) found that countertrade increased so significantly due to the oil-producing nations insisting on using oil in countertrade when buying other goods from consuming nations, and that in 1983, approximately 4.8% of world trade involved countertrade (OECD, 1985). In 1984, Forbes Magazine (12 March 1984) reported that the United States Department of Commerce estimated then that between 20% and 30% of world trade is now subject to some form of counter-purchase, buyback or offset and that the proportion could reach 50% by 1999. The article further reported that surveys by the National Foreign Trade Council Foundation in the United States, found that the number of reported transactions involving some form of barter, counter-trade, offset or buyback had increased at rates of 50% in 1981, 64% in 1982, and 117% in 1983.⁴

Countertrade has also evolved during the cold war years as an important tool for doing business in difficult markets (de Miramon, 1982). A good example of this is a deal between Poland, then an East bloc country caught in a debt crises, and Austrian suppliers in the early 1980s. Cohen and Zysman (1986) describe how a Polish apple pulp factory needed equipment that could only be provided by a number of Western firms. Due to Poland's financial situation, no bank based in the United States would supply the necessary financing to the factory. An Austrian bank and Austrian supplier of the equipment needed, made a deal with the Polish government to assist. The Austrian bank guaranteed the promissory notes and made a deal to receive a substantial portion of the apple juice produced at the new plant. The bank would then sell the apple juice in the West. At the most basic of analysis it looks as if everyone gained from this deal: both the Austrian bank and the supplier

⁴ Forbes Magazine, 12 March 1984.

of the equipment benefitted from business which they would not normally have gotten. The manufacturer of the equipment was able to charge a far higher price than a normal market transaction would permit, while the bank received fees that were much larger than those generated by just opening letters of credit. The Poles received the apple processors. However, a more in-depth analysis indicates that the Polish tax payers – the holders of the Polish debt who thought export earnings would go towards servicing the debt, and the apple pulp producers who overpaid for the machinery – gained nothing useful through this process (Countertrade, Vol.11, No: 15, as cited in Cohen and Zysman, 1986:3). This rings very close to findings by most researchers and analysts who have analysed the countertrade trade, with Yavas and Freed (2001) referring to countertrade as an inefficient way of doing business.

Hew (undated) found that approximately 130 out of 192 countries internationally require countertrade, in one form or the other, when procuring goods. South Africa is one of these countries. He also points out that many global companies have dedicated in-house specialists dealing specifically with countertrade and its derivatives and that although no-one really knows what the correct percentages are and how large the market size is, it is estimated that the annual global market size for countertrade is between US\$200 billion to US\$500 billion.

1.3.1.3 Buybacks

Buybacks involve longer-term agreements that frequently involve continued market links. Simply put: it involves the delivery of a product or service such as infrastructure, technology, or even training to a purchaser, who then agrees that a certain percentage of the product (or output) produced, will be accepted as partial payment for the product or services delivered. As early as the 1970s buybacks were used in the German-Soviet Union gas pipelines deal, in which Mannesmann, a German company, delivered gas pipelines to the Soviet Union in exchange for gas from Siberia (Wülker-Mirbach, 1990).

1.3.1.4 Switch-trading

Although switch-trading exists, it is not a frequent occurrence, and has not been noticed in the South African arms deal. Switch-trading entails one company selling to another company its obligation to a specific country.

1.3.1.5 Offsets

“Offsets are simply goods and services which form elements of complex voluntary transactions negotiated between governments as purchasers and foreign suppliers...they are goods and services on which government chooses to place the label ‘offsets’...” (Hall and Markowski, 1994:179)

As Hall and Markowski so succinctly describes above, offsets, which are often classified as a type of countertrade, occurs when a large supply contract is conditional upon the incorporation into the contract of certain goods or services supplied by the buyer’s country and which should be offset from the final price. Unlike countertrade that is generally used for short-term trade purposes, offsets have longer term implications. As we have seen here in South Africa, these offset activities may be in the form of investments, joint ventures, purchasing transactions, training programmes, technology transfers, licences, job creations or export promotions. They can also include buyback options.

Gauchery (undated) describes the industrial objectives generally linked to offsets as a way for the purchasing country to access new technologies; to gain support for product development; to subsidise training costs; to subsidise its infrastructure development; and to get exposure to new markets. He describes the economic objectives of offsets as a way for purchasing countries to most frequently lessen their

burden of overseas expenditure; to create local capability through investment, technology transfer and training; to reduce subsidies on state-owned industry and more frequently than not, to pave the way towards privatisation of these industries (similar to what has happened with Denel); to encourage industrial diversification; and to create employment.

Although offsets are used in non-military procurements, it is in the realm of military procurement where the practice is most frequently used, making the arms industry the largest international generator of countertrade and offset deals (Cohen and Zysman, 1983). In the last three decades, the international arms trade have experienced far reaching changes. During the Cold War the wealthy countries in the North each possessed their own arms industry and buyer-seller relationships were mainly horizontal within a national market; with on a much smaller scale some North-South and trans-Atlantic trade. After the fall of the Berlin Wall, ushering in the end of the Cold War, the demand for arms fell dramatically on a world-wide scale and this started the shift in the arms manufacturing industry, leading to several national and cross-border mergers and joint ventures (Markusen, 2004). South Africa, which had significantly enlarged its arms industry during the Apartheid-era, found itself in post-1994 as once again part of the international trade community and as affected by events and trends as other arms producers.

The arms trade sector is characterized by discrete, giant contracts where a large initial sale locks in a broad stream of follow-up sales of such items as spare parts, support equipment, training services, maintenance services, and up-grade kits. This practice has led over the past decades to a particularly controversial manner of engaging in trade, prompting leading arms producing countries to introduce government policies that deal explicitly with offset agreements.

In a memorandum dated 04 May 1978, the then Deputy Secretary of Defense in the United States, Charles Duncan, stated that a “basic policy with respect to compensatory coproduction and offset agreements with other nations” need to be established. The memorandum stated that “[b]ecause of the inherent difficulties in negotiating and implementing compensatory coproduction and offset agreements, and the economic inefficiencies they often entail, DOD [Department of Defense] shall not normally enter into such agreements. An exception will be made only when there is no feasible alternative to ensure the successful completion of transactions considered to be of significant importance to the United States national security interests”. The policy has subsequently been adapted and reads: “It is the DOD policy not to enter into government-to-government offset arrangements because of inherent difficulties in negotiating and implementing such arrangements. Any foreign government requesting offset should be informed that the responsibility of negotiating any offset arrangements resides with the US contractor involved. The US Government will not commit a US contractor to an offset commitment without having its prior concurrence” (as quoted in Eisenhour, 1989).

Although governments were grappling with issues related to the burgeoning use of offsets as early as the 1970s, reports on offsets first entered the mainstream media in the late 1980s when Boeing was accused by the British government of delaying the implementation of offset obligations under a contract to supply an AWACS airborne radar system to the United Kingdom Ministry of Defence. In the agreement Boeing has undertaken to purchase British goods worth 130% of the value of the AWACS sale (Wülker-Mirbach, 1990).

Although there is evidence of offsets being practiced prior to, and during, the Cold War period (Brauer, 1991, 2000, 2004), it is only during the last decade that dedicated research has been conducted on offsets. Within the context of increasing literature on offsets, there are also many

different definitions of offsets, with the most widely used definitions those used by Udis and Maskus (1991) and Martin and Hartley (1995).

Martin and Hartley (1995) describe offsets as the process where a supplier of goods, or services, provides agreed-upon additional goods, or services, at no extra costs to the buyer.

Udis and Maskus (1991) describe offsets as a contract that requires the supplier of goods, or service, to provide extra services at no extra cost to allow the buyer to recoup some of the purchase costs.

1.3.1.6 Direct and Indirect Offsets

Offsets can be divided into two different types: direct and indirect offsets.

Direct offsets include delivering of goods and services directly related to the industry of the products purchased. In the case of military arms, the goods and services that forms part of the offset would directly relate to the military or weapons industry. By describing an offset as occurring "... when the supplier places work to an agreed value with firms in the buying country, over and above what it would have bought in the absence of the offset", Martin and Hartley (199:125) refer more to direct offsets aiming to enhance the local industry.

Udis and Maskus, 1991:152 (in Brauer and Dunne, 2004:3-4) refer to an offset as "... a contract imposing performance conditions on the seller of a good or service so that the purchasing government can recoup, or offset, some of its investment. In some way, reciprocity beyond that associated with normal market exchange of goods and services is involved". This definition is more applicable to the indirect offsets aimed at developing local economic markets and the export of non-military products. Indirect purchases are services and goods that are unrelated to the specific defence equipment purchased and are to enhance civil

and social development activities (See: Brask & Johnsson 2002; Haines 2002; Brauer 2003; Wrigley 2003; Brauer & Dunne 2004).

The South Africa Government has divided offsets into two categories:

- the Defence Industrial Participation (DIP), which requires the foreign company to buy directly from, or procure business for, South African defence companies; and
- the National Industrial Participation (NIP), which requires a separate set of contracts and investments in the civilian market.

While DIP is administered by the Department of Defence and Armscor, the Department of Trade and Industry (DTI) administers the NIP Programme (DTI, undated).

1.3.1.7 The costs of offsets

The relationship between socio-economic (and other relevant) policy promotion through procurement and value for money comes into play when discussing offsets. Government procurement traditionally requires that when organs of state contract for goods or services, they must do so in accordance with a system which is 'cost-effective' – thus to procure goods or services from a contractor on the best possible terms, and this was generally the case in South Africa prior to 1996, when price was the overriding criterion for the procurement of goods and services by the government and tenders were awarded strictly based on price. The lowest tender was only overlooked “when there [was] clear evidence the he [did] not have the necessary experience or capacity to undertake the work or [was] financially unsound” (Ministry of Finance and Public Works, 1997, clause 3.4.1). With the 1996 Constitution the practice of awarding tenders strictly based on price has to a large extent changed, and although still an important criterion, price is no longer a decisive criterion. Section 217 of the 1996 Constitution explicitly recognises government procurement as a means of addressing past discriminatory

policies and practices. Government procurement is discussed in more detail in below.

At the time of promoting the arms deal, the country's Minister of Defence presented his budget speech to Parliament. This was approximately six months before the deal was signed. In the speech, the minister indicated that for the R30 odd million spent on the arms deal, an approximate R110 billion will be invested in the country: "Re-equipping the defence force is being done in such a way to add value to our economy. In return for our expenditure, our economy will benefit by an estimated R110 billion of new investment and industrial participation programmes..." (Modise, 1999).

However, international research suggests that military spending yields no statistically significant economic growth in developing countries (Brauer, 1991; Dunne, 1995, 1996; Batchelor and Willet, 1998). Although empirical data is difficult to obtain as it is considered by both the private companies and government to be commercially sensitive, the bulk of critical scholarship indicate that economic impacts that can be linked to offsets are at best limited and more often problematic or even counter-productive (see Brauer and Dunne, 2004). Markusen (2004) found that any economic impact would be minimally positive, primarily because the arms market is characterized by "illiberal trade" and the objective of the arms dealers is to make a sale and not contribute to economic or social development (Dumas, 2004a).

Indeed, international research has found that arms trade offsets seldom deliver what they advertise in terms of job creation, technology transfer and trade linkages (Williamson, 1983; Hall and Markowski, 1994; Matthews, R, 1996; Struys, 2001; Batchelor and Dunne, 2000; Dunne and Haines 2001; Brauer, 2002; Brauer and Dunne, 2002; Sköns, 2004; Struys, 2004; Baskaran, 2004; Brauer and Dunne 2004; Dunne and Lamb, 2004; Haines 2004; Bitzinger, 2004; Chinworth, 2004; Dumas, 2004a; Dumas, 2004b; Perlo-Freeman, 2004; Wellmann, 2004;

Markusen, 2004; Brauer and Dunne, 2005; Haines and Hosking 2005; Haines and Wellmann 2005; Brauer and Dunne, 2009).

Although an odd small offset project might be successful, there is no economic theory or empirical evidence suggesting that these arrangements yield benefits for a country's economic development at large. Even with a successful smaller project it is not possible to isolate the offset contribution as the main catalyst for the project's success (Wellmann, 2004).

Brauer and Dunne (2002) found that when offsets are tied in, military spending is detrimental to the broader economic development. One example of this is the high cost of arms deals when offsets form part of it. As early as 1989, Eisenhower warned that offsets can alter the nature of arms transfers in that it can introduce rigidities in the process, and more significantly, can substantially increase costs of the procurement process because the presence of offsets as part of the deal may prevent the supplier from obtaining needed commodities from the most cost-effective sources. Sköns (2004) found that when countries are known to have mandatory offset agreements, as is the case with South Africa, suppliers ensure themselves against the risk of fines resulting from penalty clauses that are included in the agreement, should an offset obligation not be fully implemented. The cost of this insurance is absorbed into the complete cost of the transaction. Further research, such as that done by Batchelor and Dunne, has found that frequently the sellers of the weaponry will increase the price of the goods offered for sale in order to cover any penalties they might have to pay in the process of implementing attached offsets: "... the costs incurred by arms companies as a result of the offset deals are simply passed on to the recipient" (Batchelor and Dunne, 2002, as quoted in Holden, 2008:23).

Struys (2004) found that Belgium has had to pay approximately 30% more for purchases that have offsets tied in than for those without offsets. In research conducted in the United Kingdom by Stephen

Martin, he found that arms deals that include offsets "... do cost more than off-the-shelf purchases and, not surprisingly, that vendors seek to include most of this premium in the selling price" (Martin, 1996:7-8).

This is not surprising as it would make little to no business sense to sell a product at a certain price and then pay, on top of delivering the product, an additional amount to the buyer. As the arms industry is not a charity, the arms seller must find a way to recoup the money that will flow into the offsets. Consumers generally pay for the expenses incurred by a retailer, whether that is transport, building lease, security and municipal services. The retailer adds these costs onto the wholesale price of the product and in so doing recoups the expenses from the consumer. The most obvious and direct way for the arms seller to recoup the added costs, is from the buyer. There is no free lunch – the guest might enjoy it with no charge attached, but the host must still pay for it.

The South African arms deal was no different from recorded international experiences. Dunne and Lamb (2004) show that the South African government invested considerable effort into negotiating offsets to benefit both the local defence industry, as well as the national economy, but that they at no time considered buying off-the-shelf products. Batchelor and Dunne (2000) suggest that off-the-shelf purchases for the South African arms deal would most probably have been less expensive. The less expensive purchases "would have allowed the government to allocate the savings to encourage conversion in the defence related industries" (Batchelor and Dunne, 2000:24).

1.3.1.8 Offsets and Socio-economic Development

Even though there is much evidence that suggest that offsets are becoming increasingly part of the normal arms and civil trade, and the literature looking at the economic and military theory related to offsets is increasing, there is still a limited amount of researchers and authors writing on the impact of offsets on social development (Brauer, 1991,

2000, 2004; Dumas, 1995; Murrell, 1982; Hennart, 1989; Hall and Markowski, 1994; Taylor, 2000; Udis and Maskus, 1991).

The offset literature that does deal with social development have found that the arms trade offsets seldom deliver what they advertise in terms of job creation, technology transfer and trade linkages (Williamson, 1983; Matthews, R, 1996; Struys, 2001; Batchelor and Dunne, 2000).

The vast employment generation as the result of an arms deal offset has not as yet materialized anywhere in the world. Matthews (1996) found that Saudi Arabia's multiple offset have managed to create only approximately 2000 local jobs of which most are unskilled, instead of the 75 000 promised.

In terms of technology transfer, there is no evidence that offset-related technology transfer is sustainable (Williamson, 1983). This is mainly because the transferring country would not ship out its newest and most advanced technology, and/or wait for the receiving country to advance enough to catch up on a technological scale. It will immediately set out to further enhance its technology and the receiving country will remain one step (or more frequently many steps) behind. Up-to-date technology transfer does not make any commercial sense. For-profit companies generally guard their trade linkages and it would make little sense that an offset obligor would be genuinely assisting a buyer in creating sustainable trade linkages. To make a sale and a profit is the main (and often only) objective of the arms producer. It is not in a for-profit business in order to contribute to economic or social development in a foreign country (Dumas, 2004).

When considering an offset as a vehicle for foreign direct investment in the local economy, it is imperative to ask how an offset activity is being financed. In the case of the beneficiation-related offset NIP projects described in this document, it has been easy to raise capital for investment within South Africa, primarily through IDC and the mining

industry, and thus the IP obligor only supplemented the venture's funding. The foreign direct investment was thus minimal. Similarly the number of permanent local jobs created, as opposed to jobs filled by foreigners, need to be investigated.

1.3.1.9 Evaluations of Offsets

Monitoring

Even before an evaluation is considered or conducted, there is a need for more sophisticated and stringent monitoring of offset activities in developing countries (Skóns, 2004).

Monitoring is an integral part of the day-to-day management of projects and programmes. The monitoring process is necessary to determine if predetermined and planned activities are being implemented as planned, and whether these are implemented successfully and on time. It is only through regular monitoring that one can keep track of activities, their deviation or convergence with original plans and targets, and their expected, or more importantly, unexpected results.

In the event of a large and multi-faceted programme such as the NIPP, a stringent monitoring and evaluation system is crucial. The Department of Trade and Industry has no strenuous monitoring and evaluation system in place for the NIPP, instead depends on *ad hoc* monitoring of projects (interviews with Ms Jogessar, DTI, 19 September 2002; and with Mr. Dion Haroldt, DTI, 23 June 2005). Dunne and Lamb (2004) confirmed this status and found that the reason for this is the limited capacity within the government to monitor the NIPP.

Evaluations

Very few independent evaluations of offset packages have been conducted internationally. The majority of available evaluations have

been conducted by the purchasing government. These include evaluations done by Finland and Sweden (Sköns, 2004, Struys, 2004).

The main reason for this lack of independent evaluations is the lack of accessible data. Very little, if any, data related to offsets are routinely published (Martin, 1996). The reason that is most frequently provided for this lack of available data is that the information is commercially sensitive and thus not for public perusal. Gupta *et al* (2001) have found that defence-related contracts are often excluded from freedom of information legislation, and thus to a certain extent outside the realm of normal public scrutiny. Because it is not possible to get documentation, information often needs to be gathered through interviews with industry and government representatives, who all have vested interests (Martin, 1996).

Although it is relatively easy to monitor formal fulfilment of offsets in terms of contracts signed, it becomes nearly impossible to evaluate offsets as a group. The complexity of offsets makes it difficult to find instruments to measure the impacts of the offsets (Willet and Anthony, 1998). Offsets refer to a collective and not to a well-defined homogenous activity. Each part of the collective has its own activities and goals, which will each have a different economic effect, and would require different evaluation methods and techniques. It is thus nearly impossible to use the same instrument to measure and evaluate the whole.

1.3.1.10 Why offsets?

Hadjiminas (undated) ponders the question of why, when there appears to be so little benefit to offsets, more and more countries continue to use it as a bargaining tool. He argues that if indeed offsets are no more than expensive 'white elephants', the use of offsets would have dwindled or even perished, and that every new government would have used the use of offsets to discredit their predecessor and abolish the use of offsets in

the future. He concludes that offsets are akin to a virus that despite their shortcomings, no government wants to risk letting go of.

Hew (2006) argues that based on past benefits to developed countries, offsets can be successful provided the offset programme is properly conceived and implemented, utilizing the right resources (time, money and experts). He does however warn that most developed countries' military offset models are aimed at direct offsets and are targeted solely at building a defence industrial base, while developing countries, because of their huge socio-economic needs, require both direct and indirect offsets.

1.3.2 Poverty

Chronic poverty is of key relevance to South Africa and evidence indicates that poverty is proving to be much more intractable than initially hoped, despite the many initiatives in place to address poverty (Leibbrandt and Woolard, 2001; Seekings *et al*, 2003). Poverty is without doubt the single most important issue that has been facing the country for decades and so enquiries into levels of poverty amongst South Africans is not new. One of the first studies undertaken, in the form of a commission of enquiry, was the first Carnegie Commission Inquiry into poverty in the Great Depression in 1928 (Magasela, 2005). Since then there has been several more national studies into poverty in South Africa and in particular the extent to which poverty levels have changed overall and for different subgroups of the population during the first years of democracy (see Adato *et al*, 2004; Borat *et al*, 2004; Borat and Cassim, 2004; Borat and Kanbur, 2005; Hoogeveen and Ozler, 2006; Leibbrandt and Woolard, 1999; Leibbrandt *et al*, 2001; May and Meth, 2005; Meth, 2006; Van der Berg *et al.*, 2006; and Woolard and Klasen, 2005).

Comparisons between the studies done prior to 1990 and those after 1990, indicate that more often than not the task of defining poverty falls to those in power and hence the conceptualisation as well as what defines poverty is reflective of the dominant ideologies (Magasela, 2005). Internationally, as well as here in South Africa, poverty has always been a political issue because it relates to the allocation and redistribution of resources, and reflects the impact of past and present policy choices (Meth, 2006), but because the concept is very nuanced and complex, it is also used by politicians and the media in a subjective, emotionally responsive manner (du Toit, 2005).

Since 1994, there has been much political interest nationally (and internationally) regarding the extent to which poverty has increased (or decreased) in the country since the change of government. Pertinent national issues, of which the arms deal is an excellent example, tend to raise the interest of the media and the broader population in issues related to poverty and inequality. In the public discourse on these issues, poverty and inequality are normally linked and treated as an expression of the same problem, even though the issues are very different, each with its own public policy consequences.

1.3.2.1 Inequality

Inequality can be described as a state in which a specific society finds itself, and is measured by the Gini coefficient, which can vary between zero (0) and one (1) and measure the distribution of the national income. The closer to 1, the more unequal a society, and the closer to 0, the more equal a society.

Concepts of poverty are also frequently used interchangeably in the press, and frequently different issues such as 'absolute poverty' and 'relative poverty' are confused.

1.3.2.2 Absolute Poverty

Absolute poverty, also referred in Rowntree (1901) as 'primary poverty', refers to a state of deprivation defined in relation to what is supposed to be an objective, invariant and value free external definition of basic human needs. Today, this objective, invariant and value free external definition of basic human needs is used by the World Bank when conceptualising poverty in the international development context to mean 'anyone living on an income below US\$1 per day' (World Bank, 2000a). Even though this 'below US\$1 per day' indicator for absolute poverty is used as an indicator for the Millennium Development Goals, its use has been heavily criticized by scholars such as Townsend and Gordon (2002) who criticised it for being an inaccurate indicator and for being set too low.

The 1995 World Summit for Social Development in Copenhagen described absolute poverty as "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information (World Summit for Social Development, 1995). The summit then significantly added that the state of poverty "... depends not only on income but also on access to social services" (World Summit for Social Development, 1995).

Statistics South Africa uses two absolute poverty lines: the 'lower-bound' poverty line and the 'upper-bound' poverty line (Statistics South Africa, 2007). Both these poverty lines are based on a household's consumption level, rather than the income level of the household. There are three reasons why, instead of household income level, the household's consumption level is a better indicator for the measurement of poverty. These reasons are that of the two measures, consumption is more closely related to well-being in the sense of having enough to meet current basic needs; consumption is usually the better measured aggregate of the two because it is less subject to short-term variation;

and consumption more accurately reflects households' true standard of living and ability to meet basic needs, which depend on current income as well as access to credit markets and households savings (Statistics South Africa, 2007; 2008a).

Using food prices from 2000, Statistics South Africa calculates that the 'lower-bound' poverty line, which provides for essential food and essential non-food consumption, amounts to R322 per capita per month. Using the exchange rate for 01 July 2000, this is approximately US\$1.50 per day per person (Statistics South Africa, 2007; 2008b). The 'upper-bound' poverty line includes an additional R271 for non-essential non-food items, and amounts to R593 per capita per month (Statistics South Africa, 2007; 2008b). Using the exchange rate for 01 July 2000, this calculates to approximately US\$2.90 per person per day.

1.3.2.3 Relative Poverty

'Relative poverty' as a concept relates poverty to a reference group, and links poverty to a particular point on the distribution curve of a particular variable, e.g. income. Thus simply put – people are poor if they are poor in comparison to those around them in society.

May (1998) describes relative poverty in relation to the national distribution of income and expenditure, and satisfying a socially acceptable minimum standard of living, while Galbraith (1958) and later Townsend (1979) defines it as living *not* in a way which is customary, or average, for society: "People are poverty stricken when their income, even if adequate for survival, falls markedly behind that of the community. Then they cannot have what the larger community regards as the minimum necessary for decency; and they cannot wholly escape, therefore, the judgement of the larger community that they are indecent. They are degraded, for, in a literal sense, they live outside the grades or categories which the community regards as respectable" (Galbraith, 1958:323).

In the 1980s, Sen developed his 'capabilities approach' for poverty, conceiving poverty as being absolute in the space of 'capabilities', i.e. having both the capability to do something as well as the commodity, or mode, to do so within the context of the society in which one lives (Sen, 1983). Like Galbraith, he links poverty, degradation and shame, and talks about the capability to 'avoid shame': "...from failure to meet social conventions, participating in social activities and retaining self-respect" (Sen, 1983:167). Noble *et al* (2004) expands the concept further to indicate that 'relative poverty' implies that a person, or family, or social group, living in poverty is unable to participate fully in society.

The vision articulated for the South African society in the preamble to 1997 White Paper on Social Welfare is consistent with a multidimensional and relative approach to poverty that incorporates the meeting of basic needs and capabilities. The White Paper views the South African society as "a humane, peaceful, just and caring society which will uphold welfare rights, facilitate the basic needs, release people's creative energies, help them achieve their aspirations, build human capacity and self-reliance, and participate fully in all spheres of social, economic and political life" (Department of Welfare, 1997: Preamble).

1.3.2.4 Poverty in South Africa

One might ask the question of why the issues of poverty and inequality are relevant, or even important, in a discussion of the arms deal, and more specifically, a discussion of those offsets linked to the arms deal. Simply put, the issues of poverty and inequality cannot be ignored. It is also not possible to fully discuss the implications of mineral and metal beneficiation without considering the implications it has for the poorest of the poor. The success or failure of initiatives such as beneficiation and industrial participation will have an impact on the overall aim to reduce poverty.

In the public debate that has taken place, and continues to take place, since the signing of the 1998 South African arms deal, many have argued against purchasing of military armaments, referring to it as a wasteful distraction from pressing development needs in a country dogged by chronic poverty and inequality (see Crawford-Browne, 2000). The Cape Times (28 March 1995) wrote: “Can the expenditure of at least R1,7 billion on naval ships, in peacetime, be justified while millions of South Africans still live in squalor with minimal access to the most basic facilities? At a pinch the navy can manage a little while longer with the strike craft and other vessels it already has, but there can be no greater urgency than housing the homeless.”

South Africa is one of the few countries in the world that guarantees socio-economic rights within its constitution, and as such has won international praise. These socio-economic rights are captured in the 1996 Constitution’s second chapter, the Bill of Rights, and include access to housing (Section 26), health care, food, water, social security (Section 27), and education (Section 29). While the Bill of Rights does not guarantee a specific level of income for any person, nor more importantly in the light of the arms deal offsets, the right to a job or paid employment, it does address a number of domains that relate to people’s well-being, in particular the right to adequate housing, to health care, to sufficient food and water, and to social security, including social assistance, and to education (Liebenberg, 2006).

The issue of poverty becomes relevant in the context of the arms deal because at the time of signing the deal, questions were raised in Parliament on the affordability of the deal, particularly in relation to the country’s socio-economic needs, in particular the number of people without access to adequate housing, without adequate access to safe, potable water and adequate sanitation, health care and the rising incidence of HIV/AIDS. Just shortly before the deal was concluded, the Minister of Health rejected the idea of providing anti-retroviral drugs to

pregnant mothers as the programme was deemed too expensive to even contemplate (Holden, 2008: 28).

In 2007, there was an estimated 5.7 million people living with HIV in South Africa (UNAIDS, 2008). During the period from 1997 to 2005, the total number of deaths in the country increased by 87%, with the death rate more than tripling for women aged 20 to 39, and more than doubling for males aged 30 to 44 (Statistics SA, 2005; Statistics SA, 2006). It is estimated that at least 40% of these deaths is attributable to HIV (UNAIDS, 2008).

Maternal, infant and child mortality ratios strongly reflect the overall effectiveness of a country's health system. Data for South African maternal mortality since 1998 are available through the National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD), which captures maternal deaths through the Confidential Enquiries into Maternal Deaths (CEMD) system. The system indicates that the reported maternal mortality ratio has increased every year. It rose from 117 per 100,000 in 1998 to 147 in 2004 (Department of Health, 2007). The last official data from the CEMD was for 2004. Although the CEMD system should capture all the maternal deaths occurring in the country, it is not clear whether all deaths occurring outside health facilities, including home deaths, are actually captured on the CEMD (Department of Health, 2007).

At least 260 women, babies, and children die every day in South Africa, and no measurable progress has been made to reduce this mortality rate. Approximately 50% of all maternal deaths take place within one day of childbirth, while approximately 40% of stillbirths occur during labour. Between one third and one half of all newborn deaths are on the first day of life, many due to asphyxia resulting from poor quality of care during childbirth (South African Every Death Counts Writing Group, 2008).

UNICEF defines 'infant mortality' as the probability of dying between birth and exactly one year of age, expressed per 1000 live births during a specific period. The 1998 Demographic Health Survey was the last population survey to provide reliable data on infant mortality in South Africa. The 2000 South African National Burden of Disease Study, which draws on the 1998 health survey data, indicates that the infant mortality rate was 59 deaths per 1000 live births. All indications are that infant and child mortality has increased since 1990.

An assessment done by UNICEF (2007) found that:

- South Africa's under-five child mortality rate was not reduced, but had risen between 1990 and 2006 from 60 to 69 deaths per 1000 live births.
- With this, South Africa puts itself on a list of 15 countries such as Somalia, Sudan and Zimbabwe who had made no progress meeting the MDG.
- The main cause for under-five deaths was HIV/AIDS, responsible for 57% of child deaths.
- If South Africa wants to meet the fourth Millennium Development Goal, it would have to reduce its mortality number to 20 per 1000 live births by 2015

Malnutrition contributes to child mortality by increasing the risk of death (Black *et al.*, 2008). The South African Child Healthcare Problem Identification Programme (PIP) data indicate that 60% of deceased children nationally were underweight-for-age and 33% were severely malnourished (Stephen *et al.*, 2009).

The extent of food insecurity in households is measured by using 'hunger' as indicator. In the Statistics South Africa General Household Survey, which is conducted annually since 2002, respondents are asked to indicate whether any child, aged between birth and 17 years old, in the household 'seldom, sometimes, often, always, or never went hungry

in the past 12 months'. Although child hunger is emotive and subjective, it is assumed that variation and reporting error will be consistent so as to allow for the reporting of trends from year to year. The results of the 2002 survey indicated that 29% of children experienced child hunger nationally, the percentage remained the same in 2003; but decreased to 25% in 2004; 22% in 2005; 16% in 2006 and 15% in 2007 (Proudlock *et al.*, 2008; and Pendleburg *et al.*, 2009).

Racial disparities are stark for this indicator and confirm that hunger, like poverty and unemployment, is most likely to be found among black children. Nationally, in 2007, approximately 2.5 million black children lived in households that reported child hunger. Thus approximately 17% of the total black child population experience hunger, compared to 11% coloured, one percent (1%) Indian and 0.1% white children (Pendleburg *et al.*, 2009).

In reality, the development indicators for the country have been indicating a downhill spiral for several years. In terms of the United Nations Development Programme's Human Development Index (HDI) for 1998 (the year that the arms deal was entered into), South Africa ranked 103 out of 174 countries, just below Tunisia and just above El Salvadore and Cape Verde (UNDP, 2000). By 2005, the country had slid to being ranked 121 out of 177 countries (UNDP, 2007).

Van der Berg and Louw (2003) found that there is a link between the number of people living in poverty and the growth in population experienced in the country. They found that although the proportion of people living in poverty had declined between 1970 and 2000, a growing population has led to more individuals living in poverty, as illustrated below.

	Population	Living in Poverty	Proportion
1970	22 million	11 million	50%
2000	44.6 million	17 million	38%

Change	+22,6 million	+6 million	-12%
--------	---------------	------------	------

Source: Van der Berg and Louw (2003).

The Human Sciences Research Council found that in 2001 approximately 57% of individuals in South Africa were living below the poverty income line, a situation that was unchanged from 1996 (Human Sciences Research Council; Press Release, 26 July 2004).

In its 2003 report on development in South Africa, the United Nations Development Programme (UNDP) reports that in the years leading up to 2003; income, poverty and inequality had increased in the country (UNDP, 2003). At the same time, the South African Human Sciences Research Council found that the country's Gini score (that indicates inequality) was approximately 0.77 (Human Sciences Research Council; Press Release, 26 July 2004).

In the past inequality in South Africa was largely defined along race lines, and the main driver of inequality was the Black/White divide. In recent years, however, inequality has become increasingly defined by inequality within population groups as the gap between rich and poor within each group has increased substantially. The Gini coefficient for the Black population has risen from 0.62 in 1991 to 0.72 in 2001 (Bhorat, 2003; Van der Berg and Louw, 2003). This level of inequality is comparable with the most unequal societies in the world. The White population has a Gini coefficient of 0.60 (Bhorat, 2003; Van der Berg and Louw, 2003), which is extremely high for a group whose education and occupational profile matches that of societies in highly industrialised countries (Human Sciences Research Council; Press Release, 26 July 2004).

	1991	1996	2001
Black	0.62	0.66	0.72
White	0.46	0.50	0.60
Coloured	0.52	0.56	0.64
Asian	0.49	0.52	0.60

Total	0.68	0.69	0.77
-------	------	------	------

Source: Human Sciences Research Council; Press Release, 26 July 2004

With specific importance to this evaluation of the SARM factory, which was located in a rural area of the Free State Province, is the poverty incidence and rates for rural South Africa. It is important in that the implicit reasons provided for the establishment of SARM are job creation and poverty reduction for the poor, unemployed black women of the area. Traditionally the incidence of poverty is much higher in the rural areas of the country, where in 2007, the incidence of poverty of households was 54.2% and that of individuals were 67.7%. These incidences were more than double the corresponding rates for urban areas, which was 21.9% for households and 32.7% for individuals during the same period (Statistics South Africa, 2008a). Statistics South Africa (2008a, b, c) further found that 57.1% of all poor households and 59.3% of poor individuals in 2007 were rural dwellers despite the fact that the rural areas housed well below 50% of the country's population.

1.3.3 Sustainable Development

The term 'sustainable development' is not new. Many scholars consider 1962 as the seminal year in which people gained understanding of how closely linked the environment and development are.

Rachel Carson's book "*Silent Spring*" shattered the assumption that the environment had an infinite capacity to absorb pollutants. Her research indicates that agricultural pesticides were building to catastrophic levels and that it was damaging to animal and human health. In 1968 Paul Ehrlich's "Population Bomb" was published. The book explores the connection between human population, resource exploitation and the environment. The following year, 1969, the USA passed the National Environmental Policy Act that led to the creation of the first national Environmental Protection Agency (EPA) ever. In 1972 the concept of

'sustainable development' is used at the United Nations Conference on Human Environment in Stockholm, to present a resolution to the environmental vs development dilemma. The conference led to the establishment of numerous national environmental protection agencies and the United Nations Environment Programme (UNEP) (Dhar and Thakur, 1996).

The term 'sustainable development' however came to prominence with the publication of the "Our Common Future" report of the World Commission on Environment and Development in 1987. This report is more commonly known as the Brundland report. The definition of sustainable development as defined in the Brundland report as "development that meets the needs of the present without compromising the ability of future generations to meet their own" is widely regarded as the fundamental definition of sustainable development. For the first time 'sustainable development' was not linked only to environmental issues, but also to the actions of both government and business. The interpretation of this definition has led to confusion and heated debate. The confusion is closely linked to the lack of agreement regarding exactly what is to be sustained, for whom, and by what means (Redcliff, 1992; Frazier, 1997), and the argument is primarily between the eco-centrism and techno-centrism viewpoints.

1.3.3.1 Eco-centrism vs Techno-centrism

Eco-centrism is a philosophy that recognizes that humans are but a component of the planet's ecosystem, and thus the environment as the source and support of all life, is more important and significant than the economy or social well-being (Shields and Šolar, 2004; Rowe, 1987).

Techno-centrism is the opposing view and argues that humans have the ability to provide technical solutions to control environmental and social problems. The free market and economic efficiency is emphasised by techno-centrism (Solow, 1993).

Jacobs (1999) narrows down the debate between these two viewpoints to the four basic questions:

- the degree of environmental protection that is envisioned to attain sustainable development;
- the emphasis placed on equity as a prerequisite for sustainable development;
- the measures and nature of participation required to attain sustainable development; and
- the scope of the subject area covered by the concept of sustainable development (Jacobs, 1999).

These questions were adapted and now forms part of the “Five Capitals” model that is widely used within companies to measure their overall sustainability and social responsibility (Sigma Guidelines, 2004).

1.3.3.2 The Capitals

The ‘capitals’ are defined as follows:

- ‘Human capital’ refers to the health, knowledge, skills, intellectual outputs, motivation and capacity for relationships of the individual. In the business context it includes the elements needed for people to engage in productive work.
- ‘Social capital’ refers to any value added to the economic outputs of a business by human relationships, partnerships and cooperation. It includes amongst others, communities, trade unions, networks, and other businesses.
- ‘Manufactured capital’ refers to material goods and infrastructure owned, leased or controlled by the business that contribute to the production, but do not form part of the output (thus for a gold mine, it would include buildings, machines, tools, etc, but not the gold which forms part of the mine’s product.)
- ‘Financial capital’ refers to the assets that exist in the form of currency that can be owned and traded, such as shares, bonds,

and money in the bank; and reflects the productive power and value of the other four types of capital.

- 'Natural capital' refers to natural resources, such as energy and matter, which companies require to produce their products and deliver their services (Carney, 1998, Sigma Guidelines, 2004).

Social, human and manufactured aspects ('capitals') are critical components of a company and its activities. A company's activities in this context include delivering value to other businesses and society, as well as the quality of life of stakeholders. The stakeholders are those groups who affect and/or are affected by the business and its activities. These may include employees, trade unions, owners, shareholders, customers, business partners, neighbouring communities, suppliers and government, amongst others.

Natural capital encompasses the natural resources and ecological systems on which the company and wider society depends.

Financial capital is crucial to the survival of the business and accountability is crucial. The principle of accountability represents the relationship that the business has with its stakeholders. Accountability includes transparency; responsiveness to the needs of stakeholders, and compliance to rules, regulations and standards to which a business must comply.

These aspects discussed above are interdependent and changes in one of these aspects of business are likely to cause an impact on another aspect (Sigma Guidelines, 2004).

1.3.4 The Reconstruction and Development Programme (RDP)

Since 1994, most of the South African government's policies have been aimed at the upliftment of the country's previously disadvantaged individuals and their communities. At the same time, the shift within the

country towards a greater use of industrial policy formed part of a broader shift within the post-Apartheid government to utilise partnerships and to leverage private sector investment. These partnerships and investments are used to reduce, and to a large degree offset, the state's costs of supporting and subsidising domestic industrial activity (Haines, 2000; Bond, 2002). Both beneficiation and industrial participation are built primarily on the principles of the Reconstruction and Development Programme (RDP), adopted in 1995 and focused on redressing the social imbalances created by Apartheid.

Feinstein (2007) recounts how the programme was a result of efforts by the Congress of South African Trade Unions (Cosatu) and the United Democratic Front (UDF), supported by the Macroeconomic Research Group, which consisted of a group of progressive international economists. The RDP was intended to be people-driven and envisaged a massive national public works programme to facilitate employment and reduce inequalities (Feinstein, 2007:45).

The programme was designed so as to acknowledge the importance of reducing poverty as a way to uplift communities. Its main principles are:

- Eliminate poverty and inequality
- Raise living standards through meeting the people's basic needs, such as housing, water and electricity
- Developing the country's human resources
- Building the economy, and
- Democratizing the state and society

The five-year RDP had several goals of which the most relevant ones have been captured in the table below for easy reference.

Selected RDP Goals	
Housing: Provide well-located and affordable shelter for all by the year 2003. Build one million houses in five years	Water: Supply 20 to 30 liters of clean water each day to every person in two years and 50 to 60 liters per day within five years from a point no more than 200 meters from their dwelling.
Electricity: Supply 2.5 million more households and all schools and clinics with electricity by the year 2000.	Health care: Give free medical care to children under six years and to homeless children; improve maternity care for women; organize programs to prevent and treat major diseases like TB and AIDS.
Land reform: Implement land reform based on redistribution of residential and productive land to those who need it but cannot afford it and restitution to those who lost land because of apartheid laws.	Job Creation through public works: A national public works program to provide basic needs such as water supply, sewerage and roads and at the same time create jobs, particularly in poor and rural areas.
Social security and social welfare: A new system to provide for all people regardless of their race, gender or physical disability. A pension system to meet the needs of workers in the formal and informal sectors.	Education and training: Literacy for all, equal opportunity, 10 years of free and compulsory education, class sizes of no more than 40 pupils, training workers to meet the challenges of the new political and economic conditions.

Source: Knight, 2001.

In his study on South Africa's economic policy and development, Knight (2001) found that there were both proponents and detractors of the RDP programme. Proponents argued that the programme oversaw many

major advances in dealing with South Africa's most severe social problems such as:

- *Housing*: Between 1994 and the start of 2001, over 1.1 million cheap houses eligible for government subsidies had been built, accommodating five million of the estimated 12.5 million South Africans without proper housing.
- *Clean water*: By the beginning of 1998, standpipes had been installed within 200 metres of the dwellings of about 1.3 million rural people. By August 1998, the Minister of Water Affairs stated that since he had taken office, more than 2.5 million people had been given access to fresh safe water. By 2000, a total of 236 projects had supplied clean piped water to nearly 4.9 million people, most of whom were inhabitants of former homelands.
- *Electrification*: Between 1994 and May 2000 around 1.75 million homes had been connected to the national grid, while the proportion of rural homes with electricity grew from 12 percent to 42 percent.
- *Land Reform*: By 1999 some 39,000 families had been settled on 3,550 square kilometres of land. Authorities claimed that 250,000 people had "received land" within four years.
- *Healthcare*: Between April 1994 and the end of 1998, around 500 new clinics gave an additional five million people access to primary health care. Under the polio-hepatitis vaccination programme that began in 1998, eight million children were immunised within two years.
- *Public works*: A community-based public works programme provided employment over five years to 240,000 people on road-building schemes and the installation of sewage, sanitation facilities and water supplies (Knight, 2001).

Critics on the other hand have questioned the scope of change represented by many of the statistics, arguing that realities on the ground signify a far more modest improvement. They have criticised the

standards of housing and water delivery, healthcare improvements and the success of the land reform policy and agricultural reforms:

- *Housing*: Critics mentioned the poor quality of the housing and the often dreary planning and layout making the RDP housing units strongly resemble the bleak building programmes implemented by the Apartheid government during the 1950s and 60s.
- *Clean water*: Critics have cited an array of problems and complications with RDP water provision policies that have led to their partial or complete failure during the implementation stage.
- *Land Reform*: The number of families settled on land under the RDP was far below the Programme's goal. The RDP had aimed to resettle families on 300,000 square kilometres of land, in reality, only just over one percent of this goal was achieved. In addition, the advances in many other areas of public services came partly through the removal of agricultural subsidies, which resulted in huge job losses. Between 1994 and 1998, the number of workers on commercial farms declined from 1.4 million to just 637,000. Thus, the number of people employed in the agricultural sector actually declined substantially under the RDP.
- *Healthcare*: Critics argued that access to healthcare improved only slightly under the RDP and that standards at many medical institutions declined rapidly. They note that use of healthcare facilities increased by just 1.6% between 1995 and 1999, and that even these modest improvements have been eclipsed by the advance of the AIDS pandemic and other health epidemics, such as malaria (Knight, 2001).

A key aspect of the RDP was that it linked reconstruction and development and attempted to combine measures to boost the economy, such as contained fiscal spending, sustained or lowered taxes, reduction of government debt, and trade liberalisation, with socially minded social-service provisions and infrastructure projects.

And as such it was frequently referred to in the arms deal – initially in the 1996 White Paper on National Defence, which urges the reduction in defence spending in the light of the needs of the RDP: “...in the South African context there is pressure to reduce defence spending substantially. There is urgent requirement to divert financial resources to the RDP in order to meet basic socio-economic needs. A failure to meet these needs will generate conflict and instability.” (Republic of South Africa, 1996b). Later the RDP (and how the offsets would assist towards reaching its goals) was referred to by Armscor in its arguments for offsets: “Normally, foreign procurement entails a net outflow of reserves, negative impact on our trade balance, and an increase in our defence burden. However, the counter trade aspect has added a new dimension to foreign acquisition. Subject to the defence budget and cabinet approval, the acquisition of the corvettes meets convincingly the needs of both the RDP and defence and it is pure butter!” (Weekend Argus, 26 February 1995, as quoted in Holden, 2008:9). A few months later, Armscor indicated that the corvette deal “successfully straddles the gap between state security and protection of the populace. It will also create employment and resources by protecting our marine environment. Furthermore, it will boost the RDP through countertrade inherent in the corvette deal” (Daily News, 26 May 1995, as quoted in Holden, 2008:9).

But the increasing socio-economic challenge in the country forced the government’s hand and their response was to significantly adjust the RDP programme, and adopt the neo-liberal macro-economic Growth, Employment and Redistribution (GEAR) strategy in 1996.

1.3.5 The Growth, Employment and Redistribution (GEAR) Strategy

"The need to create employment and a better life for our people is the central objective of the economic policy of this government. The Reconstruction and Development Program (RDP) remains the basic policy framework to achieve this objective. The Growth, Employment and Redistribution (GEAR) program is the associated macroeconomic strategy used. At the beginning of this year the President announced an Action Plan to Accelerate Growth. This action plan marked an increased emphasis on macroeconomic reform to further increase investment..." (Alec Erwin, Minister of Trade and Industry, May 2001)

Underlying the introduction of GEAR was the realization that development and poverty reduction would have to be fuelled by market-led economic growth, shifting the focus to structural economic reforms (Gelb, 2006). It also significantly meant that social spending would be reduced while the country tries to reduce its international debt burden accrued during the Apartheid era (Holden, 2008).

Stolten (undated) lists the macroeconomic strategies contained in GEAR as: growth through exports and investments; redistribution through the creation of jobs and the national budget; sharpened focus on budget reform; faster reduction in the fiscal deficit; public service restructuring; a low and stable inflation rate; gradual relaxation of exchange controls; removal of trade barriers; encourage new investments; public investment in infrastructure; sale of government assets; and flexibility and training in the labour market.

Central to all the above is the enhancement of non-gold exports, increased private sector investments (with a primary focus on increasing labour opportunities), development of infrastructure and improved service delivery (Knight, 2001).

As noted earlier, the country's industrial participation policy was conceived and implemented in the context of an increased emphasis on economic and industrial strategy, as formulated particularly in the GEAR strategy. One of the most notable approaches to achieving the aims of the GEAR strategy (and with particular reference to the SARM factory) is the 'value-chain' approach of the Integrated Manufacturing Strategy introduced by the Department of Trade and Industry (Department of Industry, 2002c; 2003b), which links up with the Department of Minerals and Energy's drive for local beneficiation of metals and minerals mined in the country (Wellmann, 2005). The Integrated Manufacturing Strategy emphasises the centrality of knowledge-intensive production processes in manufacturing and the need to construct integrated supply and/or value chains with both a national and international reach. The strategy places particular emphasis on five sectors of the economy: agriculture and food production; tourism; information and telecommunications technologies; cultural industries; and exports sectors, including minerals and metals, clothing and textiles, automobiles, agro-processing and chemicals (Department of Trade and Industry, 2001:30). The National Industrial Participation Programme (NIPP)⁵ echoes the emphasis on the same five economic sectors (Department of Trade and Industry, 2003b). In the August 1997 presentation to Parliament of the Defence Review and the list of weaponry to be purchased, the then Deputy Minister of Defence, Mr. Ronnie Kasrils, explicitly linked offsets, manufacturing and the implementation of the GEAR Strategy: "There will be substantial off-set agreements so that, for instance, South African steel and other local components and equipment will be used in production. There will be major off-set or counter-trade agreements, so that for every rand spent abroad, the same amount will be invested in South Africa. Such packages will be of enormous benefits to our GEAR Strategy. It will bring in investment and create jobs. Therefore Defence acquisition will be Trade and Industry led. Far from being a drain on our resources, it

⁵ A detailed description of the NIPP is found in Chapter 3.

will provide a tremendous boost to our economy and Treasury” (Kasrils, 1997).

The GEAR Strategy’s emphasis on export capacity and the focus on attracting foreign capital to drive the country’s development process led to the country negotiating free trade area agreements with its two largest trading partners, the European Union (EU) and the Southern African Development Community (SADC) (Gelb, 2006). These two agreements, combined with the United States government’s African Growth and Opportunity Act (Public Law 106-200 – May 18, 2000), commonly referred to as AGOA, are very relevant to the SARM evaluation. AGOA allows for the duty-free export of mainly energy-related products, transportation equipment, minerals and metals, agricultural products and textiles and apparel from qualifying Sub-Saharan countries, which includes South Africa, to the United States of America. On July 12, 2004, the USA extended the whole AGOA Programme to 2015.

The key ingredients of the GEAR Strategy that impact specifically on defence-related industries, include:

- Liberalisation of the capital account of the balance of payments and the possible abolition of exchange controls.
- The speeding up of tariff reductions to facilitate industrial restructuring.
- The improvement of incentives and facilities to promote the investment, technology development, and human resource development in industry to promote competitive and labour absorbing projects.
- The strengthening of competition policy, and the promotion of small, micro and medium enterprises.
- The promotion of sectoral industrial strategies employing cluster support programmes and related programmes and facilities.
- The restructuring of state assets (privatisation) and the introduction of schemes to allow the broader population to become owners of such assets.

- Greater support for human resource development in industry, and suitably flexible labour market policies to encourage the employment of new entrants into the labour market and marginalised groups.
- The continued rationalisation and reduction of import protection in order to encourage the emergence of truly competitive producers and service providers (Sylvester, 2006).

One of the GEAR's most outspoken critics is the Congress of South African Trade Unions (COSATU)⁶. Knight (2001) writes that the National Labour and Economic Development Institute (NALEDI), a COSATU formed research institute, found that the GEAR policy has failed to deliver the promised economic and job growth, nor did it significantly redistribute income and socio-economic opportunities in favour of the poor. The group further found that GEAR brought about deep cuts in government spending between 1996 and 1999, resulting in failed efforts to improve services to the poor suffered, and that the positive consequences anticipated by GEAR did not result.

Much of the debates around the RDP, GEAR and the arms deal have focused on the high levels of unemployment and poverty in the country. Poverty has already been discussed above.

South African unemployment rates are high. Gross national income per capita has declined during the 1998-2002 period in spite of positive economic growth (May, 2004). This situation occurred because while between 1.4 million and two million new jobs were created during this period, even greater increases in labour supply meant that overall employment rate also increased (McCord and Borat, 2003; Mayer and Altman, 2005; Casale *et al*, 2005). Statistics South Africa (as quoted by

⁶ COSATU is a federation of 19 unions with a combined membership of over 1.8 million. Its views cannot be ignored by government due to its alliance with the ANC, the federation's size and its ability to organize its members.

Knight, 2001) said unemployment was 22.5% in 2001, down from 23.3% in 1999 - but this is a narrow definition of unemployment and only includes those actively seeking work, excluding discouraged job seekers. COSATU, using the broader definition for unemployment, indicated that it believed unemployment rose to 37.3% in 2001 from 36.3% in 1999 (Knight, 2001). In February 2001, President Thabo Mbeki said in his annual state of the nation address that there had been a net gain of 1.1 million jobs between 1996 and 1999. And Borat (2003) found that between 1995 and 2002 approximately 1.6 million net new jobs were created in the South African labour market, which is an average growth rate of about 2.1% per annum in the number of jobs. At the same time, however, more than five million people entered the labour market, resulting in an increase in the number of unemployed of more than three million (Bhorat, 2003).

Another aspect of the jobs created is that those jobs were largely created in the informal sector, while jobs were shed in the formal sector. NALEDI (as quoted in Knight, 2001) noted in December 2000 that some official estimates suggest that up to one million jobs in the informal sector have been created since 1995, but the opposite was the case in the formal sector: "Between 1996 and 1999 more than 400,000 formal sector jobs were lost. The impact on families is disastrous, as there is little in the way of social security protection for the unemployed. The jobs that are being created are generally informal and lowly paid positions."

Unskilled employment declined during 1998 to 2002 (Seekings, 2003a, 2003b; Seekings *et al*, 2003), which impacted most severely on unskilled black, rural workers (McCord and Borat, 2003; Mayer and Altman, 2005). In the context of these socio-economic problems, local economic development and job creation became even more important in terms of the arms deal and its accompanying offsets. Unfortunately, despite promises of as many as 65,000 jobs to be created as part of the arms deal offsets, very few long-term, sustainable jobs have been created as

a direct result of the offsets (Batchelor and Dunne, 2004; Haines, 2004; Wellmann, 2004). Many commentators have indicated that a more sensible strategy would have been to leverage offsets investment into those sectors with a high capacity for mass employment creation that would help to improve the infrastructure and make a positive contribution towards meeting basic needs in public utilities sectors, such as housing, transport, tourism, energy and communication (Haines, 2006).

Employment and job creation is core to the reasons given by the South African government as to why offsets had to form part of the arms deal (Crawford-Browne, 2007; Feinstein, 2007; Holden, 2008). Irrespective of political rhetoric, the importance of the labour market in any attempt to reduce poverty cannot be ignored, and without an expanding labour market that creates sustainable jobs, progress cannot be made. In 2003, the Director-General of the International Labour Organisation (ILO), Juan Somavia, stated in a report to the ILO's annual conference that "[j]ob creation should be put at the centre of global efforts to halve extreme poverty by 2015" (as quoted in Financial Times, 09 June 2003). Most of the South African government's policies on job creation links the notion to that of local economic development.

1.3.6 Local Economic Development

Local economic development (LED), both internationally and nationally, has become one of the key post-1970s development interventions. It has been recognised by the South African government as a critical approach to pursue within the context of empowered local authorities, pro-active actions by local citizens, and the need to ensure that development is pro-poor in its focus and outcomes. The 1994 Reconstruction and Development Programme (RDP) document overtly support community-based development and locality-based initiatives, and make implicit references to the notion of local economic development (ANC, 1994). In 1996, the national Constitution mandated local governments to pursue 'economic and social development' (Republic of South Africa, 1996c), and the concept was taken

significantly further in 1998 when the Local Government White Paper was released (Republic of South Africa, 1998b). The White Paper introduced the notion of 'developmental local government', which is defined as '...local government committed to working with citizens and groups within the community to find sustainable ways to meet their social, economic and material needs and improve the quality of their lives' (Republic of South Africa, 1998b:17).

Local economic development is defined as locality-based interventions undertaken by local stakeholders, usually operating through partnerships, to achieve economic and employment improvements within that specific locality. "LED is the process by which public, business and non-governmental sector partners work collectively to create better conditions for economic growth and employment generation. The aim is to improve the quality of life for all" (World Bank, 2000b:1). Zaaijer and Sara (1993:129) defines it as "... essentially a process in which local governments and/or community-based groups manage their existing resources and enter into partnership arrangements with the private sector, or with each other, to create new jobs and stimulate economic activity in an economic area". In South Africa, LED tends to have a more distinctive pro-poor orientation (Rogerson, 2003; Nel, 2001).

It is both a spatial and a sectoral intervention, focusing at one level on the enhancement of the employment levels and the comparative and competitive advantages of any given locality; while at another level it is related to the development of specific economic sectors, such as the SMME and tourism sectors. In the Free State, where the case study was located, LED also has a role to play in the promotion of alternative growth options in the context of the economic decline linked to the decline of the gold mining industry and the agricultural sector.

The goals of LED tend to revolve around issues of job creation; empowerment; the pursuit of economic growth; the restoration of economic vitality and diversification in areas subject to economic decline. There are two broad LED orientations – a market-led approach, based on business development; and a bottom-up (or market-critical) approach, based on community development (Rogerson, 2000). The market-led approach focuses on the pursuit of economic growth, investment attraction and courting the high-profile business sector; while the bottom-up approach tends to be associated more with support for emerging micro and community businesses. Both of these approaches are equally valid, and could be pursued in conjunction with each other in order to meet the needs of a wide spectrum of stakeholders and to provide for balanced growth by ensuring that capital-generating large businesses can generate meaningful spin-offs for the small and emerging business sectors (Nel, Hill and Eising, 2002).

LED can also either have a 'pro-poor' focus seeking poverty alleviation as encouraged by the Department of Provincial and Local Government, or a 'pro-growth' focus seeking economic growth, as encouraged by the Department of Trade and Industry (Tomlinson, 2003). The 'pro-growth' approach of the Department of Trade and Industry (DTI) links LED firmly to mainstream economic development and particularly to small business promotion (Rogerson, 2002). Tomlinson (2003) argues that the 'pro-poor' variant of LED may well, inadvertently, be marginalised by the focus on Industrial Development Zones, Export Processing Zones and other GEAR related initiatives.

Nel (2001) has identified four variants of LED as it is currently applied in South Africa. They are the local government-led LED where the elected local authority becomes the active change agent; NGO- or Community-led LED, often in the absence of other logical economic leaders; Development Corporation or Section 21 Initiatives (of which SARM was one); and 'Top-down' LED referring to instances where significant government or external resources are specifically targeted at an area in an endeavour to catalyse LED (of which SARM was also an example).

Tomlinson (2003) finds that LED is being marginalised by the lack of available resources; the dominance of large scale state interventions, such as projects for the Industrial Development Zones (and to some degree the NIPP); the narrow conceptualization of what LED is; and that “LED is increasingly being used by central government to shift to local government some of the responsibility for dealing with unemployment and poverty” (2003:113).

SARM is not the only LED initiative that has failed. Implementation of LED has not been without difficulty and not all LED projects succeed (Nel, 2001; Marais *et al*, 2002; Tomlinson, 2003; Nel and Rogerson, 2004; Hindson, 2003; Meyer-Stamer, 2003). Hindson (2003:4) found that the results have generally been disappointing and Nel (2001) found that the main reasons for failure were linked to capacity and resource constraints.

Companies, whether big or small, operate within municipalities. The Municipal Systems Act devotes a great deal of attention to Integrated Development Plans (IDPs), of which LED is a key element (Republic of South Africa, 2000b).

1.3.7 Integrated Development Planning

Internationally more and more government functions are decentralized to municipal level as municipalities are being recognized as being crucial in the process of enhancing local development (Nel, 2001).

The South African Constitution assigns a clear development role to local government. These are described in Sections 152 and 153 of the Constitution and various pieces of legislation were enacted to implement this role. To be effective, development has to be managed at local level and this requires decentralization of functions and powers. The Municipal Systems Act No 32 of 2000 laid the groundwork for a decentralized local government. Another reason why decentralization was inevitable is the new municipal system that was introduced post-

1994. South Africa now has a 'wall-to-wall'⁷ municipal system which is constitutionally recognized as a sphere of government and is receiving an increasing share of the national budget in the form of the 'equitable share'. The 'equitable share' is a series of grants that can be used for development within the municipality. The funding for these grants is made available from nationally raised revenue. Equitable share funding is separate from the Municipal Infrastructure Grant (MIG) and the Capacity Building Grants that are also made available to municipalities. Government funding allocations to local governments are determined by the nature of planning and development priorities identified in municipalities' integrated development plans.

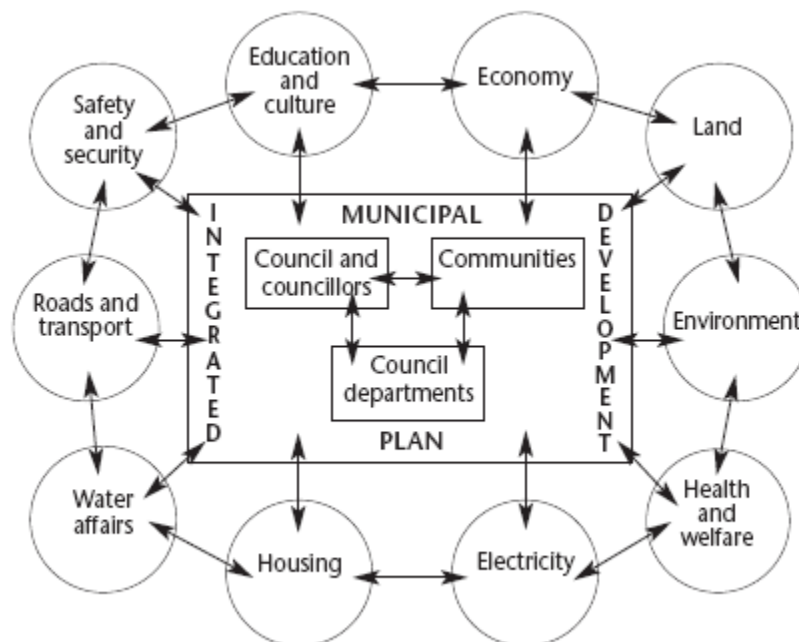
Since 2000, South African municipalities are now constitutionally bound to local economic development and poverty alleviation programmes and as such are legally required to develop Integrated Development Plans (IDPs). The development of these plans is the first real opportunity for integrated development planning in most municipalities in the country (Setplan, 2008). In essence, according to the Department of Provincial and Local Government, the IDP is "...conceived as a tool to assist municipalities in achieving their developmental mandates" (Department of Provincial and Local Government, 2000:21), and as a planning and implementation instrument it is to bring together the various functions and development objectives of municipalities.

Integrated development planning has been defined as "... a participatory approach to integrate economic, sectoral, spatial, social, institutional, environmental and fiscal strategies in order to support the optimal allocation of scarce resources between sectors and geographical areas and across the population in a manner that provides sustainable growth, equity and the empowerment of the poor and the marginalised" (Department of Provincial and Local Government, 2000:15). It is essentially a planning process by which planning efforts of different

⁷ Every centimeter of the country now falls within a municipality.

spheres and sectors of government, other institutions and stakeholders within a specific local area are coordinated at the local government level. Through this coordinating process, various economic, social, environmental, legal, infrastructural and special aspects of development planning are brought together. It is a continuous process, whereby consultative relationships, including that with the public through public consultation activities, are built into all aspects of local governance. The following diagram illustrates the various role players involved in drawing up an IDP.

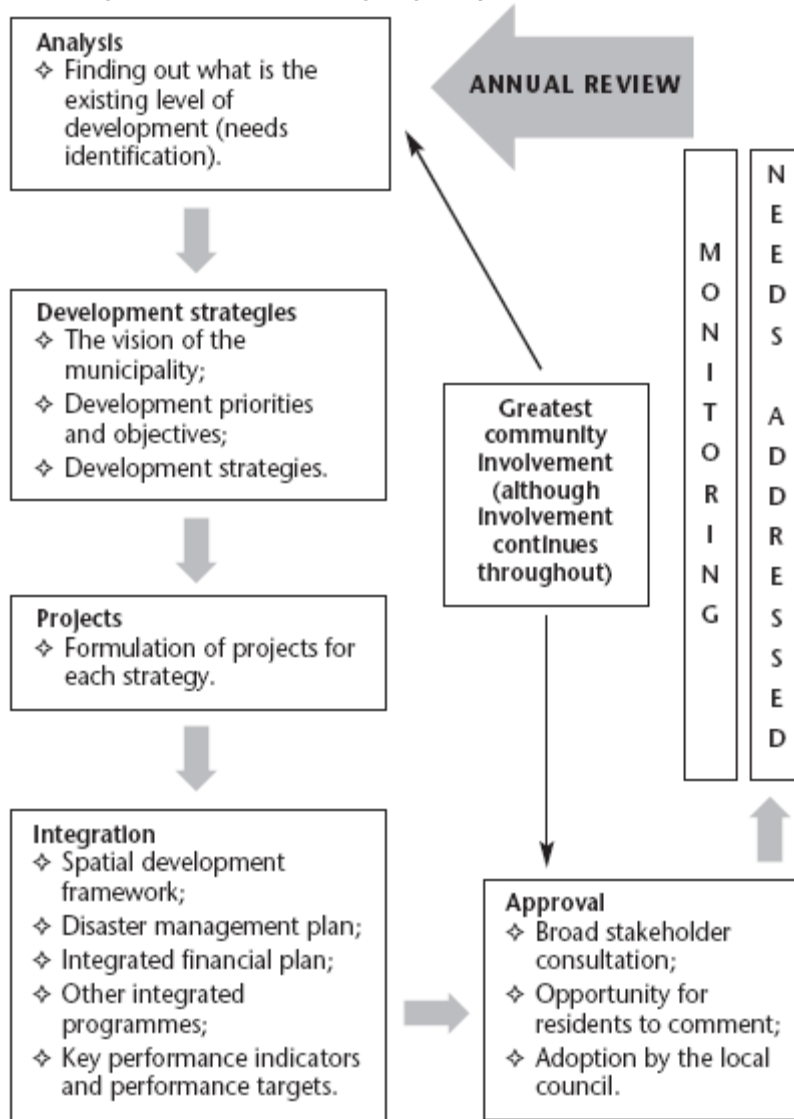
Figure 1 The IDP Process



Business forms part of both the 'economy' sector and the community, and as such is a significant role player. It is thus of vital importance that the business sector remains involved throughout the process. This is even more important in a rural municipality with a small economy, such as Virginia in the Free State.

The IDP should be reviewed on a continuous basis as demonstrated by the diagram below.

Figure 2 The on-going IDP process



1.3.8 Government Procurement

Another policy that was reformed in order to accommodate the objectives of the RDP and later that of the GEAR strategy, was that of government procurement. Government procurement involves the process through which government creates, manages and concludes contracts with the private sector for such goods and services (Watermeyer, 2000). This includes purchases made for the military.

Prior to 1994, government procurement favoured large and established businesses making it nearly impossible for newly established business to enter the procurement system (Arrowsmith et al., 2000; Watermeyer, 2000). With the distinct aim of addressing the injustices of the past, government procurement was granted constitutional status in the 1996 Constitution, and was recognised as a means of addressing past discriminatory policies and practices (Section 217 of the Constitution of the Republic of South Africa - Act 108 of 1996). This means that aside from government procurement being a form of business - in that it is the acquisition of goods and services on the best possible terms - it also has broader social, economic and political implications in that it can be used to promote social, industrial, and/or environmental policies (Arrowsmith et al, 2000; Labuschagne, 1985; Morris, 1998; Turpin, 1989).

Subsection (1) of Section 217 of the 1996 Constitution, provides that when organs of state contract for goods or services, they must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective. Subsection (2) provides that “subsection (1) does not prevent [organs of state] from implementing a procurement policy providing for (a) categories of preference in the allocation of contracts and (b) the protection or advancement of person, or categories of persons, disadvantaged by unfair discrimination”. Section 217 thus allows, but does not obligate, organs of state to make use of “targeted procurement” when awarding contracts, provided it is in accordance with the 2001 Procurement Act⁸. Although the Procurement Act was promulgated some years after the arms purchase, the essentials of Section 217 was applicable to the deal. The aims and visions of the Industrial Participation policy are aligned with the sentiments of the Procurement Act. The Industrial Participation policy is discussed in detail in Chapter 3 of this thesis.

⁸ This is in line with the amendment to Section 217 (3).

South Africa is not alone in its endeavour to use government procurement to address the inequalities of the past, and to kick-start the country's economy. The European Community undertook a study on government procurement in 1995 and found that procurement has been used by governments to amongst others, stimulate economic activity; protect national industry against foreign competition; protect national industry against foreign competition; and improve the competitiveness of certain industrial sectors. Government procurement was also employed to foster the creation of jobs, promote fair labour conditions, promote the use of local labour as a means to prevent discrimination against minority groups such as the disabled, and to protect the environment (Watermeyer, 2000).

The freedom of governments to use procurement as a policy tool has to a large extent been restrained due to the international implementation of measures aimed at achieving free trade in public markets, in the form of the World Trade Organisation (WTO) Agreement on Government Procurement. This happened at about the same time as the 1996 South African constitution was adopted. The relevance to this study of the constraints imposed by the WTO in its Agreement on Government Procurement, lies in that offsets are usually prohibited, except in relation to developing countries (see Article XVI of the WTO Plurilateral Agreement on Government Procurement), and those developed countries that can provide reasons pertaining to national security and public health (see Article XXIII of the Agreement). "Entities shall not, in the qualification and selection of suppliers, products or services, or in the evaluation of tenders and award of contracts, impose, seek or consider offsets. Nevertheless, having regard to general policy considerations, including those relating to development, a developing country may at the time of accession negotiate conditions for the use of offsets, such as requirements for the incorporation of domestic content. Such requirements shall be used only for qualification to participate in the

procurement process and not as criteria for awarding contracts” (Article XVI of the WTO Plurilateral Agreement on Government Procurement).

Although South Africa is signatory to the WTO Agreement on Government Procurement, the country uses its status as a developing country which exempts it from the constraints related to offsets, to allow it to use mandatory offsets for any government purchase equalling or exceeding US\$10 million (Crawford-Browne, 2007; Holden, 2008). The South African government argues that offsets and other countertrade agreements are the norm for all foreign procurement of defence systems (de Waal, 1993; Republic of South Africa, 2006a) and that offsets can be used to stimulate existing local industries, develop new industries, provide assistance in finding new markets for exports and diversify the country’s manufacturing base; all activities which would assist towards the alleviation of the development needs within the country (Feinstein, 2007; Crawford-Browne, 2007; Holden, 2008).

1.3.9 Corporate Governance and Corporate Social Responsibility

Good governance has become a key focal point in development and poverty reduction, and includes the notions of transparency, accountability, human rights, the rule of law, and anti-corruption (World Bank 1994; Potter, 2000; Minogue, 2002; Aubut, 2004; Wood, 2004). The World Bank emphasises that good governance can only happen in a context of efficiency, sound public management and good government practices, and that this context is essential for the economic development (World Bank, 1998), and that “[g]ood governance is epitomized by predictable, open and enlightened policy making, a bureaucracy imbued with a professional ethos acting in furtherance of the public good, the rule of the law, transparent processes, and a strong civil society participating in public affairs” (World Bank, 1994:7).

Although the governance referred to in the paragraph above mainly refers to political governance, all of the principles apply to governance within corporations as well. Corporate governance arrangements are those processes shaping the relationship between ownership and management of enterprises within the society in which the enterprise operates. Management and corporate behaviour styles have changed dramatically in the last decade. Although the basic management functions remained the same, the characteristics of the additional functions and focus have changed. There is an acknowledgement by corporations that a company and its business practices cannot be separated from the society in which it operates. The society referred to is the number of stakeholders to which the company has a responsibility – and depending on the size of the enterprise, the stakeholders can include a large part of a community (or more than one community, region, and even country in the case of multinationals). Sir Adrian Cadbury describe corporate governance as being ‘...concerned with holding the balance between economic and social goals and between individual and communal goals... the aim is to align as nearly as possible the interests of individuals, corporations and society’ (in Foreword to World Bank Governance Overview, 1999).

Management focusing entirely on profit is no longer acceptable. Those opposed to good corporate citizenship often quote Adam Smith’s “Wealth of Nations” (1904)⁹, where he argues that general welfare was better served by people pursuing their enlightened self-interest than by misguided attempts to serve society. But those in opposition to good corporate citizenship are dwindling in numbers and there is evidence of a rise in corporate conscience.¹⁰

It is now accepted that companies can only experience sustainable business growth if they operate in strong, sustainable communities, and

⁹ First published in 1776

¹⁰ The Wall Street Journal, May 18, 2005

have good relationships with these communities. Indeed, sustainability has become a pragmatic pursuit, not an ideological exercise. It is about increasing opportunities and not limiting them (Strongman, 2002). In a business context, sustainability means that each business must balance the need for long-term viability and prosperity of the enterprise, the affected communities and the environment; with the requirement for short-term competitiveness and financial gain (King Committee, 2002:91).

The three generally accepted¹¹ dimensions of sustainable development are economic, social and environmental, often referred to as the 'triple bottom line'. The developing world's, and indeed South Africa's, needs differ from those of the First World in that they are overwhelmingly social and economic and of the here and now; concentrating on how to get today's generation out of poverty and build strong sustainable communities (Wellmann, 2005). Corporate governance in South Africa became institutionalised by the publication of the first 'King Report on Corporate Governance' in November 1994. And in the light of the country's social and economic needs, the industrial sustainable development indicators proposed for South African companies are as follows:

¹¹ It is my opinion that there is a fourth, equally important dimension of sustainable development in the form of central and local governance within the country where the company and/or its operations are based. Without a functional central and local government in place, it is impossible for development to be sustainable in the long-term irrespective of the type or amount of the economic, social or environmental inputs.

Table 1 Industrial development indicators for South Africa

Economic Elements (developing financial capital)	Environmental Elements (protecting natural capital)	Social Elements (promoting social capital)
Employment creation	Promoting energy and water efficiency	Poverty alleviation
Ensuring competitiveness in global market	Maintain biodiversity	Provision of education and training
Increasing foreign exchange reserves	Addressing climate change	Reducing crime
Developing skilled workforce	Maintaining air and water quality	Access to housing and basic infrastructure
Maximising natural resource productivity	Minimising waste and pollution	Protecting consumer rights and interests
	Preventing/remediating land contamination	Ensuring health and safety in the workplace
	Promoting use of renewables	Promoting community health

Adapted from Business Council for Sustainable Development South Africa (2002: 2)

Although Harmony Gold Mining Company would be assessed against all three legs of the indicators, the SARM factory is only be assessed against the economic and social elements. The environmental factors were not considered as it is assumed that: (i) an environmental impact assessment would have been required by government prior to the establishment of the factory; (ii) there is less environmental impacts associated with a gold jewellery factory compared to the gold mining and gold refining processes leading to jewellery manufacturing; and (iii) that the jewellery factory’s impact on the environment would have been minimal compared to its economic and social impacts. Further, a full environmental impact assessment of SARM would be outside the scope of this evaluation.

1.3.10 Corporate Social Responsibility (CSR)

Sometimes the notion of ‘corporate governance’ is used interchangeably with that of ‘corporate social responsibility’ (CSR), even though there is a difference between the two notions. Good corporate governance ensures that corporations use their capital efficiently within the legal, institutional and regulatory climate in which they operate; while corporate social responsibility addresses social and environmental needs in the society within which a corporate conducts its business, and in doing so operates for the benefit of society as a whole. Many governments,

including the South African government, have taken up the rhetoric of CSR. Corporate Social Responsibility is explicitly referred to in the 2002 Minerals and Petroleum Resources Development Act.

Other terms also used to refer to CSR are 'corporate responsibility', 'business responsibility', 'corporate citizenship', 'business citizenship', 'community relations' and 'social responsibility'.

Although corporate governance is by no means a new notion – researchers at Cardiff University in the United Kingdom have found corporate governance and corporate social responsibility as far back as the time of King Hammurabi of Ancient Mesopotamia in 1700 BC (BRASS Centre, 2007) – the emergence of the cry and slogan 'corporate social responsibility' has been a significant feature of the twenty-first century (Lockett *et al.*, 2006). Holme and Watts (2000) describe corporate social responsibility as "the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large" (Holme and Watts, 2000:8). This commitment and obligation is often referred to as the 'licence to operate' and Porter and Kramer (2006) considers the concept of 'licence to operate' as one of the traditional reasons for the implementation of CSR.

Porter and Kramer also consider the importance of CSR as the shared value that business has with society. They echo the European Commission's key communication of 2002 that reported that companies can contribute to sustainable development by managing their operations in such a way as to enhance economic growth and increase competitiveness while ensuring environmental protection and promoting social responsibility (European Commission, 2002).

There is broad international consensus that CSR is intrinsically linked to the concept of sustainable development, and that it is not an optional

“add-on” to business principles, but that it lies at the core of how businesses are managed. The most broadly accepted definition of CSR is that of the World Business Council for Sustainable Development that describes corporate social responsibility as ‘the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large’ (SDU, 2007). However, for the purposes of evaluating SARM, and the CSR obligations under which both the BAE/SAAB consortium and Harmony Gold Company operate, the best definition for this context is that captured in the University of Miami’s 2007 document, ‘A Guide to Social Responsibility’. The guide describes CSR as a means of analyzing the inter-dependent relationships that exist between businesses, economic systems, and the communities within which they are based. The document further describes it as a means of probing any obligations a business has to its immediate society; a way of proposing policy ideas on how those obligations can be met; as well as a tool by which the benefits to a business for meeting those obligations can be identified.

Companies are very aware of the negative consequences of being viewed as an irresponsible corporate citizen. Recent examples are the child labour scandals that hit the Adidas and Nike brands in 2000 and 2001 (The Observer, 19 November 2000; The Independent, 20 October 2001); and the on-going public health and welfare controversy in relation to Nestlé’s powdered milk products (The Guardian, 15 May 2007). Closer to home, albeit from another era, one remembers the bad publicity and the effective public protests aimed at Barclays Bank for doing business with South Africa during the period of sanctions against the country (John, 2000).

In his presentation at the March 2006 SMI Publishing-sponsored annual conference on international offsets and industrial cooperation, Hew significantly links procurement offsets to comprising, among other needs, a need for the selling company to discharge corporate social

responsibility (Hew, 2006). This links up with the idea that offsets can be a vehicle for socio-economic projects and ultimately the vehicle for poverty and inequality reduction in developing countries. In South Africa, the changing of existing legislation and policies, and the introduction of new policies, over the past fifteen years, each one seeking to correct the injustices of the Apartheid era, has provided a conducive political and economical climate for both local and international companies to participate in development programmes, and a convenient avenue for companies to discharge their corporate social responsibility. The Industrial Participation policy is one of these policies, together with others such as the policies on black economic empowerment¹², land reform, and mineral ownership reform.

I do not agree with Hew that offsets can be seen as companies engaging in social corporate social responsibility. In the case of corporate social investment, there are many companies that fund social projects, which on occasion have been small or micro businesses. This is done voluntary - thus although it is expected on a social and even on a moral level from the company by society, it is not legislated. Corporate social engagement with society is expected as part of the company's investment in the communities within their operational footprint. Generally there are no strings attached to corporate social responsibility donations or investments, and thus corporate social investment is generally viewed in a positive light. Offsets, even indirect offsets, can however not be described as corporate social investment.

In a similar argument to that of Hew above, some researchers, most notably Franko-Jones (1987-1988), have argued that public-private

¹² Black economic empowerment can be defined as an integrated and coherent socio-economic process that directly contribute to the economic transformation of South Africa and brings about significant increases in the number of black people who manage, own and control the country's economy (www.thedti.gov.za ; Business Day, March 20, 2003; Mail and Guardian, August 21, 2003; www.southafrica.info/doing_business/trends/empowerment/bee.htm).

partnerships (PPP) can be beneficial for any government. A public-private partnership can be viewed as a method of procurement involving the use of private sector capital to fund an asset which is used to deliver outcomes for a public or state-owned entity – much in the same way as offsets. Franko-Jones points out that in less than 20 years, Brazil became one of the ten largest exporters of conventional armaments primarily through the use of public-private partnerships in developing its defence industry. Although it is true that the value for money from PPPs can be the delivery of a service or capability at a lower cost and the greater certainty of the financial outcome due to less exposure to significant risks, I do not necessarily agree that the traditional PPP set-up is similar to that of offsets, and that engaging offsets obligors as PPP partners would be any different from what the outcome would be if it was just a ‘normal’ offset project.

1.3.11 Precious metals beneficiation

For the past few years there has also been a firm push towards local beneficiation of metals and minerals mined within the country rather than exporting the raw material to other countries and then importing the processed product. Generally, beneficiation is defined as the process that eliminates the first layers of waste material in raw ore after mining. This process results in a product with a higher mineral content, thus widening the processing options. However, in the South African legislative sense, beneficiation is defined as the conversion of the minerals and metals mined into value-added products as far as possible down the value chain. In the case of precious metals and minerals, the ultimate result of the chain of beneficiation, will result in the manufacturing of jewellery (Jourdan, 1993; MPRDA, 2002).

Although there are several beneficiation offset projects that are base metal beneficiation projects, such as the production of catalytic converters for export, this study concentrates on the beneficiation of precious metals, particularly gold and to some degree, platinum.

The gold sector in South Africa is a mature industry and many mines are exploiting increasingly marginal ore deposits. The rules and legislation governing investment in the mining sector have changed, primarily in the domain of ownership of minerals. At the same time the country is participating in the AGAO¹³ opportunities provided by the USA and the EU-SA Free Trade Agreement, which makes it attractive for foreign investment for the production of certain products. This contributed to South Africa's jewellery exports increasing by 68% over a two year period from US\$11.8 million in 1997 to US\$19.8 million in 1999 (Wesgro; DTI). Exports of South African manufactured jewellery increased in the five years from 1999 to 2004, growing at an estimated average rate of 23% per annum per volume (Virtual Metals, 2006).

The changing mining legislation and the push for beneficiation, combined with advantageous export opportunities for jewellery products, have attracted several offset projects. Since 1999, six NIP precious metal beneficiation-related projects have been established¹⁴. At this point it should be borne in mind though that the reporting of the NIPP by the Department of Trade and Industry has been erratic throughout the years and not always accurate. This has been demonstrated by the Winecorp project in the Western Cape. The proposed Winecorp project was to entail the buy-out of Longridge Winery, the Longridge brand, and the Nooitgedacht farm by the BAE Systems/SAAB consortium from Winecorp as part of BAE Systems/SAAB's offsets. This proposed project was rejected in March 2003 by the NIPP on the grounds that it "is not sufficiently attractive from a national industrial participation credit

¹³ The USA "African Growth and Opportunity Act" (Public Law 106-200 – May 18, 2000) that allows for the duty-free export of the mainly energy-related products, transportation equipment, minerals and metals, agricultural products and textiles and apparel from qualifying Sub-Saharan countries to the United States of America.

¹⁴ The 2008 annual report of the NIPP refers to a seventh gold and silver jewellery factory located in the Northern Cape. At the time of writing more information on this project was not immediately available.

ration perspective to justify a potential co-operation between SA National Industrial Participation and Winecorp SA (Pty) Ltd. Given our current portfolio of projects, our risk profile employed and the time frame of your project, we feel that we have to develop and focus on the projects in which we are currently involved or those in which we are about to engage”¹⁵. The Department of Trade and Industry reported in its June 2003 annual report on the NIPP that this project at that time created 210 jobs (Department of Trade and Industry, 2003b). Within the annual NIPP reports there is limited information as to the nature and the scope of the projects, and there also appears to be a relative lack of contact between the obligors and their agents, the Department of Trade and Industry, on the one hand, and organised business and local and provincial government on the other (Haines and Wellmann, 2005).

Of the six precious metals beneficiation offset projects, four are jewellery manufacturers, and of the four, only two are still operational. The two are the Filk Gold Chains of South Africa, an Augusta NIP obligation, and Silplat, a BAE Systems/SAAB consortium NIP obligation. The failed factories, Oro-Maska and SARM, were both located in the mining town, Virginia, in the Free State Province goldfields, and both were BAE Systems/SAAB consortium NIP projects implemented together with Harmony Gold Mining Company. Both these projects also received funding from local sources: Oro-Maska received funding from the Free State Development Fund and IDC, while SARM was provided funding by IDC (Harmony Gold Mining Company, 2002; 2003; IDC, 2001a; 2001b; DTI, 2004; Wellmann, 2004).

1.4 Goals and Objectives of the Study

The main goal of this study is to conduct an ex-post evaluation of the South African Royal Manufacturing (SARM) company that was created

¹⁵ Letter from Mr. Emile du Toit, Project Manager SANational Industrial Participation, to Mr. Frans Bicard-Carton, Spier Holdings – as quoted in Haines and Wellmann, 2005.

as a National Industrial Participation Programme (NIPP) offset. The company was also a company that was involved in the process of beneficiating precious metals (gold) mined in this country. The evaluation takes place in this narrow context, but also within a broader context of South Africa's large socio-economic problems, the country's devolved local government system that strongly supports local economic development; as well as the fast changing South African mining industry and the legislation governing it. The evaluation aims to be knowledge-oriented in order to contribute to the broader debate on military offsets and the South African NIPP in particular.

The objectives of the evaluation are to:

- Explore the 1998 South African arms deal, and in particular the Industrial Participation (offsets) component of the deal;
- Explore the background to SARM, and its predecessors, and in so doing to explore the relationship between the main characters involved; and to
- Evaluate SARM as an offsets, precious metal beneficiation project against other similar offsets, precious metal beneficiation projects in order to establish the obvious, as well as the underlying, reasons for its demise, and whether it could have survived under different circumstances.

1.5 The value of the study

As indicated earlier in this thesis, there is a limited body of literature on military sales offsets (Bauer and Dunne, 2009) and even fewer studies that evaluate specific projects. The value of this case study lies in the potential to add to this limited body of literature, as well as to add to the still nearly non-existent body of literature on precious metal beneficiation in South Africa.

The study informs on possible pitfalls and risks, including the risk of corruption, when establishing a similar business. It also informs through its findings policy makers and implementers, on:

- The negative effects that the tendency of offsets obligors have of starting new 'greenfields' projects, instead of building on already existing 'brownfields' projects.
- The necessity for strict financial accountability in these projects
- The need for the implementers of the offsets projects to embrace the triple bottom line and to balance the need for short-term competitiveness and financial gain and in doing so earning a moral 'licence to operate'.
- The necessity for strict monitoring and evaluation processes in any Industrial Participation programme and/or projects; as well as the need for regular independent evaluations.
- The necessity that foreign direct investment is indeed just that.

1.6 Outline of the Study

The thesis consists of seven chapters. This first chapter not only discussed the motivation and goals of the study, but also provided a thorough definitions and literature review of those concepts that are important in this evaluation.

Chapter 2 describes the research design, methodology and evaluation process. The main questions that guided this research was (i) whether the project adhered to the objectives of the NIPP; (ii) whether even as it failed, the project contributed something worthwhile to any of the NIPP objectives, and then (iii) the reasons for its failure. These three main questions and their sub-questions are answered through three phases of research, from literary review to verification and interpretation of the data. A full description of the data collection methods, which included document analysis, key informant interviews and focus group discussions, is provided. The chapter ends with a description of the

limitation of the study, which in essence is the widespread lack of access to data.

Chapter 3 describes the evolution of the South African arms industry and the 1998 arms deal within the context of the changing legislative and policy environment within the country. This chapter is important as it sketches one of the political and economic contexts in which SARM was founded and existed, and that is important to understand when conducting an evaluation of the company. The chapter provides a brief history of the South African arms industry from pre-1989 to post-1996. The process that led to the reform of the South African National Defence Force procurement policies and methods is chronicled before discussing the 1998 arms deal. The chapter gives a full overview of the South African Industrial Participation (offsets), both present and past, but focussing on primarily the 1998 arms deal offsets.

Chapter 4, like Chapter 3, describes another important context in which the SARM was founded and operated in, that of the beneficiation of precious metals. The chapter defines and discusses beneficiation and the need for beneficiation, before describing each of the six of the other beneficiation-related NIP projects in the country. These projects are:

- The Musuku Beneficiation Systems, which was located in Virginia, Free State Province. It was a gold refinery and a gold processing factory focused on value-addition. It was a subsidiary of Harmony Gold Mining Company and was funded with US\$9 million by the BAE Systems/SAAB consortium as part of their offset obligations.
- The Harmony Jewellery School, located in Virginia, Free State Province, owned by Harmony Gold Mining Company. The BAE Systems/SAAB consortium provided US\$ 400 000 to the school as part of its offset obligations.
- The Oro-Maska jewellery manufacturing plant, which was established in October 2001 in Virginia, Free State Province.

The factory was part owned by Harmony Gold Mining Company and received funding from the BAE Systems/SAAB consortium as part of its offset obligations. The factory stopped production in May 2002.

- The Silplat platinum jewellery factory, which is located in Cape Town and was established in 2004 as a result of collaboration between Implats¹⁶ and Silmar SpA, a leading Italian Jewellery manufacturer. The BAE Systems/SAAB consortium invested US\$ 47 million into the project as part of their IP obligations.
- The Gold Advance Scheme, which has recently come into play, is a collaborative effort between Gold Fields, AngloGold Ashanti and Standard Bank to provide a gold advance scheme to gold jewellery manufacturers in South Africa. The BAE Systems/SAAB consortium will provide funding as part of its IP obligations to cover the collateral support needed by the jewellers.
- The Filk Gold Chains of South Africa, which forms part of the OroAfrica jewellery manufacturer based in Cape Town, has received funding from Augusta Westland as part of Augusta's IP obligations. As this NIP project has been evaluated before (see Wellmann, 2004), that evaluation of Filk Gold Chains of South Africa is discussed in detail. The findings of the SARM evaluation are listed in a similar manner to that of the findings of the Filk Gold Chains evaluation to allow for comparison in Chapter 6.

The reason for including these other projects, in what is essentially a case study of the SARM, is to provide a type of a 'control' group to the SARM evaluation. All these projects are NIPP (offsets) projects and they are also precious metal beneficiation projects. The reasons why some of these projects would succeed and others would fail is important to the process of learning more about how offsets can be made successful, even if just in a limited form. This is particularly important if

¹⁶ Impala Platinum Holdings Limited

one considers that offsets appear to be here to stay, particularly as they form part of the country's policy on industrial growth and government procurement. There are also researchers and practitioners, in particular Hew (undated) and Hadjiminias (undated) who argue that offsets will continue to form a part of large scale purchases (and not necessarily only arms purchases) for a long time to come still, and that the only time offsets could stop being used would be when there is a completely equal international trading system.

Chapter 5 describes the South African Royal Manufacturers (SARM). The description starts with the first layer of the context, the physical and geographical location; the second layer is that of political governance both locally and provincially; the third layer is reasons why it was established; the fourth layer refers to how it was funded, and the fifth, and last, layer refers to how it was managed. Thus the description starts from the broader angle of its provincial context, narrowing in to the district and local context, before describing the company's shareholders and investors, and then finally describing SARM's formation, owners and investors, and its inevitable decline and demise.

The chapter discusses the Free State Province's steady decline in GGP during the past decade. One of the reasons for this is the steady decline in the gold mining industry in the area, particularly in the Virginia area where SARM was located. Harmony Gold Mining Company is also the only mining company operating in this town and finds itself under pressure to invest in socio-economic projects and in recent years, the pressure to invest in gold beneficiation. The discussion of SARM's short existence and its quick demise indicates that although on the surface the company fails because of theft of gold, there are more complex reasons for its failure.

Chapter 7 discusses the findings of the evaluation. The company is evaluated against the NIPP objectives: sustainable economic growth; establishment of new trading partners; foreign investment into South

Africa; exports of South African “value-added” goods and services; job creation; human resource development; technology transfer; economic advantages for previously disadvantaged communities. To further enhance the findings of the evaluation, SARM was also evaluated against the performance of two other jewellery manufacturing beneficiation projects: Filk Gold Chains of South Africa and Silplat (Pty) Ltd.

The findings conclude that there is really no reason why SARM should have failed. Apart from what can be considered to be ill-intentions of its owners and investors, the company had the potential to be successful.

Chapter 8 discusses the findings and conclusions drawn from the evaluation. The evaluation’s findings significantly raise the questions of how much direct foreign investment should offsets projects contain; and how offsets credits are calculated. It also raises a red flag around the issue of the transfer of foreign technology. The conclusion is reached that such a transfer will never really happen to the extent anticipated by those who conceptualise these offset deals, as it makes no business sense, especially not from the obligor’s shoes.

The importance of reliable foreign trading partners and how valuable these can be to a small company provided that the obligor has a genuine interest in sharing markets (or that there are actually markets to share) are discussed in the light of the failure of SARM and the success of the other two similar projects, particularly OroAfrica. If this part of an offsets deal is implemented well, and provided the company produces good quality products to international standards, it can lead to sustained exports that will benefit both the company, the local economy in which it operates, and the country.

These are only a few of the issues raised and discussed in this evaluation of SARM.

1.7 Conclusion

The 1998 South African arms deal is estimated to cost between R30 billion and R60 billion, and included offsets as part of the deal. The value of these offsets were estimated to be between R104 billion and R110 billion and it was further estimated that it would create 65,000 jobs over an 11-year period. This evaluation of one such an offset project will contribute both to the academic literature and knowledge on the phenomenon of offsets, as well as the literature and knowledge on the socio-economic aspects related to the beneficiation of precious metals in the country. It will be one of few empirical research studies on these subjects. The next chapter details the methodology used for the study.

2 THE RESEARCH DESIGN AND PROCESS

2.1 Research Hypothesis

In deciding whether the research design should be exploratory or hypothesis testing, the former was chosen. Even though there were several tentative hypotheses thrown around in the press as to what led to the failure of the project, the choice for exploration rather than hypothesis testing was made to avoid pre-biasing the evaluation.

I did not want to pre-bias my findings by

- hypothesizing that the business failed because a large amount of gold had been stolen from the business by management; or
- hypothesizing that due to Harmony Gold Mining Company's unorthodox business practices SARM would inevitably fail; or
- hypothesizing that as the two previous factories established by Harmony Gold Mining Company in Virginia had failed, and as the business methodology used for the establishment of SARM was similar to those used for the previous businesses, SARM was due to fail as well; or
- hypothesizing that because it is an offset project it failed due to lack of commitment by the obligor and/or lack of monitoring by DTI.

The evaluation was not done to establish whether SARM was a failure or not. The fact that it closed its doors for business indicates that it was a failure. The evaluation was conducted with the aim to explore the processes that formed part of the establishment of SARM and its demise, and in so doing see what lessons can be learned to share with other NIPP initiated beneficiation projects.

2.2 Research Question

The aim of the research is to do an evaluation on the BAE Systems/SAAB consortium SARM offset component of the South Africa National Industrial Participation Programme (NIPP) project.

With this aim in mind, the research was guided by the following three questions:

1. Did the project adhere to the objectives of the NIPP?
2. Even in the failure of the project, did it contribute successfully to any of the NIPP objectives?
3. Why did the project fail?

Within these main research questions, certain sub-questions were asked to further guide the evaluation:

- How many jobs did the project create?
- What backward and forward business and socio-economic linkages were forged and reinforced?
- How did the project contribute to the industrial cluster in which it was located?
- How did it contribute to the process of beneficiation of raw materials?

2.2.1 The Research Plan and Process

An evaluation is not just about the findings. The actual process of engaging in an evaluation can have as much, or even more impact, than the findings generated. The process of participation and collaboration has an impact on evaluation participants that often goes beyond whatever they accomplish together. This links well to Patton's (1997) findings that active participation in evaluation leads to increased ownership of the findings and, therefore, increases their utility level.

The research plan for the SARM evaluation was conceptualized as exploratory and multi-method. It comprised of three main phases:

2.2.1.1 Phase 1

This phase entailed a broad and eclectic literary review, plus an extensive relevant documentation analysis. The literary review had to encompass literature on social development, mining, economics and military procurement. Accessing original documents relating directly to the firm's financial, human resources or assets proved impossible. However, other documents that were made available, plus those found on relevant internet sites proved very useful. Media reports on the subject of NIPP, the arms deal and SARM were also consulted and selectively used. These are the records which serve as sources of information for the evaluation.

Document analysis is a way of accessing and understanding some of the cultural, historical and political meta-contexts of the subject (Low, 1987). It provides essential background information for both the researcher and the reader. In particular historical information highlights the evolution of the present situation and provides meaning to the context. This allows much of what interviewees say in the interview phase of a study to gain richness when placed within the context of what the document analysis yields.

The data collected from the literature survey was augmented by a series of key informant interviews. Newspaper articles, although primary sources in respect of certain events that form part of the evaluation, can be biased, presenting slanted versions or explanations of events. The key informants were selected to be strategic in order to compensate for this phenomenon, as well as the dearth of original documents relating directly to the firm's financial and human resources or assets.

2.2.1.2 Phase 2

The second phase corresponds with the 'observation' and 'self-report' sources of information for evaluations.

This phase entailed key informant interviews. These interviews were done both face-to-face, as well as telephonically. On occasion information was solicited via e-mail.

A request to visit the now moth-balled SARM factory was denied, but a visit to Musuku Refinery was offered instead. I visited the refinery in July 2005. I also visited the Harmony Jewellery School in June 2006. This was useful in terms of Barker's (1968) ecological behaviour setting theory, which aims to describe naturally occurring behaviour in its natural surroundings. The visits to the refinery and the jewellery school allowed me access not only to individuals who had dealings with SARM in their capacity as Harmony Gold Mining Company employees, as well as observing the refinery where the gold came from and the school where some of the workers were trained. The primary purpose of this was to answer questions such as:

- What is happening in this setting?
- What are the natural units in the stream of happenings I see here? (Kaminski, 1989).

The need to observe that is stressed in Barker's theory is echoed in Kvale's injunction to the researcher to 'hang around' the context of the study during interview research (Kvale, 1996).

The second part of this phase entailed three focus group discussions with several women who worked for SARM. The main aim was to ascertain what they know of the NIP project, their working conditions, and what has happened since the factory shut down.

Fifty two-minute interviews with persons on the streets of Virginia and Meloding were conducted over a three day period in May 2006. The main purpose of this was to ascertain whether the person being interviewed was aware of the arms deal, industrial participation and SARM. Although in the final analysis this specific exercise did not contribute anything of real value to the evaluation, the responses were interesting. The results are attached in Appendix A.

2.2.1.3 Phase 3

The last phase entailed the verification and interpretation of data.

2.2.2 Data collection methods

“Different kinds of data provide researchers with different vantage points on events. And research methods differ in their strengths and weaknesses ... No strategy, design or method used alone is worth a damn. Multiple approaches are required...” (Wicker, 1987: 644-645).

The four methods used to obtain data in this study are:

- document analysis,
- observation,
- face-to-face, telephonic and e-mail interviews,
- focus group discussions, and
- questionnaire administration.

The key informants included Mr. Luis Perez, CEO of SARM; Mr. Ferdi Dippenaar, Marketing Director of Harmony Gold Mining Company; De Wet Schutte, Harmony Gold Mining Company; Mr. Denzel Young, Musuku Beneficiation Systems; Mr. Michael Wightman, Musuku Beneficiation Systems; and Ms Alta Wessels, Harmony Jewellery School. These individuals were selected to be interviewed because of

their position in relation to SARM and their knowledge of SARM would supplement the information that was available for this study.

Questions probed the history of the business; the reasons for its establishment; the official reasons for its demise; the perceived reasons for its demise; what led up to the demise; what monitoring measures and checks and balances were in place; what happened since its demise, etcetera.

Other key informants included Ms Chandrika Jogessar, DTI; Mr. Zikode, DTI; Mr. Dion Haroldt, DTI; Mr. Kevin Jacobs, IDC; Mr. Linden Birns, BAE Systems/SAAB; and Mr. Johan Smit, Silplat (previously BAE Systems/SAAB). These individuals were selected to be interviewed because of their position either in central government or in the two most prominent funders of SARM. Unfortunately it was impossible to conduct an interview with a representative of the Free State Province government.

Questions probed the reasons for funding the business; how far the funders were involved in the day-to-day operations of the business; whether there were monitoring measures and checks and balances in place, whether at the business as well as through the funders, or both; what monitoring and evaluation measures are in place at DTI to measure NIPP projects; when the funders became aware of the demise; what they did when this knowledge emerged; and what has happened since the demise of the business.

Kvale (1996) insists that the interview should have an implicit structure, whether or not this structure is translated into actual questions or not. This structure, which is derived from some pre-knowledge of the phenomenon being investigated, both guides the interview itself and provides the framework for the subsequent analysis. Although I agree with Kvale as to the importance of structure within an interview, I chose to conduct unstructured interviews in order to allow for the interview to

create its own flow and move in the direction which is most beneficial to information gathering. This works well to put reluctant interviewees at ease. Questions such as (i) could you tell me more about this? and (ii) could you specify further? were frequently asked. This was done taking great care not to give any suggestions to the interviewees.

Although I opted for this type of interview for my interviews with key-informants, I did prepare myself fully prior to each interview in order to obtain as much information from the respondent as possible. Part of the preparation included writing down a list of specific issues to be covered for that specific interview to ensure that all issues were covered. This was essential as most key informants had limited time available and most of the key informant interviews were conducted via the telephone.

The only formalized questionnaire that was used consisted of four close-ended questions, which was administered to passers-by in Virginia central business district at random in both Afrikaans and English. The questions were:

1. Do you know about the weapons deal?
2. Do you know about offsets?
3. Do you know about SARM?
4. When did you hear about SARM:
 - Before the opening of the factory
 - During the time the factory was functioning
 - After the closing of the factory?

The main purpose of this was to ascertain whether the person being interviewed was aware of the arms deal, industrial participation and SARM.

2.2.3 Designing the key-informant interview

Kvale (1996) suggests that interview research be conceptualized in seven stages: thematizing, designing, interviewing, transcribing, analyzing, verifying and reporting.

Thematizing of the interview refers to the three main tasks the researcher must accomplish. These tasks are to establish:

- *what* she wishes to know (why the NIP project failed),
- *why* she wishes to know it (to assess the reasons for the failure of the project within the context of its existence) and
- *how* she wishes to acquire this knowledge (through documentation analysis, key-informant interviews and focus-group discussions).

Using interviews as one of the main methods of research is often viewed as conducting non-scientific research (Kvale, 1996). In particular the reliability, generalizability and validity/verification of the method, is criticized. Verification and triangulation thus become crucial. Although verification is represented as part of the third phase of the research process, it ran like a thread through all the phases of this evaluation.

According to Kvale (1996:49) the qualitative interview researcher should have extensive knowledge of the research topic so that she may be "... sensitive to the nuances of meanings expressed and the different contexts into which the meanings may enter." Before the interviewing phase began, literature relating to development theories and the theories and methods behind conducting evaluations of development projects, as well as studying documents and debates on the South African Government procurement policies, industrial participation, the arms deal, the state of mining and beneficiation, SARM and BAE Systems/SAAB was studied. I drew heavily on my experience as a socio-economic

researcher who frequently conducts evaluations of projects and who has spent many years in the mining and rural environments.

The next step was to decide whether the research design should be exploratory or hypothesis testing. In order not to pre-bias the evaluation, the former was selected.

2.2.3.1 Interviewing

The interviews were conducted only by me. This ensured reliability and consistency. Maximum transparency in data gathering and analysis during the interview phase was adopted, so that the key informants could judge for themselves in how far they agreed with interpretations. Where possible, transcripts of the interview were e-mailed to the key informants for comments. This worked well.

The same technique was applied in the focus group discussion. Throughout correspondence as a qualitative equivalent of validity was endeavoured - that is, to ensure that there is confidence that the respondent is saying what I said he or she is saying. This is achieved through Kvale's (1996) self-correcting method. He considers one of the strengths of interview research to be the possibility to contact a key-informant later in order to follow up loose ends. This was frequently done through follow-up e-mails and telephone calls to key informants.

While interviewing key informants on sensitive subjects, the researcher frequently runs the risk of the 'don't know' response. There are two main reasons for this response:

- The interviewee could not know the answer, thus it is a legitimate response; or
- The interviewee prefers not to answer the question for various reasons even though the response is known.

Cooper and Schindler (2001: 432-433) advise that such responses could present special problems for data interpretation. Special care was thus

taken to ascertain that when the interviewee uses the 'don't know' response, that it is a legitimate response.

In interview research, the reader is primarily dependent on what the researcher says the respondent is saying (Kvale, 1996). Kvale recommends that reliability and validity in the transcription stage of the design should be sought by:

- Using more than one transcriber; and/or
- Employing the method of inter-transcriber reliability; and/or
- Adopting a clear, written editorial policy.

Of these methods I opted for the last only. The reason for this was primarily that I conducted all the interviews myself and that most of these were telephonic and required arduous note-taking.

The purpose of any study, including a qualitative study or evaluation, is to produce systematic knowledge. This is derived primarily from the analysis stage. Kvale (1996) consolidates the many available methods into five main approaches: condensation, categorization, narrative, interpretation and ad hoc. Mainly the interpretation method was used.

2.2.3.2 Focus Group Discussions

A focus group discussion is a direct method of accessing information as part of qualitative research. It is a structured group process used to obtain information about a particular topic. This qualitative research method requires four characteristics:

- The proper composition
- An open environment
- A probing moderator, and
- In-depth analysis.

2.2.3.3 Moderating

Focus group interviewing techniques have been used increasingly over the past decade as both a self-contained method of conducting qualitative research, and in conjunction with other research methods (Morgan, 1996).

Discussion with focus groups is an effective means to identify and understand different perspectives, conflicts, concerns and aspirations within a given community. The method often offers more substantive details than surveys. Smaller groups of approximately six to eight participants are better when trying to get really in-depth discussions (Morgan, 1997).

Focus groups are also useful in identifying issues that might be better explored by interviewing knowledgeable key informants. These key informants may be used as another means of acquiring more detailed information on complex issues and past events, which may be difficult to gather at a group level, or alternatively to confirm data gathered at a focus group discussion.

2.2.3.4 The participants

The process

I had originally requested Harmony Gold Mining Company to assist me with access to potential focus group participants. Harmony Gold Mining Company refused and advised me not to conduct focus groups until after SARM's liquidation process had been completed.

While interviewing the Project Manager of the Harmony Jewellery School¹⁷, she told me that after the closure of SARM a few of the SARM workers were offered jobs at the jewellery school. They had been students of the school previously. When I requested to speak with these persons, the request was refused. I was also again warned not to speak to individuals about SARM until after the liquidation was completed. I consulted a lawyer about the implications of holding focus groups with ex-workers and was informed that legally Harmony Gold Mining Company cannot prevent me from interviewing ex-workers or conducting focus group discussions. I thus went ahead without Harmony Gold Mining Company or the jewellery school's assistance to find focus group participants in Meloding, the township outside Virginia where the majority of the ex-workers live.

I managed to put together and conduct three focus group discussions, consisting of a total of 17 women. The groups consisted of two groups of five and one group of seven women. The women were eager to talk but afraid that they might be punished for speaking to me. They feared that when the liquidation was completed they might forfeit any monies that could come to them from the settlement because they spoke with me. I assured them that they can all remain anonymous and that they would not be identified to Harmony Gold or anyone else. They also did not want me to take any photographs of them.

The characteristics of the groups

Each of the three focus groups in this study was homogeneous with respect to certain independent variables such as gender and age. I tried to keep to Richard Krueger's advice that "familiarity tends to inhibit disclosure" (Krueger, 1994:18) and where possible avoided having people who knew each other very well in the same focus group.

¹⁷ Interview with Alta Wessels on 12 March 2006.

2.2.3.5 Memory Errors

Sudman and Bradburn (1974) distinguish between two types of memory errors. They are (a) simply forgetting; and (b) forward telescoping. An example of forward telescoping is reporting that something happened a month ago when it really happened two months ago. As the focus groups were only conducted in May 2006, approximately 30 months after the closure of SARM, I tried to reduce memory errors through providing 'landmark events' cues in terms of time frames during the discussions. Loftus and Marburger (1983) found that 'landmarks' help reduce forward telescoping.

I also encouraged 'cued recall' by encouraging key informants to consult records to minimize memory errors wherever possible.

2.2.4 Data Analysis

The purpose of any study, including a qualitative study or evaluation, is to produce systematic knowledge. This is derived primarily from the analysis of data gathered. Kvale (1996) consolidates the many available analyzing methods into five main approaches: condensation, categorization, narrative, interpretation and ad hoc.

I used mainly the interpretation method.

2.3 Limitations

This research was hampered by a widespread lack of data. Difficulties were encountered with official data. Data covering empowerment achievements and individual company employment equity plans were unobtainable. Very limited assistance was forthcoming from the main role players: Harmony Gold Mining Company, the Matjhabeng District

Municipality, the liquidators, the Scorpions and National Prosecutor Authority, and the BAE Systems/SAAB consortium.

2.4 Conclusion

The research and evaluation was conducted in three main phases to answer the three main questions that guided this research: (i) whether the project adhered to the objectives of the NIPP; (ii) whether even as it failed, the project contributed something worthwhile to any of the NIPP objectives, and (iii) the reasons for its failure. The data collection methods that were used included document analysis, key informant interviews and focus group discussions. Key informants included the CEO of SARM; Harmony Gold Mining Company senior management; DTI staff members; and staff at BAE Systems/SAAB and Silplat. Three focus group discussions were conducted with ex-SARM staff members. Unfortunately the scope and depth of the study was limited due to the widespread lack of access to data.

In the next chapter the context in which SARM was founded, existed and folded will be discussed. As the 1998 arms deal is the pivotal part of this context, the chapter sets the scene with a brief description of the history of the South African arms industry and the arms procurement processes followed by the South African Department of Defence; as well as providing a full overview of offsets as practiced both at present and historically by the South African government. The chapter touches on the risks of corruption and coercion that is an inevitable part of such business deals.

3 THE SOUTH AFRICA SITUATION

3.1 Introduction

The establishment of the South African Royal Manufacturing (SARM) factory was the result of several factors within South Africa coming together. The company was formed to answer the need for gold beneficiation, local economic development, good corporate citizenship, and offsets.

This chapter looks at only one of these conspiring factors - that of the arms deal offsets. In this chapter I endeavour to sketch the historical context in terms of the South African arms industry and the related events leading up to the establishment of SARM. The chapter looks specifically at the history of the South African arms industry, the events leading up to the 1998 arms deal and the introduction of the industrial participation policy. It also briefly tells the story of the arms deal.

3.2 A brief history of the South African arms industry

3.2.1 Pre 1989

The South Africa's arms industry, although established primarily during the first part of the 1960s, has had a long history. According to the Armscor website (www.armscor.co.za), South Africa had a viable indigenous defence industry already prior to World War II. As early as the First Anglo-Boer War (1880-81), Marthinus Ras manufactured three artillery pieces for the Boer Forces and during the Second Anglo-Boer War (1899-1902) repairs were done to damaged artillery pieces by the Zuid-Afrikaanse Spoorwegmaatschappij.

Throughout World War II (1939-1945) weapons were manufactured by South African companies under the auspices of Dr. H.J. van der Bijl, the

Director-General of War Supplies. This defence industrial base started with six factories established with British help that produced or assembled ammunition, armoured vehicles, and electronic equipment (Gray, 1945; Beri, 2000; Burgess and Purkitt, 2001). During World War II most of these factories were closed down, even though the Advisory Committee on Union Defence Equipment Requirements was established in October 1948. In the 1950s the defence industry was reborn, and received new impetus in 1960 when the government focused on increasing defence production levels and importing foreign armaments and component systems (Beri, 2000).

Prior to 1963, the country depended heavily on arms imports. But the 1963 voluntary UN anti-apartheid embargo indicated that it would have to become self-sufficient (Beri, 2000). By 1964 the Armaments Production Board was established, followed in 1968 by the establishment of the state-owned Armament Development and Production Corporation. In 1977, these two entities were merged to form Armscor. In order to circumvent the 1963 embargo, South Africa imported dual-use equipment, technology, and manufacturing techniques and learned to incorporate those into armament systems via redesign, retrofit, and upgrade. Prior to the embargo becoming mandatory in 1977, the country also received military technology by using licensing agreements with West Germany, Italy, Israel, France, Belgium and Canada, resulting in extensive licensed and co-production throughout the 1970s and 1980s (Beri, 2000; La Franchi, 1996). It also invested in foreign strategic industries, recruited foreign specialists to help design, develop, and manufacture armaments, and resorted to covert practices to obtain needed capabilities¹⁸. South Africa also developed substantial capability to modify existing equipment to be able to perform in the Southern African environment, allowing the defence industry to cannibalize older systems to upgrade to new systems (La Franchi, 1996).

¹⁸ Telephonic interview, Dr. R. Williams, July 2002

In terms of selling arms during the years of its international isolation, the country had a clandestine network of suppliers for all the country's strategic needs, in particular for arms acquisition and sales effort, which was used to reduce the pariah state situation and also to underwrite the cost of the country's expensive military research and production programme. Prior to 1980 South Africa's only significant export market was Rhodesia (Batchelor, 1998). During the early 1980s rising production costs, excess capacities, and a drop in domestic demand resulted in economic problems for the defence industry. In order to address this, Armscor created a special division, called Nimrod, to concentrate on exports (Beri, 2000). Nimrod began aggressive export marketing by participating in various major international arms shows. From 1982 up to the 1994 elections, the country's principal military customers were Third World governments or rebel groups in other pariah states such as Iraq during the Iran-Iraq war, the Pinochet regime in Chile, the Khmer Rouge in Cambodia, UNITA in Angola and Renamo in Mozambique. Other customers included Peru, Morocco, Oman, Sri Lanka, Taiwan, South Korea, Israel and Rwanda (Batchelor, 1998). Although the UN Security Council unanimously adopted a resolution asking all states to voluntarily refrain from purchasing South African arms (Batchelor, 1998), the start of constitutional negotiations in 1990 improved the country's image abroad and arms exports rose to approximately US\$200 million by 1993 (Defense News, 1999).

By the time that the final days of the Apartheid regime dawned, these arms-related linkages had expanded to include more than 130 foreign-based front companies involved in the buying and selling of arms (Carr, 2000:13). The country's arms industry became one of the largest in the developing countries (Navias, 1994), and Africa's most significant arms producer. It could however not design and produce advanced high-performance combat aircraft, tanks, and defence electronics (La Franchi, 1996; Beri, 2000; Crawford-Browne, 2007). It also grew notoriously

corrupt and secretive as the Apartheid Government sought to maintain its regional dominance in spite of an international arms embargo.¹⁹

By 1989 the industry had expanded considerably and South Africa had reached near self-sufficiency in terms of the needs of its defence force. The country had also reached the stage of independent military research and development capacity; as well as independent capacity in the process of production of less sophisticated weaponry, and limited research and development capacity in the production of advanced weaponry (Beri, 2000). In 1989, Armscor was the 30th largest company in South Africa and had subcontracts with 2271 private sector firms (Armscor as quoted in Beri, 2000). Navias (1994) found that during the years of political isolation, the South African defence industry also became one of the leading economic sectors within the country, contributing by the late 1980s, approximately 20% of total manufacturing output, with armaments the leading manufacturing export. The industry also became the key repository of the country's scientific and technical skills (Navias, 1994).

3.2.2 1989-1996

During 1989 the political environment, both internationally and in Southern Africa, changed dramatically with the break-up of the then Soviet Union; the ending of the Cold War; the movement towards political pluralism in Malawi and Zambia; and South Africa's withdrawal from Namibia. These developments, combined with a severe local economic recession, led the South African Government under the leadership of President de Klerk to introduce drastic cuts in the defence budget in 1989 (Beri, 2000; Batchelor and Dunne, 1998).

The 1999 White Paper on the South African Defence Related Industry reports that "between 1989/90 and 1997/98, the defence budget declined by over 50% in real terms, while the acquisition budget (the

¹⁹ Interview with Dr. R. Williams on 12 July 2002.

Special Defence Account) declined by over 80% in real terms during the same period. In 1997/98 acquisition spending accounted for 20% of the defence budget, down from nearly 60% in 1989/90". By 1996 the defence budget had declined by more than 50% since 1989 (Batchelor and Dunne, 1998).

The dramatic cuts in defence spending had a major impact on domestic defence related industries, which were forced to downsize and restructure as a result of the cancellation or postponement of defence contracts, resulting in the retrenchment of large numbers of workers in the decade since the late 1980's until 1999 (Republic of South Africa, 1999a).

In the early 1990s the government started the restructuring of the public sector defence industry. As part of this process Armscor was separated into two organizations in April 1992:

- i) Denel, now situated under the auspices of the Department of Public Enterprises, dealing mostly in research, development and production; and
- ii) Armscor, which remained part of the Department of Defence, and retains responsibility for the procurement of armaments for the Department of Defence, as well as providing help in establishing export markets prior to 1999. In the December 1999 White Paper on Defence-Related Industries, Armscor relinquishes responsibility for marketing armaments abroad to the Marketing Support Board that includes both government representatives from several ministries and defence industry representatives (Batchelor, 1998; Beri, 2000).

This split between Armscor and Denel was necessary to allow arms production facilities of Armscor to be used for commercial purposes, which otherwise would be illegal (Beri, 2000).

Armcor maintains offices in the United States, France, Russia, Switzerland, Israel, Malaysia, the UAE, and China. It also helps fund the participation of South African defence firms in international arms exhibitions, while Department of Defence funds also support trade missions, government personnel attendance, and transportation costs for equipment at international exhibits (Batchelor, 1998).

Most of the actual arms production in South Africa is done under the auspices of Denel (Republic of South Africa, 1996a). Because of the difficulties of conversion to civilian markets, Denel has focused on arms export markets and especially concentrated on joint ventures and strategic alliances with global firms. Strategic partnerships with major world players are viewed to be vital for rapid and cost-effective entry of the country's defence industry into the world market (Carr, 2000). The country's defence industrial base is dominated by Denel, and three private sector companies: Reunert, Grinaker Electronics and Altech Defence Systems. Together these companies account for 90% of the domestic industry's capital expenditure (La Franchi, 1996, Heiman, 1998, Shelton, 1998). By 1997, arms had become the country's second largest manufactured export, although it accounted for less than 1.2% of the GDP and only one percent of manufacturing jobs (Shelton, 1998). In 1997, South Africa's arms export level was US\$370 million, compared to only US\$11 million in 1991 (Defense News, 1999), placing the country 15th in the world in arms exports for 1997.

Further changes were in line for the industry. With its re-entry into the global arena in 1994, South Africa was exposed and influenced by globalization, and a move towards demilitarization and conversion. Demilitarization not only requires a country's military to move away from traditional military activity and migrate towards peace keeping and humanitarian missions, but it also requires it to move away from weapons manufacturing (Cock and McKenzie, 1998; Lamb, 1997). The defence budget cuts were accompanied by a variety of disarmament measures, such as the cancellation and postponement of major

weapons projects; the withdrawal and/or sale of surplus military equipment and the termination of the country's nuclear weapons programme (Cock and McKenzie, 1998). The country was also expected to adhere to global agreements, such as the discontinuance of the production of low-orbit satellites due to pressure from the Missile Technology Control Regime.²⁰

Conversion entails the process of converting the military towards non-military uses. This process expects the military to be supportive of stability and development within the country. In general, areas of conversion would entail the re-allocation of military financial resources; the restructuring of military-related industry; the reorientation of military-related research; demobilization; base closure, as well as the redevelopment and scrapping of surplus weapons (Lamb, 1997).

The South African military started the process of conversion and the integration of the armed forces in 1994. The South African Defence Force (SADF) was rationalized and restructured to include the military components of the African National Congress (ANC), the Pan African Congress (PAC)²¹ and various other armed forces in the country²².

In line with conversion, the integrated military was further used in the implementation of the national Reconstruction and Development

²⁰ Telephonic interview, Dr. R. Williams, July 2002

²¹ The PAC is a small radical leftwing nationalist party that broke away from the ANC in 1959. Patricia de Lille, the Member of Parliament who in 1999 first questioned the transparency of the arms deal and whether the negotiations for the arms contracts adhered to standards of good governance, was a PAC member. De Lille broke away from the PAC in 2003 and formed the Independent Democrats which went on to win six seats in the 2004 elections.

²² The other armed forces also present in South Africa at the time and whose members needed to be absorbed into the SANDF were: the Azanian People's Liberation Army (APLA), the Transkei Defence Force (TDF), the Venda Defense Force (VDF) and the Bophuthaswana Defence Force (BDF) (Personal communication with Dr. R. Williams, 02 August 2002).

Programme (RDP) projects. The substantial reduction in military spending in part enabled the government to finance social development programmes, such as the RDP and GEAR.

In its new role, the South African National Defence Force (SANDF) supported the UN in Mozambique in 1994, and by March 1995 there was pressure from Britain, France and the USA that South Africa should play a key role in southern African peace-keeping. The country started sending troops on peace-keeping missions to trouble-spots within Africa, such as Angola in 1995 and the Congo in 2001.²³

Humanitarian missions were also high on the SANDF's agenda, such as assistance in Mozambique during the 2000 floods by the Air Force, and the supply of water to drought- and cholera-stricken areas within South Africa.

The South African defence industry had become not only an embarrassment (the "Wazan Affair") but also a financial liability. Offsets however offered a way out: unprofitable arms companies could be sold to investors and foreigners, while profitable ones would be retained (February, 2004).

3.3 The 1998 arms deal

The focus on land-based warfare channelled Apartheid-era military budgets towards the army, neglecting the navy and air force (Engelbrecht, 2001), and this situation was worsened by the UN arms embargo against South Africa that largely prevented the defence force from modernising its navy and air force (Holden, 2008).

By 1990, both were stocked with outdated equipment that was by and large facing 'obsolescence' (Holden, 2008: 3; Engelbrecht, 2001). The

²³ Africa Confidential, March 03, 1995; Jane's Defence Weekly, October 30, 1996

declining defence budget and the move towards demilitarization and conversion resulting in the sharp drop in military procurement in the 1990s compounded these problems. The existence of the navy was furthered threatened in 1993 by the Parliamentary Floor Committee investigating maritime policy. The committee felt that the navy should be closed down and be replaced by the national coast guard, prompting the navy into high alert to save its existence.²⁴ Holden (2008) describes how it announced in March 1993 that it was looking to buy four new corvettes and by September 1993, the media²⁵ was reporting how both the navy and the air force were being courted by military weapon suppliers from both Europe and the Far East in anticipation of the lifting of the arms embargo which was still in place at that time. In 1994 the Minister of Defence gave permission for the navy to call for tenders for new corvettes. Corvettes are small ships (121 metres long) equipped with a helicopter pad and the capacity to sail in parts of the 'blue' ocean, i.e. far away from the shore. Typically these ships are used for search-and-rescue operations and maritime patrols.²⁶

Holden (2008) further describes how as the tenders flooded in by 1995, the opposition to the purchasing of arms became evident both in parliament, non-governmental groups and the media. During the same period, hundreds of members of the South African Students Congress marched to the Union Buildings in Pretoria to petition the Education Minister arguing that the funds would be better used to establish student bursary and loan schemes.²⁷ In Parliament both the Minister without Portfolio who was tasked with leading the RDP, Jay Naidoo, and the Minister of Finance, Trevor Manuel, questioned the deal.²⁸ The media reported that Tony Yengeni, who was later convicted of taking bribes

²⁴ "Don't think the navy' beg experts", Weekend Argus, 20 February 1993 ; "Adrift on uncertain seas", Pretoria News, 09 March 1993.

²⁵ "Staying out in front", The Argus, 10 September 1993

²⁶ Interview with R. Williams, interview, 12 July 2002

²⁷ "Students march to seek funding for education", The Argus, 23 February 1995

²⁸ "Navy Corvettes sail into Cabinet storm", Sunday Times, 14 May 1995

from arms dealers, said: ‘the levels of poverty in the country are so high that most victims of poverty cannot comprehend that a new democratic parliament can endorse spending a substantial amount on corvettes’ (Weekend Star, 23 April 1995 as cited in Holden, 2008: 6).

It would appear as if the outcry from within and outside of Parliament forced a temporary change of heart. Even though a shortlist of two tenders, one from Spain, the other from Britain, was announced, government announced in June 1995 that the corvette tender deal would be scrapped and that the country would first embark on a Defence Review to outline its defence policy before considering buying arms.²⁹ Holden (2008:9) further indicates that these two initial corvette tenders included substantial offsets, which whetted the appetite for more of the same. Articles in the media, particularly the Cape Times³⁰ reported that offsets from such deals would amount between R3 billion and R7.5 billion in new economic activity in the country. But it would not only be promised economic activity that was the carrot, there were also promises of as many as 25,000 jobs, and a new fleet of hake fishing boats (Crawford-Browne, 2007: 129). There was great emphasis on how these deals can assist with the government’s RDP obligations. The Armscor Managing Director, Mr Tielman de Waal, was quoted in the media³¹ as saying: “... the counter trade aspect has added a new dimension to foreign acquisition... the acquisition of the corvettes meets convincingly the needs of both the RDP and defence”.

It was also the start of significant changes in the legal landscape of the South African military trade. The first significant step towards changing the legal landscape of the South African military was taken with the establishment of the National Conventional Arms Control Committee (NCACC) based on the recommendations of the Cameron Commission

²⁹ “*Ships anchored*”, Financial Mail, 16 June 1995

³⁰ 01 March 1995

³¹ Weekend Argus, 26 February 1995

of Inquiry into the role of Armscor in the “Wazan Affair”. This step introduced and encouraged civilian control over defence matters. The “Wazan Affair” contained nearly all the ingredients of a classic gray/black-market arms deal. Clandestine meetings, intelligence community associations, Swiss banks, forged documents and corrupt officials were all facets. The Cameron Commission found that that the “Wazan Affair” was quite typical of the clandestine arrangements that had involved the South African arms industry, particularly Armscor, under Apartheid. The international scope of the operation was obvious, with a Lebanese arms dealer with Israeli intelligence connections, acting on behalf of a Saudi prince and a German citizen, inducing a South African official to sanction an illegal transfer of Chinese weapons to Yemen. It was also found that at one time all of the major parties conspired to cheat each other over commissions or compensation (Cameron et al, 1995; Carr, 2000, Nathan et al, 1997).

The Cameron Commission recommended that a cabinet committee on arms control be established to consider and approve arms export applications; South Africa's future arms export regime should be guided by human rights criteria; and arms exports should be subject to parliamentary (and consequently public) scrutiny (Cameron et al, 1995). In response a Cabinet Memorandum was compiled which made provision for the establishment of the NCACC.

Although the 1996 White Paper on Defence outlines the scope and nature of the NCACC's work, the legislation converting the NCACC into a statutory body was only promulgated in 2000, almost a year after the arms deal had been approved by Cabinet. The NCACC has two functions – the first is to oversee the acquisition, procurement and export of all arms, while the second is to design arms acquisition policies for the SANDF. The NCACC is also responsible for evaluating all applications for arms-related research, development, manufacturing, marketing, contracting, as well as granting permission for these activities (Republic of South Africa, 1996a; Republic of South Africa, 2002; Skosana 2002).

The NCACC's inconsistent approach is partly attributable to the government's overall defence industry policy. This requires that South Africa strives to be self-sufficient in arms and munitions, necessitating the existence of a domestic arms industry; and, if that industry is to be at all efficient and capable of developing technologically, it must compete in the international arena. As a result, two often irreconcilable imperatives must be satisfied: narrow economic and defence self-interest on the one hand, and respect for the broader demands of human rights, on the other (Pothier, 2000).

A White Paper on Defence was tabled in May 1996, in which the Department of Defence made public its priorities. The White Paper noted that "... in the South African context there is pressure to reduce defence spending substantially. There is an urgent requirement to divert financial resources to the RDP in order to meet basic socio-economic needs. A failure to meet those needs will generate conflict and instability. There is no foreseeable conventional military threat in the short and medium term" (Chapter 7, Sections 2, 2.1, 2.2); that "the government has prioritized the daunting task of addressing poverty and the socio-economic inequalities resulting from the system of Apartheid" (Chapter 1, Section 6); and that "The non-military threats emanating from instability and underdevelopment in Southern Africa should be tackled primarily through political and socio-economic measures" (Chapter 7, Section 2.4).

By 1997 there were media reports that both the military and Armscor were complaining about the state of military's equipment (Daily Telegraph, June 20, 1997; Jane's Defence Weekly, September 23, 1997). General Meiring³² was reported the same year as saying in a speech in London that "Parliament must decide what value it places on

³² Chief of the SANDF from 1994-1998. He resigned on 06 April 1998 (effective 31 May 1998) over a report presented to then President Mandela implicating senior Umkhonto We Sizwe Officers in an alleged coup plot.

the insurance policy provided by an adequate defence machine” (Army Quarterly and Defence Journal, 127(97):261-270).

3.3.1 The Defence Review

In August 1997 the Cabinet and Parliament approved the need for modernization and improvement of its military equipment (Independent, August 22, 1997). A Defence Review was launched a few months later.

The documented findings of the Defence Review was tabled and approved in Parliament in April 1998. The findings detailed the equipment needs of the SANDF if it is to retain an effective defence capability. The Defence Review used both the 1996 White Paper on Defence’s framework and the National Industrial Participation Programme³³ as a guideline in designing an arms acquisition process for the country and sets out the obligatory implementation of the Industrial Participation³⁴ aspect of military procurement.

Criticism of the Review included the emphasis by the Review on the SANDF maintaining the ability to mount offensive operations with the use of conventional forces in order to repel any external attack from a similar military power. The Institute for Security Studies argued that the SANDF was more likely to be involved in its secondary missions such as peace operations and assisting the South African Police Service (Institute for Security Studies, 2004).

In February 1998 Parliament was told that the South African National Defence Force (SANDF) could be re-equipped without strain on the defence budget and indeed with benefit to the economy (Jane’s Defence

³³ South Africa’s Industrial Participation became obligatory on 01 September 1996 and the National Industrial Participation Programme (NIPP) was adopted by Cabinet in April 1997.

³⁴ Also commonly known as “offsets” or “offset arrangements”.

Weekly, February 18, 1998), and the government initiated a strategic rearmament programme (Hietman, 1998).

Strategic arms acquisition differs from routine arms acquisition of military equipment. It refers to very rare and very expensive acquisitions and when a series of arms acquisition programmes are packaged into one cardinal expenditure programme, it becomes a non-routine (or strategic) expenditure (Sylvester, 2006). Unlike routine arms acquisition, which is usually the responsibility of the chief accounting officer of the Department of Defence and the Minister, strategic arms acquisitions rests with the country's legislative branches and the President.

Other players in the routine acquisition of arms include the South African Defence Secretariat, the Armament Acquisition Council; the Armament Acquisition Steering Board; the Armament Acquisition Control Board; and Armscor (Republic of South Africa, 2006a). The South African Defence Secretariat is responsible for all acquisition activities. Its main function is to ensure that the deal is the best value for money and that the expenditure falls within the financial objectives of the state (Republic of South Africa, 2006a:14). Within the Defence Secretariat, the Defence Secretary position is held by the chief accounting officer for the Department of Defence and also the person responsible for formulating the department's policy. The Acquisitions Division, a unit within the Secretariat, is headed by the Chief of Acquisitions, who is responsible for industrial and procurement policy for the Department of Defence, and for coordinating research and technology. The Chief of Acquisitions reports to the Defence Secretary (Republic of South Africa, 2006a:7).

The Defence Secretary chairs the Armament Acquisition Steering Board, which includes members from the Secretariat and the South African National Defence Force (SANDF). The board approves non-cardinal projects and screens cardinal acquisition projects. In the context of the arms deal, it should be noted here that the Secretariat only deals at the highest level of bids, thus it does not deal with sub-contracted suppliers

(Republic of South Africa, 1996a:8,15). All suppliers of a single unit of military hardware, such as a corvette, were to be responsible for the sub-contracting of suppliers of the subsystems required (Zacarias, 1998). This places the burden on the domestic industry to compete with each other and convince the bidders that they can perform in accordance with the required quality, price and schedule conditions – a new experience for many South African companies who had previously worked either with the government or on international contracts obtained through Armscor (Campbell, 1999).

The SANDF determines its own requirements, provided these are in line with the approved force structure, defence policies, programmes and budgets of the Ministry, the Secretariat, and Parliament; and it is also responsible for the overall management of armament acquisition projects. Within the SANDF, the Chief of Logistics chairs the Armament Acquisition Control Board, which screens acquisition projects according to the stated requirements of the SANDF (Republic of South Africa, 1996a: 7,8)

The Department of Defence's acquisition processes, including management of programmes, tenders, and the awarding of contracts, are all managed through Armscor. Armscor also "ensures that the technical, legal, and financial integrity of companies supplying acquisitions are in accordance with Department of Defence requirements. Additional tasks include offering marketing support for the industry, facilitating participation in international armaments shows, and the co-management of Industrial Participation Programmes with the Department of Trade and Industry" (Republic of South Africa, 1996a:5).

In the case of strategic, non-routine, arms acquisitions, the Minister of Defence chairs the Armament Acquisition Council, whose members include the Defence Secretary, the Chief of the South African National

Defence Force³⁵, and Armscor's Executive General Manager. The Council approves armament acquisition budgets and approves all cardinal projects (Republic of South Africa, 1996a).

Such strategic acquisitions also require the political approval of the Cabinet and the President, and the approval of Parliament (Republic of South Africa, 1996a). This approval is overseen by the Parliament's Joint Standing Committee on Defence (Republic of South Africa, 1996a:51), as well as the National Assembly's Portfolio Standing Committee on Defence that is mandated to monitor, investigate and enquire into matters and decisions related to defence policy (Le Roux and Boshoff, 2005). The Joint Standing Committee on Defence (JSCD), which includes members of the National Assembly and the National Council of Provinces, has the main oversight role though. However, Mills (1999) and Frankel (2000) have found that the JSCD is curtailed in its efforts by limited expertise on defence issues, insufficient research support, and a high rate of turnover among members.

In the case of the 1998 strategic arms acquisition, the Cabinet and Presidency were dominating participants. The Cabinet Sub-committee on Acquisitions consisted of Thabo Mbeki (Deputy President), Alec Erwin (Minister of Trade and Industry), Trevor Manuel (Minister of Finance), Stella Sigcau (Minister of Public Enterprise, and Joe Modise (Minister of Defence) (Crawford-Browne, 2007). Members of the Cabinet and Presidency were negotiating directly with European governments who are trade partners and sources of foreign direct investment.

³⁵ The person has executive command over the SANDF under the direction of the Minister of Defence in peacetime, and the President of the Republic during national emergencies. It is the task of the Chief of the SANDF to implement defence policies, planning and administrative directives of the Minister of Defence (Frankel, 2000).

3.3.2 The Financial Cost of the Deal

In order to evaluate the deal, four committees were established: a technical committee, a finance merit committee, a defence industrial participation (DIP) committee, and a national industrial participation (NIP) committee. The findings from these committees were provided to the Strategic Offers Committee, who in turn submitted its views to the Armament Acquisition Steering Board. This board then forwarded its recommendations to the Armaments Acquisition Council, who in turn reported to the Ministers' committee, chaired by then Deputy President Thabo Mbeki. Thabo Mbeki then reported the final recommendations to the Cabinet (February, 2004). In November 1998, it was announced that government had selected its list of preferred suppliers.³⁶

Negotiations were started with these preferred bidders. Four national government departments were involved in the arms deal negotiations:

- Department of Finance (National Treasury) dealt with budgetary implications, financial affordability and macro fiscal and economic implications.
- Department of Trade and Industry dealt with the non-defence part of the industrial participation and assisted with certain economic implications.
- The Department of Public Enterprises dealt with aspects relating to state-owned corporations.
- The Department of Defence dealt with the technical defence requirements, defence industrial participation and the specific budget of the Defence vote (ANC, 2003).

The affordability of the contract was high on the Department of Finance's agenda. The Finance Minister, Trevor Manuel, reiterated that the deals had to be 'affordable' (Financial Times, January 18, 1999). An

³⁶ "Arms bonanza for SA", Pretoria News, 19 November 1998; "Cabinet OK to huge Arms Deal", The Star, 19 November 1998.

'affordability team' headed by Jayendra Naidoo was appointed to review the individual deals.

Prior to the signing of agreements with suppliers, the Cabinet was presented by an Affordability Report compiled by the Department of Finance, which warned that it was not prudent to agree to the deal, and that "expenditures of this order will inevitably involve both a move away from government's existing fiscal targets and a significant restructuring of the national budget towards defence expenditure." (South African Press Association, 2004). "The proposed armaments procurements are distinguished from other government procurements by four key characteristics. The sums involved are extremely large; they involve fixed contractual commitments extending over long periods with high breakage costs; they are heavily import-biased; and their costs are offset by a set of associated activities (the NIPs) which cannot be guaranteed. These characteristics create a set of important and unique risks for government. The analysis of these risks suggests that as the expenditure level increases these risks escalate significantly. In fact even expenditure of R16.5 billion may create a situation in which government could be confronted by mounting economic, fiscal and financial difficulties at some future point. Ultimately the decision about expenditure levels really constitutes a decision about government's appetite for risk." (ECAAR, 2002 – as quoted in Holden, 2008: 27). It should be noted that the original speculation in the media had been that the arms deal would cost between R12 billion and R15 billion – thus the reference in the Affordability Report to R16.5 billion.

David Botha (2003a) writes that the quantities of the various systems procured as part of the arms deal were adjusted to remain within the budget during the tendering process. This reduction process brought the expense to 1.62% of the country's GDP, and below the 1.8% of the GDP stated in the 1998 Defence Review. The table below demonstrates the lowered requirements of the arms deal.

Equipment	Planned	Actual
Gripen	38	28
Hawk	24	24
Corvettes	5	4
Submarines	4	3
Helicopters	60	30

Source: Botha (2003:100)

On 03 December 1999, the government signed the final purchasing agreements and loan agreements that would pay for the equipment. The total cost at that time was R29,992,000 - just short of R30 million. The contracts were awarded to British, German, Italian, French and Swedish firms. Those whose bids were not selected included firms from the Czech Republic, Spain, Canada, and some companies in Italy and Sweden.

In the table below, Holden (2008) sets out clearly what was purchased, where the equipment came from and how much the initial costs were.

Equipment	Quantity	Contractor/Supplier	Price in millions of Rand (1999 value)
Corvettes (Meko A200)	4	German Frigate Consortium (Germany) providing the ship platform Thomson-CSF (France) and African Defence Systems (South Africa) providing the combat suite	R6 917
Submarines (Class 209 1400 MOD)	3	German Submarine Consortium (Germany)	R5 354
Advanced Light Fighter Aircraft (The Gripen)	28	SAAB and British Aerospace as a joint British-Swedish Consortium (UK/Sweden)	Part of R15 772
Lead-in Fighter Trainer Aircraft (The Hawk)	24	British Aerospace (UK)	Part of R15 772
Light Utility Helicopter (Agusta A109M)	30	Agusta (Italy)	R1 949
Total Cost			R29 992

Source: Holden (2008:18)

The arms deal purchase was divided into two tranches. The first tranche included:

- three submarines and four corvettes from Germany
- twelve jet trainers from Britain
- nine light fighters from Britain and Sweden
- thirty light utility helicopters from Italy

The cost for this tranche is R21.3 billion.

The second tranche includes:

- twelve jet trainers from Britain
- nineteen light fighters from Britain and Sweden

The costs involved would be R8.6 billion (Crawford-Brown, 2002).

The totals exclude finance charges, escalation clauses and foreign exchange fluctuations. The foreign loans procured for the deals were pegged to the exchange rate and the costs of the deal changes as the value of the Rand fluctuates against the value of the foreign currency used. February (2004) indicated that by 2004, the cost had risen to in excess of R60 billion.

The choice of the military equipment purchased was criticized by military analysts. Nathan (2001) argues that as the 1996 White Paper on Defence fully embraces a wide notion of security, in so accepting the view that security challenges are not primarily military by nature, or even interstate affairs, it does not condone that military spending should increase, but rather that spending on civilian priorities should increase. Engelbrecht (2001b) in turn points out that although the fighter jets will afford the Air Force some measure of power, the country is bordered to the north by economically dependent countries that have no incentive to threaten South Africa's airspace by conventional means. He further argues that as the only African countries that possess submarines are Algeria, Egypt, and Lybia, the submarines seem to be an unnecessary

extravagance. Harris (2000) has argued that the Meko class corvettes, which were purchased to protect the coastal economic zone, was also unnecessary, as the Department of Environmental Affairs and Tourism has three inshore patrol vessels and one deep-see patrol vessel for guarding the country's exclusive economic zone. The cost of these four vessels totalled R500 million compared to the cost of the Meko class corvettes of R6,9 billion.

Other analysts, most notably, David Botha (2003a), have accepted the necessity of the equipment purchased, and although arguing that the overall arms deal, as a percentage of the country's GDP is well below international norms, and within the 1998 Defence Review's accepted 1.8% of the GDP, he has questioned the value-for-money of the individual contracts. The purchase of the Lead In Fighter Trainers (LIFT), commonly known as the Hawk, has been heavily criticized, also in the Joint Report on the arms deal submitted by the Public Protector, the Auditor-General, and the Directorate Special Operations of the National Prosecuting Authority. Concerns about irregularities in the decision-making process, particularly in a report by the Auditor General to the Select Committee on Public Accounts (SCOPA) in September 2000, led to the instruction to these three agencies³⁷ to undertake a comprehensive forensic investigation of all aspects of the arms deal, but also to particularly look at the negotiating and tendering process for the purchase of the Hawks. SCOPA focuses solely on public expenditure by government, assessing the efficiency and effectiveness of the management of state finances, and checking whether government departments' expenditure is in line with their budgets. The arms deal falls directly within the ambit of SCOPA's financial oversight.

³⁷ SCOPA also recommended that the Heath Special Investigations Unit form part of the investigation, but the unit was not appointed despite much acrimony (Botha, 2003a). The exclusion of the Heath unit has cast a shadow of doubt over the whole investigation. SCOPA's reputation was also severely tarnished by the events around the arms deal (February, 2004).

In his 2007 book on his time as an MP and as a significant member of SCOPA during the initial stages of the committee's investigation of the arms deal, Feinstein details how the original joint investigation report's findings were altered. He quotes at length from both the original draft of the joint report and the final draft submitted to the public:

Original wording:

'5.13 CONCLUSION

According to documentation the Minister could have influenced decisions made by certain role-players during the process to select BAE/SAAB as the preferred bidder for the Gripen and Hawk aircraft. Furthermore, during the investigation it became apparent that preference was given to BAE/SAAB by making changes to value systems midway through the process. This caused the Hawk aircraft to be ranked first, followed by the MB339FD (the Aeromacchi jet). The MB339FD could have been acquired much cheaper whilst also meeting the SAAF LIFT requirement adequately.

1.8 OVERALL CONCLUSION

1.8.1 The findings of the joint investigation support the majority of the key findings by the AG as contained in his Special Review dated 15 September 2000.

1.8.2 There were fundamental flaws in the selection of BAE/SAAB as the preferred bidder for the LIFT & ALFA³⁸ programme.'

Adjusted wording after Executive intervention and as presented to Parliament:

'14.1 KEY FINDINGS

³⁸ The ALFA refers to Advanced Light Fighter Aircraft. In this context, it refers to the SANDF changing its requirements in early 1997 from its traditional three-tier operation system for the Air Force to a two-tier system due to high costs. This new system would see trainee pilots moving straight from the Astra planes, which had traditionally been used to train pilots, to a new midrange fighter, the ALFA. This change would however negate the need for the Hawk (LIFT). In late October 1997, the system was once again reverted back to a new, redesigned three-tier system that required the LIFT (Holden, 2008). For a detailed comparison of the three systems, please see Appendix D.

14.1.1. No evidence was found of any improper or unlawful conduct by the Government. The irregularities and improprieties referred to in the findings as contained in this report, point to the conduct of certain officials of the government departments involved and cannot, in our view, be ascribed to the President or the Ministers involved in their capacity as members of the Ministers' Committee or Cabinet. There are therefore no grounds to suggest that the Government's contracting position is flawed.

14.1.6. The decision that the evaluation criteria in respect of the LIFT had to be expanded to include a non-costed option and which eventually resulted in a different bidder being selected, was taken by the Ministers' Committee, a subcommittee of Cabinet. Although unusual in terms of normal procurement practice, this decision was neither unlawful, nor irregular in terms of the procurement process as it evolved during the SDP acquisition. As the ultimate decision-maker, Cabinet was entitled to select the preferred bidder, taking into account the recommendations of the evaluating bodies as well as other factors, such as strategic considerations.

14.1.7. The decision to recommend the Hawk/Gripen combination to Cabinet as the preferred selection for the LIFT/ALFA was taken by the Ministers' Committee for strategic reasons, including the total benefit to the country in terms of counter trade investment and the operational capabilities of the SANDF.' (Feinstein, 2007: 214-215)

An extensive and in-depth evaluation of both the British Hawk and the Italian-made Aermacchi MB339, found that the Aermacchi would be a better deal in terms of performance and price. The Aermacchi MB 339 is a highly rated plane, considered to be just as capable of the Hawk, but cost half the price of the Hawk. What appears to have tipped the balance in favour of the Hawk, was the larger amount of offsets attached to the British Aerospace offer. BAE offered US\$1.2 billion in offsets, compared to the US\$431 million on offer from the Italians (Botha, 2003a). Wrigley (2003) also points out that it was unlikely that the Hawk would be used in a combat role, and that it would ever only be used as a

trainer. It was thus an unnecessary option, and that the less expensive Aermacchi was a better option as a trainer. Wrigley further argues that because the Hawk and the Gripen were both connected to BAE, the South African government saw greater value in choosing their contract for reasons of foreign policy, despite the Italian, Czech and German tenders being less expensive.

In replying to SCOPA questions in 2007, the Department of Defence's Chief Director of Acquisitions confirmed that the equipment bought through the arms deal was not the most appropriate. He was quoted in *Business Day* (12 March 2007) as saying that "the current need for combat aircraft and combat aircraft support for joint operations is very low because there is no real conventional threat. For that reason, the air force is focusing mainly on transport capabilities as well as the train of new pilots to feed into the squadrons to prepare for future operations. Instead of 200 hours per aircraft, we may only achieve 100 hours per aircraft. We will not use them as often because there is no need in the short term. Until such time as the physical risk to national security escalates, where it requires a larger investment in combat systems, this is a wilful decision to reduce the investment in that environment". And the *Cape Argus*³⁹ speculated that due to a lack of skilled staff to operate all the purchased submarines, two of the three would have to be mothballed.

Payment for the arms was to be spread over 14 years and would be funded by low-interest loans totalling US\$4.8 billion. This amount equalled R29.3 billion in 1999. By February 2002 it was estimated that the cost would be R52.7 billion (or an average of R3.7 billion per year over the life of the deal). This sharp increase was linked to the adverse exchange rate and to some degree to inflation and interest payments. At the time that the deal was signed the US Dollar-South African Rand exchange rate stood at US\$1 to R6. By early 2002, the exchange rate

³⁹ 05 December 2007

stood at US\$1-R10. The Finance Minister informed the public though that the loan contracts remained \$4.8 billion in dollar terms.⁴⁰ The rand strengthened during the latter part of 2002 and by late 2003, the exchange rate stood at US\$1 to R6.5. The exchange rate has hovered steadily for the most part around the US\$1 to R6.50/R8 in recent years.

Those in opposition to the procurement of the military equipment pointed out that South Africa desperately needs to spend money on the development of civil industry, water supplies, education, housing and health and that the arms deal diverted funds away from these development priorities (Wrigley, 2003; Crawford-Browne, 2002). At the time of the signing of the arms deal contracts, the Minister of Health rejected the idea of providing anti-retroviral drugs (ARVs) to pregnant mothers as the programme would be too expensive for the country (Feinstein, 2007; Holden, 2008). As the 2003 Report of the Joint Health and Treasury Task Team found, distributing ARVs to those who needed them, would cost R5.7 billion per annum, which was a mere 10% of the cost of the arms deal at the time (Republic of South Africa, 2003; Feinstein, 2007; Holden, 2008). In his 2008 comprehensive book on the arms deal, Holden extrapolates the actual costs of the arms deal compared to the funds spent on other social expenditure between the 1999/2000 financial year and the 2007/2008 financial year. He used the 'National Estimates of Expenditure' for the Departments of Housing, Defence, Health and Education for the years 1999, 2004 and 2008.

⁴⁰ Business Report, November 16, 2001

	1999/ 2000	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	Total
Arms deal	2.901*	4.223	6.342	5.864	4.502	6.331	4.537	4.515	3.882	43.097
HIV/AIDS	zero	0.181	0.265	0.459	0.7662	1.107	1.511	1.953	2.473	8.7152
National student financial aid scheme	0.390	0.443	0.449	0.500	0.545	0.583	0.864	0.926	1.332	6.032
Housing grants	2.970	2.997	3.225	3.800	4.246	4.473	4.843	6.677	8.342	41.573

Source: Holden (2008:29)

* all values in R billion

The original value of the offsets that would result from the arms deal was touted to be as much as R110 billion.⁴¹ Subsequently a lower figure of R70 billion was agreed upon.

An Affordability Committee headed by Jayendra Naidoo was appointed to review the individual deals. The team reported that the amounts claimed for offsets were inflated. This finding was not unusual, as it is common in arms deals that have offsets attached to the deal. Brauer and Dunne (2004) found that offsets are often more costly than straight ‘off-the-shelf’ arms purchases and according to Hawley (2003:18) offsets “have a reputation for raising the cost of a deal by around one-fifth”. The Affordability Committee also indicated that the offset arrangements could not be strictly enforced (February, 2004).

According to Ms Chandrika Jogessar of DTI⁴², for civilian contracts the value of the offsets should comprise a minimum 30% of a bid’s imported component, while for defence contracts the offsets should comprise 50% of a bid’s imported components.

⁴¹ Business Day, August, 28, 1999

⁴² Ms Chandrika Jogessar, DTI, interviewed 19 September 2002

The offsets of the South African arms deal were reported to be as follows in 1999:

Table 2 The offsets of the South African 1998 arms deal

	Investments in billions of Rand	Technological Transfers in billions of Rand	Purchases in billions of Rand	Total
Military	4	8	7	14.5
Non-military	24	31.5		55.5
Total				70

Source: DTI

One of the earliest DIP offsets was the selection of Denel by BAE Systems to be a strategic supply partner for the design, development, and production of NATO-standard stores pylons for the Gripen fighter (Defense News, 10 April 2000). By 2006, more progress has been made on the DIP offsets than with the NIP offsets (Haines, 2006).

It should be noted that despite the open post-apartheid era, the extensive public scrutiny of, and the debate around the arms deal was met with opposition and secrecy by government. Government opposed any publication of contract and other related details (Epps, 2004:9). This was repeatedly highlighted by Terry Crawford-Browne, including in front of the Joint Standing Committee on Defence at Parliament on 29 November 2001: "The public was (and is) expressly forbidden details of the offset programmes in terms of 'commercial confidentiality clauses', which violates Section 217 of the Constitution' (Parliament of the Republic of South Africa, 2001). Conflicting information was released into the public domain and no independent audit of the process was allowed. Indeed some details were only revealed as a result of a legal challenge by ECAAR-SA against the South African government (Crawford-Browne, 2007).

In-depth details pertaining to the implementation and progress of offset projects are still nearly impossible to obtain. The majority of the information is from government sources and documentation, which as I pointed out earlier, are often erratic, and sometimes just completely false

and inaccurate. Very often it was left for the press to sniff out the truth. Holden (2008:25) lists a few of these. He quotes the Business Day⁴³ in relating that when the first 'offsets milestone', or point at which the arms companies were supposed to have achieved certain targets, was reached in 2003-2004, three of the arms contractors had defaulted on their offset commitments. These were Ferrostaal by R4 billion; the BAE/SAAB consortium by R840 million, and Thales by R262 million. This was in spite of Armscor reporting in its 2007 Annual Report that most of the contractors were actually ahead of schedule in meeting their offset targets and that offsets had contributed R11.4 billion in the returned investments (Holden, 2008; Armscor, 2007:13).

How do offsets function within the South African legislative system?

3.4 Industrial Participation

3.4.1 General background to offsets

Industrial participation agreements, also known as "offsets", are contracts that require the seller to transfer extra economic benefits to the buyer as a condition for the sale of goods and services (Brauer & Dunne, 2004).

By implementing the industrial participation programme as part of the arms deal, South Africa joined the many countries that are not just buying arms, but are buying complex bundles of goods and services and wish to minimize associated transaction costs (Hall & Markowski, 1994). The use of offsets is not restricted to the field of arms trade, but is also used when governments purchase telecommunications equipment, computers and other electronic and mechanical equipment (Brauer & Dunne, 2004).

⁴³ 20 September 2006

Although the arms deal is the most widely known of the sales agreements entered by the South African Government, mainly due to the media frenzy around it, there are several significant NIPP projects currently ongoing arising from purchases made by South African Airways and some other State Owned Enterprises (SOEs) such as Eskom, Transnet, and PetroSA. As this evaluation is on one of the NIPP projects resulting from the arms deal, discussion here will focus on the Strategic Defence Procurement package and its NIP projects.

3.4.2 The WTO Agreement on Government Procurement

The use of offsets has become a common practice in the international arms trade. According to Wood (1992) at least 130 countries, in all regions of the world, and irrespective of being industrialized or not, maintain some sort of offset programme. This is the consequence of reduced military budgets since the end of the Cold War. These reduced military budgets led to lower volumes of arms sales, which changed supplier-buyer relationships on the international arms market. These changes led to arms producing companies out-bidding each other in offering attractive offset packages (Wood, 1992; Courtney, 2002; Brauer & Dunne, 2003).

Offset agreements are thus entered into as a matter of course even though Article XVI of the World Trade Organization's Agreement on Government Procurement explicitly forbids the use of offsets in government procurement. This agreement, which came into effect January 01, 1996, covers the use of offsets and South Africa, as a member, is bound to it.

The exception to Article XVI of the WTO Agreement on Government Procurement is listed in Articles V and XXIII of the Agreement. Article V states that developing countries may negotiate conditions for the use of offsets as long as offsets are used in order to qualify for participation in

the procurement process, and not as criteria for awarding contracts. Article XXIII allows exemptions in the case of protecting national security interests and public morals amongst others (www.wto.org⁴⁴). Most countries use the exceptions that are granted in Article XXIII, which effectively excludes all military trade from its provisions (Control Arms Campaign, 2003; Thomas, 2006).

South Africa, which is a developing country, uses both Articles V and XXIII in order to use offsets. It is also adhering to its own government procurement policies that mandates that all government purchases in excess of, or equivalent to, US\$10 million include offsets.

3.4.3 South Africa's offsets history

It is generally assumed that offset arrangements is a new component to the South African arms procurement process, and that it was introduced post 1996. However, neither the Defence Review, nor the Department of Trade and Industry's policy documents on Industrial Participation, refers to it as a new practice in South African Government's procurement, but at the same time they also do not refer to similar practices in the previous era.

A literary review conducted in 2001 indicated that limited research and documentation on the Apartheid era procurement, in particular on arms procurement and industrial participation, exists (Wellmann, 2004). Nevertheless newspaper reports and anecdotal evidence indicate that industrial participation was practiced prior to 1994. An example is the newspaper article on the role of Swiss arms manufacturer, Dieter Buhrlé, in South African arms procurement during the Apartheid era indicates that the covert deal with Buhrlé led to the "granting of production licences to South Africa and supporting the build-up of the South African

⁴⁴ http://www.wto.org/english/res_e/booksp_e/analytic_index_e/gpa_02_e.htm
(accessed on 12 April 2005)

arms industry”⁴⁵. It is not clear how formalized these arrangements were, but it can safely be assumed that these early arrangements influenced and informed post-1996 policy.

Armcor has reportedly been enforcing offsets since 1989. These offsets had various forms of benefits such as stimulating economic growth, developing industrial projects and securing industrial projects and securing foreign investment. These obligations were monitored and carried penalties ranging between 5-15% of the unfulfilled portion of the obligation for non-performance.⁴⁶

According to its website⁴⁷, Armcor’s policy is that a Defence Industrial Participation (DIP) obligation of up to 100% of the contract value applies to all purchases with an imported value above US\$2 million, and focuses on strategic business within the defence industry.

3.4.4 Current South African Industrial Participation

In the government’s move towards addressing the past through economic policies such as the RDP and GEAR, policies related to changing the government procurement system were introduced. South Africa’s Industrial Participation (IP) became obligatory on 01 September 1996 and the National Industrial Participation Programme (NIPP) was adopted by Cabinet in April 1997.

This policy makes it mandatory for all government purchases in excess of, or equivalent to, US\$ 10 million to include the foreign supplier’s implementation of business projects in South Africa. These business projects should equal or exceed 30% of the value of the deal. The purpose of this policy is to create further socio-economic empowerment

⁴⁵ Weekly Mail and Guardian, 22 November 2001

⁴⁶ Star, 23 August 2001

⁴⁷ www.armcor.co.za/Dip/What!SDIP.asp; accessed 07 July 2007

in terms of jobs and economic investment – these are goals that are implicitly part of the RDP and GEAR policies. Apart from any single contract exceeding US\$10 million, it also applies to multiple contracts for the same products, or services, each exceeding US\$3 million awarded to one seller over a 2-year period which in total exceeds US\$10 million. It also applies to a contract with a renewable option clause where the total value will exceed US\$10 million (DTI, 2001, 2002). During their investigation on the arms deal on behalf of SCOPA, the joint task team surveyed counter-trade practice in 13 other countries, and found that the South African policy compares favourably with international practice, although most countries have a somewhat lower threshold, in some cases as low as US\$1million (Botha, 2003b).

The obligation of any deal that has offsets is to create economic activity generating credits equal to or exceeding 30% of the contract value over a fulfilment period of seven years for most of the suppliers. In the 1998 arms deal, there is an exception to this rule in that the BAE Systems/SAAB consortium has to fulfil its offset obligation over a period of 11 years. This exception is due to the size of the contract with the company. Thus offset projects tend to be relatively long term, and credits are only earned as the economic activity actually occurs, and not at the time of making the commitment. A penalty of 5% of the IP obligation can be levied for non-performance and a performance bond is required. SCOPA queried the enforceability of these offset agreements and indicated that the value of the penalties was too small in comparison to the value of the offsets (February, 2004). As pointed out in earlier chapters, research has shown that most supplying companies would include this 5% penalty in their costing of the product (Eisenhour, 1989; Batchelor and Dunne, 2002; Skõns 2004).

There are two different types of offsets: direct and indirect offsets. Direct offsets include goods and services directly related to the equipment purchased. Indirect purchases are services and goods that are unrelated to the specific defence equipment purchased.

The South African government has divided the IP into two categories:

- the Defence Industrial Participation (DIP), which requires the foreign company to buy directly from or procure business for SA defence companies – thus a direct offset; and
- the National Industrial Participation (NIP), which requires a separate set of contracts and investments in the civilian market – thus an indirect offset.

For DIP a further distinction is drawn between direct and indirect DIP. Direct DIP refers to projects that form part of the planned procurement in the form of subcontracting. Indirect DIP refers to other, indirectly related projects, in the defence industry. Direct DIP is required to make up 20% and indirect DIP 70% obligation at a minimum (Armcor DIP Guidelines). The DIP obligations (whether direct or indirect) must meet the following requirements:

- products - more than 45% of the DIP commitment, excluding any exports
- technology: as defined in the DIP agreement, not more than 10%
- exports: greater than 25%
- investment: up to 15% (Equity or Capital Equipment)
- loans: up to 2.5%, and
- marketing support of up to a maximum of 2.5% of export value (Armcor DIP Guidelines, paragraph 6.2.2.2).

While DIP is administered by the Department of Defence and Armcor, the Department of Trade and Industry (DTI) administers the NIP Programme (DTI, 1997).

Thus in the case of the arms deal, three contracts were prepared for each supplier, three different contracts are prepared: the systems contract, the NIP contract and the DIP contract (Campbell, 1998).

A National Industrial Participation Secretariat, which is headed by a Chief Director, was created within the Department of Trade and Industry to oversee the NIP. This IP Secretariat keeps track of all relevant transactions in South Africa which have IP potential; assists, guides and advises sellers in the fulfilment of their obligations; makes recommendations to the Industrial Participation Control Committee (IPCC) for its approval; concludes IP contracts; administers, reviews and audits performance of all ongoing projects; prepares reports for the IPCC supporting/not supporting allocation of credits or penalties; and prepares periodic status reports (Botha, 2003b).

The Industrial Participation Control Committee (IPCC) is made up of representatives of the Departments of Trade and Industry, Finance, Foreign Affairs, Defence, and the purchaser, if not one of the above. The IPCC provides strategic guidance and approves guidelines for the NIPP; ensures that all government departments and parastatals comply with the policy; reviews recommendations made by the Industrial Participation Secretary for acceptance of proposals, awarding of credits, or application of penalties; and reviews the performance of the IP Secretariat (Botha, 2003b).

The process that is followed to assess the Industrial Participation (offsets) contribution of a tender is that after a tender is issued potential tendering companies liaise with the Industrial Participation Secretariat and submit their business concepts. Once a tender is awarded, a full business plan is submitted to and negotiated with the Secretariat. Once the Secretariat is satisfied that the proposal meets the requirements, it is submitted to the IPCC for approval. On approval, a contract is concluded between the seller and the government (Telephonic interview, Mr. Zikode, DTI, 06 August 2003; Botha, 2003b). Botha (2003b) found

that the time-pressured process result in business plans being developed in haste and without sufficient planning, and thus subsequently require revision once the contract has been signed. In terms of the awards of the tenders, industrial participation (offsets) is a precondition but not a deciding factor, unless all bids are relatively close.⁴⁸

The Defence Industrial Participation (DIP) Programme follows principles similar to that of the NIPP, but “the objectives of all DIP programmes are... [to] address specific defence industry objectives such as the retention, and where possible, the creation of jobs, abilities and capabilities; the establishment of a sustainable defence industrial and economic basis, with strategic logistic support capabilities; the promotion of defence exports of value-added goods; the promotion of like-for-like technology transfer and joint ventures; the maintenance of skilled indigenous design, development and manufacturing capabilities; and the provision for a sustainable local defence industry capacity” (Armscor DIP Guidelines, paragraph 3.1). As is the case for the NIP, offset proposals are requested along with the tenders. These proposals are routed through the Armscor Defence Industrial Participation Secretariat, who together with the programme manager and the Defence Secretariat evaluate the tenders and engage with the successful tendering companies in negotiations. In cases where the purchase would be in excess of US\$10 million, as in the case of the arms deal, the NIP and DIP secretariats evaluate the tenders separately and only once both the DIP and NIP agreements are concluded, is the purchase contract signed between government and seller (Botha, 2003b).

The assessment of DIP proposals is based on the extent to which they support the capabilities required in the defence industry to provide for a strategic design, development, manufacturing, logistical support, and upgrade capability for a technologically advanced and modern defence

⁴⁸ Telephonic interview, Mr. Zikode, DTI, 06 August 2003

force, its doctrine and posture. The offset element in defence procurement is not only a precondition, but also forms one of the key evaluation factors and plays a major role in the final adjudication of the tender (Botha, 2003b).

3.4.4.1 Industrial Participation Objectives

There are various objectives of the IP programme. These include:

- sustainable economic growth
- establishment of new trading partners
- foreign investment into South Africa
- exports of South African “value-added” goods and services
- job creation
- human resource development
- technology transfer
- economic advantages for previously disadvantaged communities (www.the-alliance.org⁴⁹; Department of Trade and Industry, 2001).

Apart from working to fulfil the above objectives, the NIPP programme further endeavours to support the development of South African industry (DTI, 2001).

Botha (2003b) lists a number of principles further apply to the offsets:

- No increase in prices - the economic activity must be truly economic and must not increase the cost of doing business;
- There must be mutual benefit for the seller as well as national economic objectives;
- Additionality: all proposals must generate new business. In order to qualify for credits, investments may be in new facilities or the

⁴⁹ www.the-alliance.org : Government Procurement document, accessed August 2002

expansion of existing facilities, but the additional benefit must be shown beyond doubt, besides the mere increase in output. Exports must be for new products or for new markets.

- The projects must be economically and operationally sustainable. The objective is to create businesses that will survive, and changes to the business plan may be required to adapt to changing circumstances.
- Causality: The proposal must result from the purchase contract. The IP proposal would not have been initiated had it not been a condition of the purchase contract. Furthermore it means that each project submitted, resulted from an action by the seller as a result of an IP obligation, or that the seller's involvement influenced the project to occur within a shorter time frame than would otherwise have been the case.
- The fulfilment of any obligation is the sole responsibility of the seller. When other parties are involved in the execution, the responsibility remains with the seller.

The stated tender requirements for offsets set for the arms deal were that DIP and NIP should at least equal the value of the purchase contract. The interest among tendering companies was so high that IP became a key differentiating issue, and the agreements that were eventually signed were for DIP of \$2.4 billion (60% of the contract value) and NIP of \$14 billion (350% of the contract value), totalling more than four times the value of the signed contracts (Botha, 2003b, Holden, 2008). This went against the rules of the WTO Agreement on Government Procurement, of which South Africa is a signatory, and which states clearly that: "... a developing country may at the time of accession negotiate conditions for the use of offsets, such as requirements for the incorporation of domestic content. Such requirements shall be used only for qualification to participate in the

procurement process and not as criteria for awarding contracts" (World Trade Organization, 2004).

Although cheaper alternatives were available to those specific contracts that were signed for this arms deal, the only issues separating those from the ones that were chosen were the promise of more attractive offset arrangements and the South African government's preference for European suppliers (Wrigley, 2003).

Whether offsets are welfare enhancing depends on whether the offsets are an efficient means of pursuing government's multiple objectives. The IP objectives linked to the arms deal correspond to a large degree with the RDP's central goal to meet social and economic needs of the South African community. There is also a definite attempt to use the arms deal to drive substantial investment into the non-defence sectors of the economy, and to ensure a good geographic spread among the provinces.

The nature and spatial implementation of the NIP and the DIP offsets confirms rather than challenge existing spatial patterns and inequalities in the South African economy (Haines, 2004). Haines (2004) also found that the allocation and integration of the various offsets projects and offsets-related investments to specific regions and centres has not been prescriptive or systematic, even though government has acknowledged 'that it needs to do more to improve the coherence of existing strategies to promote a more equitable geographic spread of investment and economic activities' (DTI, 2002c:28). The allocation of specific offset projects almost inevitably involved a degree of horse-trading, rather than systematic targeting or keeping in mind the need for geographic spread (Haines, 2004).

There are nine provinces in post-Apartheid South Africa, each with a provincial government with certain budgetary powers and funds allocated by central government. Gauteng remains the dominant province in terms of economic activity and incorporates Johannesburg

and Pretoria. The Johannesburg-Pretoria axis is the largest concentration of manufacturing industry in the country. Only seven of the nine provinces have the Strategic Defence Programme offset projects allocated to them (DTI, 2003b).

Table 3 Provincial spread of the Strategic Defence Programme

Provinces	Projected value (in US\$) of offset projects – investments, exports and local sales	Anticipated number of direct jobs created up to 2011	Percentage (%) allocation of performance per region
Western Cape	4,141,415,920	3,314	37,20
KwaZulu-Natal	4,886,190,048	1,201	4,51
Eastern Cape	3,177,770,461	2,435	1,60
Free State	1,651,400,000	2,100	1,33
Gauteng	5,621,256,713	3,216	42,59
Mpumalanga	762,500,000	230	6,76
Limpopo	909,990,000	880	6,01
TOTAL	21,150,523,142	13,376	100

Source: Department of Trade and Industry, 2003b.

So given what we know, how are the offsets projects faring overall? Haines (2006) found that although the arms deal offsets projects included some small-scale successes in the bio-tech industries, there has been insufficient involvement in emerging high-tech industrial sectors and emerging export-oriented industries, with an overall tendency to opt rather for brownfields rather than greenfields projects. He further found that more progress has been made on DIP offsets than with NIP offsets. Even though Denel have had added opportunities of participating in the international defence production, and there had been some specific and modest achievements particularly for Denel Aviation; the actual DIP offsets experience does not match the expectations created. Some of Haines' (2006) findings include that there has been a failure of certain obligors to fulfil their targets in helping to stimulate output and exports for Denel; there has been a significant shortfall between the promised DIP contracts and the contracts actually received;

and that those projects that did materialize were often on a smaller scale than envisaged.

3.4.4.2 Industrial Participation Obligations

The IP guidelines and criteria obligate the seller that incurs an IP obligation to actively participate in the South African economy. Business proposals linked to the offsets obligations must be made on the principles of mutual benefit and good business sense. (DTI, 2001)

All bidders, except the BAE Systems/SAAB consortium, must fulfil their obligations within a seven-year period from the time of implementation of the agreement and must provide a performance guarantee equal to 5% of the offset component. Due to the size of its order, the BAE Systems/SAAB consortium must fulfil its obligations within an eleven-year period. These criteria appear to be equal or even above international norms, and within international practice. The idea behind the 5% guarantee is that it should not be measured against the size of the NIP obligation but rather against the loss the obligor may suffer should the NIP not be fulfilled.

The contractors also face a penalty to the value of 10% of their unrealized IP obligation should they fail to meet their IP requirements.⁵⁰

The IP obligation also has a credit system, which values the methods used to meet the IP obligations. Each credit is valued as an equivalent to one US dollar of the obligation amount. Certain types of projects are awarded greater credits, for example: new investment, research and development, as well as links with previously disadvantaged persons or groups (either as shareholders or contractors) earn double credits.

In order to be considered for IP credits, all Industrial Participation proposals must reflect incremental or new business ventures (www.the-

⁵⁰ Telephonic interview, Mr. Zikode, DTI, 06 August 2003

alliance.org). The credits are accumulated over a 7-year period (11 years for the BAE Systems/SAAB consortium offsets) and are awarded based on actual successful performance and not on projections. A combination of various methods can be used to meet the IP obligation and credits are calculated cumulatively and concurrently among all methods used. Excess credits can be banked for a period of four years after the obligation is discharged (www.the-alliance.org⁵¹).

The evaluation of IP proposals and the awarding of IP credits are based on the following methodology:

Table 4 Methodology of IP credits

Objective	Methodology	Factor
Sustainable Economic Growth	Revenues accumulated over the fulfilment period	\$1 = 1 credit
Export Promotion	Export revenues = additional credits	\$1 = 1 credit + local content
Job Creation	Salaries and Wage costs accumulated over the fulfilment period	\$1 = 1 credit
Training and Development	Training and Development Costs accumulated over the fulfilment period	\$1 = 1 credit
SMME Promotion	Outsourcing to SMMEs	\$1 = 1 credit
Previously Disadvantaged Individuals	Outsourcing to PDI SMMEs PDI Ownership % x Revenues	\$1 = 2 credits \$ x % = credits
Investment	Capital outlay or capital injections	\$1 = 2 credits
R&D Expenses	All costs	\$1 = 2 credits
Technology Transfer	On a case by case basis linked to revenues	\$1 = 1 credit

Source: National Industrial Participation Policy for South Africa, Department of Trade and Industry, Pretoria, April 1997

Monitoring and Evaluation

Provided that the use of procurement as a policy tool, as is used here through IP, has measurable targets; the processes used are verifiable, auditable, and transparent; and takes place within a competitive environment, procurement can to a large extent contribute to the development of growing enterprises that are able to participate equitably in the global economy (Watermeyer, 2000, Shezi, 1998). It is therefore appropriate that the procurement contracts be regulated and monitored. Studies have however shown that the current lack of data collection and records by the government prevents the effective monitoring of targeted

⁵¹ Government Procurement document, accessed August 2002

procurement such as the NIPP, and further hampers the transparency of the tendering processes (Sharp et al, 1999).

Once the contract is awarded the supplier must provide bi-annual progress reports to the DTI. DTI initiates audits if and when required. Independent audit reports are required from the obligor annually.⁵²

Questions regarding the ability and capacity of the government, specifically the DTI, and Armscor, to fully monitor the implementation of NIP and DIP have been asked. Although it is relatively easy to monitor formal fulfilment of offsets in terms of actual contracts signed, it is nearly impossible to establish whether these transactions are the direct results of the offset arrangement.

Basic monitoring and evaluation of the NIPP appears not to be implemented. According to Mr. Dion Haroldt of the DTI, there is no monitoring and evaluation system in place for any of the offset projects, and monitoring occurs, at best, on an *ad hoc* basis.⁵³ There is also no evidence of any independent audits of any aspect of the NIPP.

3.4.5 Corruption

Various studies such as the ones by Heymans and Lipiez (1999), Robinson (2002) and Le Billon (2003), found that corruption has a negative impact on a country or region's economic growth, and because corruption is so frequently linked to political corruption, it can also destroy the legitimacy of governing institutions. Szeftel (2000:298) described political corruption to involve "the abuse or misuse of public office, public resources or some public obligation or duty for the purposes of private gain". Lambsdorff (2003) estimates that single point improvement in a country's Transparency International corruption score

⁵² Ms Chandrika Jogessar, DTI, interviewed 19 September 2002

⁵³ Mr. Haroldt, interviewed on June 23, 2005

increases productivity by 4% of the Gross Domestic Product (GDP) and increases net annual capital inflows by 0.5% of the GDP.

Corrupt practices in the arms trade are widespread and commonplace. According to Transparency International, its 1999 'Bribe Payers Index' found that the arms industry was considered the second most likely to pay bribes compared to all other industries ranked (Transparency International, 2002). Courtney (2002) notes that Transparency International further found that despite the industry accounting for less than one per cent of world trade in 1999, 50% of all bribes during this period were paid for defence contracts⁵⁴. Transparency International also suggests that a conservative estimate of the value of bribes is 10% of the total value of the trade, which translates to billions of US Dollars every year (Courtney, 2002; Transparency International UK, 2002).

That bribery is the norm in the arms trade was confirmed by Denis Healey, the United Kingdom's Labour Defence Secretary from 1964-70. Mr Healy launched an official arms sales department at Whitehall in 1965, at a time when the United Kingdom was in the midst of an economic crisis. According to the British Guardian newspaper, the remit of this arms sales department was to pay bribes (www.guardian.co.uk) – in the least the United Kingdom government has for a 40-year period secretly tolerated, and more often than not deliberately colluded with arms production companies in the country, such as BAE Systems, to continue corrupt practices. On 07 June 2007, in an interview with the Guardian after the British Serious Fraud Office were politically forced to stop all investigations into BAE System's Saudi deals in 2006, Mr Healy said: "Bribery has always played a role in the sale of weapons – I think almost no role in the sale we made to the Americans or the Germans or our Western allies. But in the Middle East people couldn't buy weapons

⁵⁴ These estimates were provided by the General Accounting Office, a USA Congress-funded watchdog agency.

unless you bribed them to do so, and that was particularly true in Saudi Arabia”.

It is thus not surprising, considering the nature of the international arms trade that by late 1999 allegations appeared in the South African public domain that certain government officials who had been responsible for deciding who the successful bidders for the arm deal would be, received bribes from bidders. These rumours of kickbacks and underhand deals remained innuendo until in September 1999, a Pan Africanist Congress MP, Patricia de Lille (now leader of the Independent Democrats), proposed a motion calling of a commission of inquiry into the arms deal and named senior ANC officials who had received money in exchange for influencing the arms deal tendering process. Ms de Lille’s information was made available to her by Bheki Jacobs, an agent in the ANC’s Department of Intelligence and Security. It appears as if Mr Jacobs became disillusioned with the level of corruption in the upper echelons of the ANC. Apart from approaching Ms de Lille, Jacobs also approached Terry Crawford-Browne, who had been actively campaigning against the arms deal for several years. Crawford-Browne later told the Mail and Guardian: “He told me: ‘We’ll tell you where the real corruption is – around Joe Modise and the leadership of Umkhonto we Sizwe, who see themselves as the new financial elite in post-apartheid South Africa.’ Jacobs said that he and his ANC intelligence colleagues had seen the disastrous consequences in Russia of the collapse of the Soviet Union, when communists suddenly became super-capitalists. Such a gangster society, said Jacobs, was not why he had gone into exile to fight for liberation from Apartheid. Something had to be done.” (du Preez, 2008:203).

Jacobs’ revelations had far-reaching reverberations across the South African political landscape. The corruption allegations against the government officials resulted in a series of investigations into the decision-making process of the arms deal. The most significant of these investigations is the joint investigation by the offices of the Auditor

General, the National Directorate of Public Prosecutions and the Public Protector. The report of this investigation stated that approximately 50 instances of non-compliance to procurement processes in that “proper evaluation procedures were not consistently and diligently applied and a proper audit trail was not established throughout the procurement process” and that “the time allocated for each evaluation and execution was insufficient to ensure that it was done properly and efficiently”. The report continued to say that “various key documents had not been finalised and/or duly approved before the final contracts were concluded”. Overall the report stated that “no evidence was found that any improper or unlawful conduct by Government” (Republic of South Africa, 2001b). It did note though that certain government officials had acted in an improper and irregular manner, in particular the Chief of Acquisitions in the Department of Defence (DoD) at the time, Mr. Shamin “Chippy” Shaik. In 2002, Chippy Shaik resigned after being found in possession of classified government documents.

Feinstein (2007) writes that the report avoided the key questions posed by SCOPA of whether Cabinet was upfront with the South African public about the actual costs to the taxpayer of the deal, and that the investigators did not investigate any subcontracts that formed part of the deal. He further chronicles changes to the original joint report by political leaders (and Mr. Chippy Shaik) indicating a cover up and white-washing of issues, particularly those pertaining to corruption.

Mr. Chippy Shaik’s brother, Mr. Schabir Shaik, owned a company, African Defence Systems, which is engaged in direct links with the Thomson Group (now Thales), one of the successful arms deal bidders. African Defence Systems together with Thales, are now providing the combat suite for the corvettes (Holden, 2008). Mr. Schabir Shaik’s company directly benefitted from contracts awarded to the group. Mr. “Chippy” Shaik was suspended from the Department of Defence in 2002 and resigned shortly thereafter. His brother was charged with fraud and was found guilty on 09 June 2005. After his initial appeal processes

failed, he was jailed on 09 November 2006 and his legal team lodged papers with the Constitutional Court in December 2006 appealing his corruption and fraud conviction and jail sentence. Subsequently Mr. Schabir Shaik, who had spent lengthy periods of his jail time in hospital, was released from jail on medical parole due to a terminal affliction.

During the early days of the arms deal, evidence of improper practices suggested that Mr. Joe Modise, who was Minister of Defence at the time, had several conflicts of interests pertaining to the decisions made during the deals. Mr. Modise died in November 2001 and no charges were ever brought against him.

In March 2001, it was revealed that the ANC Parliamentary Chief Whip, Mr. Toni Yengeni had received a massive discount on his luxury four-wheel drive vehicle from DaimlerChrysler Aerospace. During 2002, Mr. Toni Yengeni, was arrested on fraud and corruption charges stemming from this bribe. He had also actively lied to Parliament about the vehicle. In February 2003 he pleaded guilty to the fraud charges in the Pretoria Commercial Crime Court and sentenced to four years in prison, but was acquitted on corruption charges. After years of appealing his sentence, he started serving his four year prison sentence on August 24, 2006. He was released on parole in December 2006. The Star (02 July 2001) published a list of 33 prominent South Africans who had received special deals on similar luxury four-wheel drive vehicles from DaimlerChrysler Aerospace, indicating that Toni Yengeni was not the only person who had received such a bribe. The list of the names included the Chief of the Defence Force, senior Denel personnel and a member of the offsets negotiating team (Feinstein, 2007).

The fall-out of the corruption around the arms deal also negatively affected those who had no part of the corruption. In August 2001, Andrew Feinstein, a senior ANC MP and a member of parliament's Standing Committee on Public Accounts (SCOPA), resigned over the way the government had handled the controversial arms deal and the

probe into alleged bribes. A few months later, Gavin Woods, an IFP MP, and who was the head of SCOPA at the time of reviewing the arms deal, also resigned because of the unwillingness on behalf of government to tolerate any thorough investigation into the arms deal (Feinstein, 2007).

3.4.5.1 Jacob Zuma

Mr. Jacob Zuma, President of the country since late April 2009, had, to date, the biggest fall-out of the arms deal scandals. Even though the Director of Public Prosecutions announced in August 2003 that no legal action would be taken against Mr. Zuma for allegations that he attempted to solicit bribes from the Thomson Group (now Thales) on the grounds that even though “there is a *prima facie* case of corruption against the deputy president, our prospects of success are not strong enough”, Mr. Zuma became the key figure mentioned in the corruption trial of Schabir Shaik. Shaik was Zuma’s financial advisor, both in Mr. Zuma’s private capacity and as deputy president, particularly in the case of South Africa’s purchase of corvettes (Sunday Times, August 24, 2003). In 2005, Mr. Shaik was found guilty and sentenced to 15 years in prison (Transcript of The State versus Schabir Shaik and 11 others⁵⁵).

Mr. Zuma was dismissed from his post as vice president to the country on June 14, 2005 as a result of suggestions of corruption and his close links to the convicted Shaik. President Mbeki told a joint sitting in Parliament on June 14, 2005 that “in the interest of the Honourable Deputy President, the government, our young democratic system and our country, it would be best to release the Honourable Jacob Zuma for his responsibilities as deputy president of the republic and member of the Cabinet”. Shortly thereafter the National Prosecuting Authority charged Mr. Zuma with two counts of corruption.⁵⁶ On September 20, 2006 Judge Herbert Qedusizi Msimang of the Pietermaritzburg High Court struck the case off the roll on the basis that the prosecution did not

⁵⁵ www.news24.com, accessed June 09, 2005

⁵⁶ Mail and Guardian; Mail and Guardian online; www.anc.org.za

follow proper procedure.⁵⁷ On November 08, 2007, the Supreme Court of Appeal overturned the earlier High Court rulings on the Scorpions search and seizure operations, and declared the seizures legal.⁵⁸ This led to Mr. Zuma being charged again with two counts of corruption and 12 counts of fraud in December 2007, only a few days after he is elected as President of the ANC in Polokwane.

According to the 2007 charge sheet, Mr. Zuma was to appear before court on August 14, 2008. Mr. Zuma launched a series of legal challenges relating to evidentiary and procedural matters and finally the trial date to hear the merits of the corruption charge was set for August 25, 2009. At that time, Mr. Zuma was also expected to apply for a permanent stay of prosecution.

On April 7, 2009, Acting National Director of the NPA announced that charges would be dropped against Mr. Zuma because of alleged political interference leading to an abuse of the legal process evident from transcripts of telephone calls between the ex-head of the Scorpions, and the ex-head of the National Prosecution Agency. By all accounts the tapes allegedly contained conversations in which the charges against Mr. Zuma and the timing of the announcement to reinstate the charges, were discussed. The NPA's Acting National Director concluded that it would be unfair and unjust to continue with prosecution against Mr. Zuma and that the decision was based on (i) the merits of the case against Mr. Zuma; (ii) any legal defences Mr. Zuma may have concerning the fairness of any trial; (iii) the practical implications and considerations of a continued prosecution of Mr. Zuma; and (iv) the policy aspects militating against prosecution (IDASA, undated).

⁵⁷ Mail and Guardian online, September 20, 2006; iol online, September 21, 2006

⁵⁸ Mail and Guardian online, November 08 and 09, 2007

All charges against Mr. Zuma were formally withdrawn by the Pietermaritzburg High Court on April, 7, 2009 and he will no longer be required to stand trial on this matter.

3.4.5.2 The BAE Systems fraud investigation

The London-based *The Guardian* newspaper reported on 11 September 2003 that BAE Systems had a £20 million slush fund to finance prostitutes, gambling trips, yachts, sports cars and more for the Saudi Royal family so that they might favourably influence its chances of winning the “Al Yahamah” deal.⁵⁹ As a result the United Kingdom’s Serious Fraud Office started an investigation of BAE Systems, in which they were assisted by the United Kingdom Department of Defence’s fraud squad. Together these two offices launched wide-reaching international investigations into BAE System’s operations. But in December 2006, their investigations into the Saudi Arabia deals was stopped after threats from the Saudi ruling family and the interventions of Toni Blair, the then British Prime Minister, who claimed it was necessary as national security was at stake (www.guardian.co.uk⁶⁰). The investigating team has however carried on pursuing BAE Systems dealings in other countries.

Transparency International found that the widespread and legal use of commissions and agents in the arms trade is more often than not a way of hiding corrupt and/or illegal practices (Courtney, 2002). This was largely the case in the South African arms deal. The United Kingdom’s Serious Fraud Office, believing that BAE Systems would use the same method of doing business that it had in Saudi Arabia – i.e. the use of slush funds to pay ‘commissions’ and bribes – unearthed a web of companies which were used by BAE Systems to pay £75 million (an approximate R1 billion) in commissions to six entities for provision of consulting services during the South African arms deal process. One of

⁵⁹ The Guardian, 11 September 2003

⁶⁰ Accessed on 07 January 2009

the entities identified is Hlongwane Consulting, owned by Fana Hlongwane, who was the advisor to Mr. Joe Modise while he was the Minister of Defence. The other entities named are: Brookland Management, Huderfield Enterprises, Osprey Aerospace, Kayswell Services and FTNSA Consulting.⁶¹ Fana Hlongwane allegedly received £3 million, while Richard Charter, owner of Osprey Aerospace, allegedly received almost £27 million, and Jules Pelissier received an alleged £34 million, in payment for services rendered to BAE Systems (Feinstein, 2007). The investigation into BAE Systems role in the arms deal is ongoing.

Sweden's public prosecutor launched an investigation into whether there had been corruption in the joint marketing by BAE Systems and SAAB of the Gripen fighter (www.guardian.co.uk⁶²). A TV documentary in Sweden revealed allegations in 2007 of corruption in arms deals between the BAE Systems/SAAB consortium and the Czech Republic and Hungary. The programme suggested that SAAB might have used similar tactics in the South African arms deal (Feinstein, 2007).

There is evidence that it was not only the BAE Systems/SAAB consortium that was involved in bribery and other illegal practices in the arms deal. Der Spiegel (05 February 2007) revealed that Mr. Chippy Shaik had solicited US\$3 million from ThyssenKrupp, the leading member of the German Frigate Consortium that is supplying the four corvettes. In true German professionalism, the company had minutes taken of the meeting with Mr. Shaik when he requested the bribe and the journalist was able to substantiate his claims. I will however not dwell here on the German role in the arms deal primarily as SARM (and most of the six precious metal beneficiation offsets projects discussed in this thesis) are projects initiated by the BAE Systems/SAAB consortium.

⁶¹ Mail & Guardian, January 12-18, 2007

⁶² Accessed 07 January 2009

The British Guardian newspaper's website⁶³ reports that the United Kingdom Serious Fraud Office continues to investigate BAE Systems in various countries. Frequently the authorities in those countries are also involved in the process:

- In Switzerland an official inquiry into possible BAE Systems money laundering was declared. This followed attempts by the United Kingdom Serious Fraud Office to access Swiss bank accounts linked to two Saudi Arabia intermediaries.
- In Chile, a combined effort between Chilean, British and United States authorities are probing payments allegedly made to the now deceased Augusto Pinochet.

The company is also being investigated for suspected corruption in a deal with Tanzania, in which commissions of more than 29% has been paid (The Guardian, 13 November 2006). Investigations of BAE Systems' deals in Romania, Chile and the Czech Republic, as well as South Africa are ongoing (The Guardian, 15 December 2006).

3.5 Conclusion

In its aim to illustrate one of the factors in the context in which SARM was founded, existed and folded - the 1998 arms deal offsets – this chapter briefly described the history of the South African arms industry and the arms procurement processes followed by the South African Department of Defence. The risks of corruption and coercion was also highlighted in a description of the 1998 arms deal, its main characters, events and the political fall-out as a result of it.

SARM was also founded in the context of South Africa's reassessment of the mining industry and mining legislation and the resulting drive for the local beneficiation of (in particular) precious metals mined in the country. The next chapter discusses that context. The chapter defines

⁶³ www.guardian.co.uk, accessed 09 March 2009

and discusses beneficiation and the need for beneficiation, before describing each of the six of the other beneficiation-related NIP projects in the country. These projects are: The Musuku Beneficiation Systems, which was located in Virginia, Free State Province; the Harmony Jewellery School, located in Virginia, Free State Province, owned by Harmony Gold Mining Company; the Oro-Maska jewellery manufacturing plant, which was established in October 2001 in Virginia, Free State Province; the Silplat platinum jewellery factory, which is located in Cape Town and was established in 2004 as a result of collaboration between Implats⁶⁴ and Silmar SpA, a leading Italian Jewellery manufacturer; the Gold Advance Scheme, which has recently come into play (and which was withdrawn after performing poorly in its pilot form), is a collaborative effort between Gold Fields, AngloGold Ashanti and Standard Bank to provide a gold advance scheme to gold jewellery manufacturers in South Africa; and the Filk Gold Chains of South Africa, which forms part of the OroAfrica jewellery manufacturer based in Cape Town, has received funding from Augusta Westland as part of Augusta's IP obligations.

These other projects are discussed in their role as a 'control' group to the SARM evaluation. All these projects are NIPP (offsets) projects and they are also precious metal beneficiation projects. The reasons why some of these projects would succeed and others would fail is important to the process of learning more about how offsets can be made successful, even if just in a limited form.

⁶⁴ Impala Platinum Holdings Limited

4 GOLD BENEFICIATION AND NIPP

4.1 Introduction

In official documents and press releases, SARM was primarily identified as a NIP project, and secondly as a gold beneficiation project. In the previous chapter, SARM was described in the context of its geographical location and the socio-economic conditions of the local area where it was established. It also described the company's main founders and investors and the background to its failure. This chapter will look at its dimension as a NIP gold beneficiation project.

4.2 Why beneficiation?

History shows us that where the right legislation, policies and institutions have emerged in resource-rich countries, mining and beneficiation has translated into long-term economic progress and development. Resource wealth, in theory at least, should provide an economy with enormous benefits (Heeks, 1998)

The export of these resources generates foreign exchange, while resource-based operations and the associated profits can be taxed, which in turn will generate revenue for the country's fiscus. In order to avoid the "Dutch disease"⁶⁵, it is imperative to diversify (Heeks, 1998).

Three of the main reasons to diversify in the mineral sector are:

- the cyclical and frequently volatile metal prices,
- it is a non-renewable industry, and
- it is environmentally unfriendly and unpopular (Davis, 1999).

⁶⁵ This phrase refers to Holland's experience of the loss in manufacturing sector competitiveness in the wake of a currency appreciation driven by exports of newly discovered gas fields. In recent years this situation has become known as the 'natural resource curse'.

Beneficiation provides South Africa the opportunity to diversify its mineral sector. The country's comparative advantage in its mining activities that provides for proximity to mineral stocks, along with additional factors such as the relatively inexpensive electricity costs, allows it the opportunity to be competitive in downstream value addition (Jourdan, undated; Barcza, undated).

South Africa has dominated the global gold mining industry for the past 120 years since the discovery of the Witwatersrand goldfields in 1886. At peak production in 1970, the country was producing 1000 metric tons (t), which was equivalent to two-thirds of global supply at the time. Today the industry is in a mature and declining phase with production having declined to 342t in 2004. Many mines are exploiting increasingly marginal ore deposits. Nevertheless, South Africa is currently⁶⁶ still the world's largest gold producer with three of the largest gold mining companies, AngloGold Ashanti, Gold Fields and Harmony Gold Mining Company, being South African.⁶⁷

As is illustrated in the table below, there is a huge margin between the gold produced in South Africa and its closest competitor, the United States of America. The margins of production are smaller between the USA, Australia and China.

⁶⁶ At the time of writing in 2006. In 2007, China overtook South Africa.

⁶⁷ www.southafrica.info/business/economy/sectors/mining.htm (accessed on 12 February 2007)

Table 5 Global Gold Production in 2004

Country	Metric tons (t)
South Africa	342
USA	260
Australia	253
China	220
Peru	173
Russia	159
Canada	129
Indonesia	100
Uzbekistan	90
Papua New Guinea	71
Ghana	60
Tanzania	48
Mali	40
Chile	39
Brazil	34
Colombia	30
Argentina	27
Mexico	24
Kazakstan	22
Kyrgyztan	22

Source: Raw Materials Group, March 2005

Mining continues to be the single most important earner of foreign exchange in the South African economy.

The minerals sector has been impacted on by the dual effects of the Rand exchange rate and rising input costs since 2004. A major contributor to the rising cost of production is increasing input costs, mainly related to goods and services provided by monopolistic or parastatal organisations. Bulk commodity exporters are not only highly sensitive to input costs, but also incur additional costs through infrastructure inefficiency. Water, transport and steel costs have been rising steadily, while transport efficiency in particular, has declined⁶⁸.

4.2.1 Legislation

The myriad of new policies and legislation that came into effect in South Africa post-1994, also affected the mining sector. Key legislation that affects the South African gold industry within the post-1994 context, particularly within the requirements of beneficiation, poverty alleviation,

⁶⁸ Interview with Roger Baxter, Chief Economist, Chamber of Mines, South Africa on 06 July 2005.

black economic empowerment, local economic development and skills development are:

- The Minerals and Petroleum Resources Development Act 28 of 2002;
- The Precious Metals Act No 35 of 2005;
- The Mineral and Petroleum Royalty Bill; and
- The Broad-Based Socio-Economic Empowerment Charter for the Mining Industry, generally referred to as the 'Mining Charter'

Other legislation that has significant impact on the gold industry does exist, but not relevant to this study, and therefore not listed nor considered here. The legislation that pertains the most to this evaluation is the Minerals and Petroleum Resources Development Act.

4.2.1.1 The Minerals and Petroleum Resources Development Act (MPRDA)

In 1994 it was recognised that the country's mineral and mining policies required review as the majority of the population had largely been excluded from participating in the ownership and management of the mining industry. A review of the policies was initiated in April 1995 resulting in the release of a White Paper: 'A Minerals and Mining Policy of South Africa' in October 1998. The contents of the White Paper were then incorporated in the Minerals and Petroleum Resources Development Act 28 of 2002 (MPRDA), which came into effect on 01 May 2004.

MPRDA deals with the issuing, renewal and administration of development rights in the mining sector, while also making provision for secondary laws and regulations that will assist in successful implementation of the new policies.

The main features of the MPRDA are:

- A need to transform mineral rights ownership that will allow the state to have custodianship thereof, affecting the regulation of

access to mineral properties. Property rights in South Africa historically developed from Roman-Dutch law resulting in landowners also owning the rights to all minerals in the ground. Mineral and surface rights were separable resulting in a situation where rights to different minerals on one property were often split by multiple inheritances and separate sales. The intent of the Act is to change the situation so that all mineral rights are under state custodianship.

- The introduction of the principles of sustainable development in an attempt to balance the social, economic and environmental spheres of mining within the framework of good governance.
- Ensuring compliance with the legal instruments aimed at engineering social change.

The Mining Charter

Section 100(2)(a) of the MPRDA requires the Minister to develop a 'Broad-Based Socio-economic Empowerment Charter'⁶⁹ aimed at addressing historical, social and economic inequalities in the South African extractive industry. The Mining Charter stipulates targets for transforming the mining industry. The vision of the Charter is "the creation of a globally 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 empowerment charter is to create an industry that will proudly reflect the promise of a non-racial South Africa."

While the Mining Charter arises from the MPRDA, it also draws on several other pieces of legislation to achieve this goal. These legislations are:

⁶⁹ In this paper it is referred to as "The Mining Charter".

- The Preferential Procurement Framework Act (Act No. 5 of 2000)
- The Employment Equity Act (Act No. 55 of 1998)
- The Competition Act (Act No. 89 of 1998)
- The Skills Development Act (Act No. 97 of 1998)

The principles contained in the Mining Charter relate to the transfer, over a 10-year period, of 26% of South Africa's mining assets to historically disadvantaged South Africans.

The Mining Charter sets out targets and a timetable for, amongst others⁷⁰, the:

- broad-based black economic empowerment in the areas of human resources, skills development, employment equality, procurement and beneficiation;
- community upliftment and other socio-economic issues such as migrant labour, housing and living conditions⁷¹; and
- the promotion of value-added production, such as jewellery making and other gold fabrication.

Under the Mining Charter, the South African mining industry has committed to securing financing to fund participation of historically

⁷⁰ There are nine areas of activity:

- Human resource development
- Employment equity
- Migrant labour
- Mine community and rural development
- Housing and living conditions
- Procurement
- Ownership and joint ventures
- Beneficiation
- Reporting.

⁷¹ Community upliftment issues affecting the industry include contribution towards skills development within communities, local development, developing physical infrastructure and to share these with communities and providing business opportunities to communities through procurement.

disadvantaged South Africans (HDSAs) in an amount of R100 billion within the first five years of the Mining Charter's tenure. The Mining Charter provides for the review of the participation process after five years to determine what further steps, if any, are needed to achieve the 26% target participation of HDSAs.

The Mining Scorecard

The requirements of the MPRDA and the Mining Charter are monitored via the Mining Scorecard.⁷² The Scorecard is a formulated standardised mechanism for monitoring the empowerment progress of a company. The risk of not converting, or of non-compliance, is to forfeit the right to mine.

The nine elements of the Mining Scorecard are listed below. Each element has a number of sub-requirements:

1. Human resource development
2. Employment equity
3. Migrant labour
4. Mine community and rural development
5. Housing and living conditions
6. Procurement
7. Ownership and Joint Ventures
8. Beneficiation
9. Reporting

For the purposes of this evaluation, beneficiation is the most important element.

⁷² As described in the General Notice GNR 1639, GG 26661 of 13 August 2004.

4.3 What is Beneficiation?

4.3.1 Definition

4.3.1.1 Industry Definition

Beneficiation of metals is a process which eliminates the first layers of waste material in raw ore after it has been mined, delivering an upgraded product with higher mineral content to widen its processing options. There are four stages of progressive value addition within the beneficiation process from mining to finished products. The stages are:

- Mining and concentration
- Processing
- Refining
- Primary manufacturing.⁷³

The above is the definition used by industry internationally but it has a slightly different meaning in the South African legislation.

4.3.1.2 South African legislative definition

In the South African legislative sense beneficiation means conversion of the extracted minerals and metals into value-added products all the way down the value chain (Jourdan, 1993; MPRDA, 2002). In terms of precious metals and minerals, jewellery is the most common, although not the only, end product.

4.3.2 Historical background to beneficiation in South Africa

Gold industry projects in Southern Africa, in particular gold beneficiation projects, have been practiced on a small scale some centuries ago.

⁷³ Personal communication with Mr. Tim Buchanan, mining engineer

The mining and processing of gold in Southern Africa and even its beneficiation and export can be traced to Great Zimbabwe⁷⁴, Mapungubwe⁷⁵ and Thula Mela⁷⁶ between AD1000 and AD1640. Prospecting and mining were crude but effective, but were to be totally overshadowed by the development of large-scale industrial mining from the late 19th Century.⁷⁷ This move to industrial mining also led to legislation that prevented the direct beneficiation of gold. Specifically during the last century, the Mining Rights Act No 20 of 1967 has had a significant impact on the way the South African gold business has developed. Chapter XVI of this Act prohibits private individuals and institutions from holding gold in any form other than bullion (gold) coins⁷⁸ or jewellery. This provision has been revised and changed significantly

⁷⁴ Great Zimbabwe was built by late Iron Age African farmers. It is estimated that between 15 and 25 million ounces of gold were mined in the area that is now known as Zimbabwe, but little gold has been found in the region's archaeological sites, suggesting that most of it was traded for other goods such as copper, salt, soapstone, grain and slaves. It was abandoned around 1450 AD.

⁷⁵ Mapungubwe is situated near the intersection of the borders of South Africa, Botswana and Zimbabwe. The Mapungubwe Kingdom served as a gold-trading centre in southern Africa and had international trading links. Ivory was traded for gold, salt, glass and cloth from Arab lands, India, China and East Africa. Although gold was not mined at Mapungubwe, there were goldsmiths working at the city, producing goods from gold imported from Great Zimbabwe. When Mapungubwe was abandoned in approximately 1270 AD, Great Zimbabwe became the new centre of gold trading for the next two centuries.

⁷⁶ Thula Mela was located in what is now the Kruger National Park, 17km from the confluence of the Limpopo and Levubu Rivers. This was near one of the major trade routes of the time which linked the interior to the coast. It was inhabited from mid 13th century to the mid 17th century AD. Evidence at this site indicates that gold was definitely melted and worked, even though there is no evidence of mining in the area, leading to the conclusion that this gold also came from Great Zimbabwe and/or from trade with regions further north in Africa.

⁷⁷ Telephonic interview with Lebo Mogotsi, AngloGold Ashanti, 12 October 2004

⁷⁸ These gold coins are usually 22 or 24 carat. All gold coins minted in South Africa are legal tender. They include Kruger Rands, the Natura coin series, Protea coins and the R1 and R2 coin series.

in the post-1994 legislation. In 2005 the Mining Rights Act No 20 of 1967 was replaced with the Precious Metals Act No 35 of 2005.

The development of gold beneficiation projects has been planned since the 1980s by the South African government, but it is only since the mid 1990s that there has been a strong movement to establish them.⁷⁹

4.3.3 Current gold beneficiation

The gold beneficiation debate is based on the argument that the South African beneficiation of gold is currently less than 2% of current mine production.

The table below verifies this for the gold industry and further indicates that a very small proportion of most precious metals are beneficiated through to the last stage of manufacturing.

Table 6 Beneficiation stages of precious metals

Commodity	Ores/Concentrates (Stage 1)	Processed/refined ore (stage 2)	Primary manufacture	Finished manufacture
Gold	100%	100%	5%	2%
Diamonds	100%	100%	6%	-
Platinum	100%	100%	-	6%

Source: Department of Trade and Industry, as quoted in Baxter, 2005.

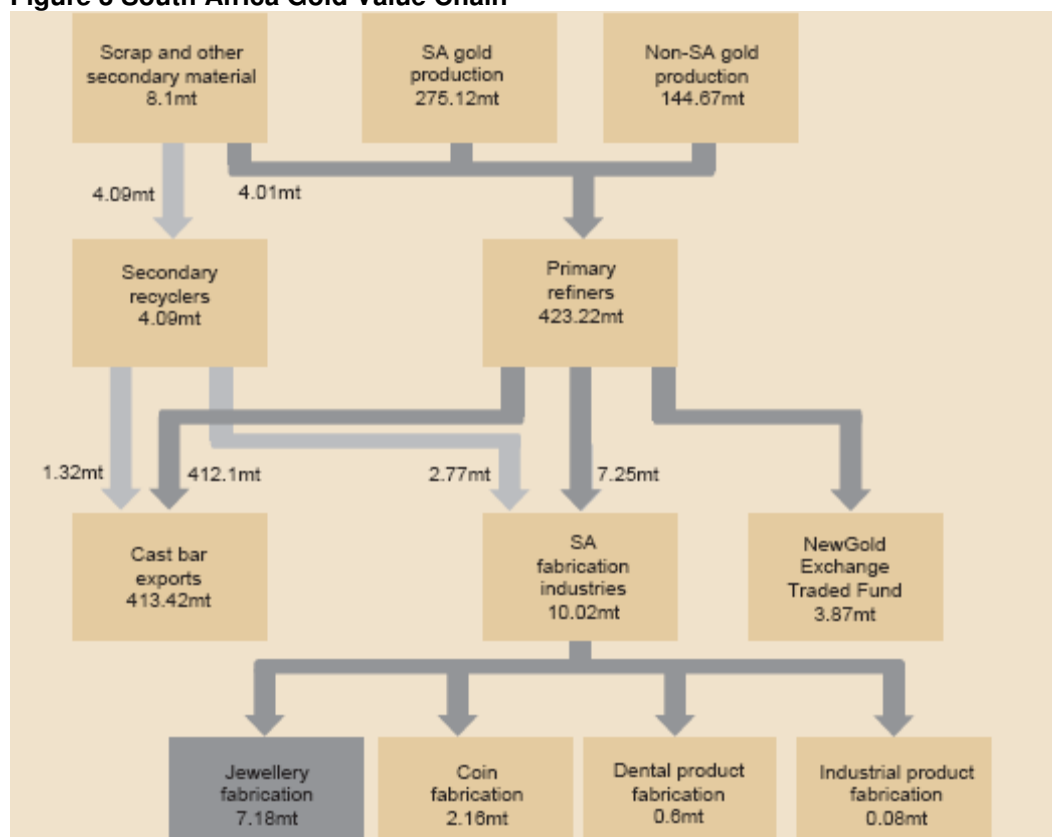
No diamonds are being beneficiated to the last stages in South Africa, and only 6% of completed platinum end-products produced. The platinum end-products would primarily service the demand from the automotive industry. This is due to the growth in new vehicle sales, a higher demand for diesel vehicles in the light of the ever-increasing oil prices and tighter emissions legislation world-wide.

End-uses of gold in South Africa include jewellery, coins, dental alloys and electronic components.⁸⁰

⁷⁹ Telephonic interview with Dr. P. Jourdan, erstwhile Research Director, DTI; CEO of Mintek until October 2007; face-to-face interviews with Dr. Jourdan on 08 July 2005 and 07 February 2006

The figure below, sourced from Genesis Analytics, demonstrates the South African gold value chain. The figures are that of fiscal year 2006.

Figure 3 South Africa Gold Value Chain



Source: Genesis Analytics

As the table below demonstrates, the non-jewellery end-use sectors for gold are small, accounting collectively for 0.87% of South African gold mine output in 2004 and 0.49% of global consumption in these sectors (Virtual Metals, 2005).

Table 7 Fine gold usage in SA in 2004

Fine gold usage in SA (non-jewellery applications)	Metric tons (t)	% of global fabrication
Coin/medal fabrication	2.93	1.98
Dental alloys	0.04	0.07
Electronics	0.01	0.004
Total	2.98	0.49

Source: Virtual Metals, 2005:102

⁸⁰ Personal communication with Mr. Denzel Young, CEO of Musuku Refinery, 12 July 2005

4.3.3.1 Beneficiation in terms of the Mining Charter

Mining companies' core competencies lie in stages one and two of the beneficiation process:

- mining and concentration, and
- processing.

Mining companies operating within South Africa are however now legally required in terms of the MPRDA to be involved with downstream processes and to report their activities. Section 2(f) of MPRDA states that one of the fundamental objectives of the Act is to “promote employment and advance the social and economic welfare of all South Africans”. It is argued that value-adding to South African minerals can increase employment opportunities for the wider population. The Act further states in Section 26 that “the Minister may initiate or prescribe incentives to promote the beneficiation of minerals within the Republic”.

In terms of all the provisions captured in the Mining Charter, which was drawn primarily from the requirements of the MPRDA, the provision on beneficiation is unique in that:

- it is the only provision that does not have to be met in full in order for mining companies to qualify for conversion to new-order⁸¹ mining rights.
- It is also the only provision which can be used by companies to offset commitments on historically disadvantaged South African ownership. The Charter allows companies to offset a proportion of this requirement⁸² against their beneficiation activities.

⁸¹ In line with the new legislation that gives the state control over the access to minerals in South Africa.

⁸² This relates to the transfer, over a 10-year period, of 26% of South Africa's mining assets to historically disadvantaged South Africans.

Mining companies are required to “identify their current levels of beneficiation” and to “indicate to what extent they can grow the baseline level of beneficiation.” At the time of writing neither the extent of beneficiation nor the beneficiation levels to be achieved in order to qualify for offset of historically disadvantaged South African ownership, had been determined.

Amongst the weaknesses within the MPRDA and the Mining Charter related to beneficiation, it is however the lack of a definitive definition of beneficiation captured within the Act or the Mining Charter, that is highlighted the most. It is currently open to interpretation. This vagueness leaves this particular aspect of the Mining Charter open to misuse. There is also an absence of a mechanism to detect “fronting” by the mining companies.

The intention of the MPRDA is that the possibility of offsetting historically disadvantaged South African ownership against beneficiating initiatives, combined with the provisions of Section 26⁸³, will lead to a situation where mining companies who traditionally exported raw products, will consider local value-addition first. There is also a possibility that multi-nationals might consider taking advantage of the situation and invest in new, or perhaps relocate their existing, value-adding facilities to South Africa.

One of the main objectives of the NIPP is to encourage direct foreign investment into South Africa. The main catalyst of this investment should be the NIPP obligors and the vehicle for such investment would be a business venture that would be beneficial for the country. DTI guidelines indicate that business proposals linked with NIPP and offsets should be made on the principles of mutual benefit and good business sense (DTI, 2001).

⁸³ This section states that “the Minister may initiate or prescribe incentives to promote the beneficiation of minerals with the Republic.”

4.4 NIPP Beneficiation Projects

4.4.1 Background

This section looks at the various NIP projects located nationally that are also beneficiation projects.

In general, NIP projects are located throughout all, but one province, with the Gauteng Province being the most popular location for these projects.⁸⁴ This is understandable as Gauteng Province is the most dominant province in the country in terms of economic activity. The Northern Cape Province has reportedly no NIP projects as the vastness of the area and its relative remoteness from the rest of South Africa is considered to be negative aspects. At only a gross geographic product of R10.9 billion during the 2002/2003 fiscal year, it might have been to the province's advantage to receive foreign direct investment through a NIP project.

In 2004 the geographic spread of the NIP projects was as follows:

Table 8 Geographic spread of NIP projects in 2004

Province	Number of NIP projects
Western Cape	22
Eastern Cape	19
Limpopo	6
Mpumalanga	3
KwaZulu-Natal	15
North West	3
Free State	3
Gauteng	55

Source: Mr. Zikode, DTI, Interview 08 December 2004

Earlier NIPP reports indicated that there were three NIP projects in the Free State, but the NIPP 2005 Annual Report only two projects were listed for the Free State. The two projects were described as a gold beneficiation project and a machine tool manufacturing project. However, neither of these projects was named or contributed to any specific obligor. There are various possibilities as to which gold beneficiation project the report refers to. It could be the Musuku

⁸⁴ Telephonic interview with Mr. Zikode, DTI, 08 December 2004

Beneficiation Systems, even though by all accounts the NIPP obligor, BAE Systems/SAAB, stopped being involved directly with Musuku Beneficiation Systems in 2001, another possibility could be the US\$400 000 made available to Harmony Jewellery School in 2002/2003 as part of its offset obligations; or then of course SARM.

The table below indicates the projected values as listed in the October 2003 Portfolio Committee Report. Although only eight of the nine provinces would benefit from NIPP, only seven are listed in the table. The North West Province is not listed at all.

Table 9 Regional Data of the IP programme: the projected values from the Portfolio Committee Report, 2003

Province	Projected Value up to 2011 -investments, exports, local sales (US\$ value)	Direct jobs up to 2011	Percentage allocation of performance per region
Western Cape	4,141,415,920	3,314	37.20%
KwaZulu-Natal	4,886,190,048	1,201	4.51%
Eastern Cape	3,177,770,461	2,435	1.60%
Free State	1,651,400,000	2,100	1.33%
Gauteng	5,621,256,713	3,216	42.59%
Mpumalanga	762,500,000	230	6.76%
Limpopo	909,990,000	880	6.01%
Total	21,150,523,142	13,376	100%

Source: www.dti.gov.za/parliamentary/2003 ; accessed on 12 June 2005

It is also interesting to note that there appears to be no direct correlation between the amount of money invested in a project and the direct permanent jobs it would create by 2011. A reason for this could be that while some of the projects require high capital costs in terms of having to purchase complex plants and machinery, these projects are not necessarily high in employment creation. In terms of metal production projects, it is the down-stream processing that is labour intensive.

There are five discrete phases in the beneficiation value chain from primary production to finished product. These are:

- Extraction of raw material
- Refining and processing of raw materials
- Component manufacture

- Sub-assembly
- Original equipment manufacture

Each of these phases has a different level of employment intensity, for example: the extraction (mining) phase provides for high employment, while the refining and processing phase consists of complex plants with low employment intensity:

The South African gold mining industry employs substantially more people than other gold mining countries because it engages in deep-level, hard rock, underground mining, which is labour intensive. Despite declining employment levels, gold mining still accounts for the largest proportion (95.33%) of employees by far in the gold value chain (Virtual Metals, 2005).

Refiners process raw material to separate the impurities and create the fine gold in the form of gold bars or semi-fabricated products, such as gold grain, sheet and wire used in jewellery and coin manufacture or for dental and industrial use. The refining processes are largely mechanized and provide fewer employment opportunities.

The third phase, component manufacture, is labour intensive. Jewellery manufacturing falls into this category because it is the end process for specific processed parts of the metal. Some of the precious metals that will not find its way to jewellery manufacturing will be used to manufacture parts, such as catalytic converters, that will be used as parts of original equipment (cars).

Thus it would make sense that jewellery manufacturing requires less capital input than for example a ferrochrome beneficiation project⁸⁵. Yet,

⁸⁵ BAE/SAAB's Ferrochrome beneficiation project located at Buffelsfontein mine, North West Province, required an investment of R2.1 billion, plus technology, but will only create approximately 960 full-time jobs. (DTI, 2007)

the jewellery manufacturer will employ more people than the ferrochrome beneficiation plant, which is mostly mechanized.

There are eight precious metal beneficiation projects nationally that were initiated under the NIPP programme:

- Two of these projects were research and development projects through Mintek and the Musuku Beneficiation System and were linked to BAE Systems/SAAB.
- A small grant to the Harmony Jewellery School was a third project, also linked to BAE Systems/SAAB.
- Four of these projects are precious metal jewellery factories, of which two no longer exist. SARM, a gold beneficiation NIP project, was one of these failed projects. The two that are still operational were founded on factories that already existed prior to the changes in mining legislation and/or the NIPP, and have solid business principles behind them. The NIPP obligors for these two projects are respectively Agusta Westland and BAE Systems/SAAB.
- The eighth project is the Gold Advance Scheme which has completed its pilot phase, but has not moved on to full implementation.

4.4.2 Musuku Beneficiation Systems

Musuku⁸⁶ Beneficiation Systems started operations in 2002 and was closed in December 2006. The refinery was based in Virginia, Free State Province. The company consisted of a gold refinery and a gold processing factory focused exclusively on value addition. It was a subsidiary of the Harmony Gold Mining Company Limited, the third largest gold mining company in South Africa and the sixth largest in the world. Harmony Gold Mining Company is to date the only⁸⁷ gold

⁸⁶ Musuku is a Venda word meaning 'gold'.

⁸⁷ Rand Refinery, the primary refinery in South Africa, has been in existence since 1921 and is a collaborative effort of AngloGoldAshanti (53%), Gold Fields (33%), DRDGold (10%), AvGold (2%) and Western Areas (2%). Gold that is refined here are

producer in South Africa that had refined and marketed their own gold exclusively.

4.4.2.1 Funding and Ownership

At the time of its closure, Harmony Gold Mining Company was the sole owner of the Musuku. Since the establishment of Musuku, a 20% equity share had been reserved for an empowerment partner, but up to the time of the company's closure, no empowerment partner had been identified.

Mintek

Initially newspaper reports lauded Musuku as South Africa's first gold public-private partnership (PPP) between Mintek, South Africa's state-owned mineral and metallurgical services organization, and Harmony Gold Mining Company.⁸⁸ However, within the first year of operations, Mintek had withdrawn from the business. The main reason for this was the difference in approach by the two entities. Harmony Gold Mining Company preferred to run Musuku as a utility, while Mintek wanted it to be a profit centre. From that point onwards its involvement with Musuku was limited to collaboration on specific projects with Musuku.⁸⁹ Indeed Harmony Gold Mining Company never commercialized Musuku by refining for other mining companies. Hundred percent of its raw material was locally sourced from the company's mines. In contrast, Rand Refinery also sources raw material from other African countries, primarily Ghana, Mali, Zimbabwe and Tanzania.

sourced from all South African gold mines as well as from mines in other countries, such as Ghana, Mali, Tanzania and Zimbabwe.

⁸⁸ Mining Weekly, April 28, 2003

⁸⁹ Interview with Dr. P. Jourdan, Mintek, on 08 July 2005. This was confirmed in an interview with Mr. Young, Musuku, on 12 July 2005

BAE Systems/SAAB Consortium

As part of their offset obligations, the BAE Systems/SAAB consortium funded Harmony Gold Mining Company with US\$9 million in 2001 to upgrade the machinery and plant in the planned refinery to enable it to refine gold to a purity of 99.99%. The funding also provided the financial backing for the gold in its downstream journey into gold wire, strip, alloys and associated products for supply to gold jewellery manufacturers.

It would appear as if not all of this specific funding from the BAE Systems/SAAB consortium was used and there were reports that Musuku would repay the unspent portion of the money to the funders.⁹⁰ I asked Messrs. Young, CEO of Musuku, and Dippenaar, director of Harmony Gold Mining Company until 2005, about the reported remaining funds which reportedly would be repaid to BAE Systems/SAAB, and it appeared as if they were unaware of either the remaining funds or the repayment commitment. Even though feedback on the issue was promised, none was forthcoming despite frequent reminders of the request for this information.

A query sent to Mr. Linden Birns, South Africa spokesperson for BAE Systems/SAAB, about the issue of this unspent funding remained unanswered, but he did comment that “Musuku, which came before SARM, is recognized by the DTI as a NIP project as it was financed by BAE Systems/SAAB. Musuku remains the core of our beneficiation strategy successfully producing a range of gold beneficiated projects” (E-mail from Linden Birns, 15 September 2005).

If the Mining Weekly’s report was accurate, I suspect that some of this money was earmarked for the Oro-Maska project (discussed below) that followed VDO in 2001 and which was a complete failure. It is of course also a possibility that Oro-Maska received its own individual NIPP

⁹⁰ The Mining Weekly, April 16-22, 2004

funding, and that even if any monies were paid back to the BAE Systems/SAAB consortium by Musuku, the NIPP obligor would still receive its full complement of credits based on the original amount of funding made available to Musuku.

The NIPP credit system awards credits accumulatively over the NIP obligation period and based upon successful performance. It measures each credit as equal to one US dollar of the NIP obligation amount. Thus irrespective of whether the full amount was used for Musuku or not, or whether the project was successful or not, the BAE Systems/SAAB consortium is credited for the initial full amount made available to the project.

In the 2004 NIPP annual report reported that the BAE Systems/SAAB consortium achieved 149% of its investment milestone. This milestone included amongst other, Musuku Beneficiation Systems.

The 2005/2006 NIPP annual report also reported that the BAE Systems/SAAB consortium had met their first milestone of US\$2.3 billion worth of credits. Gold beneficiation is listed as one of the main types of contributing projects that allowed them to achieve the milestone (DTI, 2007:24).

Production

At its production peak the refinery could produce in excess of 100 metric tons (mt) of refined gold per annum. During its lifespan, it also developed 15 product lines in four sectors:

- Gold bullion bars – large, small and granules
- Jewellery alloy, including plate, strip, grain and wire manufactured in 9ct to 18ct yellow, white and red gold for casting or bench work, fine silver granules and crystals, sterling silver and low-tarnish sterling silver, solders as poste or blocks in gold, silver and platinum, bangles, wedding and blank coins, semi-manufactured and custom-made orders;

- Industrial gold and silver, including silver anodes for the electroplating industry as well as 99.99% gold for high-purity applications, gold fuse wire and connections;
- Dental alloys, including an extensive range of casting and bonding alloys, solders and wire meeting restoration requirements. (Harmony, 2006)

During 2005 it produced 62.82 mt of fine gold but production dropped to its 2006 production level of only 29.17mt fine gold. This drop in production was due to Musuku stopping its production in the second half of the year. The main reason for this was Harmony Gold Mining Company's continued losses since late 2005, despite a buoyant gold price and a relatively stable Rand. The company was forced to close down some shafts and this caused its production to decline, which in turn lowered refinery throughput at Musuku.

In 2006, 93.59% of the refinery's raw material was sourced from Harmony Gold Mining Company's South African mines and 6.41% from processing scrap from the mining company's jewellery school and other concerns. Ninety-seven percent of the gold was used to produce 400oz gold bars, all of which were exported, while the rest of the gold went into:

- coin blanks – 0.04%
- jewellery semis – 0.69%
- dental products – 1.50%, and
- industrial alloys – 0.01%.⁹¹

During the last months of 2006 Harmony Gold Mining Company started using the services of Rand Refinery and will continue to do so for the foreseeable future.⁹²

⁹¹ Interview with Michael Wightman, erstwhile Manager, Musuku Beneficiation Systems, on 26 March 2007

⁹² Interview with De Wet Schutte, Executive Manager New Business, Harmony Gold Mining Company, on 03 April 2007

At the time of its closure, Musuku employed 64 people.⁹³

Hydrometallurgical technology and production

South Africa is emerging as a world leader in hydrometallurgical technology.

Mintek, the state-owned mineral and metallurgical services organization, develops cost-effective methods for mineral extraction, upgrading and optimization, which includes leaching, precipitation, extraction, electro-winning and gold-recovery processes.⁹⁴ In its refining process, Musuku used the Mintek-developed Minataur technology. Minataur technology eliminates the smelting process that usually results in doré⁹⁵ and converts sludge to what is known as four-nines (99.99% pure gold) in a 24-hour period using four machines for casting, stamping and then weighing the refined bullion.⁹⁶

During the 2002/2003 fiscal year, the BAE Systems/SAAB consortium funded a research and development project aimed at producing new gold processing technologies. The research was done by Mintek in cooperation with Harmony Gold Mining Company and Musuku. The new technologies would include new alloys and powder metallurgy. The funding totalled US\$1 million and formed part of BAE Systems/SAAB's offset obligations. The products of this project would be commercialized by Harmony Gold Mining Company (DTI, 2003; Harmony, 2003).

⁹³ Interview with Michael Wightman, erstwhile Manager, Musuku Beneficiation Systems, on 26 March 2007

⁹⁴ Telephonic interview with Dr. P. Jourdan, erstwhile Research Director, DTI; CEO of Mintek in 2004

⁹⁵ Conventionally gold arrives from the mine site in doré form. Doré is impure alloy of gold and silver produced at a mine to be refined to a higher purity, usually consisting of an average of 85% gold.

⁹⁶ Personal communication with Denzel Young while visiting Musuku Beneficiation Systems, 12 July 2005

It was anticipated that Harmony Gold Mining Company would market the technology through Musuku Beneficiation Systems. It was impossible to establish whether these technologies were produced, whether they were successful and whether all three of the collaborators would benefit from the sale of these products. Critics of the offset package have raised questions regarding the beneficial access that the BAE Systems/SAAB consortium has to Mintek technology, the potential technology credits it could claim, as well as the long-term intellectual property implications (Haines, 2004).

As certain types of projects, such as research and development are awarded double credits, the BAE Systems/SAAB consortium would have benefited through double credits from any initiative it funded through Mintek, whether the technologies were produced or not.

4.4.3 Harmony Jewellery School

Harmony Gold Mining Company established a jewellery school on its premises in Virginia in September 2000 with 20 pupils, with the first 12 students graduating in December 2003.

The BAE Systems/SAAB consortium provided funding of US\$400 000 to the jewellery school in 2002/2003 as part of its offset obligations. The money was made available to purchase capital equipment and to fund a bursary scheme (DTI, 2003). Apart from Harmony Gold Mining Company⁹⁷ and the BAE Systems/SAAB consortium funding, the school received additional funding from the Italian government through the United Nations Office for project services.⁹⁸

⁹⁷ According to Alta Wessels, Project Manager of the Harmony Jewellery School, Harmony's total investment in jewellery design and manufacturing is estimated to be in the region of R4 million between 2000 and 2006. Interviewed on 16 March 2006.

⁹⁸ Interview with Alta Wessels, Project Manager, Harmony Jewellery School, on 16 March 2006

By 2004 the Central University of Technology⁹⁹ (CUT) received permission from the Department of Education to offer the National Diploma in Jewellery Design at the premises of the Harmony Jewellery School. The school now operates as a satellite campus of the University (Harmony, 2004).

4.4.5 Oro-Maska

Oro-Maska, a jewellery manufacturing plant, was established in October 2001 in Virginia, Free State Province.

4.4.5.1 Investors

The partners in this venture included Harmony Gold Mining Company, the IDC, the Free State Development Corporation (FDC) and BAE Systems. The fifth partner, who had a 51% stake in the company, appears to have been the Bhagwanji Group from Dubai. Although the media named this fifth partner to be a London-based gold retail company, G5 (International Mail and Guardian, October 04, 2002; The Tribune Chandigarh India, October 06, 2002); official reports named the main partner to be the Bhagwanji Group from Dubai (The Harmony Gold Mining Company 2001 and 2002 annual reports; the “2002/2003-2004/2005 Medium Term Expenditure Framework Budget for Department of Tourism, Environmental Economic Affairs to the Free State Legislature delivered in April 2002; <http://www.bulletinonline.co.za/archives/specfeat/aprfeat02.php>).

It is not known what amount the main partner invested in the venture, but it is reported that the IDC invested R4.5 million and the FDC R15 million, while Harmony Gold Mining Company provided the buildings and would provide the gold via the Musuku Beneficiation Systems’ refinery. The BAE Systems/SAAB consortium invested US\$4.5 million as part of their offset obligations.

⁹⁹ Previously known as the Free State Technikon.

4.4.5.2 Operations

From October 2001 to February 2002 the company recruited 110 Indian goldsmiths and designers who were brought to Virginia with the intention that they would impart knowledge and train local goldsmiths and factory workers as part of the skills transfer aspect of the offset. They were housed by Harmony Gold Mining Company.

In February 2002 the factory started operations to test the machinery employing the Indian expatriates. It is not clear whether any local people were employed to work in the factory with the Indian expatriates during this time. By May the same year the factory ground to a halt. It is not clear why this happened. Mr. Max Makhubalo, Managing Director of FDC, was quoted in the Mail and Guardian as saying that the failure of the factory was due to an “unfortunate coincidence”. Mr Ferdi Dippenaar, Marketing Director of Harmony Gold Mining Company, was quoted as saying that there was a debacle with the major shareholder.¹⁰⁰ At some stage during the months following the stopping of productions in May and September 2002, the BAE Systems/SAAB consortium cancelled its loan to the company. It is unclear what happens in a situation like this one when an obligor cancels a loan. It appears as if the obligor is credited whether the initiative is successful or not, but it is unclear what happens to the money. Would the funds return to the obligor’s obligation in order to be invested in another venture, or does the money just revert back into BAE Systems/SAAB’s coffers as the offset credits had already been earned?

The Indian goldsmiths and designers were sent home in stages, either being deported by the State or through funding made available by FDC.

I was not able to find any information on G5 International or the Bhagwanji Group on the internet, nor were my phone calls to Mr. Makhubalo returned. Mr. Dippenaar only referred to it as an incident of

¹⁰⁰ Mail and Guardian, 04 October 2002

choosing a bad partner to initiate a project, and that Harmony Gold Mining Company stopped the project in 2002 and put their energies into planning their new project, South African Royal Manufacturers (SARM).¹⁰¹

Oro-Masaka was not mentioned in the 2002 NIPP Annual Report, nor in the 2002 Harmony Gold Mining Company annual report.

4.4.6 Silplat

Another mineral beneficiation project forming part of the NIPP and involving a mining company was established in Cape Town in early 2004.

The 2004 DTI NIPP report describes this project as follows:

Table 10 Silmar Platinum Jewellery NIP project

Silmar¹⁰² Platinum Jewellery	
Product:	Platinum jewellery
Sector:	Value-added beneficiation
Benefits:	Investment in equity to ensure adequate capitalization. Increased local production of platinum jewellery for export. Technology transfer
Local company involved:	Implats SA Link Silplat
Total investment:	US\$ 47 million
Projected sales:	US\$ 591 million
Location:	Cape Town, Western Cape
Other benefits:	120 jobs created/sustained

Source: DTI 2004 report, p. 26

The NIPP obligor is BAE Systems/SAAB.

¹⁰¹ Mr. Ferdi Dippenaar, Harmony Gold Mining Company, telephone conversation, 15 March 2005

¹⁰² According to Implats' website, the new company is called "Silplat (Pty) Ltd", and that Silmar is an already existing Italian-based company.

4.4.6.1 Ownership

This project is a gold and platinum beneficiation project and is a result of collaboration between Impala Platinum Holdings Limited (Implats) and a leading Italian jewellery manufacturer, Silmar SpA. Other shareholders include a local jewellery producer, SA Link Company, and the specialist corporate finance house, Microfin Corporate Services. The BAE Systems/SAAB consortium provides the equity and further loans as part of their NIPP offset obligations. It is interesting to note that although the venture is said to have received a combined foreign and local investments worth US\$25 million¹⁰³, the DTI 2004 NIPP Annual Report list the project as receiving investment worth US\$ 47 million from the BAE Systems/SAAB consortium alone, excluding local investment.

Silmar SpA

Silmar SpA is Italian-based and was established in 1977. The company reports to have an annual turnover exceeding US\$100 million. Apart from selling platinum products, the company also ranks among the world's top five producers of gold chain products, with the USA and Asia among its main markets. The company also specializes in jewellery manufacturing processes and technologies (www.silmar.it¹⁰⁴).

Silmar SpA provides the Silplat venture with the specialized equipment, technology and skill training required by the factory. It is further expected that Silmar SpA will support the Silplat project by not only sharing their knowledge and technology, but also by sharing its global network of wholesale and retail partners, thus providing Silplat access to platinum and gold jewellery markets.¹⁰⁵

¹⁰³ Implats Press Release, April 07, 2004

¹⁰⁴ Accessed on May, 12, 2007

¹⁰⁵ Implats Press Release, April 07, 2004

Implats

Impala Platinum Holdings Limited (Implats) is the world's largest platinum producing company. In Financial Year 2007 the company produced 2.03million ounces of platinum and 3.86million ounces of platinum group metals.¹⁰⁶

Platinum is considered to be the most precious of all metals and platinum jewellery currently accounts for 38% of global demand of the metal. South Africa has 70% of the world's platinum reserves, but produces less than 0.5% of its platinum jewellery.¹⁰⁷ Currently the most important markets for platinum jewellery are China, Japan, Europe and the USA. Previously the platinum jewellery industry in South Africa was constrained by limited access to the raw material combined by the high cost of the working capital (www.implats.co.za¹⁰⁸).

Implats holds an equity interest of 17.5% in Silplat and provides a platinum loan. The provision of the loan ensures that there is a sufficient supply of raw platinum to the factory.

SA Link

SA Link, a small business owned and managed by the Marine family, was established in 1977 in Cape Town. It specialized in gold cast rings, earrings and pendants that were exported to the USA and the UK. The company was operating from the same premises¹⁰⁹ that now houses Silplat.

At the time of the formation of Silplat, SA Link had 120 permanent staff members. The new venture absorbed all the SA Link employees

¹⁰⁶ Mr. Johan Smit, CEO, Silplat, interviewed on 31 August 2007

¹⁰⁷ Engineering News, November 05, 2004

¹⁰⁸ Accessed on May 12, 2007

¹⁰⁹ 79 Roeland Street, Cape Town.

(Implats, 2004; Interview with Mr Johan Smit, CEO of Silplat, on 31 August 2007).

4.4.6.2 Management

During the first few months of Silplat's operation it was managed by SA Link's existing management. However, the larger company started to flounder under this team, who only had the experience of managing a small, family-owned company and not a large, multifaceted company. By February 2005 a new management team was introduced and the old team remained on for a few more months to assist with training and knowledge-sharing. This change in management turned around the down-ward spiral which the company experienced in its first few months of operation.¹¹⁰

4.4.7 Gold Advance Scheme¹¹¹

4.4.7.1 Background

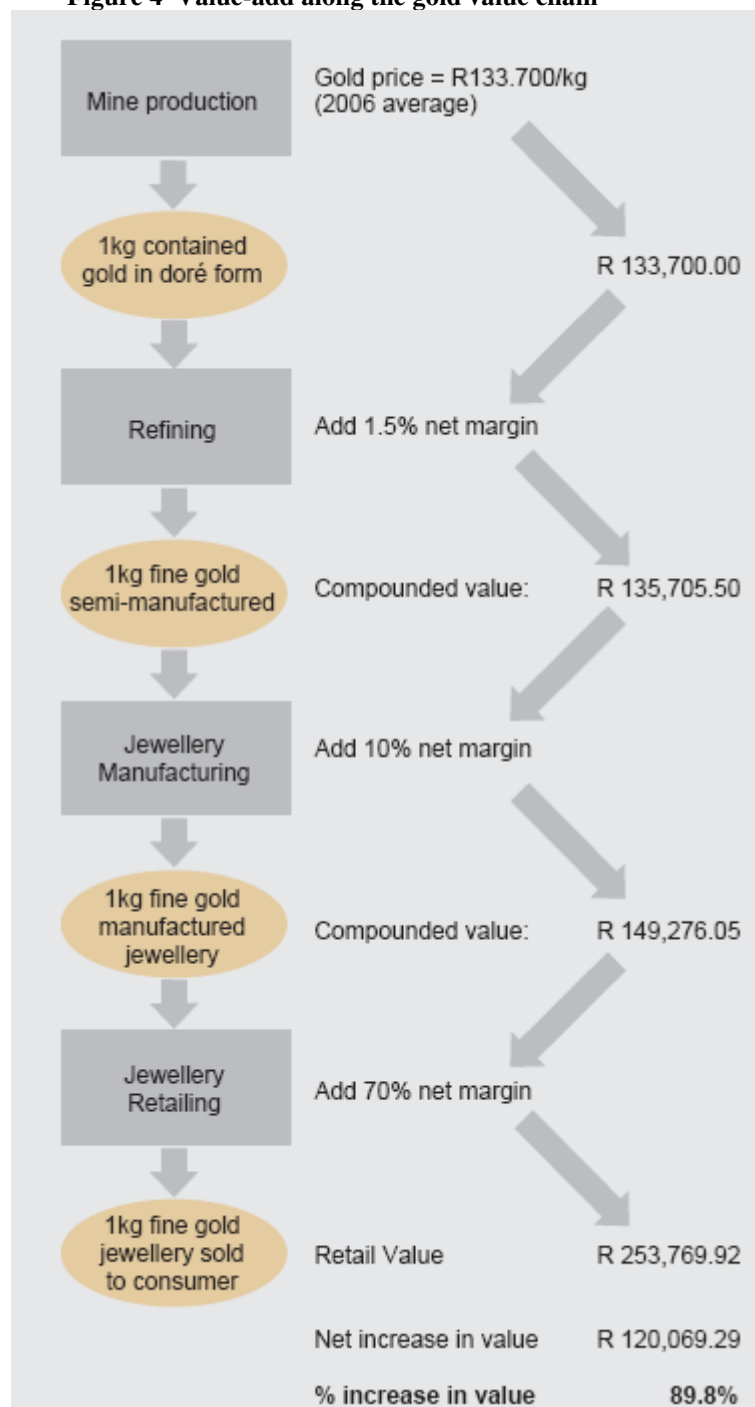
The South African jewellery manufacturing industry is constrained, *inter alia*, by the absence of cost-competitive credit facilities for the affordable, secure financing of gold. South Africa's high interest rate environment and the fact that gold cannot be "leased" because of legislation, compounds the problem. Instead, local jewellers must buy gold stock, forcing them to also carry the gold price risk. The high cost and volatile price of gold does not make it viable for gold jewellery manufacturers to own the gold used in the jewellery manufacturing process or to have it tied up in jewellery stock. The cost of the raw materials is estimated at around 90% of the cost of the finished product (Virtual Metals, 2005;

¹¹⁰ Interview with Mr. Johan Smit, CEO Silplat, on 31 August 2007. This was confirmed by Mr. Derek Engelbrecht, Marketing Manager, Implats, telephone conversation on 12 September 2007

¹¹¹ Commonly referred to as the 'gold loan scheme'.

Interview with Mr Johan Smit, CEO of Silplat, on 31 August 2007). This is illustrated in the diagram below.

Figure 4 Value-add along the gold value chain



Source: Genesis Analytics, 2008, pg.13

All these factors put local jewellery manufacturers at a disadvantage to their foreign competitors.

In an effort to address this situation and also to participate in a gold beneficiation project as they are legally obligated to, two South African mining companies, Gold Fields and AngloGold Ashanti, entered an agreement to provide a gold advance scheme to gold jewellery manufacturers in South Africa. Their partners in this initiative are Standard Bank of South Africa and BAE Systems/SAAB. The gold advance scheme is supposed to facilitate the provision of secure and cost effective advances of gold to the gold jewellery industry.

4.4.7.2 Collateral

Although Gold Fields, AngloGold Ashanti and the BAE Systems/SAAB consortium will provide the collateral support in the form of two-thirds of the guarantees, the jewellers is required to cover the remaining one-third guarantee. The jeweller thus essentially needs to have 120% collateral for the gold they want to borrow in addition to paying interest on the loan. The maximum aggregate amount that any one of the three main guarantors could be liable in respect of such guarantees is R17 million.¹¹²

The jeweller is also required to provide a business plan, financial information spanning at least three years and a general notary bond¹¹³ with a perfection clause stipulating that the bond holder will be entitled to obtain possession of the movable asset (the gold) in the occurrence of pre-defined events of default.

The scheme will initially cover up to 1 000kg of gold available at interest rates below prime, to be advanced to participating manufacturers. The minimum amount of gold that can be borrowed through the scheme at any one time is 50kg. This minimum amount of 50kg makes it

¹¹² Personal communication with Mr. Tim Buchanan, Gold Fields, 12 May 2006; supplemented with information in NIPP 2005 report

¹¹³ This would be the only legal way for the lenders to secure and attach the gold if there was a default in payment.

impractical and too expensive for smaller manufacturers to participate. They would thus automatically be excluded from participating in the scheme. Yet it would not be economically viable for the lenders to make amounts of less than 50kg available, especially if the gold is provided at below prime interest rates. Essentially the scheme is flawed.

In South Africa gold is sourced either from Rand Refinery or from one of the seven legal recyclers. While refiners process raw material to separate the impurities and create the fine gold in the form of gold bars or semi-fabricated products, recyclers process existing product like old jewellery, cut-offs and other scrap containing recoverable precious metals, recycling these back in to useable semi-fabricated products. Large jewellery manufacturers buy approximately 80-100% of the gold they need from Rand Refinery, while smaller jewellery manufacturers obtain up to 95% of their gold from recyclers.¹¹⁴

Local jewellery manufacturers have to buy their working metal outright and they calculate their margins on a basis of a price paid for the gold from their suppliers. They either have to borrow to fund working capital or finance the purchase of the gold from their working capital. Thus many jewellers are already heavily in debt and the conditions of the gold advance loan too daunting to fulfil. Added to this is the very high cost of security services and insurance in South Africa, which every jeweller is obliged to purchase.

The high costs involved in refining scrap has motivated OroAfrica to invest in its own small refinery to be used at its premises to recycle their scraps left over from processing. As so many of the larger manufacturers, OroAfrica use to send their scraps to Rand Refinery in Gauteng for recycling and refining. In 2006 alone they sent 731kg to Rand Refinery. The transport costs from Cape Town to Johannesburg and back to Cape Town combined with the costs of security and

¹¹⁴ Interview with Bernard Stern, Metal Concentrators, on 01 November 2007

insurance became too exorbitant forcing them to spend the money on a small refinery for their own use.¹¹⁵ However, very few jewellers would be able to do this.

The conditions attached to using the scheme have made the gold advance scheme unpopular amongst the jewellery manufacturers.

4.4.7.3 The end of the pilot phase and the way forward

The project is at the end of its pilot phase and has not as yet awarded a single loan.

According to Ms Joanne Jones of AngloGold Ashanti¹¹⁶, the scheme has only received two applications during its pilot phase. Although confirming that Silplat is the one applicant, she was not willing to say which manufacturer was the second applicant¹¹⁷, citing confidentiality. What is clear is that the process is a long and complicated one. Silplat had applied for a loan during October 2006 and it was still being processed in December 2007.¹¹⁸

At the 01 November 2007 annual meeting of the Western Cape Jewellers Association¹¹⁹ many of the delegates felt that participating in the gold advance scheme was too arduous and that the application process was too complicated. They felt that it was primarily aimed at the bigger manufacturers and excluded the smaller ones from participating due to the conditions attached. It was clear that there was a lot of negativity towards this initiative.

¹¹⁵ Interview with Gary Nathan, OroAfrica, on 31 August 2007

¹¹⁶ Interviewed on 05 and 07 December 2007

¹¹⁷ There are rumours that the second applicant is Alan Mair Manufacturing Jewellers, but this could not be confirmed.

¹¹⁸ Mr. Johan Smit, CEO of Silplat, interviewed on 31 August 2007

¹¹⁹ I was kindly invited to attend by Mr. Smit, Chair of the Association. This provided me the opportunity to interact with many of the smaller jewellery manufacturers operating in the Western Cape (primarily Cape Town environs).

That the right implementation formula for the scheme has not yet been found is clear, according to Ms. Jones of AngloGold Ashanti, speaking on behalf of the lenders.¹²⁰ During the last quarter of 2007 the lenders had returned to the drawing board in anticipation of finding a product that is simplified and more marketable. They have also approached the IDC to come on board in the form of possibly another underwriter. The reasons why the IDC was approached to join the scheme were listed as their experience in conducting due diligence, their past interaction and work with the jewellery sector and their interest in promoting precious metal beneficiation¹²¹.

Discussions with the IDC is still ongoing and there is a possibility that Silplat's loan will be made available under this first pilot phase, although there is the possibility that it will be carried over to the second pilot phase when that is initiated. No date has been announced.

Updated information gained from the 2008 DTI annual report on NIPP indicates that this NIP project has been withdrawn (p.37). No reasons were provided in the report. Enquiries to the various companies that were involved indicated that the companies felt that due to the poor performance of the pilot phase of this initiative, it was unlikely that the project would be successful.

4.4.8 Filk Gold Chains of South Africa

Filk Gold Chains of South Africa, a gold chain manufacturer, formed part of the OroAfrica company.

¹²⁰ Interviewed on 07 December 2007

¹²¹ The interview with Ms. Jones was discussed with her counterpart at Gold Fields, Mr. Rudi Jordaan, on 11 December 2007. He confirmed that her statements are accurate.

OroAfrica is an unlisted company owned by several parties: the Nathan family, Global Capital/Investec, AngloGold Ashanti, management and staff. The company has a 6000 square meter facility in the old Nationale Pers Building in Buitengracht Street in the centre of Cape Town. The complex includes manufacturing space, retail space and offices to house local and international buyers.

4.4.8.1 Background

The company was founded in 1945 in Johannesburg and traded under the name: “Efune Brothers”. It manufactured cast jewellery, in particular diamond rings, which were distributed locally. By 1990 the business’ turn-over was approximately R13 million per annum, which had escalated to an approximate R120 million per annum in 1997 when a management buy-out resulted in the name change from “Efune Brothers” to “OroAfrica”.

After the management buy-out, the company raised funding through the sale of 25% of the company to Global Capital, a private equity fund owning 50% of Investec. This funding allowed the company to relocate to Cape Town.

In late 1998 OroAfrica entered a joint venture with Gruppo Industriale Filk Spa of Vincenza, Italy, to form the company called “Filk Gold Chains of South Africa”. This venture forms part of the Agusta Westland NIPP offset obligation. Gruppo Industriale Filk is located in the Vicenza province in northeast Italy, where they have three manufacturing plants. According to the World Gold Council, it is regarded the world’s largest and most technologically advanced manufacturer of gold chains, producing 42 tons of gold chain annually. This was their first (and only one so far) venture into Africa.

In July 2000, Anglo Gold¹²², the world's largest gold producer, announced the acquisition of a 25% stake in OroAfrica for R55 million, describing the deal as a strategic investment towards their goal to "add value to gold through encouraging and driving the development of gold product that are of an internationally acceptable standard in terms of design, quality, marketing and sales support, to complete successfully in international markets, resulting in sustainable growth" (AngloGold Ashanti website¹²³).

Filk Gold Chains of South Africa forms only one part of the OroAfrica business. OroAfrica also owns another company, which is located on the same premises and which produces jewellery through casting (which was the original Efune Brothers business) called Trigold. The two companies together were trading as OroAfrica until mid 2007. During 2007 Trigold stopped existing and a new venture, Cinere¹²⁴, was established.¹²⁵

The Filk Gold Chains of South Africa NIPP obligations also came to an end in March 2007.

4.4.8.2 Agusta Westland

Agusta Westland is a merger between Finmeccanica SpA¹²⁶ of Italy (Agusta) and GKN Westland Helicopters, United Kingdom. The companies each own 50% of the newly formed company. The merger

¹²² Now known as AngloGold Ashanti.

¹²³ Accessed on 12 February 2006

¹²⁴ The name is bound to change, but at the time of writing, the name change was not certain yet.

¹²⁵ Interview with Mr. Gary Nathan, OroAfrica, on 31 August 2007

¹²⁶ Finmeccanica SpA and BAE Systems have also been involved in the merger of some subsidiaries and subsequently conducting business together. No obvious direct link between the mergers and the two companies' South African arms deal contracts could be established.

became final on 12 February 2001, after a merging agreement was drawn up on 26 July 2000. In 2004 Finmeccanica SpA bought out GKN Westland's 50% stake for one billion Euros. Finmeccanica SpA of Italy (Agusta) is reported to be 32.4% Italian Government-owned.

DIP

As part of the country's 1998 weapons purchase, Agusta Westland signed an agreement with the South African government to provide thirty A109 Light Utility Helicopters (LUH). The table below details the different deals within the arms deal.

Table 11 Arms Deal details

Programme	Sales -local & export (R million)*	Technology Transfer (R million)	Investments (R million)	Other (R million)	Total (R million)
Corvettes	1,036.9	175.2	5.6	7.8	1224.5
Submarines	422.6	-	-	-	422.6
Helicopters	141.2	85.4	3.9	0.8	231.5
Hawk	588.3	193.3	1	88.2	870.9
Gripen	282	457.4	.9	228.7	969
Total	2,470.1	911.3	11.5	325.6	3,718.5

* Exchange rates used: US\$: 6.25; Euro: 6.4

Source: Armscor Annual Report 2002-2003

Agusta Westland's deal and its offset programme were hardly mentioned in the media frenzy that ensued after the announcement of the deal and which has continued over the past eight years. The reason for this could be the size of the deal. It is the smallest deal of the purchase.

Agusta Westland's Industrial Participation (IP) obligations are about US\$ 1billion. As part of the agreement five of the LUH was produced and assembled in Italy, while the rest of the helicopters are to be produced in South Africa by Denel Aviation. This would be a DIP offset project and Denel Aviation will serve as a subcontractor of Agusta Westland.

As part of another DIP project, Augusta Westland has also contracted Denel Aviation to build a Swedish order of twenty A 109 helicopters in 2001. Further the company has contracted Turbomeca Africa, of which Denel Aviation owns 49%, for the repair and maintenance of Makila

engines, which traditionally powered the Rooivalk attack helicopter and which is used in several other aircraft internationally.¹²⁷

NIPP obligation

Agusta Westland's NIP obligations amount to approximately US\$50 million.

As one of its NIPP obligations, Agusta Westland enabled a deal between Gruppo Industriale Filk, an Italian jewellery manufacturer, and OroAfrica, a South African jewellery manufacturer. This deal led to the establishment of the Filk Gold Chains of South Africa. The project became one of the first NIPP precious metal beneficiation projects in South Africa. The mining company buy-in was from AngloGold Ashanti. The project entailed a cash investment by Agusta Westland into the business as part of their NIPP obligations, while Gruppo Industriale Filk provided machinery and technology, training and access to foreign markets. AngloGold Ashanti would benefit as it could claim the venture as a beneficiation project and could earn points for it on the Mining Charter.¹²⁸

According to Mr. Mark Tarlie of OroAfrica¹²⁹ the deal with Gruppo Industriale Filk was clinched with the help of the Department of Trade and Industry, Agusta and Mediotrade, which is an Italian Government export agency. When I approached the department and Mediotrade, I was told that the information was "confidential" and that I should get all information from OroAfrica.

No direct link between Finmeccanica SpA of Italy and Gruppo Industriale Filk could be found. All information available on the Internet was checked and during a trip to Italy in October 2003, telephone calls to

¹²⁷ Star newspaper, 28 June 2001

¹²⁸ Interview with Mr. Gary Nathan, OroAfrica, on 31 August 2007

¹²⁹ Interviewed 09 July 2003

both businesses affirmed that there was no obvious formal link. Requests for interviews were denied by both companies. Gruppo Industriale Filk referred me back to Mr. Nathan of OroAfrica in South Africa, where none of my questions about this specific question were answered¹³⁰.

Overall the Filk Gold Chains of South Africa venture was a success. The business continues to grow and although there has been a fluctuation of number of employees over the years due to fluctuations in the volumes produced, the venture has never employed less than 120 persons on a permanent basis. The 2002 and 2003/2004 NIPP annual reports expected the joint venture to create employment for 115 persons by the end of the obligation period.

Completion of NIPP obligation

Agusta Westland's NIPP obligations are supposed to be completed by 2007. According to Mr. Anton Meinesz, Director of Finance at OroAfrica¹³¹, the final report regarding Filk Gold Chains of South Africa was submitted to DTI in March 2007. From that point onwards Gruppo Industriale Filk became less hands-on and became a silent partner in the business. The part of OroAfrica that was called 'Filk Gold Chains of South Africa' is now called 'OroChains' and Gruppo Industriale Filk traded its 50% share in Filk Gold Chains in South Africa for 6% of the OroAfrica group as a whole. OroAfrica now consists of four distinct companies: OroChains, OroTrading, OroDesign and Cinere. The ownership of the company was at 31 August 2007 as follows:

- 25% AngloGold Ashanti
- 6% Gruppo Industriale Filk

¹³⁰ I had to heed Cooper and Schindler's (2001) warning about the "don't know" response and ascertain whether Mr. Nathan really did not know the answer or whether he knew the answer but chose not to respond. In this case it was clear that the respondent was unwilling to answer this question as opposed to not knowing the answer.

¹³¹ Interviewed on 31 August 2007

- 69% management.¹³²

Gruppo Industriale Filk remains a supplier of spool-stock to OroAfrica. Spool-stock is raw spool chain that is refined and sorted by OroAfrica. All Gruppo Industriale Filk staff members, who had been seconded to Filk Gold Chains of South Africa for training purposes, have returned to Italy. The cordial and cooperative relationship between the companies is further enhanced by the marriage in recent years of Steven Nathan to a Filk.¹³³

Even though it is uncertain how Gruppo Industriale Filk initially became involved in the deal, it is clear that the company would have conducted, as an obligation to their shareholders, a thorough due diligence study of OroAfrica and the feasibility of a joint venture before they would have invested money, technology and their brand name. They would thus continue to ensure that their initial investment continues to pay dividends.

It is clear that OroAfrica benefited greatly from this deal even though in the last two fiscal years their production volumes have fallen. This was due to a lesser demand for gold jewellery internationally, combined with a growing aversion for risk in the USA. OroAfrica has found that the appetite for credit risks internationally, but particularly in the USA, has slowed and that companies have become less risk-intense and more cautious. This in turn rationalized their international client base.¹³⁴

The lesser demand for gold jewellery internationally is linked to the high gold price and a tendency of consumers to move more towards the less expensive costume jewellery and non-precious metals, such as silver.

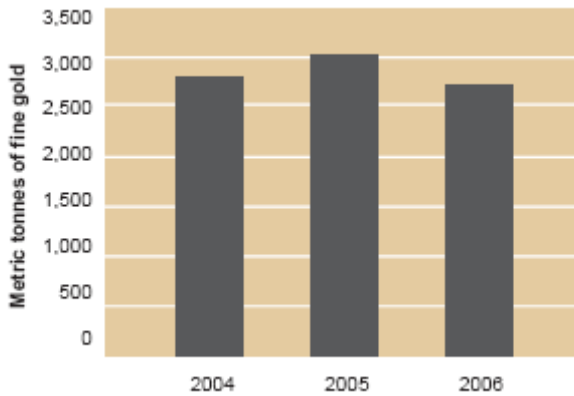
¹³² Mr. Gary Nathan, Managing Director, OroAfrica, interviewed on 31 August 2007

¹³³ Mr. Anton Meinesz, Finance Director, OroAfrica, interviewed on 31 August 2007

¹³⁴ Mr. Anton Meinesz, Finance Director, OroAfrica, interviewed on 31 August 2007

The graph below illustrates the drop in the international demand for gold jewellery in 2006.

Figure 5 Gold Jewellery sales from 2004-2006



Source: Genesis Analytics, 2008, pg. 45

Irrespective of the reduction in the production volumes, the 2006-2007¹³⁵ fiscal year was one of the most profitable years for OroAfrica.¹³⁶

4.4.8.3 Cinere - Another Agusta Westland NIP project

During the second half of 2007, OroAfrica entered an agreement with a small, little known, family-owned and run Italian company, Cinere, which produces handmade gold jewellery.

According to Mr. Gary Nathan the Italian factory closed down in Italy and moved all its concerns, except for its marketing division, to South Africa.¹³⁷ It brought with it all its machinery and main staff members, with whom OroAfrica has signed a three year contract. It is expected that the Italian employees will train their South African counterparts and also train employees from other OroAfrica divisions.

¹³⁵ March 2006- February 2007

¹³⁶ Mr. Anton Meinesz, Finance Director, OroAfrica, interviewed on 31 August 2007

¹³⁷ Mr. Gary Nathan, OroAfrica, interviewed on 31 August 2007

As part of OroAfrica, Cinera¹³⁸ will produce handmade, hollow, gold chain, which is at the moment still more of an exclusive product that requires less gold in terms of volume. The production is labour intensive and it is expected that at least 15 South Africans will be employed initially in this venture. The work-force will increase as the demand for the product increases. The marketing division in Italy will be used to market the product in the overseas markets.

Cinera is the second Agusta Westland NIP project. According to Mr. Anton Meinesz, OroAfrica is required to submit regular reports to DTI concerning Cinera's progress.¹³⁹ These reports are submitted via Stemcor Trade Finance, which represents Precision Aviation, the local Agusta Westland representative. Neither Mr. Nathan nor Mr. Meinesz could provide me with further details such as the amount of money invested by Agusta Westland linked with this specific NIP project. They referred me to Stemcor Trade Finance and Precision Aviation for more information. My phone calls to these businesses were not returned, and I was unable to secure any meeting with representatives. I also approached DTI for more information and my request was received with confusion and my repeated phone calls and visits to DTI to find more information were fruitless.

4.5 The South African Jewellery Industry

4.5.1 Background

The World Gold Council reports that in 1999, about 85% of the world-wide demand of gold (3280 metric tons), was converted into jewellery. Of this, India is the world leader producing 596 tons, followed by Italy with 500 tons, China with 231 tons, Turkey with 168 tons and the USA with 159 tons. In South Africa the gold downstream industries are largely dominated by the gold jewellery manufacturing industry. Even so

¹³⁸ There is a possibility that this name will change, but at the time of writing the new name could not be confirmed.

¹³⁹ Mr. Meinesz, interviewed on 31 August 2007

the country contributed less than half a percent to the world's fabricated jewellery industry, even though it provided approximately a quarter of all raw materials used in the world-wide production of jewellery.

In recent years, spurred on by pressure from government and legislation, mining houses have expanded their support of the jewellery sector. Currently gold is the precious metal predominantly used in South African jewellery manufacture. During 2004, 12.6t of fine gold was supplied to the local gold manufacturing sector. As is demonstrated in the table below, of the 12.6t of fine gold, 76.6% was destined for the manufacturing of jewellery.

Table 12 Gold Usage in Fabrication

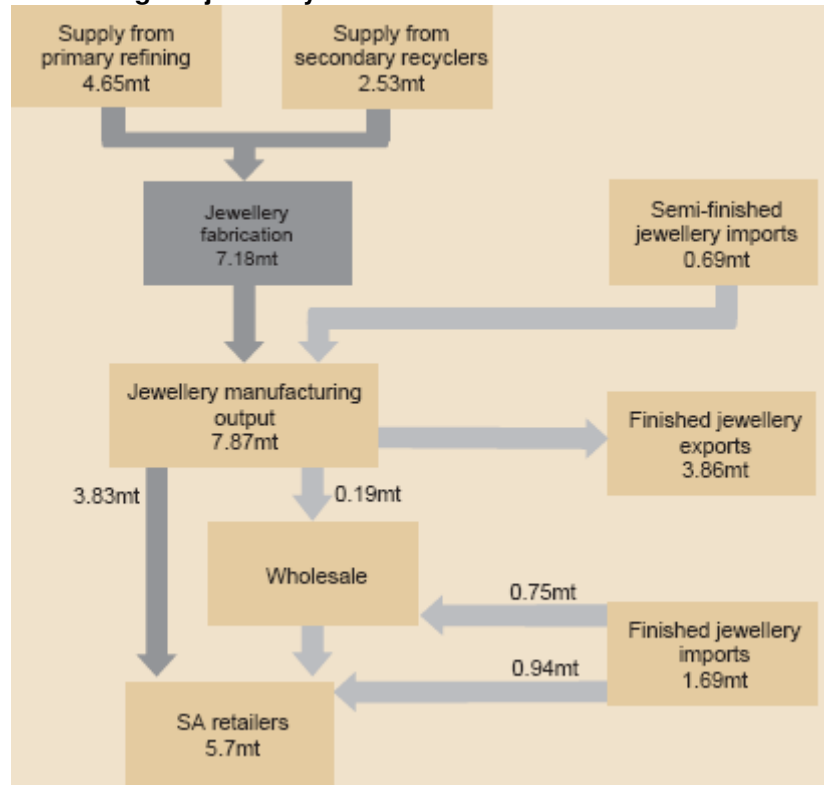
	Metric tons	Percentage
Jewellery fabrication	9.64	76.6
Coin fabrication	2.90	23
Other fabrication (including dentistry and electronics)	0.05	0.4
Total	12.59	100

Source: Genesis Analytics, 2008, pg.45

There are approximately 500 gold jewellery manufacturers in the country. Only approximately 13 firms use a sizable amount of gold in production. Three of these 13 firms account for 65% of the fine gold consumed in the industry while the 13 as a group account for 84% of the fine gold consumed. The three firms are OroAfrica, Silplat and Alan Mair.

The diagram below demonstrates the amounts of gold used in jewellery fabrication in 2006.

Figure 6 Gold Usage in jewellery fabrication and retail



Source: Genesis Analytics, 2008, pg. 7

The perception that South Africa has a comparative advantage to its non-gold producing industry, due to the location of its mining industry, is false. The location of the gold mining industry does not in itself render the country competitive in terms of its downstream industries. Unlike other locally produced minerals, the extremely high unit value of gold means that a local jeweller has no transport advantage over his/her international competitors. Even though exports of gold bars totaled 421t in 2004, up from 408t in 2003, there is also very little to no profit margin on gold bars exported.¹⁴⁰

Only the first two phases of gold beneficiation, smelting and refining, have an advantage in international competitiveness because of the local availability of the bullion and the advanced local technology (Jourdan, 1993).

¹⁴⁰ Personal communication with Dr. Paul Jourdan, Mintek and Dr. Jessica Cross, Virtual Metals

Nevertheless the industry enjoys some advantages.

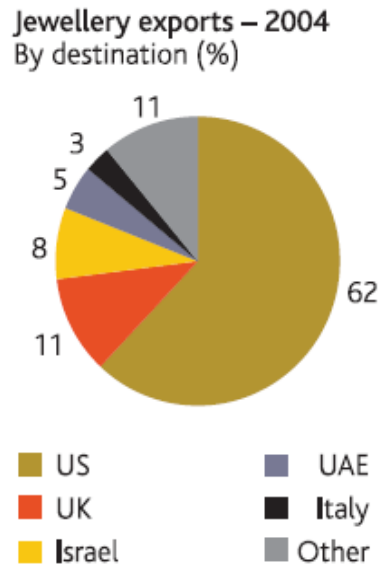
The advantages:

- **Local refinery services:** Rand Refinery offers localized refining services and capacity to refine gold competitively. The refinery has London Bullion Market Association (LBMA) accreditation, was the world's first refinery to receive the Dubai Good Delivery accreditation in September 2004 and it serves as a referee in international quality control for the LBMA. The country also possesses a good technological base in gold refining and the production of gold alloys.
- **AGOA:** The USA "African Growth and Opportunity Act" (Public Law 106-200 – May 18, 2000), commonly referred to as AGOA, that allows for the duty-free export of the mainly energy-related products, transportation equipment, minerals and metals, agricultural products and textiles and apparel from qualifying Sub-Saharan countries, which includes South Africa, to the United States of America. On July 12, 2004, the USA extended the whole AGOA Programme to 2015.

South African total exports, including both AGOA and non-AGOA exports, to the USA declined from US\$4.4 billion in 2001 to US\$4.2 billion in 2002. Despite this decline, the AGOA-affected export categories such as jewellery and textiles, actually increased fairly dramatically, from US\$ 923.3 million in 2001 to US\$ 1 342.6 million in 2002. By 2002 this sector covered 31.7% of total (both AGOA and non-AGOA) RSA exports to the USA. In 2004 South Africa's AGOA exports were valued at US\$1.78 billion only, indicating only a small increase, but it still constituted 30% of total exports to the USA (US Trade Commission). These exports include gold jewellery exports to the USA. Although the AGOA

exports in the last year of SARM's existence might only have indicated a small increase, 62% of gold jewellery produced in South Africa during 2004 was exported to the USA.

Figure 7 South African jewellery exports in 2004



Data source: Virtual Metals' analysis of trade data.

- **Tourism:** Inbound tourists frequently buy quality jewellery, which benefit gold jewellery sales. This has been demonstrated in other countries with a gold jewellery industry, such as Italy. A large proportion of Italy's gold jewellery is sold to visiting tourists who are aware of the large industry, the world class design and the competitive prices (Jourdan, 1993).

Tourism in South Africa increases on an annual basis. Information released in 2006 that compared the tourist arrival statistics for April 2005 to those of April 2006, indicate that tourism from tourists originating from continents other than Africa increased by 13.8%. The total number of tourists (including those from African countries and islands) visiting South Africa during

that timeframe increased by 27.7% (<http://www.kzn.org.za/invest/April2006.pdf>¹⁴¹).

- **The emerging middle class** among the previously disadvantaged South Africans has prompted jewellery manufacturers to adapt their product range to suit this new market.¹⁴²
- **The South African/European Trade Development and Co-operation Fund** (TDCS) provides for the creation of a free trade agreement between the European Union and South Africa by no later than December 31, 2012, by which time 90% of all trade between the two partners will be free of customs duties. This means that the European Union will gradually become a free trade zone in the way the USA is under AGOA. This can however, backfire on local jewellery producers, as reciprocally European manufacturers will be able to export to South Africa free of import duties, which could make it difficult for the local industry to survive.

The challenges:

- **Lack of access to affordable finance**, the high cost of working capital, and the periodic volatile nature of the gold price that renders it particularly expensive, are some of the main challenges faced by jewellery manufacturers in South Africa.

Unlike South Africa, other gold jewellery production countries, for example Italy, have an active bullion lending business with long-

¹⁴¹ Accessed 12 August 2007

¹⁴² Interview with Alta Wessels, Project Manager, Harmony Jewellery School, interviewed 16 March 2006. This was confirmed by both Gary Nathan of OroAfrica, interviewed on 31 August 2007; and Johan Smit of Silplat, interviewed on 31 August 2007

standing relationships existing between local banks and the jewellery industry. The local commercial bank will complete a credit rating of the local jewellery manufacturer and based on these results, will issue a letter of credit or guarantee against the metal loan. The bullion bank, or the local commercial bank, will then lend the gold to the manufacturer. Such schemes allow manufacturing jewelers to benefit from gold lending rates based on the gold lease rate, which is typically lower than monetary interest rates.¹⁴³

In the early 1990s a concessionary gold loan scheme for jewellery manufacture was introduced by the state whereby state gold reserves are loaned to the fabricator at a low interest rate and returned when the product is sold (Jourdan, 1993). This however was still too expensive for most South African fabricators. The recently introduced Gold Advance Scheme faces similar problems.

South African manufacturers have to rely on the high interest rate environment of the standard bank loan agreements for financing working gold inventory. The table and chart below clearly demonstrates the difference in lending rates.

Table 13 Comparative look at costs of loans for gold jewellery finance as of mid-2005

	Dubai	Italy	South Africa
Loan type	Gold (lease)	Gold (lease)	Rand (prime rate)
Interest	2%	3%	10.5%
Risk premium	0,70%	0,07%	2% - 3%
Letter of credit	Local bank	Local bank	None
Cost of letter of credit	1%	1%	Not applicable
Collateral (other than letter of credit)	None	None	120%
Total cost of loan	3.7%	4.75%	12.5% - 13.5%
Insurance needed for metal on loan	Yes	Yes	Yes

Source: Virtual Metals, 2006

¹⁴³ Personal communication with Denzel Young, CEO of Musuku Beneficiation Systems, 21 September 2005



South African manufacturers are thus at a disadvantage in terms of accessing affordable finance. Access to affordable gold loans and other financing incentives would render the local jewellery manufacturers more competitive internationally.

- ***The high start-up costs*** associated with gold jewellery manufacturing plants: these plants are capital intensive because all capital equipment must be imported. South African manufacturers are also behind in the latest developments and fabricating techniques, which detract from local manufacturers' ability to compete internationally.¹⁴⁴
- ***The performance of the Rand:*** When the Rand is strong against the other main international currencies, as it was in much of 2003 and 2004, it is a threat to the survival of the gold jewellery

¹⁴⁴ Personal communication with Mr. Tarlie, OroAfrica, 2003

industry. The reason for this is that finished jewellery could be imported at a cost less than the manufacturing cost incurred by local manufacturers for the same or a similar product. As demonstrated by the chart below, the Rand exchange rate against the US Dollar depreciated by 20% annually between January 1999 and December 2001 before appreciating by 24% annually between January 2002 and December 2004.



The stronger Rand also makes South African gold jewellery exports more expensive. Mr. Tarlie of OroAfrica¹⁴⁵ confirmed that in recent years the strong Rand had negatively affected the companies' export rates due to the costs of the final product.

- South African manufacturers are **unable to compete with low labour costs** in jewellery manufacturing in countries such as China and India, where there is no minimum wage or labour unionization. Imports from these countries are popular, even though of lower quality, because of the low price.¹⁴⁶

¹⁴⁵ Personal communication with Mr. Tarlie, OroAfrica, October 2005

¹⁴⁶ Personal communication with Jessica Cross, Virtual Metals, 2006

- ***The country's low skills pool:*** Even though students continue to graduate every year from universities after completing jewellery courses, there is a reported lack of skills in this sector. A reason for this could be a mismatch between the training provided by the institutions and the needs of the jewellery manufacturers.¹⁴⁷
- ***Declining jewellery sales:*** Statistics SA has found that local jewellery sales, as a percentage of total retail sales, have been falling steadily since 1996, as it loses market share to other lifestyle products, such as cell phones.
- ***No brand recognition:*** South African has no reputation as a jewellery producer either locally or internationally, thus the country's jewellery, unlike jewellery from other countries, has no brand recognition as being South African or unique.
- ***Jewellery is not viewed as a craft:*** Compared to West African countries, such as Ghana and Mali, and other gold producing countries of the world, such as Peru and Bolivia, South Africa lacks a tradition of viewing gold jewellery as a craft, and generally veers towards seeing the process as purely manufacturing through casting. This could be attributed to the lack of culture of precious metal jewellery adornment, a culture which is common in other parts of Africa. It is important that this view of gold jewellery be changed as the jewellery sub-sector not only falls under the manufacturing sector, but also under the craft sector.¹⁴⁸

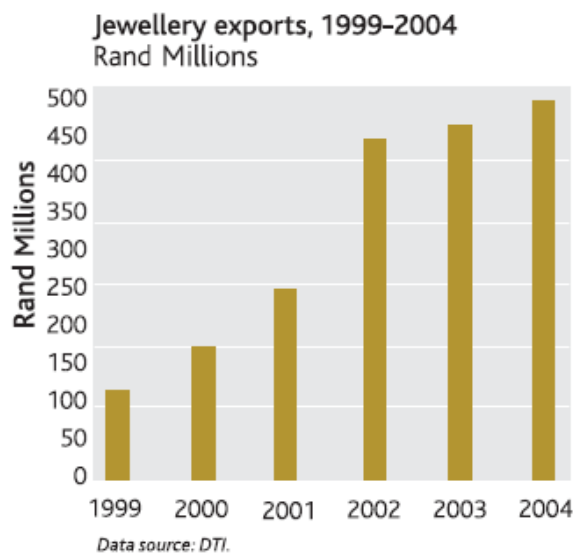
¹⁴⁷ Personal communication with Dieter Rowe-Setz, Lecturer, Wits Technikon, 12 February 2005

¹⁴⁸ Personal communication with Dieter Rowe-Setz, Lecturer, Wits Technikon, 12 February 2005

4.5.2 South African Jewellery Exports

There has been a steady increase in the export of South Africa's jewellery since 1994.

The largest increase in exports to date was an increase of 68% over a two year period from US\$11.8 million in 1997 to US\$19.8 million in 1999. (Wesgro; DTI) Despite the strong Rand, exports of South African manufactured jewellery have increased in the five years from 1999 to 2004, growing at an estimated average rate of 23% per annum per volume as demonstrated below:



The majority (62%) of the gold jewellery exports in 2004 were to the USA, with 11% to the UK and 3% to Italy (Virtual Metals, 2006).

4.5.3 Employment in the Jewellery Manufacturing Sector

A 2005 research study commissioned by the DTI, AngloGold Ashanti, IDC and the World Gold Council and conducted by Virtual Metals, found that although there were 2 456 valid jewellery permits in issue in 2004, the jewellery manufacturers sector employed only an estimated 2 680 persons. This is in stark contradiction with figures published by DTI that

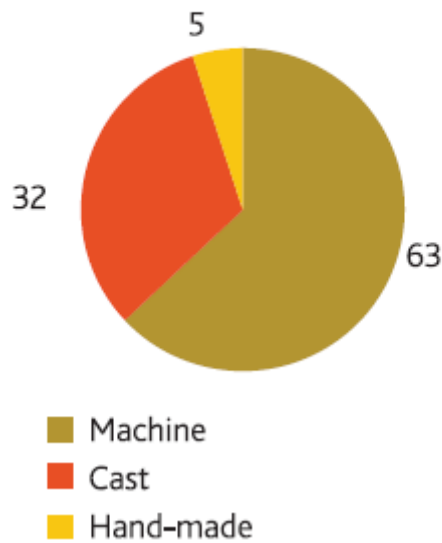
claims that the jewellery industry employs approximately 4 500 persons in more than 350 manufacturing concerns located in Gauteng, Western Cape, KwaZulu-Natal and Free State (<http://www.dti.gov.za/downloads/investjewellerysector.pdf> (undated)¹⁴⁹).

The discrepancy between the number of valid permits issued and the number of persons employed can be explained. Permits are issued not only to manufacturers who are in business, but also to hobbyist goldsmiths. The goldsmiths who work alone, or only use the gold as part of a hobby, would not employ staff.

Another factor that influences the number of jobs created in gold jewellery manufacturing is the type of manufacturing engaged in. The Virtual Metals study found that in 2005 only five percent of the jewellery manufactured in South Africa was hand-made, while 63% were created by using machine and 32% were cast. Those manufacturers who primarily use machinery require fewer employees to manufacture jewellery than those manufacturers who use cast methods. Hand-made jewellery is labour-intensive and requires more staff than either of the other two methods. As 63% of the manufacturers use machinery that require fewer employees and 32% use cast methods and only 5% are engaged in the labour-intensive hand production, it is understandable that the employment levels would be less than anticipated for this manufacturing sector.

¹⁴⁹ Accessed on 10 March 2007

South African gold jewellery by type of manufacturing process
By volume (%)



Of the estimated 2680 persons employed in the sector, 85% are involved in production, 10% in administrative, sales and marketing roles, and 5% in management roles. The total amount of employees is approximately 1.76% of those employed in the complete gold value chain (Virtual Metals, 2006).

A regional analysis of valid jeweller’s licences for 2003 and 2004, found that gold jewellery manufacturing is concentrated in Johannesburg and Cape Town, and that Gauteng and the Western Cape provinces are home to approximately 70% of the manufacturers.

Table 14 Valid Jewellery Permits in South Africa in 2003 and 2004

Number of valid jewellery permits	2003	2004	Region as % of 2004 total
Gauteng	838	982	40
Western Cape	710	733	29.8
KwaZulu-Natal	351	385	15.7
Eastern Cape	76	95	3.9
Free State	71	84	3.4
Northern Cape	59	63	2.6
Mpumalanga	50	52	2.1
Limpopo	33	34	1.4
North West	27	28	1.1
Total	2 215	2 456	100

Source: Virtual Metals’ analysis of South African Police Service data (2006)

According to the Virtual Metals study, permit holders in the Free State Province increased by 18.3% from 2003 to 2004. As there are no factories, except for the Harmony Jewellery School and Emthutwini casting factory in the Free State, it must be assumed that these licenses were issued to hobbyist goldsmiths. Jewellery manufacturing is generally not the primary source of income for hobbyist goldsmiths and as such they would generally not employ staff.

The more than 100 jewellery manufacturing firms in the Western Cape provide approximately 700 formal jobs.¹⁵⁰

In 2004 the Cape Jewellery Manufacturers Association had 99 members. The Association is represented by approximately a third of all Western Cape jewellery manufacturing concerns. Of the 99 members, 86 are gold jewellery producers.¹⁵¹ More recent information on membership was not available.

These firms are generally the more established, older and often family-owned factories, that primarily produce gold jewellery and to some extent use mass-production techniques. These firms are finding it hard to survive in the new marketplace.

Although gold is the precious metal used predominantly in South African jewellery manufacture, the newer firms are mostly smaller and tend towards high value-added handcrafting using metals other than gold, such as silver and platinum. The price of gold plays a large role in this decision.¹⁵²

¹⁵⁰ Telephonic interview, Mr. Peter Cloete, Secretary of the Jewellers and Goldsmiths Union - Cape

¹⁵¹ Telephonic interview, Ms Martin, Cape Jewellery Manufacturers Association, October 2004

¹⁵² Interview with Mr. Johan Smit, Chair of Cape Jewellery Manufacturers Association, 01 November 2007

4.5.4 Jewellery Manufacturing and the Mining Scorecard

While the Mineral and Petroleum Resources Development Act (MPRDA) and the Mining Charter and Scorecard call for greater beneficiation efforts, the Precious Metals Act No 35 of 2005, aims to reduce the administrative procedures relating to the possession and trade of gold as a raw material.

The legislation introduces a new definition of unwrought precious metals, which makes it easier to hold precious metals, including gold, for use in industry and for jewellery manufacturing. It further introduces a more streamlined regulatory institution for the sector. The South African Diamonds and Precious Metals Regulator replaces the multi-institutional regulatory framework that had been in place since 1967 and which included the Department of Minerals and Energy, the South African Reserve Bank, the South African Revenue Services and the South African Police Force. The streamlined institution will allow for a smoother licensing and monitoring process.

Government officials have further assured mining companies that they will not be forced to go into jewellery production as part of their beneficiation obligations, but that they could link up with specialists in jewellery manufacturing through funding of beneficiation projects. AngloGold Ashanti followed this route when it purchased 25% of OroAfrica. Since 2000, other mining companies have also ventured into the beneficiation business. The most prominent of these companies are Harmony Gold Mining Company and Impala Platinum Holdings (Implats).

4.6 Conclusion

This chapter has illustrated the background to the NIPP precious metal and research and development beneficiation projects. It has shown how

these projects can attract direct foreign investment, create new trading partners for the country not only by building up international linkages, but also because of the conducive climate for beneficiation projects, in particular jewellery manufacturing.

This information is important as we move into the next chapter which focuses on SARM. The jewellery manufacturing projects discussed in this chapter will, together with the NIPP objectives, be the objectives and goals against which SARM is evaluated.

5. SOUTH AFRICAN ROYAL MANUFACTURERS

5.1 Introduction

The context in which a project operates has an impact on its performance. Thus, in order to conduct a good evaluation of a project, it is important to know and understand its context.

The first layer of the context is the physical and geographical location; the second layer is that of political governance both locally and provincially; the third layer is reasons why it was established; the fourth layer refers to how it was funded, and the fifth, and last, layer refers to how it was managed.

In this chapter the context in which SARM was established, operated and closed down, is described. The description begins from a wider angle and looks at the Free State Province. It then focuses in on the district and local municipalities, ending with a description of Virginia, before moving on to describe SARM's owners and investors. The chapter ends with a description of SARM, its background, functioning and its demise.

5.2 Provincial Context

South African Royal Manufacturers (SARM) was established in the goldfields of the Free State Province.

The Free State Province is the third largest province in South Africa. It comprises approximately 10.6% of the country's land mass - 129 480 square kilometres.

Table 15 Free State Basic Facts

	Free State	Compared to South Africa
Land area	128 480 km ²	10.6%
Main language	Sesotho	Zulu (23%)
Population Census (2001):	2.71 million	44.82 million
% African	88%	79%
% Coloured	3.1%	8.9%
% Indian	0.1%	2.5%
% White	8.8%	9.6%
Population (2002 estimate)	2.95 million	6.4%
Population growth per annum (1996-2001)	0.6%	2%
Population growth estimated 2001-2006	0.72%	1.18%
Population density (2003)	21.1 per km ²	30.0 per km ²
Urbanization level (2002)	71,7%	55,4%
Urban population as % of total population (2003)	69.2%	
Age dependency ratio	55.4%	63%
Total fertility rate (1994-1996)	2.3	2.7
Child mortality	24%	13%
Life expectancy at birth (1994-1996)	62	63
% population under 15 years (2003)	30.7%	
% population aged 65 and over (2001)	5%	
Functional literacy	68,6%	72,4%
HDI (2002)	0,55	0,62
People living in poverty (2002)	54.7%	48.9%
Annual per capita income	R11 854	R17 164
Unemployment (2002)	38,9%	40,8%
Equitable share in national budget allocation (1999-2002)	6.8%	
GDP 2002	R49,1 billion	4,9%

Sources: Census 2001; SAIRR: South Africa survey 1999/2000,2000/2001,2003/2004; DBSA, 2003

In the late 1990s the Development Bank of South Africa (DBSA) identified four functional regions in the Free State:

- Bloemfontein,
- the Goldfields,
- Eastern, and
- Northern Free State.

Although the 1999/2000 national demarcation process left the outer boundaries for the Free State virtually unchanged from what was previously called the Orange Free State, and what is still referred to as the “heartland” of the country, the province’s regions were again re-grouped, this time into five district councils, namely:

- Xhariep,

- Motheo,
- Lejweleputswa,
- Thabo Mofutsanyane , and
- Northern Free State.

Virginia, where SARM was located, is situated within the Lejweleputswa District Municipality.

5.2.1 Economy

The Free State Province flourished for several decades due to the riches of the goldfields and its importance in the production of a South African staple food, maize. It also has Sasol, the Orange River Dam, the vast Lesotho Highlands Project at the Free State-Lesotho border; and found itself on the Cape Town-Witwatersrand, Port Elizabeth-Witwatersrand and the Durban-Johannesburg transport axes.

However, recent economic data for the province suggests that it is a poor province with a gross annual household income of R42 500 per annum as opposed to a national average of R56 740. The per capita annual income is R11 854 (Du Toit, 2001:14).

5.2.1.1 Dominant industries

The dominant influences in the province's economy are still agriculture and mining, even though both are slowly declining.

Mining in the Free State is declining faster than it is nationally. In 1981 the industry was at 37.4% by far the largest contributor to the Free State's Gross Geographic Product¹⁵³ (GGP). By 1991 this had dropped to 20.6% and by 2001 it was down to 14.3%. At the same time the

¹⁵³ GGP equals the remuneration received by the production factors, such as land, labour, capital, entrepreneurship, for their participation in production in a given geographic area.

sector experienced negative annual growth rates of -1,25% between 1991 and 1996; and -7,6% between 1996 and 2001 (Chamber of Mines; Mbendi).

The contribution of agriculture to the province's economy has declined steadily between 1981 and 2001, primarily because of the rationalization of the grain industry. The sector showed negative growth rates between 1991 and 1996, and again between 1996 and 2001.

Gross Geographic Product (GGP) of a particular area amounts to the total income produced through production in that area. The table below compares the Free State Province's GGP with that of the other provinces and South Africa as a whole. It also lists the GGP per head per province.

Table 16 Gross Geographic Product per Province and per Head

Province	Gross Geographic Product * (Rand billion)	GGP per Head (Rand)
Eastern Cape	40.4	8 917
Free State	29.5	15 196
Gauteng	221.9	39 089
KwaZulu-Natal	75.7	11 924
Limpopo	22.9	6 869
Mpumalanga	47.1	21 331
North West	31.9	15 508
Northern Cape	10.9	18 242
Western Cape	102.9	34 986
South Africa	583.4	19 508

* Figures should add up vertically but may not, owing to rounding
Source: South African Institute of Race Relations 2002/3 Survey.

The 2002/2003 GGP for the Free State Province is R29.5 billion, while its GGP per head is R15 196. Compared to the other eight provinces, the Free State could be characterized as falling into the provinces with the lowest GGP in the country. Only Limpopo and the Northern Cape have a lower GGP. Gauteng Province has by far the highest GGP at R221.9 billion, with the Western Cape lagging behind at R102.9 billion.

In terms of GGP per head, the Free State Province has the fourth lowest score, indicating lower employment figures and/or lower production

output than that of other provinces. As can be seen in Table 6, in 1999 37.2% of the province's population earned R500 or less per month.

The table below compares the Free State values of various economic indicators with that of the country as a whole.

Table 17 Free State Province economy compared to that of South Africa nationally

Indicator	Free State	South Africa
% contributor to national GDP (2001)	5.5%	100%
GGP/head (2001)	R15 196	R19 508
Manufacturing as % of GGP (2001)	13.2%	18.6%
% of working age population economically active (2003)	60.4%	56.7%
% of population earning R500 per month or less (1999)	37.2%	25.05%
% of population earning R4 500 per month or more (1999)	6.7%	10.3%

Source: SAIRR, 2003; DBSA, 1998; DBSA, 2003

In 2001 the province contributed R33.5 billion to the national economy which represented only 5.5% of the national GDP. Thus within the national context, the overall economic and more specifically the manufacturing importance of the Free State Province, remains minor.

5.2.1.2 Manufacturing

The province can be regarded as a 'lagging region' in terms of manufacturing (Ilberty *et al*, 2004; Cabus, 2001).

Table 7 demonstrates the growth trends in the Free State as from 1970 to 2002 in measures of five-year intervals. A 5% growth occurred during the 1970-1975 period, with a further growth of 3.9% during the following five years.

Table 18 Growth trends in the manufacturing industry of the Free State, 1970 – 2002

Period	Manufacturing growth for period
1970-1975	5%
1975-1980	3.9%
1980-1985	0.6%
1985-1990	2.6%
1996-2002	-1.2%

Source: Urban-econ, 2003.

Although considerable growth in manufacturing took place between 1970 and 1980, it declined sharply between 1980 and 1990. In 1990 manufacturing contributed only some 18% of the provincial Gross Geographic Product (GGP), and by 2002 it had fallen to 16% (Urban-econ, 2003). In 1993, the province had 851 manufacturing establishments in operation, employing some 46 500 people and generating a gross output of R8 170 million (Urban-econ, 2000).

A negative growth rate continued for the period 1996-2002, as is demonstrated in the table below.

Jewellery Manufacturing

There is a strong push for jewellery manufacturing and precious mineral beneficiation in the province. In a speech by Premier Winkie Direko, at the opening of the fourth session of the second Free State Legislature on the 14th February 2002, she stated that the province's overall development strategy must of necessity, ensure a strong focus on:

- Beneficiation of value-addition to Free State products:
- The enhancement of exiting national and international competitive advantages of the province.
- Empowering and capacitating small, medium and micro enterprises (SMME's) to ensure their progressive mainstreaming into the formal manufacturing sector. She also reported on the establishment of the jewellery hub zones with foreign investment of R120 million with the potential of creating 2000 jobs referring in part to the now failed SARM initiative.

The Free State MEC for finance expenditure and economic affairs with reference to Medium Term Expenditure Framework (MTEF), stated in 2001 that the main focus areas of this development over the MTEF period will, inter alia, be the facilitation of sustainable provincial economic growth and development through the promotion of the

province as an ideal investment location for jewellery manufacturing amongst other opportunities.

However, to date none of the larger and more ambitious initiatives have been successful and indeed in terms of jewellery manufacturing, the Free State Province does not have a very good track record. Two of the factories started in Virginia since 2001 have shut down. The Harmony Jewellery School and Harmony Gold Mining Company's small Emthuthini Jewellery Manufacturers¹⁵⁴ appear to be the only manufacturers operating. The output is however negligible.

5.2.2 Employment statistics

The decline in the various economic sectors within the province had a direct effect on the province's employment figures.

Although mining nationally employed 163 000 in 1980, and 236 000 by 1990 the next decade saw a loss of 191 700 jobs in this sector alone. The national agriculture sector recorded a loss of 55 000 jobs between 1980 and 2001. A negative growth rate in the manufacturing sector has also resulted in a drop of 7.5% in the employment figures in this sector between 1996 and 2002 (Urban-econ, 2003).

¹⁵⁴ The Emthuthwini Jewellery Manufacturer was first mentioned in the 2002 Harmony Gold annual report. It is not clear whether this factory is part of Musuku or separate from it. No information about Emthuthwini Jewellery Manufacturer is available on the Internet. Enquiries about the factory directed to Harmony Gold Mining Company, Musuku Beneficiation Systems, the Harmony Jewellery School and the Mathjabeng Municipality have not been responded to at the time of writing. In November 2002 Mr. S. Zikode, Chief Director, Industrial Participation Secretariat, DTI in an interview with Richard Haines, indicated that there were moves to expand beneficiation to other precious metals such as silver on a home production basis to the poor sections of the population of Virginia. It is not clear if Emthuthwini is one of these projects. It does not appear to be a NIPP project.

The following table, sourced from the South African Institute of Race Relations 2002/3 Survey, reflects the unemployment rate by province during 2002*:

Table 19 Unemployment rate per province

Province	Employed	Unemployed (strict)	Unemployed (strict) as proportion of provincial economic active population
Eastern Cape	1,628,000	638,000	28.1%
Free State	767,000	386,000	35.5%
Gauteng	2,776,000	1,027,000	27.0%
KwaZulu-Natal	2,002,000	1,047,000	34.3%
Limpopo	870,000	505,000	36.7%
Mpumalanga	753,000	320,000	29.8%
North West	822,000	364,000	30.7%
Northern Cape	233,000	100,000	30.0%
Western Cape	1,542,000	352,000	18.6%
South Africa	11,393,000	4,738,000	29.4%
2001	11,837,000	4,240,000	26.4%
Percentage Change: 2002 vs 2001	-3.8%	11.7%	11.4%

* Figures should add up vertically but may not, owing to rounding.

Source: South African Institute of Race Relations 2002/3 Survey.

The incidence and extent of poverty seems to be increasing in the Free State Province relative to other provinces. Household income is the third lowest among the provinces and per capita income is the sixth lowest. Its position on the Human Development Index (HDI) worsened from third to fifth place between 1999 and 2003 and its Gini coefficient¹⁵⁵ from fourth to fifth place. In 1996 the province had the third lowest percentage of people living in poverty in the country, which was lower than the national average. By 2003 the province had slipped to 6th place, with 51.9% of its people living in poverty compared to the national average of 46.2%. Statistics South Africa (2008a) indicates that 5.5% of the Free State households fall within the first quintiles of the provincial population. The first quintile constitutes the poorest of population, while the fifth quintile refers to the wealthiest of the population. Seven point seven percent (7.7%) of Free State households fall within the fifth quintile (Statistics South Africa, 2008a). The incidence of poverty is

¹⁵⁵ A measurement of income equality.

however much higher in rural areas (Statistics South Africa, 2008b), and it is most likely that the majority of the Free State's households that fall within the first quintile live in the rural area of the province.

The decline in gold mining in the province has contributed to this situation. Since 1984, the number of unskilled personnel employed by the South African gold mining industry nationally has fallen from 450 000 to 130 000 due to restructuring in the sector (Chamber of Mines). It is estimated that each mining job has between seven and 12 dependents. Thus the wider social and economic damage – not just in the Free State or South Africa but also in neighbouring regions – is substantial.

5.2.3 Local Economic Development

The experience of LED in the Free State clearly is a mixed balance sheet (Nel *et al.*, 2002). The evaluation of 16 LED projects in the Free State by Marais *et al.* (2002) has shown that only a small percentage of LED projects implemented in the Free State have the potential to become financially viable. They found that very few SMMEs established as a result of LED initiatives survived, with none being economically competitive. The researchers also identified poor project design, training, implementation, market research and business planning in each of the projects evaluated (Marais *et al.*, 2002). Although there has been employment creation, most tend to be short-term jobs created through infrastructure projects. In 2003, Mark Ingle investigated LED projects funded through the national government LED Fund, which is used to support targeted LED poverty-relief projects. During this investigation, Ingle¹⁵⁶ was unable to find a single long-term job created in the LED Fund projects. Despite an investment in excess of R15 million in the 16 projects studied by Marais *et al.*, only 95 full-time, long-term jobs were created. These jobs were all in agriculture. In total, only 403 short-term jobs were created (Marais *et al.* 2002).

¹⁵⁶ Personal communication, January 2004

Matjhabeng Municipality consists of the Matjhabeng/Welkom Goldfields comprising of Virginia, Welkom, Odenadaalsrus, Hennenman, Ventersburg and Allanridge. The populace is concentrated in the main nodes of Welkom, Odendaalsrus and Virginia.

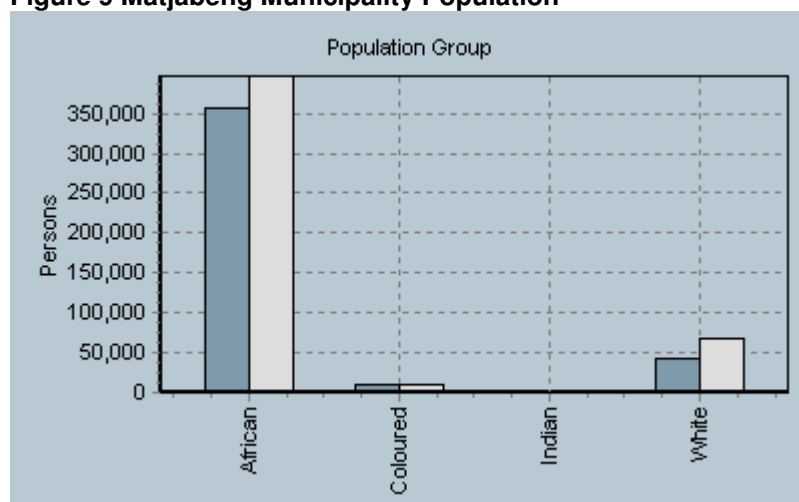
As can be seen from the table and chart below, the municipality's population is in decline, dropping from 477 411 (1996 Census) to 408 166 (2001 Census).

Table 20 Matjhabeng Municipality Population

Persons	2001	1996
African	356098	396812
Coloured	8904	9050
Indian	474	411
White	42694	68241
Total Population	408170	476927

Sources: 1996 Census; 2001 Census

Figure 9 Matjhabeng Municipality Population



Sources: 1996 Census; 2001 Census

The reason for this decline in population can be contributed to the lack of employment opportunities in the area with the continuing decline of both the gold mining and agriculture sectors.

5.3.2 Economy

Measured against all other municipalities in the province the Matjhabeng Municipality makes the second single largest contribution to the Gross Geographical Product (GGP) of the Free State Province, accounting for nearly a third of the GGP (Matjhabeng – Diverse City of Golden Opportunities, pp.5-8). The table below demonstrates this.

Table 21 Free State Municipal Gross Domestic Product for 2002

Municipality	Population	GDP
Motheo	26.0%	30.9%
Lejweleputswa	26.9%	26.5%
Thabo Mafutsanyane	26.3%	14.0%
Northern Free State	16.3%	25.5%
Xhariep	4.5%	3.1%
Total	100%	100%

Source: Free State Premier's Economic Advisory Council

This economic contribution to the provincial coffers is mainly the result of the mining industry. The Matjhabeng Municipality remains critically dependent on mining, with 58% of its GDP being derived directly from that sector and almost 90% of the remaining, non-agricultural GGP linked to the mining sector. Almost 90% of industries and supplier agencies based in the municipality are linked to the mining sector (Matjhabeng Development Strategy).

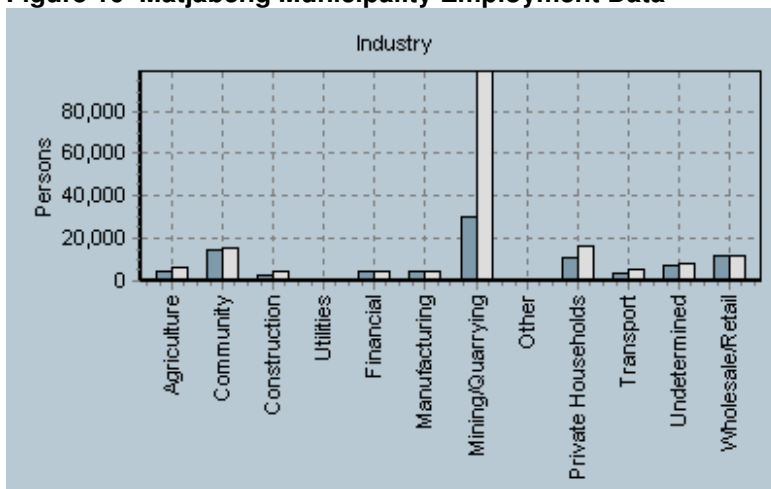
The Free State goldfields mines were developed in the 1940s with an original view to closure in the mid 1980s, but technological improvements in the 1980s and the discovery of new viable deposits extended the life of the mines for another decade or two. This grace period is now rapidly coming to an end due to depleted deposits. Areas with a narrow resource base, such as the Free State goldfields, are the worst affected by the decline in gold mining (Binns and Nel, 2001). In Virginia, as well as in Welkom, the local economy has not diversified, and mine closures and downscaling have had severe socio-economic impacts.

Table 22 Matjabeng Municipality Employment Data

Persons	2001	1996
Agriculture/Forestry/Fishing	5029	6181
Community/Social/Personal	14315	15636
Construction	2778	4449
Electricity/Gas/Water	467	1253
Financial/Insurance/Real Estate/Business	4790	4803
Manufacturing	4133	4861
Mining/Quarrying	30581	98787
Other	11	-
Private Households	11118	16670
Transport/Storage/Communication	3265	5192
Undetermined	7404	8658
Wholesale/Retail	11795	12023

Sources: 1996 Census; 2001 Census

Figure 10 Matjabeng Municipality Employment Data



Sources: 1996 Census; 2001 Census

The above table and chart indicate the decrease in mining/quarrying jobs available in the municipal area. It also clearly demonstrates the loss of jobs in both the agriculture and mining sector.

5.4 Virginia

Virginia is the town within the Matjhabeng Municipality where SARM was located. The map below indicates the position of Virginia and Meloding, the Virginia township, where the factory was located.

Figure 11 Map of Virginia area



Virginia has traditionally been disproportionately dependent upon mining. It also has the least diversified local economy in the Free State goldfields. This is not unusual as it is internationally recognized that in the more rural and remote areas, it is impossible for a mining community not to become dependent on the income and employment provided through the mine. Consequently, closure or reduced activities of the mine has significant impacts on the well-being of community. This is exacerbated in developing countries, such as South Africa, where alternative economic activity may be more limited, and where local

government and communities lack the resources to develop a process that would provide suitable alternatives (Sheldon *et al.*, 2002).

Dependency on the mine is often increased when communities are not informed of the mine's activities and future plans, and communities are thus not encouraged to prepare for a future without the mine. In South Africa, several mine-dependent communities were found by Hoadley *et al* (2003) to lack capacity to identify alternative economic activities. Virginia was identified as such a community.

Hamman (2003) found that the Virginia community's awareness of mine closure is non-existent as the general expectation is for the mines to provide employment for generations to come. However, unemployment of the youth is considered an issue of concern, as educational qualifications do not necessarily assist in securing a job within the limited local economy. Apart from schools, there is also no other way to formally further one's education or learn a new skill in the town. This absence of local vocational training centres requires people seeking such skills, to make use of Welkom's facilities, more than 30km away.

5.5 SARM

During 2001 the South African Royal Manufacturers (SARM)¹⁵⁷ was founded in Virginia, Free State, with its main focus on producing high carat gold rope chain for export to the USA market.

The table below describes the details of the NIPP characteristics of the project as described in 2004 by DTI.

¹⁵⁷ Harmony Gold's annual reports have used both RSAM and SARM when referring to this factory. It is also referred to as RSAM in the 2002 NIPP report.

Table 23 SARM NIP project as reported in 2004

South African Royal Manufacturing (SARM)	
Product:	Gold rope chain
Sector:	Value-added beneficiation
Benefits:	Exports (up to 400kg per month); New markets; Technology and expertise transfer; Value-added
Local company involved:	SARM
Total investment:	US\$ 9m
Projected sales:	US\$ 37m in 2004, up to US\$ 350m by 2011
Location:	Free State
Other benefits:	500 jobs created, mostly for rural women, rising to 1 000 jobs when full production is reached

Source: DTI 2004 report, p. 26

SARM was initiated as a project by Harmony Gold Mining Company with funding from the IDC, supplemented with US\$9 million from the BAE Systems/SAAB consortium as part of their offset obligations (DTI, 2004). Harmony Gold Mining Company viewed the venture as fulfilling its social corporate investment obligations as well as answering the call for beneficiation of metals within the country. The company would provide the premises for the factory as well as provide the gold needed for operations in the factory on loan directly from its refinery, Musuku Beneficiation Systems.¹⁵⁸

Direct financial investment for the business would come through IDC and the NIPP. The NIPP obligor participating in this project was BAE Systems/SAAB. BAE Systems/SAAB's spokesperson, Linden Birns, said the following about the founding of SARM: "We see SARM as a Harmony-initiated project as they introduced the project to us, but it was our financial contribution which caused the business to happen" (E-mail from Linden Birns, 15 September 2005). The BAE Systems/SAAB consortium funding was provided in the form of a rotating loan facility that could be drawn down over a five year period, and could be refunded through export sales.¹⁵⁹

¹⁵⁸ Information provided by Mr. Ferdi Dippenaar, Marketing Director of Harmony Gold, July 2005

¹⁵⁹ Telephonic interview with Linden Birns, 05 July 2005

Technology transfer and access to markets internationally would come through the Royal Chain Canada Inc.

The original shareholders and investors are described below.

5.5.1 Harmony Gold Mining Company

Harmony Gold Mining Company Limited was formed in 1950 as a Rand Mines-managed company. The company was formed with the exclusive goal of exploiting the single Harmony mine lease in Virginia.

Rand Mines was established in 1893 and was unbundled in 1992 when the mining interests were separated into two separate entities: Randgold and Exploration. By 1997 it had been rationalized into three South African mining companies:

- Durban Roodepoort Deep (now called DRD Gold),
- Harmony Gold Mining, and
- Crown Consolidated Recoveries.

A fourth part became an offshore gold company, Randgold Resources, which operates the Syama mine in Mali.

In 1997 Harmony Gold Mining Company severed its links with Randgold and became an independent, unhedged, South African gold producer. Since then, the company has expanded from the single mine in Virginia to becoming the world's sixth largest gold producer by acquiring both South African and overseas assets. Overseas assets are located primarily in Australia and Papua New Guinea.

In 2007 Harmony Gold Mining Company was the sixth largest gold producer in the world. In Financial Year 2004/2005, Harmony produced three million ounces of gold, predominantly from South African sources (Harmony Gold, 2005). Eighty-nine percent of the company's production was in South Africa with 11% production overseas during June 2005.

Harmony Gold Mining Company employed 53 588 people (including contractors) at the end of June 2005, of which 96% (51 610) were employed in South Africa. During 2007 the company suffered huge financial losses resulting in the resignation of the chief executive officer and the financial manger. The company was also forced to sell some of its assets to remain afloat.

Harmony Gold has always prided itself in being in the forefront of gold beneficiation in South Africa. The development of a jewellery manufacturing hub for Virginia was announced by the company during 2000. The project was described as a co-ordinated approach between Harmony, labour, government and other stakeholders to establish a leading South African jewellery industry. Although mentioned in the Free State provincial plan, the jewellery manufacturing hub was not mentioned in the local Matjeheng Integrated Development Plans of any of the past five years. The past five years have shown that very little of this planned hub has been successful.

Similarly the company saw itself during the time of the establishment of SARM as a forerunner in corporate social responsibility and in doing so providing possibilities for sustainable development (www.harmony.co.za¹⁶⁰; Harmony, 2002; 2003; 2004; 2005). This mantra reminds one of the words of Dr. Joseph Goebbels, Propaganda Minister of the German Third Reich: "Repeat a lie a thousand times and it becomes the truth..." (Doob,1950). It must be noted that senior management and governance at Harmony Gold changed substantially in August 2007 when the then CEO, Bernard Swanepoel, resigned. At that time, Harmony Gold was deep in debt and dealing with an accounting mess (Miningm^x, 2009).

5.5.2 BAE Systems/SAAB Consortium

BAE Systems

¹⁶⁰ Accessed 28 November 2006

British Aerospace is Europe's biggest arms production company and conducts sales across the globe. The company was first formed as a nationalized corporation in April 1977 through the merger of British Aircraft Corporation, Hawker Siddeley Aviation, Hawker Siddeley Dynamics and Scottish Aviation. In 1981 the United Kingdom Government sold 51.57% of its shares and in 1985 sold the rest of its shares, keeping only a special one British Pound share.

The now privately-owned company began to expand its holdings significantly and now has interests in areas spanning the range of avionics and defence systems, but it is primarily an arms company present on five continents, although based in the United Kingdom. The company owns 50% of European Aeronautical Defence and Space Company (EADS), with the other 50% held by AeroSpatale Matra of France and DaimlerChrysler.¹⁶¹

Even though BAE is a private company, it, as well as other British arms exporters, receives assistance from the British government through the Defence Export Services Organisation, which advises companies on markets and facilitates access to overseas decision-makers (Miller, 1996). Miller further argues that the British defence industry uses tactics to increase its arms exports, including "a willingness to facilitate offset deals; the use of aid in underwriting arm sales; and the provision of a subsidy for sales to developing countries in the form of disproportionate amounts of credit for military, as opposed to civil, exports". This is done with the endorsement of the British government (Miller, 1996:5).

SAAB

Although SAAB, a Swedish company, is now mainly known by the man in the street as an automobile manufacturer, the company was originally built to manufacture military aircraft (bombers and fighters) to be used in

¹⁶¹ Engineering News, February 10, 2000

World War II. The factory was built in 1938. The manufactured planes were mostly copies of German and American design and the first SAAB in-house designed aircraft, the SAAB 17, was completed in 1941. Shortly thereafter, a bomber, SAAB 18, also rolled off the production line. In 1944, towards the end of World War II, SAAB began work on non-military aircraft – primarily the SAAB 90 and 91, which were small passenger planes (www.swedecar.com/saab_history¹⁶²).

Even though SAAB now primarily manufactures automobiles, it is still recognized as a large military production operation, and it still manufactures both civilian and military aircraft, such as the Viggen and now in its consortium with BAE Systems, the Gripen. The military production arm of the company focuses on high technology defence, aviation and Space. Shareholders include Investor AB, the Scandinavian Investment Group and now BAE Systems (www.saab.se).

The BAE Systems/SAAB consortium

Even though not mentioned on the BAE Systems website, a joint venture between SAAB and BAE Systems (Gripen International) was established in 2001 in order to collectively fulfil the two companies' South African industrial participation (IP) commitments. The joint venture is equally owned by SAAB and BAE and is registered in both Sweden and Britain (Gripen News, September 04, 2000). In South Africa a company, The South Africa National Industrial Participation (SANIP), was established to act as the IP project manager in South Africa.

The South African arms deal

In terms of the South African arms deal, the BAE Systems/SAAB consortium agreement, signed in December 1999, was set in fixed dollar terms at a cost of US\$2.2 billion, making it the largest part of the arms deal.

¹⁶² Accessed 20 November 2006

In terms of the deal, the companies will jointly supply the South African Air Force with 28 Gripen fighters and 24 Hawk trainers. In terms of the attached offsets, the BAE Systems/SAAB consortium's investment takes the form of a mix of 21 NIP and 12 DIP projects. The specific areas were identified to include forestry, automotive, electricity, power generation, engineering and metals processing. Work packages and technological transfers worth US\$1.5 billion in South Africa's defence and aerospace sector, as well as civil industrial areas identified by government for strategic development were also included (Gripen News, December 10, 1999). Due to the size of the deal, the company will discharge the obligations over an eleven year period.

Defence Industrial Participation

According to the press release at the time, the DIP benefits from the BAE/SAAB consortium will come in three forms:

- Local defence firms will earn over R4 billion via direct participation in the production of the aircraft and ships being procured. This is worth about 20% of the total. In addition, the suppliers are transferring technology worth about R3 billion in royalties and licence agreements to South African firms, and will direct export orders to South African firms.
- Counter-purchase by the defence equipment suppliers of South African goods, including automotive components, furniture, fabricated metal goods and electronic goods worth approximately 45% of the total value.
- Foreign investment in South Africa associated by companies associated with the equipment suppliers – worth approximately 35% (Defence Systems Daily; Press Release by Government Communication and Information Service, September 15, 1999).

State-owned Denel is one of the local defence firms that stood to benefit from the BAE Systems/SAAB consortium DIP offsets.

National Industrial Participation

Although it was originally announced in 1999 that the BAE Systems/SAAB consortium would initiate 21 NIP projects, by 2003 the list of these projects included 23 projects as demonstrated in the table below.

Table 24 BAE Systems/SAAB's NIPP projects' geographic spread

Geographic Area	Number of Projects
Gauteng: cities	8
Gauteng: rural	2
KwaZulu-Natal: cities	7
KwaZulu-Natal: rural	3
Eastern Cape: cities	3
Eastern Cape: rural	1
Western Cape: cities	2
Western Cape: rural	1
North West: rural	2
Free State: rural	2
Mpumalanga: rural	1

Source: NIPP 2003 report

In terms of its five NIP projects that are precious metal beneficiation projects or projects related to beneficiation, the BAE Systems/SAAB Consortium has had mixed success. Its small sponsorship to the Harmony Jewellery School was limited to one year¹⁶³, while funding towards Mintek's gold technology and the Implats platinum and gold jewellery project have been successful to date. However, its ventures into Oro-Masaka and SARM have not been successful with both projects grounding to a halt a few months after it was initiated.

The gold advance scheme in association with Gold Fields, AngloGold Ashanti and Standard Bank of South Africa has been withdrawn (DTI, 2009:37).

¹⁶³ Interview with Alta Wessels, Project Manager, Harmony Jewellery School, 16 May 2005

5.5.3 Industrial Development Corporation (IDC)

The Industrial Development Corporation of South Africa (IDC) was established in 1940 to promote economic growth and industrial development in South Africa through the provision of both loans and equity financing at commercial levels (www.idc.co.za¹⁶⁴). Until the 1990s loans were provided at very low interest rates. Although it was originally 100% state-funded, it is now completely self-financing.

The IDC's loans directly accounted for around 12% of gross domestic fixed investment in manufacturing from 1998 to 2000 (IDC, 2001a, 2001b). It has historically been oriented to the development of extremely large-scale mineral beneficiation projects and has close links with previously state-owned industrial enterprises such as Iscor and Sasol, as well as the major conglomerates. In 1998, the IDC owned 11.3% of Gencor, 14.4% of Iscor, 9.1 per cent of Billiton and 8.2 per cent of Sasol. The projects in the non-ferrous metals and basic iron and steel sectors with major IDC participation alone accounted for approximately 25% of total manufacturing investment from 1992 to 1997 (IDC, 1997).

From June 1994 to June 1999, over half the IDC's investments by value, were classified as being in basic, non-precious metals (IDC, 1999). A greater focus in recent years on small and medium enterprises (SMEs), as well as tourism and agriculture projects, has shifted the IDC project mix to some extent.

SMEs are defined by the IDC as business ventures with total assets valued to less than R30 million. Lending to SMEs accounted for around 75% of the number of projects and 15% of the amount of finance authorized by the IDC in 2001. According to Mr. Kevin Jacobs¹⁶⁵,

¹⁶⁴ Accessed 10 January 2005

¹⁶⁵ Interview with Kevin Jacobs, Industry Analyst, IDC in 07 July 2005

jewellery manufacturing initiatives could qualify as SMEs provided that they fit the definition and have other donors that assist them with the machinery and other intensive capital requirements.

IDC has funded, in partnership with the BAE Systems/SAAB consortium and Harmony Gold Mining Company, two gold jewellery factories located in Virginia. Both these factories have failed. These two ventures were IDC's first steps in investing in gold beneficiation.

5.5.4 Royal Chain Canada Inc.

The Royal Chain Canada Inc. is based in Ontario, Canada and was first established in 1989. The company is producing high quality gold chain for the design, wholesale and manufacturing trades. The firm exports primarily to the USA (www.canaoro.com¹⁶⁶).

Enquiries about SARM via telephone calls and e-mails to Royal Chain Canada Inc. were not responded to date.

5.5.6 Ownership post-2004

In 2004 the ownership of SARM was reported as follows:

- 40% is owned by IDC
- 15% owned by Valentino Diaz, who was SARM Managing Director and Royal Chain Canada Inc. Vice President Sales (DTI, 2003)
- 15% owned by Luis Perez, the SARM CEO
- 30% owned by Royal Chain Canada Inc.¹⁶⁷

¹⁶⁶ Accessed 12 July 2006

¹⁶⁷ Personal communication with Perez in April 2004; Mining Weekly, April 16, 2004; Mining Weekly, February 17, 2005

This new ownership structure indicates that at some stage in 2003 and 2004 there was a management buy-in to the company. The BAE Systems/SAAB consortium was not mentioned because it is not seen as an owner as such, but rather a provider of start-up funding through a rotating loan facility that could be drawn down over a five year period, and the loan could be refunded to the BAE Systems/SAAB Consortium through profits made through export sales.¹⁶⁸

It is interesting to note that AgustaWestland has a different approach to carrying-out its obligation. In its beneficiation NIP project, Filk Gold Chains of South Africa, it did not directly invest in (or loan money to) the project, but rather facilitated a buy-in from an Italian firm into the existing project. In this way, the NIPP obligation is completed successfully in that the funding was transferred and the project benefited, but there is no 'loan' hanging over the head of the project.

5.5.7 SARM Exports

SARM started production in May 2002. The factory aimed to export annually two tons of locally produced 10-, 14- and 18-carat gold rope chain.

On 12 March 2003 the company released a press release that announced that it had already exported finished and semi-finished products to the value of US\$3 million to North America since the start of operations, and that they aimed to export US\$15 million worth of gold rope chain in the first year of full-scale production. It could not be confirmed whether this was achieved. SARM was supposed to feed Royal Chain Canada's North American distribution network.

¹⁶⁸ Mr. Linden Birns, interviewed on 05 July 2005

DTI reported in 2004 that exports had reached up to 400kg of gold rope per month. It projected sales of US\$ 37 million for the 2004 financial year and sales up to US\$ 350 million by 2011 (DTI 2004:26).

5.5.8 SARM Employment

Gold rope chain is hand-made and labour-intensive. It was reported in the media that about 500 women was employed when the factory started production. In 2003 Harmony Gold Mining Company reported in its annual report that the factory employed 700 people in that year (Harmony, 2003). This in sharp contrast with information in the 2004 NIPP report which indicated that 500 jobs were created; an article by Mining Weekly, February 17, 2005 which reported the creation of 600 jobs; and yet another report by Mining Weekly¹⁶⁹ published several months after the closure of the factory, which indicated that there were only 200 permanent jobs. Without access to the company's official records, it was not possible to ascertain exactly how many jobs there actually were.

Although SARM reported in 2004 that it had employed 500 people with another 1000 jobs in the pipeline, the company closed abruptly in early December 2004¹⁷⁰ leaving all workers unemployed.

5.5.9 Theft and Fraud at SARM

The SARM Managing Director and CEO were arrested on February 14, 2005 on charges of fraud and theft. Reports have subsequently

¹⁶⁹ April 15, 2005

¹⁷⁰ Some reports indicated that it closed in November 2004 (Business Day, May 27, 2005). Although it was not possible to get an exact closure date from key informants or the focus group discussions, the focus groups participants were adamant that the factory was shut overnight during the 'last days of November and early days of December 2004' period.

revealed that Mr. Perez and Mr. Diaz were also directors of a USA-based company called Mega Gold.¹⁷¹ In contrast with media reports that Royal Chain Canada Inc. was the international outlet for SARM, Mega Gold was SARM's only overseas buyer.¹⁷² The fact that Valentino Diaz was also listed as Royal Chain Canada Inc.'s vice president of sales should have been a red flag to IDC, Harmony and BAE/SAAB before the business was even formalized.

Linden Birns, the BAE Systems/SAAB consortium spokesperson, wrote in an e-mail to me in September 2005 that "the creditors moved to have SARM's operations suspended in total to safeguard and secure their loans. Messrs Dias (*sic*) and Perez left South Africa at around this time, but as was widely reported in the news media, they were arrested by the Scorpions in a sting operation when they returned to South Africa a few weeks later" (E-mail from Linden Birns, 15 September 2005). The BAE Systems/SAAB consortium considered itself to be a creditor.

Harmony Gold Mining Company's Marketing Director, Ferdi Dippenaar, was quoted in a Reuters press release on February 16, 2005 referring to the SARM Managing Director and CEO: "We became uncomfortable with their business practices. Their company had bought gold from Harmony over a couple of years, and SARM owed Harmony 68 million Rand." Through this statement it was clear that Harmony Gold Mining Company had separated itself from SARM completely, referring to it as a separate entity, while viewing Harmony Gold Mining Company as an affected creditor.

SARM was however not Harmony Gold Mining Company's first encounter with Messrs Diaz and Perez and Mega Gold.

¹⁷¹ There is a company called Mega Gold listed in Florida, USA.

¹⁷² The Star, February 16, 2006

5.5.9.1 Via D'Oro

Harmony Gold Mining Company and the Free State Development Corporation (FDC)¹⁷³ founded a gold jewellery company in 1999. The company was called Via D'Oro (VDO). Mega Gold obtained shares in VDO at some stage and also became the main buyer of the VDO jewellery in the USA.

According to the Scorpions' spokesperson Makhosini Nkosi as quoted in The Star: "In June 2000 the first batch of jewellery, valued at about US\$35 000 was produced by VDO and sent to Mega Gold, which said that problems with the shipment would result in a loss of US\$4 000. Two more shipments followed and VDO was ultimately conned out of US\$195 000. VDO was left stranded, owing Harmony R6 million as Perez disappeared after the third shipment" (The Star, February 16, 2005).

Harmony Gold Mining Company closed down VDO in February 2001 resulting in job losses of 475. According to the FDC website, SARM was established on the refurbished VDO premises and that most of the workers who lost their jobs were employed at SARM (www.fdc.co.za)¹⁷⁴. This could not be verified at the focus groups held in May 2006, who could only vaguely recall VDO. However, it appears more likely that SARM was established on the refurbished premises evacuated by OroMaska (which came into operation in 2001) after it took over the premises after VDO failed.

The Scorpions spokesperson, Mr. Makhosini Nkosi, was further quoted in The Star with reference to SARM: "SARM's only buyer was Mega Gold, which owes it R4 million for jewellery. SARM owes Harmony Mine

¹⁷³ Other possible parties/owners are not known and it does not appear to be a NIP project.

¹⁷⁴ Last accessed on October 18, 2006.

R68 million for gold provided” (The Star, February 16, 2005). It has been impossible to get this verified as the repeated response from Harmony Gold Mining Company has been that the forensic investigation into the business of SARM is still ongoing. All attempts to reach SARM’s liquidators and specifically Theo van den Heever were unsuccessful. The Business Day also reported that SARM bought gold on credit from Harmony Gold Mining Company to make jewellery which it then passed on to Mega Gold, owned by Perez and Diaz (who were both not only shareholders, but also directors with executive powers, in SARM) for sale in the USA market and for which SARM never was paid.¹⁷⁵

It is not clear why Harmony Gold Mining Company would enter into business relations with two individuals and their company who had led to the demise of VDO.

5.5.10 The court case

Mr. Diaz and Mr. Perez appeared in the Johannesburg Magistrate Court on February 16, 2005 on the charges of theft from SARM and were granted bail of R500 000. The court case was postponed to March 10, 2005 and transferred to the Virginia Magistrate Court. On March 10 the case was transferred to the Welkom Regional Court and postponed until May 9, 2005. In June 2006 the trial started, but the Scorpions indicated that they were not ready to proceed, leading to the case being removed from the court roll and Perez and Diaz free to leave the country.

5.5.11 SARM's Liquidation

The company is still under liquidation and a forensic investigation by KPMG was still not complete in early 2007, and it appears as if it has now been put on the backburner indefinitely. Enquiries about SARM to both KPMG and D&T Trust, the liquidators, were not responded to as they said they could not discuss the matter with me. Theo van den

¹⁷⁵ The Business Day, May 27, 2005

Heever of D&T Trust was however quoted in the Business Day as saying that although the investigation had not been completed yet, there was a “fair amount of disingenuousness” (Business Day, May 27, 2005). During 2007 the machinery and other equipment owned by SARM was auctioned off as part of the liquidation process.

At a meeting in July 2005 with representatives from IDC, I was told that they could not discuss an individual case, such as SARM with me, because they did not have the details and that the investigation was still not complete. They said that as this was a bankrupt business, IDC would try and recoup monies after the investigation was completed, but that monies which could not be recouped would be written off as a loss.¹⁷⁶ IDC was quoted in the Business Day as saying that ‘the venture failed because it had been based on a weak Rand’ (Business Day, May 27, 2005). This was not the case. Even if there was a marginal truth to that statement, Filk Gold Chains of South Africa demonstrated that even with the stronger Rand, gold jewellery remained in high demand overseas and that gold jewellery manufacturers could remain afloat with the correct business practices and acumen.

5.6 Conclusion

This chapter has described the background and context within which SARM was founded and operated in.

The Free State Province has experienced a steady decline in GGP during the past decade and can be considered as one of the country’s poorer provinces. One of the reasons for this is the steady decline in the gold mining industry in this area. Virginia is located in the goldfields and has a town, which is completely reliant on gold mining. It has a high level of poverty and unemployment. In this town Harmony Gold Mining Company is the only mining company operating and thus finds itself

¹⁷⁶ Meeting with Messrs Jacobs and Ndoba, IDC, 05 July 2005

under pressure to invest in socio-economic projects and in recent years, the pressure to invest in gold beneficiation. At the same time the NIPP obligors are looking for investment possibilities in order to complete their obligations. SARM is established in this context. Although on the surface the company fails because of theft of gold, there are more complex reasons for its failure.

The findings of the evaluation are discussed in the next chapter. The company is evaluated against the NIPP objectives: sustainable economic growth; establishment of new trading partners; foreign investment into South Africa; exports of South African “value-added” goods and services; job creation; human resource development; technology transfer; economic advantages for previously disadvantaged communities. To further enhance the findings of the evaluation, SARM was also evaluated against the performance of two other jewellery manufacturing beneficiation projects: Filk Gold Chains of South Africa and Silplat (Pty) Ltd (discussed in chapter 4).

6 FINDINGS

SARM was evaluated against the NIPP objectives as described in earlier chapters. To further enhance the findings of the evaluation, SARM was also evaluated against the performance of two other jewellery manufacturing beneficiation projects: Filk Gold Chains of South Africa and Silplat (Pty) Ltd, which were discussed in detail in Chapter 4.

6.1 Foreign investment into South Africa

6.1.1 Direct cash foreign investment

Direct foreign investment can be a major stimulus to economic growth in developing countries. One of the main objectives of the NIPP is to encourage direct foreign investment into South Africa. The main catalyst of this investment should be the NIPP obligors and the vehicle for such investment would be a business venture that would be beneficial for the country. DTI guidelines indicate that business proposals linked with NIPP and offsets should be made on the principles of mutual benefit and good business sense (DTI, 2001).

NIPP Objectives	Filk Gold Chains of SA	SARM	Silpat
Foreign investment into South Africa	US\$1.5 million	US\$9 million.	US\$47million (2004 NIP annual report, p. 26) US\$25 million (Implats press release, 07 April 2004)

Of the three projects, Filk Gold Chains received the least direct foreign cash investment. The Filk Gold Chains project received US\$1.5 million cash investment from Agusta Westland as part of Agusta Westland's NIPP obligations (DTI, 2002). SARM received a cash injection of US\$9 million from the BAE Systems/SAAB consortium (DTI, 2004). Although

the exact amount is uncertain, compared to the other two projects, Silplat received the most direct foreign cash investment. The venture is said to have received a combined foreign and local investments worth US\$25 million (Implats Press Release, April 07, 2004), the DTI 2004 NIPP Annual Report list the project as receiving investment worth US\$ 47 million from the BAE Systems/SAAB consortium alone, excluding local investment.

In terms of offsets and projects linked to offsets, it is critical to ask how the offset activity is being financed. If it is fully financed by capital raised outside the weapons purchasing nation, then it is actually bringing in fresh capital. In the case of SARM, only approximately 50% of the investment was foreign. SARM received US\$9 million from BAE Systems/SAAB, 40% of the complete funding package came from the IDT. Harmony Gold provided most of the machinery (originally purchased for the two ventures that failed previously) as well as the buildings that housed the business.

Internationally the sale or donation of redundant mine infrastructure as a means of supporting business development and alternative economic activities is common closure practice (World Bank and IFC, 2002a). There are commercial benefits associated with the responsible transfer of redundant mine assets to new business ventures for the mining company. In the present South African legislative and accounting framework, mining infrastructure is unique in that it is the only asset that is not depreciated to zero value during its commercial life. International mine legislation, including South African legislation, requires that the company restores the mining site to a stable, non-mining condition, preferably one resembling the status quo prior to mining. Thus mining infrastructure in the form of buildings can become quite a liability to the owners. As an alternative the building may be sold or transferred to another entity but only after it has been determined that this new owner possesses the means to manage the impacts upon the land – which would be minimal in the case of a jewellery factory.

In the case of a business being the new owner, its ability to generate a positive cash flow over a period of years and on a scale capable of dealing with the impacts, is deemed adequate assurance. The transfer of the building into the name of another business does not require a payment from the receiving business in order to allow the mining company to qualify to remove the infrastructure from its list of liabilities. There is thus benefit for both sides. The new business venture can acquire premises with at near zero costs, which is a huge advantage as it frees the business venture from having a lease, or the need to purchase a substantial capital asset. This is an immediate inherent competitive advantage for any business.

Harmony Gold Mining Company has been providing the buildings for the factories and accommodation for overseas workers. According to the Harmony Gold annual reports beneficiation enterprises are being established in existing excess company infrastructures. It was not possible to ascertain whether these buildings had been transferred to the jewellery manufacture companies and whether the buildings have been removed from Harmony Gold Mining Company's list of assets. The information was deemed confidential.

6.1.2 Foreign technology transfer

In terms of the South African Industrial Participation policy, foreign investment also includes technology transfer into the country. Technology transfers can play a significant role in increasing the factory's competitiveness and the quality of their output, while on a broader social level building the indigenous manufacturing capacity. However, research has shown that in many cases technology transfers do not provide sufficient input to develop or sustain indigenous manufacturing capacity (Cawthra, 2000; Martin, 1996; Struys, 2002). The limitations of technology transfer are not limited to the NIP

programmes. Haines (2006) reports that within the DIP, trends include limited technology transfer; concerns about leaching of local technology and loss of local intellectual capital; as well as little or no planned domestic conversion of imported technology as part of the offsets.

NIPP Objectives	Filk Gold Chains of SA	SARM	Silpat
Technology Transfer	Yes, albeit not 100% due to protection of own turf by overseas company	Could not be established for sure, although report of purchase of casting machinery from Italy, however conditions of these deals not established	Yes, albeit not 100% due to protection of own turf by overseas company

Filk Gold Chains of South Africa only has approximately 10% of the technology capacity of Gruppo Industriale Filk. South African technology is years behind that of Italy.¹⁷⁷

Apart from labour, all input costs in jewellery manufacturing in South Africa are expensive. This is because all machinery to mass produce jewellery is manufactured overseas and needs to be imported, which makes the purchase foreign exchange dependent.

It is not clear whether South Africa is receiving state-of-the-art technology through the NIPP initiatives, but it is highly unlikely. In a forced situation, where companies are forced to cooperate instead of doing it because it makes good business sense, such as is the case with the NIPP projects, the transfer of technology cannot be sustainable because the transferring company will not stop advancing in its own

¹⁷⁷ Mark Tarlie, OroAfrica, interviewed in July 2003

knowledge and technological prowess, and it would be most unlikely that they will enhance the receiving company's to be on par with their own as the receiving company still essentially remains a market competitor.

Mr. Tarlie, OroAfrica¹⁷⁸, confirmed this and believes that the Italian firm, Gruppo Industriale Filk, would not transfer all their knowledge or make the newest and most advanced technology available to the receiving firm, as they would need to protect their own industry. In order to address this the supplier in some offset cases agrees to invest in physical plant and technology in the purchasing country and purchase back a certain proportion of the output produced there by the receiving company using the technology and plant. In this way, uncertainty about the quality of the technology and plant is mitigated as the receiving firm will be sharing the risk with the obligor (Williamson, 1993). This scenario does not appear to have been the case in any of the three projects.

In the case of SARM it is not clear where the technology came from, whether Canada or India. This is not clear because SARM took over the premises from which Oro-Maska operated and presumably used the machinery available on the premises¹⁷⁹.

In 2004, Mining Weekly¹⁸⁰ reported that SARM was starting to use casting methods to complement the chain processes, and that machinery had been installed. The Free State Development Corporation also reported that SARM had successfully negotiated with an Italian investor to form a joint venture worth R120 million, which would create 50 to 60 jobs. This was reported nowhere else and my enquiry about this to Harmony Gold Mining Company was not responded to. It is possible that this joint venture had produced the gold casting machines.

¹⁷⁸ Interviewed July 2003

¹⁷⁹ As part of the SARM liquidation process all machinery and other equipment that formed part of the business were auctioned during 2007. Both OroAfrica and Silplats bought equipment at the auction.

¹⁸⁰ April 16, 2004

Mining Weekly further reported that technicians were brought in from Peru to operate the machinery and that a person had been sent to Italy for training. It is not clear if this person was South African or Peruvian. The focus group participants were unaware of South African employees that were sent overseas for training.

Even though it was reported in Harmony Gold Mining Company's annual reports and several media articles that the investors in SARM had transferred technology, skills and management expertise to SARM, this could not be verified sufficiently.

6.2 New foreign trading partners and sustained exports

For offsets to carry genuine economic impact, world demand for the underlying products must be increased (Miramon, 1985). Even though the high gold price led to a drop in the demand for gold jewellery internationally in recent years, this is not considered to a serious or long-term condition and there still appears to be sufficient demand world-wide.

In 2000, South Africa exported approximately 15% of its gold manufactured jewellery to US, UK and Australia (Jewellery Council of South Africa). In comparison, OroAfrica, the largest gold jewellery producer in SA currently, exports 80% of its products to those countries. The local market buys predominantly 9ct jewellery, and once the local market is saturated, 9ct gold products are exported primarily to Australia, UK and Mauritius. Few 9ct gold products are exported to the US, who prefers 14 and 18ct gold products.¹⁸¹ OroAfrica distributes through world-leading jewellery brands, such as Fope, Ronco and Piero Milano. At this time Silplat relies primarily on its Italian partner, Silmar, for international distribution. Like Filk, Silmar is a well-known international brand name.

¹⁸¹ Mr. Mark Tarlie, OroAfrica, interviewed in July 2003

NIPP Objectives	Silk Gold Chains of SA	SARM	Silpat
Establishment of new trading partners	Yes, there are distribution agreements with various overseas distributors in USA, Europe and Far East	Had an exclusive deal with one US-based company. Led to fraud and theft.	Yes, working through Silmar to establish trading partners in Europe and elsewhere
Exports of South African "Value-added" goods and services	Yes	Yes, over a one year period, although the bulk of these goods were not paid for.	Yes

Clusters are important vehicles for access to global value chains for new enterprises (Nadvi and Barrientos, 2004). Compared to Filk Gold Chains of South Africa and Silplat, SARM was lagging behind. Both companies produce gold products for both the national (local) and international markets. SARM was not producing for the local or even national market and its main challenge was to be globally competitive. But its business was not well placed within linkages and clusters, and SARM only had one market outlet: Mega Gold in the USA. In contrast with media reports that Royal Chain Canada Inc. was the international outlet for SARM, Mega Gold was SARM's only overseas buyer.¹⁸²

Linkages between the Augusta Filk Gold Chains of South Africa, the BAE SARM, or even BAE Silplat projects are non-existent. Indeed, within the Strategic Defence Programme project portfolio, contact between the main obligors appears at best rudimentary. The Department of Trade

¹⁸² The Star, February 16, 2006

and Industry appears to be dealing with obligors on an individual basis (Haines and Wellmann, 2005).

SARM appears to have sold its products exclusively to Mega Gold, which appears to be based in Florida in the USA. It is not a well-known entity in the international jewellery trade. Royal Chain Canada Inc. was reported to be one of the main investors in the business and it owned 30% of SARM. It does not appear as if any products were sold to Royal Chain Canada Inc. but even if products were sold to the Canadian company, the company only exports to the USA and not to other international countries.

Both Filk Gold Chains of South Africa and Silplat have linkages to Europe through their Italian alliances. This allows them not only available markets but also a link with a well-established brand name. These Italian firms in turn have forward linkages to other international markets, such as North America and the East. Silplat have different and individual forward linkages for both its two main precious metals, gold and platinum, products.

Filk Gold Chains of South Africa has during its lifespan managed to sign numerous distribution deals with some of the world's leading jewellery brands, such as Fope, Ronco and Pierre Milano. These distribution deals still exist and OroAfrica is reaping the benefits. The foreign brand names have secure export markets in the United States, their biggest partner; Brazil; UK; Europe; Australia and Mauritius.

6.2.1 Export Credit Calculations

The manner in which credits are awarded for exported products under the NIPP has been criticized by researchers.

The NIPP credit system measures each credit as equal to one US dollar of the NIP obligation amount. Certain types of projects, such as

research and development projects, are awarded greater credits. Credits are awarded accumulatively over the NIP obligation period and based upon successful performance. Export credits are awarded on the basis of the total value of the exported product, rather than on the value added by the investment. This can result in severe distortion when dealing with gold beneficiation. Export credits are claimed on the full value of the export rather than on the value-added. For a high-value commodity like gold, this can lead to bloated calculations. Thus: if the gold price is US\$400/ounce, and the beneficiated costs are US\$100/ounce, the credit would be calculated as if the total value of the credits were US\$500/ounce.

In order for credits to be awarded, economic activity must be shown as clearly generated by the offset obligation and that it would not have happened anyway without the offset. This is nearly impossible to measure and ascertain especially in situations where the business already exists prior to the offset intervention and the offset's aim is to enlarge its existing activities. Also problematic is the rule that companies can claim full offset credits for investments they claim to have "facilitated" from other sources, such as local banks or IDC or FDC. Many projects are majority-funded by the IDC or local banks, with the foreign arms company investing little, yet they can claim full offset credits.

In 2004 it was reported that the BAE Systems/SAAB consortium achieved 149% of its investment milestone. This milestone included SARM, as well as Musuku Beneficiation Systems. Whether the credits will be adapted to reflect the failure of SARM could not be confirmed by Mr. Dion Harold of DTI¹⁸³. The NIPP 2005/2006 Annual Report did not comment on the failure of SARM or how this will affect BAE Systems/SAAB's credits. It did however indicate that the BAE Systems/SAAB consortium had met a milestone with US\$2.3 billion

¹⁸³ Interviewed on 23 June 2005

worth of credits (p. 24). The report credits gold beneficiation and the Gold Loan Scheme¹⁸⁴ as the main contributing projects to this milestone. It is important to note that of 13 December 2007 the Gold Advance Scheme had not assisted a single jeweller as yet and the pilot is considered to have been flawed and not successful.¹⁸⁵

6.3 Job creation

NIPP Objectives	Silk Gold Chains of SA	SARM	Silpat
Job creation	Yes, jobs increased with more than 50% since the NIPP intervention	Approximately 200 permanent jobs plus some contract workers, however all jobs were temporary and not sustainable	Saved the 120 jobs that was in existence prior to the NIPP intervention. These jobs have been sustained.
Upliftment of members of previously disadvantaged communities	Yes, employs predominantly Coloured and Black workers, large amounts females, in line with Western Cape demography, also employs deaf women, which looks good in terms of Equity.	Employed previously unemployed Black women from the local area, yet did not provide sustainable jobs, so it was not a sustainable improvement of the disadvantaged community	Employs predominantly Coloured and Black workers, largely female

¹⁸⁴ This refers to the Gold Advance Scheme.

¹⁸⁵ Interview with Joanne Jones, AngloGold Ashanti, 07 December 2007

The number of jobs created in the jewellery manufacturing sector depends on the type of manufacturing engaged in. Those manufacturers who primarily use machinery require fewer employees to manufacture jewellery compared to those manufacturers who use cast methods or who make hand-made jewellery. Hand-made jewellery is labour-intensive and requires more staff than either of the other two methods.

6.3.1 SARM

SARM produced primarily hand-made gold rope, which is very labour-intensive and can lead to creation of a large number of jobs. Several figures of how many jobs had been created at SARM have been bandied about. Harmony Gold Mining Company reported in its annual reports that SARM created 700 jobs, DTI reported in 2004 that it was 500 jobs, the Mining Weekly reported in February 2005 that 600 jobs had been created, and in April 2005 the same Mining Weekly reported that there were in actual fact only 200 permanent jobs and some contract workers.

SARM imported eight workers from Peru with the understanding that they will be used to provide on-the-job training for local employees.¹⁸⁶ The local employees were semi- and unskilled workers from the Virginia area. The focus group participants, who are all ex-SARM employees, were not sure how many people worked at the factory, but none of the participants or their colleagues with whom they have contact, were permanently employed. They were all employed on short-term contracts. At the time of SARM's closure, these contracts were suspended and because they were not permanent workers, they did not qualify legally to be retrenched nor could they qualify to go through the retrenchment steps as legislated in the labour legislation.

According to the focus group participants, they were told that once the liquidation process is completed and once the creditors were paid, and

¹⁸⁶ Mining Weekly, April 16, 2004

provided that there were any funds left, the workers would benefit. When asked whether they are kept informed about the liquidation process, they said no. They did report though that when the factory shut down, they were told that should it re-open they will be re-hired. When asked whether they had any continued contact with Harmony Gold Mining Company, or a representative from SARM, to provide them with updates and keep them informed, they said no. This confirms that Harmony Gold Mining Company does not interact with community stakeholders on a regular basis, as required from a good corporate citizen. The behaviour of good corporate citizens with regards to their employees encompasses a broad range of operational issues. These include fair pay, a safe work place, equal opportunities, the promotion of diversity and support for employee development (Tuffrey, undated). SARM fell short on several of these aspects.

Those focus group participants who were lucky enough to find alternative employment took those jobs. Unfortunately these are in the minority and the majority remains unemployed.

6.3.2 Silplat and Filk Gold Chains

The NIPP expectation of the Silplat project is that it will provide 120 sustained jobs (DTI, 2004). At the time of the formation of Silplat, SA Link had 120 permanent staff members. The new venture absorbed all the SA Link employees (Implats, 2004; Confirmed by Mr Johan Smit, CEO of Silplat, on 31 August 2007). These 120 jobs have remained sustained even through the recent economic downturn. The employees are predominantly female and from previously disadvantaged population groups.

The 2002 and 2003 DTI reports expected the Filk Gold Chains of South Africa joint venture to create employment for 115 persons by the end of the obligation period, 2006. In November 2004 OroAfrica employed 128

employees and by early 2006 it had increased to 160 permanent employees.¹⁸⁷ The project created 120 permanent jobs by March 2007 at the time of the completion of the obligation.

According to Mr. Peter Cloete, Secretary of the Jewellers and Goldsmiths Union (Cape)¹⁸⁸, the company had a remarkable growth after Filk Gold Chains of South Africa was formed and started operating. He estimates an increase of at least 50% of employees who fall within his union's bargaining units. In 2003 that was a total number of approximately 80 members from both Filk Gold Chains of South Africa and Trigold. He estimates the total number of staff (inclusive of secretarial and other "white collar" staff) of OroAfrica as a group to be about 150 staff members. The staff members are similar to the Western Cape demographics and in line with the Employment Equity Act of 1998.

Mr. Mark Tarlie confirmed that in June 2003 they employed 148 workers, and had at one stage employed 180 workers, but due to the deterioration of the South African economy during the period 2001-2003 the company had to retrench some staff members. A further 20 workers were retrenched in early 2004, when even though the company increased the volume of its products sold by up to 15%, the strong Rand and the strong gold price, resulted in a drop in Rand turn-over for the company, forcing it to retrench employees.¹⁸⁹ By early March 2006, OroAfrica confirmed 160 permanent employees.¹⁹⁰

The number of jobs held by Trigold and Filk Gold Chains of South Africa were not segregated during the monitoring and for statistical purposes. For the purposes of the NIP calculations, it appears as if both companies' employees are lumped together. This was confirmed by Mr Tarlie, via e-mail on 09 October 2003.

¹⁸⁷ Personal communication with Mr. Steven Nathan, CEO OroAfrica, 2007

¹⁸⁸ Telephonic interview on 02 September 2003

¹⁸⁹ Personal communication with Mr. Tarlie, OroAfrica, November 2004

¹⁹⁰ Personal communication with Mr. Steven Nathan, OroAfrica

The Deaf Federation of South Africa¹⁹¹ do however keep separate statistics per company and have confirmed that Filk Gold Chains of South Africa employed four deaf women and that Trigold employed two deaf women on the factory floor and assembly line. OroAfrica started employing deaf women in May 2003. These women were still in the employ of OroAfrica at 31 August 2007.

The most important question though is whether these jobs are sustainable. The 60% appreciation of the Rand against the US Dollar since its lowest level in January 2001 (R13.65 to the US Dollar) is not a positive factor, since this swing caused havoc among the South African mining and manufacturing exporters. This combined with the constantly weakening US Dollar which drove up the gold price to a 25-year high during 2006¹⁹² combined with a relatively strong Rand against the US Dollar could have spelled doom for OroAfrica, yet the company appears to be weathering the storm very well. Throughout the past seven years it has maintained between 115 and 120 permanent employees, as well as temporary workers who might be required for special jobs.

6.3.3 Unionization

The presence of a strong union and bargaining council is a step towards the protection workers' rights.

The Western Cape and Gauteng are the only provinces that have a union that represents persons specifically working in the jewellery manufacturing and retail sector. According to Mr. Peter Cloete,

¹⁹¹ Telephonic interview with Wasima Herabai, recruitment officer of the Deaf Federation of SA (Cape) on 02 September 2003

¹⁹² The price of gold topped US\$600/ounce in March/April 2006, marking a 25-year high. It rose to US\$730/ounce in May 2006, then sliding down to hover around between US\$570-600.

Secretary of the Jewellers and Goldsmiths Union (Cape)¹⁹³ no union exists under which the SARM workers would fall in the Free State. They would not be represented by the Mine Workers Union (MUN). The focus group participants confirmed that they did not belong to a union and that there were no visits to them by any union representatives.

There are approximately 780 members in the Jewellers' and Goldsmith's Union in the Western Cape, of which 600 are employed in actual manufacturing, while the rest are employed in retailing jewellery.¹⁹⁴ According to Wesgro, the Western Cape is the only province in South Africa that has a bargaining council for the jewellery industry. Both Silplat and OroAfrica belong to the bargaining council. The main aim of such a council is to negotiate collective agreements between employers' and employees' organizations.¹⁹⁵ There is no gender discrimination in the application of these wages. It is understood that the employer shall provide training to all employees to enable them to move upward from the minimum wages.

All employees of OroAfrica (Filk Gold Chains of South Africa) and Silplat are protected under these conditions. The workers at SARM did however not have these protections in place.

6.4 Sustainable economic growth

6.4.1 Skills development

South Africa's legislative and moral push towards affirmative action makes it critically important that firms give particular attention to developing their internal human capacities through both skills development and stable employment policies. The development of human resources should be seen as more than just job-related skills

¹⁹³ Telephonic interview, 16 May 2006

¹⁹⁴ Telephonic interview with Marjory, Cosatu, Johannesburg Office, 16 May 2006

¹⁹⁵ Labour Relations Act of 1995.

training, but also as a means of resolving social pathologies. It can enhance broad political stability and a way of re-equipping those whose existing skills are redundant or lacking. This is crucial in the light of continued reduction of gold mining in the country.

NIPP Objectives	Silk Gold Chains of SA	SARM	Silpat
Human Resource Development	Training happening on continuous basis in-house on-the-job, also in Italy and through AngloGold Ashanti initiatives	Some in-house on-the-job training.	Training happening on continuous basis in-house on-the-job

The South African gold mining industry employs substantially more people than in other gold mining countries because it is involved in labour-intensive, deep-level, hard-rock, underground mining. Nevertheless, the gold mining industry is declining by approximately 8% annually in South Africa and due to continued mine closures the numbers employed in the gold mining industry keeps falling (Virtual Metals, 2007).

Companies do not function in isolation from the society around them. It is estimated that each mining job has between seven and twelve dependents. Thus the wider social and economic damage, not just in South Africa but also in neighbouring countries in the region, is substantial. In South African communities there is frequently a lack of entrepreneurship and business orientation, making the residents reliant on the formal sector for employment. Unfortunately few residents would have any of the skills required by available jobs. Workers who have lost their jobs due to mine closure or downscaling, and whose skills are redundant, need to be re-skilled. Many of the women who moved to

areas near mines post-1994 have either only worked as domestic workers or remained unemployed. Effective local economic development requires that local skills are retained and utilized. It would make sense that when a jewellery manufacturing facility is established within a traditionally gold mining area, such as Virginia, the retrenched miners and their female relatives would be given first option to be employed. SARM rightfully targeted the unemployed women in the Virginia area for employment.

The South African metal industry, which includes the jewellery manufacturing sector, faces considerable challenges related to skills and craftsmanship.¹⁹⁶ Within the jewellery manufacturing sector, specifically within those factories which has been funded through the NIPP, there are two specific issues faced in terms of attaining skilled workers. More so than non-NIPP sponsored manufacturers, they are faced with the following options:

- Do they train low-skilled workers through a training programme, which might mean the delay in production until all skills are acquired?
- Do they hire away skilled workers from the limited pool existing within the country? or
- Do they import skilled workers from abroad?

Workers at both Filk Gold Chains of South Africa and Silplats benefited, and continue to benefit, through on-the-job training for semi-skilled workers, while technical and assembly-line workers are sent on exchange training programmes both nationally and internationally to acquire skills that are then passed on through on-the-job training. This was possible as both were existing factories, with skilled employees at the time of the NIPP intervention.

¹⁹⁶ Mr. Roger Baxter, Chief Economist, Chamber of Mines, interviewed on 06 July 2005

During the first five years of Filk Gold Chains of South Africa's operations, six persons spent up to three months at Gruppo Industriale Filk plant in Italy for training. The rest of the staff members were trained in Cape Town as part of in-house and on-the-job training.¹⁹⁷ Training and research is also funded by AngloGold Ashanti in their various endeavours to promote the beneficiation of gold in South Africa. It is difficult to discern which knowledge transfer, whether from Gruppo Industriale Filk or from AngloGold Ashanti, was more valuable to Filk Gold Chains of South Africa and continues to be for OroAfrica. Yet according to Paul Romer's theory, which argues that expenditure by business on research and development creates a basis and environment for long-term sustainable growth, it is irrelevant which knowledge transfer benefited the company the most (Romer, 1993a; 1994). All that is important and relevant is that the company, and ultimately the country, benefits.

As SARM was not built on an existing factory with existing skilled labour in place, the decision was made to bring foreign skilled workers into the country to work at the factory. Eight workers were imported from Peru with the understanding that they will be used to provide on-the-job training for local employees¹⁹⁸. The local employees were semi- and unskilled workers from the Virginia area. A DTI news release¹⁹⁹ reported that local SARM workers had been given comprehensive skills training. The women in the focus groups said they were given on-the-job training.

Assuming the acquired skills are both relevant and transferable, the kind of human capital investment involved in raising workers' skills through training programmes, is a real contribution to development. In SARM's case the skills acquired by the women would only become relevant for the majority of the women if another similar factory opens within the

¹⁹⁷ Mr. Mark Tarlie, OroAfrica, interviewed in July 2003; follow-up interview on 18 October 2005

¹⁹⁸ Mining Weekly, April 16, 2004

¹⁹⁹ March 12, 2003

area, which has not happened yet. Only five (29%) of the 17 ex-workers participating in the focus groups, have managed to find other work. None of these jobs were factory-related work or relevant to the training they received from SARM.

The 1998 Skills Development Act encourages firms to take workplace-based training more seriously. Every employer in South Africa is obliged to pay 0.5% of its payroll to the Skills Development Fund,²⁰⁰ which is used to establish Sector Education and Training Associations (SETA) responsible for training. Employers can apply to SETAs for training for their employees, or can claim up to 50% of its skills levy back if it can show that it is registered with the SETA and busy with in-house-training. The jewellery manufacturing industry resides under the Mining Qualifications Authority SETA. Mr. Perez of SARM was quoted in Mining Weekly as having approached government for re-imbursment of training expenses: “We are preparing a submission to the Department of Trade and Industry and the Department of Labour to recover part of the cost incurred in training” (Mining Weekly, April 16, 2004). This implies that training did occur and that SARM was registered with the SETA. As the Mining Qualifications Authority SETA would have been the logical place to direct such a request for re-imbursment, I approached the SETA to find out if such submissions had been made and whether re-imbursments have taken place. Although this request for information had been made as early as August 2005 and repeated six times during the following two years, no response has been forthcoming to date.

6.5 Sustainable growth

The sustained success of a local business will influence the overall sustainable economic growth in the local area in which it operates. This happens through its continued creation of work opportunities to the local population, the provision of services to the local economy, and the payment of taxes to the local and national government.

²⁰⁰ Skills Development Act No 97 of 1998; Skills Development Levies Act No 9 of 1999.

NIPP Objectives	Silk Gold Chains of SA	SARM	Silpat
Sustainable economic growth	Yes, factory growing in terms of products and staff levels	No	Yes, at this time

In heavily mined areas such as the Free State goldfields, mine-sponsored development projects are important vehicles for stimulating local economic growth and development. The sustainability of these projects are crucial and it is becoming more internationally accepted that arrangements must be in place to continue the life of projects after initial project funding from the mining company stops.

In terms of mining areas, local government and mining companies have a shared responsibility for the sustainability of the community post mine-closure. Possible partnerships between the mine and the local authority must be established and in operation during the life-of-mine so that the transition to alternative economic activities is a continuous process. Any projects proposed by the partnership should form an integral part of the municipality's Integrated Development Plan (IDP) and should assist mining companies with the integration of their development plans with those managed by local municipalities.

Provincial governments are also important as the bulk of government fiscal allocation²⁰¹ is at the provincial level. Provinces are required to compile Provincial Growth and Development Strategies (PGDS), which is in effect an IDP at provincial level. Close scrutiny of the Free State PGDS revealed that although the importance of mining as a proportion

²⁰¹ It should be noted though that mining falls under the Department of Minerals and Energy, a national-level department, which has no corresponding provincial department, unlike Department of Trade and Industry, Department of Labour, and Department of Agriculture, which all have provincial counterparts.

of the provincial GDP was recognized, mining as a development partner was not addressed as a significant matter. Any development suggestions that deal with mining are at best *ad hoc* in nature. No mention is made specifically of offsets or beneficiation projects.

In terms of the Mining Charter, mining companies are required to monitor and report the results of their involvement in the IDP process. The following Mining Charter questions must be answered:

- Has the company co-operated in the formulation of IDPs and is the company co-operating with government in the implementation of these plans for communities where mining takes place and for major labour sending areas?
- Has there been effort on the side of the company to engage the local mine community and major sending areas communities?
- Companies will be required to cite a pattern of consultation, indicate money expenditures, and show a plan.

At the time that SARM was operational, it was not yet compulsory for mining companies to respond to the Mining Charter. It was thus not possible to ascertain how Harmony Gold Mining Company responded to these points in their annual score card submission.

Often extra effort would be required from the mine company aiming to participate in the IDP process, as local governments are frequently under-resourced and they also lack capacity and essential skills. Requests to the Matjhabeng Municipality to access their IDP committee meeting minutes for the past six years were declined. I had hoped to be able to assess whether Harmony Gold Mining Company played any role in the discussions and whether these jewellery factory initiatives were discussed at these meetings.

There is no evidence that Harmony Gold Mining Company or any of the other SARM partners conducted any social impact assessments, or

whether they engaged with the broader Virginia community when SARM was conceptualized or implemented. There is no evidence that Harmony Gold Mining Company or any other of SARM's owners engaged with the community regarding SARM since the closure of the business.

The most important condition for long-term success and sustainability for offset projects is that the project is designed to suit a specific economic or regional policy initiative. The more tailored an offset activity can be to existing policies or strategies, the better the prospects for success in terms of long-term policy goals. Just as important is the local development plans. The more an offset project fits into the existing IDP, the more likely it is to be supported by other local government initiatives, which can add to its success and sustainability.

Linkages of mining companies' local economic development initiatives with the local government planning and IDPs are thus extremely important and can ensure that such ventures are compatible with surrounding development initiatives. There appears to be limited co-operation or partnerships between Harmony Gold Mining Company and the Matjhabeng Municipality. None of the three Harmony Gold jewellery factories over the years are mentioned in the municipality's IDPs (Matjhabeng 2002, 2003, 2004, 2005). Nel and Binns found that in Matjhabeng "formalized partnerships do not figure prominently in local economic development initiatives" (Nel and Binns, 202:267). Instead it appears as if Harmony Gold Mining Company more frequently works with the provincial structures instead of the local authority structures. Two of the failed Harmony Gold factory initiatives, VDO and Oro-Maska were funded by the Free State Development Corporation.

Beneficiation requires the following:

- Both foreign and local investment

- Skills, and where those are lacking, skills training must be available.
- Working capital
- Markets and the demand for the products both locally and internationally
- Steady supply of the raw materials needed
- Government incentives and support

All available evidence indicates that SARM had all of these requirements met. Then why did the other two jewellery initiatives work and SARM fail? The most obvious point is that the Filk Gold Chains and Silplat initiatives were built on existing and successful jewellery manufacturing enterprises, instead of starting from scratch, as was the case with SARM. There is a tendency to start a new enterprise, rather than support and grow existing business to enable it to expand and create more sustainable employment. Both of these successful NIPP beneficiation initiatives had performed extensive due diligence studies and they both have monitoring systems in place with all the required checks and balances to keep the businesses healthy even in difficult times such as in recent years (Wellmann, 2005). The gradual weakening of the US Dollar on global currency markets in recent years led to the appreciation of the South African Rand and this rendered the country's products less competitive globally. Yet the Silplats and the OroAfrica initiatives adapted to these fluctuations successfully. They have ensured that they have sustainable markets that can withstand the fluctuations of the international demands for their products; they have invested heavily in training and skills development for their employees and have used the government incentives and other opportunities available at this time to their fullest potential.

Like any other business decision, the choice of offset projects need to be based on a realistic assessment of long-term prospects for the production line, technology and markets to survive in international

competition. None of the partners or initiators of the project appears to have done a thorough due diligence study. According to BAE Systems/SAAB's Linden Birns²⁰², Harmony Gold proposed the project to them and on the basis of that, funding was provided. According to Kevin Jacobs of the IDC²⁰³, funding would have been provided to the project based on Harmony Gold's proposal. None of the previously failed projects in the same town on the same premises appears to have raised a red flag. Neither did the fact that the company would be managed by the same persons that caused the failure of VDO, one of the previous companies established there.

6.6 Conclusion

The findings conclude that there is really no reason why SARM should have failed. Apart from what can be considered to be ill-intentions of its owners and investors, the company had the potential to be successful. The evaluation's findings raise the question of how much direct foreign investment should offsets projects contain. In the case of SARM, 40% of the cash funding came from within the country through the IDC, while Harmony Gold Company provided the land, buildings and gold loans, which would diminish the investment made by the BAE Systems/SAAB consortium to be less than 50%. The evaluation further raises the issue of the transfer of foreign technology. The conclusion is reached that such a transfer will never really happen to the extent anticipated by those who conceptualise these offset deals, as it makes no business sense, especially not from the obligor's shoes.

The SARM evaluation further highlights the importance of foreign trading partners and how valuable these can be to a small company provided that the obligor has a genuine interest in sharing markets (or that there are actually markets to share). If this part of an offsets deal is

²⁰² E-mail from Linden Birns, 15 September 2005

²⁰³ Interviewed on July 07, 2005

implemented well, and provided the company produces good quality products to international standards, it can lead to sustained exports that will benefit both the company, the local economy in which it operates, and the country.

This chapter shows how difficult it is to create new sustainable long-term jobs. It is easier to sustain long-term jobs that already exist, but then the offsets should focus on developing an existing brownfield project instead of rushing into creating new companies. Sustained growth of a company (and indeed a country) is closely linked to developing the skills of local workers instead of foreign workers.

The overall conclusions that can be drawn from this study are discussed in the next chapter.

7 CONCLUSION

SARM is an offset project, which is simultaneously a precious metal beneficiation project that forms part of a mining company's corporate social investment.

This evaluation of SARM is an ex-post evaluation that is knowledge-oriented and aimed to contribute to the broader international debate on military offsets, and specifically to the debate around the South African NIPP. SARM was evaluated in the context of the 1998 South African arms deal; the South African NIPP; the decentralization of government and its powers, obligations and needs; as well as the fast changing South African mining industry and the legislation governing it. The objectives of the evaluation were to (i) explore the 1998 arms deal, and in particular the offsets component of the deal; (ii) explore the background to SARM and its predecessors in order to understand the relationship between the main characters involved; and to (iii) evaluate SARM against other similar projects. These objectives were accomplished successfully within the limitations created by the lack of all relevant documentation, and the evaluation has made it possible to document valuable lessons that can inform future NIPP projects.

The first of these lessons are that there is a tendency by offset obligors to start 'greenfields' projects instead of building on already existing 'brownfields' projects. SARM was a 'greenfields' project, while the two other NIPP projects against which it was compared, OroAfrica and Silplats, are 'brownfields' projects that were built on existing and successful jewellery manufacturing enterprises, which both continue to exist successful. Social, human and manufactured capitals are critical components of the sustainability of a company. Both of these successful NIPP beneficiation initiatives have increased and developed their social and human capital through sustainable job-creation (or in the very least sustaining existing jobs); through training to enhance the human capital;

and by delivering value to both society as a whole and other businesses who provide services to them.

The second lesson from this evaluation is the necessity for strict financial accountability in these projects. Financial capital is not only crucial to the survival of the business, but also to the sustainability and growth of the other capitals (social, human, manufactured and natural). Financial accountability is thus crucial. Both the successful beneficiation initiatives performed extensive due diligence studies and they both have monitoring systems in place with all the required checks and balances to keep the businesses healthy even in difficult times such as in recent years (Wellmann, 2005). There is no evidence of financial accountability in the management of the SARM. The gradual weakening of the US Dollar on global currency markets during recent years led to the appreciation of the South African Rand and this rendered the country's products less competitive globally. Yet Silplats and OroAfrica have ensured that they have sustainable markets that can withstand the fluctuations of the international demands for their products; they have invested heavily in training and skills development for their employees and have used the government incentives and other opportunities available at this time to their fullest potential.

The third lesson is the need for the implementers of offsets projects to embrace the triple bottom line and to balance the need for short-term competitiveness and financial gain and in doing so earning a moral 'licence to operate'. Hew (2006) argues that offsets fall into the realm of corporate social investment, linking the idea that offsets can be a vehicle for socio-economic projects and a vehicle to reduce poverty and inequality in developing countries. Although I do not agree with Hew that offsets can be viewed as corporate social investment, SARM was described by Harmony Gold as part of its corporate social investment in the Virginia area. SARM thus played the role of both being an offset project with BAE Systems/SAAB as the obligor, while at the same time

SARM was also a corporate social investment initiated by Harmony Gold.

In a corporate context, sustainability means that each business venture must balance the need for long-term viability and prosperity of the business itself, the communities in which it operates, and the environment, with the requirement for short-term competitiveness and financial gain (King Committee, 2002). Unfortunately this balance was not in place when SARM was created and in operation. SARM was established with outdated business principles within a modern South African legislative and trade environment. “In decades past, if people had gathered in order to establish a company to produce goods, they would have applied to a regulator for a license, hired a premise, bought a plant, and proceeded to manufacture without much regard to the impact on the environment, or the interests of other stakeholders. The permission from the regulator to manufacture goods would have been the ‘license to operate’. Today, the license to operate a company is much more complex” (Kings Committee, 2002:8). There is no evidence that SARM embraced the triple bottom line, a concept that puts equal value on the economic, social and environmental aspects of a company.

A further twist in the SARM case is that the project is also a gold beneficiation project. There are many legal advantages to starting precious metal beneficiation factories, least of all being able to ‘exchange’ credits for beneficiation against implementing BEE obligations, and being able to ‘write off’ against tax infrastructure ‘donated’ to factories. With the DTI being entirely responsible for monitoring the NIPP, but lacking capacity, essential skills and being under-resourced; and very frequently using potentially biased organisations to monitor NIPP projects on their behalf, there is very little incentive to really make any of these factories sustainable beyond the first few months when both mining and NIPP credits are calculated and awarded.

Although I do agree with Hew's (2006) assertion that offsets can be successful on condition that the offset programme is properly conceived and implemented, and utilizes the right resources; I do not think that these conditions currently exist in South Africa. The DTI is entirely responsible for ensuring that the NIPP is carried out properly, but there is not an efficient system for monitoring these types of investments in South Africa. According to Mr. Dion Harold of the DTI, there is no monitoring and evaluation system in place for these projects. They are basically monitored on an ad hoc basis. The lack of, or the insufficient, monitoring and evaluation of such projects means that lessons from the failure of one project cannot be transferred to new initiatives. Mr. Harold also indicated that there is a high turn-over in staff in the unit that monitors the NIPP. He had replaced the previous manager dedicated to the BAE Systems/SAAB consortium projects and was not even aware of SARM at the time of our interview several months after he filled the post. He was unable to provide me with information that was project specific. And this is the fourth lesson of this evaluation – the necessity for strict monitoring and evaluation processes in any Industrial Participation programme and/or projects combined with the need for regular independent evaluations.

Even though the DTI monitors the performance of the obligors through six-monthly reports and review meetings, this is supplemented with site visits by institutions such as the Council for Scientific and Industrial Research (CSIR) and Mintek on behalf of the DTI (DTI, 2004). Mintek is however involved in the BAE Systems/SAAB consortium NIP SARM project through Musuku Beneficiation Systems and several projects being done with Harmony Gold, which raises questions of impartiality and bias concerning the NIPP inspections. It is thus recommended that an independent body be appointed to monitor the NIPP and the various projects.

The fifth lesson points to the necessity that foreign direct investment should be hundred percent foreign investment, and not local investment

masquerading as foreign investment. SARM had limited foreign direct investment, and indeed most of the investment in the business was sourced from local funders. When the project failed, the main local funder, the state-owned IDC, lost a large sum of money that could have been invested in a more successful venture. Foreign direct investment has many benefits and when it is successfully harnessed, as is the case with OroAfrica, it can create employment with high added value. However, in an offset set-up, the foreign investor's activities need to be monitored closely to ensure that the investment is focussed on delivering that it set out to do. Unfortunately, without the capacity to apply conditions to foreign investors or to monitor them, the South African government has limited scope to promote technology transfers and linkages with domestic producers and to develop a competitive advantage. The findings also highlight the farcical manner in which offsets credits are calculated, and how impossible it is for technology transfer to take place to the extent anticipated by those who conceptualise these offsets deals, purely because it makes very little business sense from the obligor's shoes.

Foreign direct investment, whether as part of NIPP or not, often takes the form of large projects with potentially damaging social and environmental effects. It is further recommended that an independent body be commissioned to monitor and assess the socio-economic and environmental impact of such projects. This will force companies to interact with the various affected stakeholders, such as the broader local community, the local government, employees, trade unions, owners, shareholders, customers, business partners, suppliers, and government. It will also heighten transparency and accountability.

In conclusion it is clear that there would have been no technical reason for SARM to have failed. The company was not constrained by the availability of gold material, or working capital, or infrastructure. Having all these available, actually gave the factory an advantage over other jewellery manufacturers. Its failure, however, highlights (i) the lack of

due diligence by IDC, the state-owned entity that provided a large part of the funding; (ii) the lack of operational monitoring and evaluation of the NIPP; (iii) an incidence where 'foreign direct investment' was not all it proposed to be; (iv) the confusion and murkiness that guides NIPP credit calculations and awards; (v) the general lack of understanding of sustainability of projects linked to socio-economic policies; (vi) and the lack of political will to investigate the failure of these types of projects.

In contrast, the continued success of the OroAfrica and Silplat ventures highlight that if conceived well with a proper due diligence investigation in place; combined with real foreign direct investment, and a genuine interest by the foreign investor to share international markets (or that there are actually existing markets to share); and provided the company produces good quality products to international standards; small individual offset projects can be successful. There is however still a need to assess the variety of offsets projects (beyond just beneficiation projects) linked to the 1998 arms deal to establish how many are indeed relatively successful.

One has to agree with Hadjiminias (undated) that offsets are here to stay, and that very few (if any) governments are willing to take the plunge to get rid of them. As offsets are now firmly entrenched in South African government procurement policies, they will no doubt continue to form part of the country's procurement landscape for the foreseeable future. Keeping this in mind, it is cautioned that an independent body should be appointed to monitor the NIPP and its individual projects; and even more importantly it is cautioned that the job creation promised by offsets projects never quite materialises to the extent that is envisioned, and neither does the promised exponential local economic growth linked to such projects. The best option for offsets is to develop existing 'brownfields' and to, in the very least, maintain the jobs that existed prior to the offsets intervention and in doing so encourage a realistic, steady growth of the local economy.

There still exists a need for a thorough evaluation of the NIPP programme, to assess how many offset projects were successful, even if just marginally.

8 REFERENCES

- Adato, M., Carter, M. and May, J. 2004. *Sense and sociability? Social exclusion and persistent poverty in South Africa*. University of KwaZulu-Natal, Durban.
- Adeola, O.F. 1996. *Military Expenditures, health and education: bedfellows or antagonists in development?* *Armed Forces and Society* 22:3, Spring 1996, pp 441-467
- Ali, A.A. and Elbadawi, I.A. 1999. *Inequality and the dynamics of poverty and growth*. CID Working Paper No.2. Centre for International Development at Harvard University. December 1999
- ANC. 1994. *The Reconstruction and Development Programme: A Policy Framework*. Umanyano Publications, Johannesburg.
- ANC. 2003. *Arms Procurement*. Briefing Note #4. October 2003.
- Arm Scor. 2007. *Annual Report 2007*. Pretoria
- Babbie, E. 2004. *The practice of social work research*. Tenth edition. Southbank: Woodsworth.
- Ball, A.R. 1994. *Modern Politics and Government*. Macmillan Press
- Ball, N. 1988. *Security and Economy in the Third World*. Princeton University Press
- Barcza, N.A. (undated). *Foresight mining and metallurgy report*. Mining and Metallurgy Sector Working Group. Department of Arts, Culture, Science and Technology, South Africa.
- Barker, R.G. 1968. *Ecological psychology. Concepts and methods for studying the environment and human behavior*. Stanford: Stanford University Press
- Baskaran, A. 2004. *The role of offsets in Indian Defence Procurement Policy*. In J. Brauer and J.P. Dunne (eds). *Arms Trade and Economic Development: Theory, Policy and Cases in Arms Trade Offsets*. London: Routledge
- Batchelor, P. 2002. *Defence Industry Globalization: The case of South Africa*. Paper presented at the 6th Annual Middlesex Conference on Economics and Security, Middlesex University Business School, 22-25 June 2002.

Batchelor, P. 1997. *South Africa's Arms Trade and the Commonwealth: A Cause for Concern?* Centre for Conflict Resolution, University of Cape Town.

Batchelor, P. 1998. *Arms and the ANC*. Bulletin of the Atomic Scientists, September/October 1998

Batchelor, P. and Dunne, J.P. 1998. *Demilitarisation, Disarmament and Defence Industrial Adjustment: The Case of South Africa's Defence Industry*. Centre for Conflict Resolution, University of Cape Town, South Africa and Middlesex University Business School, United Kingdom (unpublished)

Batchelor, P. and Dunne, P. 2000. *Industrial participation, investment and growth: The case of South Africa's defence related industry*. Development Southern Africa 17(3), pg. 417-435

Batchelor, P. and Willet, S. 1998. *Disarmament and defence industrial adjustment in South Africa*. Oxford: SIPRI and Oxford University Press.

Baxter, R. 2005. *Mineral Beneficiation: the mining industry viewpoint*. Paper presented at the LBMA Precious Metals Conference 2005. Johannesburg

Bell, T. and Madula, N., 2002. The manufacturing industry, 1970-2000, in Jones, S. (ed.), *The Decline of the South African Economy*, Edward Elgar, Cheltenham, pp 99-142.

Beri, R. 2000. *Indo-South Africa Defence Cooperation: Potential and Prospects*. Strategic Analysis, January 2000

Bhorat, H. 1999. *Public Expenditure and Poverty Alleviation in the South African Labour Market*. Working Paper No. 99/26. Development Policy Research Unit, University of Cape Town

Bhorat, H. 2003. *Labour market challenges in post-Apartheid South Africa*. EFSA colloquium, Cape Town.

Bhorat, H., Leibbrandt, M., Maziya, M., van der Berg, S. and Woolard, I. 2001. *Fighting poverty: labour markets and inequality in South Africa*. University of Cape Town Press

Bhorat, H. and Cassim, R. 2004. *The challenge of growth, employment and poverty in the South African economy since democracy: an exploratory review of selected issues*. Development Southern Africa, 21(2), pp. 7-31

Bhorat, H., Poswell, L. And Naidoo, P. 2004. *Dimensions of poverty in post-Apartheid South Africa 1996-2001*. Development Policy Research Unit, University of Cape Town

Bhorat, H. and Kanbur, R. 2005. *Poverty and well-being in post-Apartheid South Africa: An overview of Data, Outcomes and Policy*. Working Paper No. 05/101. Development Policy Research Unit, University of Cape Town.

Binns, T. and Nel, E. 2003. The village in a game park: local response to the demise of coal mining in KwaZulu-Natal, South Africa. *Economic Geography*, Vol. 79, No.1, January 2003.

Bitzinger, R.A. 2004. *Offsets and Defense Industrialisation in Indonesia and Singapore*. In J. Bauer and J.P. Dunne (eds). *Arms Trade and Economic Development: Theory, Policy and Cases in Arms Trade Offsets*. London: Routledge.

Black, R.E., Allen, L.H., and Bhutta Z.A. 2008. *Maternal and child undernutrition: global and regional exposures and health consequences*. *Lancet* 2008: 371: 243-60

Blanton, S.L. 1999. *Examining the impact of arms transfers on human development*. *Journal of Third World Studies*, 16:2, pp 75-93

Bockett, D. 1999. *Export or Expire: The Political Economy of the Post-Cold War Conventional Arms Trade*. Occasional Paper No. 4, International Pacific College, New Zealand, June 1999

Bond, P. 2002. *Unsustainable South Africa: Environment, development and social protest*. University of Natal Press, Pietermaritzburg

Bonn International Centre for Conversion: *Conversion in Africa: Past Experiences and Future Outlook*, BICC Paper, downloaded from www.bicc.de

Botha, D. 2003a. *The arms deal controversy*. ISS Paper (downloaded from www.iss.co.za)

Botha, D. 2003b. *Offsetting the costs of SA's strategic defence package*. ISS Paper (downloaded from www.iss.co.za)

Brannen, J. 1992. (Ed.) *Mixing methods: qualitative and quantitative approaches*. Aldershot, Avebury

Brask, C. and Jonsson, T. 2002. *Countertrade: an analysis of two business agreements from the sellers' perspective*. Institutionen for Ekonomi.

Brauer, J. 1991. "Arms production in developing nations: the relation to industrial structure, industrial diversification, and human capital formation." *Defence Economics* 2 (2), pg. 165-175

Brauer, J. 2000. *Potential and actual arms production: implications for the arms trade debate*. Defense and peace economics 11(5), pg.461-480

Brauer, J. 2002. *The arms industry in developing nations: History and post-Cold War assessment*. In Brauer, J. and Dunne, J.P. (eds) *The economics of military expenditure and arms production and trade in developing countries*. New York: Palgrave

Brauer, J. 2003. *Potential and actual arms production: implications for the arms trade debate*, in Levine, P. and Smith, R. *Arms Trade, Security and Conflict*, London, Routledge

Brauer, J. 2004. *Economic Aspects of Arms Trade Offsets*, in Brauer, J. and Dunne, J.P. (eds) *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets*. London: Routledge.

Brauer, J. and Dunne, J.P. (eds.) 2002. *Arming the South: The Economics of Military Expenditure, Arms Production and Arms Trade in Developing Countries*. New York: Palgrave.

Brauer, J. and Dunne, J.P. 2004. *Arms Trade and Economic Development: Theory and Practice in Offsets*, London: Routledge

Brauer, J. and Dunne, Paul J. 2009. *Arms Trade Offsets: What do we know?* Downloaded from www.carecon.org.uk

Brozka, M. 1989. *The impact of arms production in the Third World*. Arms Forces and Society, 15:4, pp 507-530

Bruntland Report, 1987. *Our Common Future*.

Bryman, A. 1988. *Quantity and quality in social research*. London, New York: Routledge

Budlender, D., 1999. "Patterns of Poverty in South Africa", *Development Southern Africa*, 16(2).

Burgess, S.F. and Purkitt, H.E. 2001. *The Rollback of South Africa's chemical and biological warfare program*. USAF Counter Proliferation Center, Air War College, Alabama

Business Council for Sustainable Development South Africa, 2002. "Progress towards sustainable development: A review of business initiatives." *WSSD Briefs*, No. 6

Business Council for Sustainable Development South Africa, 2002. *Tools for the triple-bottom-line*. An executive briefing for the WSSD.

- Cabus, P. 2001. The meaning of local in a global economy, *European Planning Studies*, 9, 8, pp 1011-1029.
- Cameron, E., Maleka, I.V. and Nathan, L.N. 1995. *Commission of Inquiry into alleged arms transactions between Armscor and one Eli Wazan, and other related matters*. Parts 1 and 2.
- Campbell, J., 1999. *The changing role of mining companies*. Optima. July.
- Campbell, K. 1999. *The Re-equipping of the South African Navy*. Naval Forces, January 1999
- Caniels, M.C.J. and Romijn, H.A., 2003. Agglomeration Advantages and Capability Building in Industrial Clusters: The Missing Link. *The Journal of Development Studies*. February 2003. Vol.39, No3, pp 129-154
- Carney, D. (ed) 1998. *Sustainable Rural Livelihoods: What contribution can we make?* DFID, UK.
- Carr, C. 2000. *The security implications of microdisarmament*. Counterproliferation Paper #5. USAF Counterproliferation Center, Air War College
- Case, A. 1994. *Military Expenditure and Economic Development*. Discussion Paper IPR86, Institute for Policy Reform. Princeton University, March 1994
- Casale D. Muller C. Posel D. 2005. 'Two Million Net New Jobs': A Reconsideration of the Rise in Employment in South Africa, 1995-2003. Casale, D.; Muller C. and Posel, D. *DPRU Working Paper 05/97*. Cape Town: Development Policy Research Unit.
- Cassim, F., 1988: Growth, Crisis and Change in the South African Economy, in Suckling, G. and White, L. (eds.), *After Apartheid: Renewal of the South African Economy*, James Currey, London, pp 1-15.
- Cawood, F.T. and Minnitt, R.C.A. 1998. A Historical Perspective on the Economics of the Ownership of Minerals Rights. *Journal of the South African Institute of Mining and Metallurgy*, vol. 98, no. 7, Johannesburg, November/December 1998, pp. 369-276
- Cawood, F.T. 2004. The Mineral and Petroleum Resources Development Act of 2002: A Paradigm Shift in Mineral Policy in South Africa. *Journal of the South African Institute of Mining and Metallurgy*, vol. 104, no. 1, Johannesburg, January/February 2004, pp. 53-64
- Cawthra, G. 2000. 'South Africa', in Ravinder Pal Singh (ed.) *Arms Procurement Decision Making Vol. II: Chile, Greece, Malyasia, Poland, South Africa and Taiwan*. New York, NY: Oxford University Press.

Chisholm, M., 1990: *Regions in Recession and Resurgence*, Unwin, London.

Chinsworth, M.W. 2004. *Offset Policies and Trends in Japan, South Korea and Taiwan*. In J. Brauer and J.P. Dunne (eds). *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets*. London: Routledge

Cooper, D.R. and Schindler, P.S. 2001. *Business Research Methods*. 7th ed. McGraw-Hill

Cohen, S. And Zysman, J. 1983. *Double or Nothing*. Foreign Affairs, Summer 1983.

Cohen, S. And Zysman, J. 1986. *Countertrade, offsets, barter and buybacks: A crisis in the making*. University of California Berkeley: Berkeley Roundtable on the International Economy.

Control Arms Campaign. 2003. *The Arms Bazaar, Shattered Lives*. Amnesty International

COSATU. 2001. *The arms deal and employment creation*. Submission to the Portfolio Committee on Trade and Industry, 06 February 2001

Courtney, C. 2002. *Corruption in the Official Arms Trade*. Transparency International (UK), Policy Research Paper 001

Clark, P.A. 1972. *Action Research and Organizational Change*, Harper and Row, London

Cox, K.R., 2004: Globalization and the politics of local and regional development: the question of convergence, *Transactions of the Institute of British Geographers*, 29, pp 179-194.

Crawford-Browne, T. 1998. *The R30 Billion Defence Procurement Proposals and Industrial Participation Programme (Offsets)*. Cape Town: Coalition for Defence Alternatives

Crawford-Browne, T. 2000. *South Africa's R30 billion weapons procurement programme: Offsets, an invitation to corruption, in a country desperate for socio-economic development*. Paper delivered to Conference on Security, Conflict and Development, Middlesex University Business School, London, 16-17 June 2000.

Crawford-Browne, T. 2002a. *ECAAR: South Africa Challenges Arms Expenditures*. In ECAAR News Network, 14:1, May 2002

Crawford-Browne, T. 2002b. *Offsets and the Affordability of the Arms Deal*. Downloaded from the Economists Allied for Arms Reduction website (www.ecaar.org)

Crawford-Browne, T. 2003. *ECAAR-SA will release BAE Systems Arms Deal Loan Agreements on Monday, September 22 at 10h30am*. Press statement by ECAAR, 19 September 2003

Crawford-Browne, T. 2007. *Eye on the Money*. Cape Town: Umuzi

Cock, J. and McKenzie, P. 1998. *From Defence to Development: Redirecting military resources in South Africa*. International Development Research Centre. Canada

Davis, G. A. 1999. *The minerals sector, sectoral analysis, and economic development*. Colorado School of Mines, Golden, USA.

De Beer, E. and Rensburg, R. 2003. *Reputation Management and Stakeholder Engagement: An Integrated Approach to Future Corporate Governance in South Africa*. Paper presented to the 9th Annual Public Relations Research Symposium, Lake Bled, Slovenia, July 2003.

De Miramon, J. 1985. *Countertrade: an illusory solution*. The OECD Observer. Vol. 124, pp 24-29.

Defense News. 1999. *Defense News Top 100*. 26 July 1999 (<http://www.defensenews.com>)

Denzin, N. 1978. *The Research Act. A theoretical introduction to sociological methods*. Second edition. New York: McGraw Hill.

Department of Economic Affairs and Tourism, 1998: *The High Road*, Department of Economic Affairs, Tourism and the Environment, Bloemfontein, South Africa.

Department of Finance. 1996. *Growth, Employment and Redistribution: A macroeconomic Strategy*. Pretoria

Department of Health. 2007. *Saving mothers: third report on confidential inquiries into maternal deaths in South Africa, 2002-2004*. Pretoria: National Department of Health

Department for International Development, 2000. Security Sector Reform and the Management of Defence Expenditure: A Conceptual Framework. *Discussion Paper Number 1, Security Sector Reform and Military Expenditure Symposium*, February. London, UK

Department of Provincial and Local Government. 2000: *A Policy Paper on Integrated Development Planning*. Produced by M. Oranje, P. Harrison, E. Meyer and E. van Huyssteen for DPLG, Pretoria.

Department of Trade and Industry, 1997. *National Industrial Participation Policy for South Africa*. Pretoria: Government Printer

Department of Trade and Industry. 2001. *Driving competitiveness in South Africa: The integrated industrial strategy*. Pretoria: Government Printer

Department of Trade and Industry, 2002a. *A guide to the Microeconomic reform strategy*, DTI, Pretoria.

Department of Trade and Industry, 2002b. *Report on the Industrial Participation programme*. Final draft. March 2002.

Department of Trade and Industry, 2002c. *Accelerating growth and development: the contribution of the integrated manufacturing strategy*. Pretoria: Government Printers

Department of Trade and Industry. 2002d. *Leveraging growth in the South African economy: The national industrial participation programme in review: 2002*. Pretoria

Department of Trade and Industry, 2003a. *Press Release*. March 12, 2003

Department of Trade and Industry. 2003b. *Report on projects of the national industrial participation programme*. Pretoria. June 2003

Department of Trade and Industry. 2004. *The National Industrial Participation Programme*. Pretoria: Government Printer

Department of Trade and Industry. 2006. *The Report of the National Industrial Participation Programme 2005/2006*. Pretoria: Government Printer

DTI – see Department of Trade and Industry

Dhar, B.B. and Thakur, D.N. (eds) 1996. *Proceedings of the First World Mining Environment Congress, New Delhi*. Balkema, Rotterdam, Netherlands.

Dickin, P., 2003. *Global Shift*, Sage, London.

Dohrenwend, B.S. and Richardson, S.A. 1965. Directiveness and nondirectiveness in research interviewing: A reformulation of the problem. *Psychology Bulletin* 63:475-85

Du Preez, M. 2008. *Of tricksters, tyrants and turncoats – more unusual stories from South Africa's past*. Cape Town: Zebra Press

- Du Toit, J. 2001. *Provincial Characteristics of South Africa*. ABSA
- Du Toit, J. 2003. *Sustainability Watch*. Issue 3. Institute for Futures Research, Stellenbosch
- Dumas, L.J. 1995. *Finding the future: The Role of Conversion in Shaping the Twenty-first Century*. In Dumas, L.J. (ed) *The Socio-economics of Conversion from War to Peace*. Armonk, NY. and London: M.E. Sharp
- Dumas, L.J. 2002. *Weapons Procurement and Development: Do offsets mitigate or magnify the military burden?* Paper presented at the International Conference on Defence Offsets and Economic Development. 25-27 September 2002, Cape Town
- Dumas, L.J. 2004a. *Peacemaking and Peacekeeping: The Power of Economic Incentives*. ECAAR Review 2004, Pearl River, NY: ECAAR
- Dumas, L.J. 2004b. *Do offsets Mitigate or Magnify the Military Burden?* In J. Bauer and J.P. Dunne (eds). *Arms Trade and Economic Development: Theory, Policy and Cases in Arms Trade Offsets*. London: Routledge
- Dunne, J.P. 1995. "The defence industrial base", in Hartley, K. and Sandler, T. (eds) *Handbook of defence economics*. Amsterdam: Elsevier
- Dunne, J.P. 1996. "Economic effects of military spending in LDCs: A survey." in Gleditch, N. (ed) *The peace dividend*. Amsterdam, North Holland
- Dunne J.P. 2002. *The economics of South Africa's Defence offsets*. Paper presented to the International Conference on Defence Offsets and Economic Development. 25-27 September 2002. Cape Town
- Dunne, J.P. 2003. "The making of arms in South Africa. In *Economists allied for arms reduction (ECAAR) Review 2003*. Pearl River, NY: ECAAR
- Dunne, J.P. 2004. *Defence Industrial Participation: the South African experience*. In J. Brauer and P. Dunne (eds), *Arms trade and economic development: theory, policy and cases in arms trade offsets*. London: Routledge
- Dunne, J.P. 2006. *The making of arms in South Africa*. *The Economics of Peace and Security Journal*. 1(1) pp. 40-48
- Dunne, P. and Haines, R.J. 2001. *Defence procurement and regional industrial development in South Africa: A case study of the Eastern*

Cape. Middlesex University Business School: Economics Group Working Papers, no. 98. August 2001.

Dunne P. and Haines, R.J. 2002. *Defence restructuring and economic growth in South Africa*. TIPS Working Paper, no. 2, 2002. Trade and Industrial Policy Secretariat.

Dunne and Perlo-Freeman, 2003. *The demand for military spending in developing countries*. International Review of Applied Economics, 17:1, pp 23-48

Dunne J.P. and Lamb. 2004. "Defence Industrial Participation: the experience of South Africa." in Brauer, J. and Dunne, J.P. (eds) *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets*. London: Routledge.

Editors Inc., 2000. *SA 2000-01: South Africa at a Glance*, Editors Inc, Craighall.

Eisenhour, J. H. 1989. *Offsets in Military Exports: U.S. Government Policy*. Office of Management Budget. Remarks presented at the Spring Meeting of the Defense Industry Offset Association in Scottsdale, Arizona, 09 May 1989

Engelbrecht, L. 1999a. *South Africa's arms spending back in the headline*. Defense Systems Daily, 25 August 1999.

Engelbrecht, L. 1999b. *South Africa to get R104 billion for R21.4 billions arms*. Defense Systems Daily, 17 September 1999.

Engelbrecht, L. 1999b. *South Africa boosts defence spending*. Defense Systems Daily, 29 October 1999.

Engelbrecht, L. 2001a. *South Africa's multi-billion arms programme revisited: Part 1*. Defense Systems Daily, 15 October 2001.

Engelbrecht, L. 2001b. *South Africa's multi-billion arms programme revisited: Part 2*. Defense Systems Daily, 19 October 2001.

Epps, K. 2004. *Project on Sustainable Development and the Arms Trade Treaty*. Project Ploughshares, February 2004.

Erzberger, C. and Prein, G. 1997. Triangulation: validity and empirically based hypothesis construction. *Quality & Quantity*, 31(2), pg. 141-154

February, J. 2004. *South Africa – Democracy and the South African Arms Deal. Three strikes against the graft*. Commissioned case study for the ISS Anti-corruption Strategies Programme. South Africa: Institute for Security Studies, 15-17 March 2004.

- Fedderke, J. 2001. *Technology, Human Capital and Growth: Evidence from a middle income country case study applying Dynamic Heterogeneous Panel Analysis*. Paper presented at the TIPS Annual Forum, September 10-12, 2001.
- Fedderke, J.W. and Vaze, P. 2001. The Nature of South Africa's Trade Patterns. *South African Journal of Economics*, 69(3), pp 366-84
- Fedderke, J.W., Henderson, S., Kayemba, J. Mariotti, M. and Vaze, P. 2001. Changing Factor Market Conditions in South Africa: The Capital Market – a sectoral description of the period 1970-1997. *Development Southern Africa*, 18(4), pp 493-512
- Feinstein, A. 2007. *After the Party*. Cape Town: Jonathan Ball Publishers
- Fine, B. and Rustomjee, Z., 1996. *The Political Economy of South Africa*, Hurst, London.
- Flick, U. 1992. Triangulation revisited: strategy of validation or alternative? *Journal of the Theory of Social Behaviour*, 22(2), pg. 175-197
- Flick, U. 1998. *An introduction to qualitative research*. Thousand Oaks, London, New Delhi: Sage.
- Focus. 2003. *Full roll out on the cards?* No. 23, November 2003
- Forbes Magazine. 1984. *Business Marketing*. March 12, 1984
- Frankel, P. 2000. *Soldiers in a Storm: The armed forces in South Africa's Democratic Transition*. Boulder: Westview Press
- Frazier, J.G. 1997 "Sustainable Development: modern elixir or sack dress?" *Environmental Conservation*, 24(2), pg. 182-193
- Freemantle, A. and Rockey, N. 2004. *The good corporate citizen...pursuing sustainable business in South Africa*. Cape Town. Triologue.
- Galbraith, J.K. 1970. *The affluent Society*. Hamondsworth, Middlesex: Pelican
- Gauchery, L. undated. *Les compensations internationales: moyen de financement des exportations, outile de négociation commerciale*. (www.avenir-export.com)
- Genesis Analytics. 2008. *Gold in South Africa 2007*. Anglogold Ashanti and Gold Fields.

- George, P. 1998. *Defence expenditures in the 1990s: budget and fiscal policy issues for developing countries: an overview*. In 'Report 12: Converting Defence Resources to Human Development'. Bonn International Center for Convention, October 1998.
- Gilbert, M. 2000. *Challenge to Civilization: A History of the 20th Century 1952-1999*, Harper Collins
- Gorden, R. L. 1975. *Interviewing: Strategy, techniques, and tactics*. Homewood. Dorsey
- Gray, J.A. 1945. *Studies in war-time organisation: The Union's supply effort*. African Affairs, 44 (175): 58-61. London
- Grimmet, R.F. 2003. *Conventional Arms transfers to Developing Nations 1995-2002*. CRS Report to Congress. September 22, 2003
- Guba, E.G. and Lincoln, Y.S. 1994. Competing paradigms in qualitative research in *Handbook of Qualitative Research*, N.K. Denzin and Y.S. Lincoln (eds.), Sage, Thousand Oaks, 1994, pp. 105-117.
- Gupta, S., De Mello, L. and Sharan, R. 2001. Corruption and Military Spending. *European Journal of Political Economy*, 17(4) pg. 749-777
- Hadjiminas, C. (undated) *Why offsets?* APCA. (www.apca.net)
- Haines, R. J. 2000. *The third way? Public-private partnerships in South Africa*. Iliso 1(1):29-54
- Haines, R. 2002. *The Defence Offsets and Regional Development in South Africa*. Paper presented at the ECAAR-SA Conference on Defence Offsets and Economic Development. September 2002. Cape Town, South Africa.
- Haines, R. J. 2003. The Politics of the Strategic Defence Procurement Programme in South Africa: The Kwa-Zulu Natal Case. *Paper presented to the 7th Annual Conference on Economics and Security. 26-28 June, 2003. University of the West of England, Bristol, United Kingdom*
- Haines, R.J. 2004. *Defense Offsets and Regional Development in South Africa*, in Brauer, J. and Dunne, J.P. (eds.) *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets*. London: Routledge
- Haines, R. J. 2006. *Defence Offsets and Industrial Participation in South Africa*. Paper delivered at the *International Offsets and Industrial Co-operation Conference* on 22-23 March 2006, London

- Haines, R. J. and Wellmann, G. 2005. *Value chains and institutional imperatives in regional industrial development: The implementation and impact of defence offsets in the Western Cape*. *Africanus – Journal of Development Studies*, Vol. 35, No.1, 2005.
- Hall, P. and Markowski, S. 1994. *On the normality and abnormality of offset obligations*. *Defence and Peace Economics* 5(3), pg. 173-188
- Hamman, R., 2002. *Mining companies' role in sustainable development: The 'why' and 'how' of corporate social responsibility from a business perspective*. In *Development Southern Africa*, Vol. 20, No. 2
- Hammersly, M. 1992. *Deconstructing the qualitative-quantitative divide*. In Brannen, J. (ed.) *Mixing methods: qualitative and quantitative research*. Aldershot, England: Avebury.
- Haodley, E.M., Limpitlaw, D. and Weaver, A. 2002. *Mining, Minerals and Sustainable Development in Southern Africa*. Vol. 1, MMSD Southern Africa. Johannesburg, South Africa.
- Haodley, E.M., Limpitlaw, D. and Sheehy, B. 2003. *The Mining Community and Development Projects – Enhancing Skills and Resources for Participation and Sustainability*. Commissioned by the ICMM and the World Bank. Unpublished.
- Harmony, 2004. *Harmony Freegold Surface Structure Plan Status Document*. Unpublished.
- Harris, G. 2000. *The irrationality of South Africa's Military Expenditure*. Durban: University of Natal
- Hawley, S. 2003. *Underwriting Bribery: Export Credit Agencies and Corruption*. *Corner House Briefing No 30*.
- Hew, D. 2006. *Offsets in India*. Paper delivered at the *International Offsets and Industrial Co-operation Conference* on 22-23 March 2006, London
- Hew, D. (undated) *What is offset countertrade and structured finance?* APCA (www.apca.net)
- Heeks, R. 1998. *Small enterprise development and the 'Dutch Disease' in a small economy: the case of Brunei*, *IDPM Discussion Paper*, number 56, University of Manchester.
- Heitman, H. 1998. *At a crossroad: shakeout ahead for South Africa's Defence Industry*. *Armed Forces Journal International*, November 1998, pp.46-50

Heitman H. 1999. *South Africa sees defence exports plummet*. Jane's Defence Weekly, 15 September 1999.

Heymans, C. and Lipiez, B. 1999. *Corruption and Development, Some Perspectives*. Monograph, No.40

Hindson, D. 2003. *Connecting economic growth with poverty alleviation: South Africa's LED challenge*. Hologram, 1,1, 2-7.

Holden, P. 2008. *The arms deal in your pocket*. Jonathan Ball Publishers.

Hoogenveen, J.G. and Ozler, B. 2006. *Poverty and Inequality in post-Apartheid South Africa: 1995-2000*. In Bhorat, H. and Kanbur, R. (eds) *Poverty and Policy in Post Apartheid South Africa*. HSRC Press.

Hosking, S., Haines, R. and L. Banks. 2002. *The defence offsets and economic development in the Eastern Cape*. Paper presented at the International Conference on Defence Offsets and Economic Development. September 25-27, 2002. Cape Town.

Hosking, S. and Haines, R. 2003. *Arms offsets and the Coega Industrial Development Zone*. Paper presented at Conference on the Eastern Cape. August, 27-29 August 2003.

Hunter, N., May, J. and Padayachee, V. 2003. *Lessons for PRSP from Poverty Reduction Strategies in South Africa*. Third Meeting of the African Learning Group on the Poverty Reduction Strategy Papers, Economic Commission for Africa. www.uneca.org (accessed June 2004)

Hyman, H. H. and Cobb, W.J. 1975. *Interviewing in social research*. Chicago: University of Chicago Press.

IDASA (undated) *A quick guide to the Jacob Zuma Affair*

Ilbery, B., Maye, D., Kneafsey, M., Jenkins, T. and Walkley, C. 2004 "Forecasting food supply chain developments in lagging rural regions: evidence from the UK", *Journal of Rural Studies*, 20, pp 331-344.

Institute for Security Studies. 2004. *Submission on the South African Defence Review to the Portfolio Committee on Defence*. 04 October 2004. Pretoria: Institute for Security Studies

International Broadcasting Trust, 1994. *Bleeding the Poor: Arms Versus Development*

Jacobs, M. 1999. *Environmental Modernization: The New Labour Agenda*. Fabian Society, London

Jones, W. 2001-2002. *The value of military industrial offsets*. DISAM Journal. Winter

Jourdan, P. (undated). *Links with domestic industry downstream processing and the provision of inputs: Resource-based industrialisation in South Africa*. Mintek.

Jourdan, P. 1993. *South Africa's Mineral Beneficiation Industries and the Potential for Mineral-Based Fabrication Industries*. Industrial Strategy Project. Johannesburg.

Kahn, R. L. and Cannell. 1957. *The dynamics of interviewing*. New York: Wiley

Kaminski, G. 1989. "The relevance of ecologically oriented conceptualizations to theory building in environment and behavior research". In Zube, E.H. and Moore, G.T. (eds) *Advances in environment, behavior and design*. Vol. 2 (pp.3-36) New York: Plenum Press

Kaplan, B. and Maxwell, J.A. 1994. Qualitative Research Methods for Evaluating Computer Information Systems in *Evaluating Health Care Information Systems: Methods and Applications*, J.G. Anderson, C.E. Aydin and S.J. Jay (eds.), Sage, Thousand Oaks, CA, 1994, pp. 45-68.

Kasrils, R. 1997. *Address to the National Assembly. The Defence Review Debate*. National Assembly, 20 August 1997 (www.info.gov.za)

Kelle, U. and Kluge, S., 1999. *Von Einzelfall zum Typus. Fallvergleich und Fallkontrastierung in der qualitativen Sozialforschung*. Opladen: Leske und Budrich.

King Committee, 2002. *King report on corporate governance for South Africa 2002*. SA Institute of Directors

Kleynhans, E.P.J., Naude, W.A., van der Merwe, S.J., 2003: SpAtial economic development in South Africa, *Development Southern Africa*, 20, 5, pp 617-631.

Kluckhohn, K. 1945. The personal document in anthropological science. In *The use of personal documents in history, anthropology, and sociology*, edited by L. Gottschalk, C. Kluckhohn, and R. Angell, 79-176. Bulletin 53. New York: Social Science Research Council.

Knight, R. 2001. *South Africa: Economic Policy and Development*. Shared Interest, March 19, 2004

Knight, M., Loayza, N. and Villaneuya, D. 1996. *The Peace Dividend: Military Spending Cuts and Economic Growth*. IMF Staff papers, 43:1, 1996.

- Kraak, A. 2004a. "The National Skills Development Strategy: a new institutional regime for skills formation in post-apartheid South Africa" in McGrath, S., Badroodien, A., Kraak, A. and Unwin, L. (eds) *Shifting Understandings of Skills in South Africa*. Human Sciences Research Council, Pretoria
- Kraak, A. 2004b. "Rethinking the high skills thesis in South Africa" in McGrath, S., Badroodien, A., Kraak, A. and Unwin, L. (eds) *Shifting Understandings of Skills in South Africa*. Human Sciences Research Council, Pretoria
- Kraak, A. 2005. "Human resources development and the skills crises in South Africa: the need for a multi-prong strategy. *Journal of Education and Work*. 18(1), pg. 57-83
- Krause, K. 1992. 'Arms imports, arms production, and the quest for security in the Third World.' In Job, B.L. (ed.) *The Insecurity Dilemma: National Security of Third World States*. Boulder: Colorado. Lynn Rienner Publishers
- Krueger, R.A. 1994. *Focus groups: A practical guide for applied research*. 2nd ed. Thousand Oaks, California, Sage
- Kuyek, J. and Coumans, C. 2003. *No Rock Unturned: Revitalizing the Economies of Mining Dependent Communities*. MiningWatch Canada, August 2003.
- Kvale, S. 1996. *Interviews. An introduction to qualitative research interviewing*. Thousand Oaks: Sage
- La Franchi, P. 1996. *South Africa's Defence Industry: The New Challenge in the Race for Asian Contracts*. Asian Defence Journal, January 1996, p.31
- Lamb, G. 1997. *Demilitarisation and peacebuilding in Southern Africa. A survey of literature*. Project on Peace and Security. Centre of Conflict Resolution. University of Cape Town
- Landau, D. 1994. *The impact of military expenditures on economic growth in less developed countries*. Defence and Peace Economics, 5:3, pp 205-220
- Le Billion, P. 2003. Buying Peace or Fuelling War: The Role of Corruption in Armed Conflicts. *Journal of International Development* (15), pg. 413-426
- Le Roux, L. and Boshoff, H. 2005. *The state of the military* in J. Daniel, R. Southall and J. Lutchman (eds.) *The state of the Nation*. Pretoria: HSRC Press

- Lee, A.S., Baskerville, R.L. and Davies, L. 1992. A Workshop on Two Techniques for Qualitative Data Analysis: Action Research and Ethnography *Proceedings of the Thirteenth International Conference on Information Systems*, 1992, p. 305-306.
- Leibbrandt, M. And Woolard, I. 1999. *Understanding contemporary Household Inequality in South Africa*. In Borat et al. (eds), 2001.
- Leibbrandt, M, and Woolard, I. 2001. *The Labour Market and Household Income Inequality in South Africa: Existing Evidence and New panel Data*. *Journal of International Development* 13(6), p. 671-689.
- Leibbrandt, M., Woolard, I. And Borat, H. 2001. *Understanding Contemporary Household Inequality in South Africa*. In Borat et al., 2001
- Levine, P. and Smith, R. 2003. *Arms Trade, Security and Conflict*, London, Routledge
- Lincoln, Y. and Guba. E. 1985. *Naturalistic Inquiry*. Beverly Hills, Ca: Sage
- Loftus, E.F. and Marburger, W. 1983. 'Since the eruption of Mt. St. Helens, has anyone beaten you up? Improving the accuracy of retrospective reports with landmark events.' *Memory and Cognition* 11: pp 114-120
- Lovering, J., 1999: Theory led by policy, *International Journal of Urban and Regional Research*, 23, pp 379-395.
- Low, S. 1987. "Developments in research design, data collection, and analysis. Qualitative methods." In Zube, E.H. and Moore, G.T. (eds), *Advances in environment, behavior and design*. Vol. 1, pp 279-303. New York: Plenum Press
- Lunsche, S. 2005. "A Soft touch: Empowerment charters have increased the importance of social investment." *Financial Mail*, 22 July 2005. Pg. 57-60
- Machaka, J. and Roberts, S. 2003. The DTI's new 'Integrated Manufacturing Strategy'. Comparative industrial performance, linkages and technology. *South African Journal of Economics*, 70(4), pp 679-704
- Magasela, W. 2005. *Towards a constitution-based definition of poverty in post-apartheid South Africa*. State of the Nation, South Africa, 2005-2006. HSRC Press, 2005.
- Markusen, A. 2001. *Statement regarding offsets and US export controls*, in Presidential Commission on Offsets in International Trade.

Washington, D.C.: Office of Management and Budget, January 18, 2001. Appendix H.

Markusen, A. 2002. *The Arms Trade as Illiberal Trade*. Paper at ECAAR Conference on 'Offsets and Economic Development' in Cape Town, 25-27 September 2002.

Markusen, A. 2004. "Arms trade as illiberal trade." In Brauer, J. and Dunne, J.P. (eds) *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets*. London: Routledge.

Martin, R. and Sunley, P., 1998: Slow convergence? The new endogenous growth theory and regional development, *Economic Geography*, 74, 3, pp 201-227.

Martin, S. and Hartley, K. 1996. "The UK Experience with Offsets," in Martin, S. (ed) *The Economics of Offsets: Defence Procurement and Countertrade*. Amsterdam: Harwood Academic Publishers

Martin, S. 1996. 'Countertrade and offsets: an overview of the theory and evidence', in Martin, S. (ed.) *The economics of offsets: defence procurement and counter trade*. Amsterdam: Overseas Publishers Association.

Matthews, R. 1996. "Saudi Arabia's defence offset programmes: Progress, policy and performance." *Defence and Peace Economics*. 7(3), pg. 233-251

Matjhabeng Municipality (undated), *Matjhabeng – Diverse City of Golden Opportunities*

Matjhabeng Municipality (undated), *Matjhabeng Development Strategy*.

Matjhabeng Municipality, 2002a. *Urban Economic Development Review and Projection of Local Economic Stability for Matjhabeng Local Municipality*.

Matjhabeng Municipality. 2002b. Matjhabeng Municipality IDP 2001.

Matjhabeng Municipality. 2003. Matjhabeng Municipality IDP Review 2003.

Matjhabeng Municipality. 2004. Matjhabeng Municipality IDP Review 2004.

Matjhabeng Municipality. 2005. Matjhabeng Municipality IDP Review 2005.

May, J. (ed.). 1998. *Poverty and Inequality in South Africa*. Report prepared for the Office of the Executive Deputy President and the Inter-

Ministerial Committee for Poverty and Inequality, 13 May 1998. Department of Social Development, Pretoria.

May, J., Carter, M and Posel, D. 1995. *The Composition and Persistence of Poverty in Rural South Africa: An Entitlements Approach* Policy Paper No. 15, LAPC, Johannesburg.

May, J., Woolard, I. and Klasen, S. 2000. "The Nature and Measurement of Poverty and Inequality", in J. May (ed) *Poverty and Inequality in South Africa: Meeting the Challenge*, Cape Town: David Philip.

May, J. And Meth, C. 2005. *Dualism and Data: What does a quantitative assessment of poverty, inequality and employment reveal?* University of KwaZulu-Natal, Durban.

Marais, L., Botes, L. and Mosothoane, S. 2002. *An evaluation of Local Economic Development projects in the Free State*. For the Department of Local Government and Housing in the Free State.

Mayer, M.J. and Altman, M. 2005. "South Africa's Economic Development Trajectory: Implications for Skills Development." *Journal of Education and Work*. 18(1), pg. 33-56

McCord, A. and Borat, H. 2003. "Employment and Labour Market Trends." *Human Resources Development Review*. Human Sciences Research Council, pg. 112-141.

Merton, R. K. 1987. The focused interview and focus groups. *Public Opinion Quarterly* 51. pp 550-566

Merton, R.K., Fiske, M. and Kendall, P.L. 1956. *The focused interview: A manual of problems and procedures*. Glencoe. Free Press

Meth, C. 2003. *What to do until the doctor comes: Relief for the unemployed and poorly-paid workers*. Background research study for the Committee of Inquiry into a Comprehensive Social Security for South Africa. University of Natal, Durban.

Meth, C. 2004. *Half measures: The ANC's unemployment and Poverty Reduction Goals*. Working Paper No. 04/89. DPRU, University of Cape Town.

Meth, C. 2005. *Reflections on the difficulties of identifying and protecting vulnerable children and orphans*. Save the Children, UK.

Meth, C. 2006. *What was the poverty headcount in 2004. A critique of the latest offering from Van der Berg et al*. UKZN/SALDRU UCT.

Meth, C. and Dias, R. 2004. *Increases in poverty in South Africa: 1999-2002*. Development Southern Africa, 21(1), pp 59-85

- Meyer-Stamer, J. 2003. *Principles of local economic development: options for South Africa*. Community Self Reliance, 3, 1-4.
- Miller, D. 1996. *Export or Die: Britain's Defence Trade with Iran and Iraq*. London: Cassell.
- Mills, G. 2004. *The South African National Defence Force: Between downsizing and new capabilities*. Naval War College Review, 52(1), pp. 78-99
- Mills, G., Oosthuizen, G. and Katzenellenbogen. 1999. *Disarmament and arms control in Africa: A South African perspective*
- Miningm^X. 2009. *Rainmakers and pot stirrers*. Finweek
- Miramón, Jacques de. 1985. *Countertrade: An illusory Solution*. The OECD Observer. Vol. 124. pp. 24-29
- MMSD Southern Africa, 2001. *Locating the Mining and Minerals Sector within the Southern African Vision for Sustainable Development*. Workshop report, 13 March 2001, Stellenbosch, South Africa
- Modise, J. 1999. *Realising our hopes*. Address by the Minister of Defence on the Defence Budget Vote. 09 March 1999
- Morgan, D.L. (1996) Focus Groups. *Annual Review of Sociology*.
- Morgan, D.L. 1997. *Focus groups as qualitative research*. 2nd ed. Thousand Oaks, California, Sage.
- Morgan, D.L. and Krueger, R. 1998. *The focus group kit*, 6 vols. Thousand Oaks, California, Sage.
- MPRDA – see Republic of South Africa, 2002.
- Murray, A. 2005. *Will 'social responsibility' harm business?* The Wall Street Journal. May 18, 2005
- Nadvi, K. and Barrientos, S. 2004. *Industrial Clusters and Poverty Alleviation: Mapping links and developing a methodology for poverty and social impact assessment of cluster development initiatives*. Working Paper, UNIDO, Vienna.
- Nathan, L. 2001. *Parliamentary approval of original Defence Review was no mandate to buy weapons*. Sunday Independent, 22 July 2001.
- Nathan, L. 2005. *Consistency and inconsistencies in South African Foreign Policy*. International Affairs, 81(2), pp.361-372

Nathan, L., Batchelor, P. and G. Lamb. 1997. *Submission to the Truth and Reconciliation Commission: Business Sector Hearing*.

Navias, M. 1994. *The future of South Africa's arms trade and defence industries*. Jane's Intelligence Review, November 1994, p.522

Nel, E.L. 2001. *Local economic development: a review and assessment of its current status in South Africa*. Urban Studies, 38, 1003-1024.

Nel, E.L., 2002: South Africa's manufacturing economy: problems and performance, in Lemon, A. and Rogerson, C.M., *Geography and Economy in South Africa and its Neighbours*, Ashgate, Aldershot, pp 81-94.

Nel, E. and Binns, A. 2002. Decline and Response in South Africa's Free State Goldfields. Local Economic Development in Matjhabeng. *International Development Planning Review*. August 2002, Vol. 24, No 3.

Nel, E.L., Hill, T.R. and Eising, W. 2002. *Evaluation of local economic development in Cato Manor*, Cato Manor Development Association, Durban.

Nel, E. L., Hill, T. R., Aitchison, K.C. and Buthelezi, S. 2003. The closure of coal mines and local development responses in the Coal-Rim Cluster, northern Kwa-Zulu-Natal, South Africa. *Development Southern Africa*. September 2003, Vol. 20, No.3

Nel, E.L. and Rogerson, C.M. 2004. *Local Economic Development in Southern Africa*, Transactions Press, New Jersey

Nel, E., Rogerson, C. and Marais, L., 2004: Manufacturing industry study of the Free State: *Current trends, Spatial and sectoral considerations and future prospects*, unpublished study undertaken for the Premier's Economic Advisory Council of the Free State, Bloemfontein.

Ngwenyama, O.K. and Lee, A.S. 1997. Communication Richness in Electronic Mail: Critical Social Theory and the Contextuality of Meaning. *MIS Quarterly* (21:2), 1997, pp. 145-167.

OECD. 1985. *Countertrade: Developing Country Practices*. OECD Publications, Paris.

Parliament of the Republic of South Africa. 2001. *Minutes: Joint Standing Committee on Defence, Joint Investigation Report into Strategic Defence Packages (Question Formulation)*. 29 November 2001. www.pmg.org.za

- Patton, M. 1997. *Utilization-Focused Evaluation: The New Century Text*. New York, John Wiley
- Pendlebury, S., Lake, L. and Smith, C. (eds) 2009. *South African Child Gauge 2008/2009*. Cape Town: Children's Institute, University of Cape Town
- Perlo-Freeman, S. 2004. *Offsets and the Development of the Brazilian Arms Industry*. In J. Brauer and J.P. Dunne (eds). *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets*. London: Routledge
- Porter, M.E. and Kramer, M.R. 2002. "The Competitive Advantage of Corporate Philanthropy", in *Harvard Business Review*. December 5-16, 2002
- Pothier, M. 2000. *The Conventional Arms Control Bill*. Southern African Catholic Bishops' Conference. Briefing Paper 36. October 2000
- Posavac, E. and Carey, R. 1992. *Program Evaluation*. Englewood Cliffs, NJ: Prentice Hall
- Prohansky, H.M. 1991. "The field of environmental psychology: Securing its future." In Stokhols, D. and Altman, I. (eds) *Handbook of environmental psychology*. Vol. 2, pp 1489-1510. New York: John Wiley
- Proudlock, P., Dutschke, M., Jamieson, L., Monson, J. and Smith, C. (eds). 2008. *South African Child Gauge 2007/2008*. Cape Town: Children's Institute, University of Cape Town.
- Rappaport, J. (ca 1990) "Research methods and the empowerment social agenda." In Tolan, P., Keys, C., Chertok, F. and Jason, L. (eds) *Researching community psychology: Issues of theory and methods*. Washington, D.C.: American Psychological Association
- Redclift, M. 1992. *Sustainable Development: Exploring the Contradictions*. Routledge, London.
- Republic of South Africa, 1967. *Mining Titles Registration Act 16 of 1967*
- Republic of South Africa, 1996a. *MODAC: Investigation of Technology and Armament: Acquisition in the Department of Defence*. Pretoria: Department of Defence
- Republic of South Africa, 1996b. *Defence in a Democracy. White paper on National Defence for the Republic of South Africa*. Pretoria: Government Printer
- Republic of South Africa, 1998a. *Defence Review*. Pretoria: Government Printer

Republic of South Africa, 1998b. *White Paper on Local Government*. March 1998. Pretoria: Government Printers

Republic of South Africa, 1999. *Economic and Fiscal Impacts of the Procurements*. Press Release. Government Communication and Information Service. September 15, 1999

Republic of South Africa. 2000. *Standing Committee on Public Accounts, Fourteenth Report*. Pretoria: Government Printer

Republic of South Africa, 2001a. *Estimates of National Expenditure*. Pretoria: National Treasury

Republic of South Africa, 2001b. *Strategic Defence Procurement Packages: Joint report by the Public Prosecutor*. Pretoria: Government Printers

Republic of South Africa. 2002. *Minerals and Petroleum Resources Development Act of 2002*. Pretoria: Government Printers

Reed, T.W. and Stimson, R.J. eds. 1985. *Survey interviewing: Theory and techniques*. Sydney: Allen & Unwin.

Roberts, B. 2000. *Chronic and transitory poverty in post-apartheid South Africa: evidence from KwaZulu-Natal*. CSDS Working Paper No 28, School of Development Studies, University of Natal, Durban

Robertson, A. 2004. *The six tenets for sustainability in mining*. www.informine.com (accessed in April 2004)

Robertson, A.M., Devenny, D. and Shaw, S.C., 1998. "Post Mining Sustainable Use Plans vs Closure Plans" in *Mine Reclamation and Remediation*. Proceedings from the 22nd annual British Columbia Mine Reclamation Symposium, Penticton, B.C. 14-17 September 1998. pg. 95-110

Robertson, A.M., Devenny, D. and Shaw, S.C., 1999. "The Concept of Custodial Transfer of Mined Land." Paper presented at: *Mine, Water and Environment*. 1999 MWA Congress, Sevilla, Spain.

Robinson, M. 2002. *Corruption and Development*. London: Frank Cass

Rodrik, D. 1995. Political Economy of Trade Policy. In Grossman, G.M. and Rogoff, K. (eds) *Handbook of International Economics*. Vol.3, Elsevier, Amsterdam

Rogerson, C.M. 1997. Local Economic Development and Post-Apartheid Reconstruction in South Africa. *Singapore Journal of Tropical Geography*. Vol. 18, No.1, June 1997

- Rogerson, C.M. 2003. *Towards pro-poor local economic development: The case for sectoral targeting in South Africa*. Urban Forum, 14, 53-79.
- Romer, P. 1993. "Economic Growth" in Henderson, D.R. (ed) *The Fortune Encyclopedia of Economics*. New York: Time Warner Books
- Romer, P. 1993. *Ideas and Things*. The Economist, 11 September 1993
- Romer, P. 1994. *Beyond Classical and Keynesian Macroeconomic Policy*. Policy Options. July-August 1994
- Romer, R. 1996. *Why, indeed, in America? Theory, History and the Origins of Modern Economic Growth*. American Economic Review, Vol. 86, No. 2. May 1996, pp. 202-206
- Rossi, P. and Freedman, H. 1993. *Evaluation: A Systematic Approach*. Newbury Park, CA, Sage
- Rossouw, G.J. 2002. "Business Ethics and Corporate Governance in the Second King Report: Farsighted or futile?" *Koers* 67(4), pg. 405-419
- Rowe, S.J., 1987, *Ecosphere Thinking*. www.ecospherics.net (accessed in June 2006)
- Rowe, M. 1989. *Countertrade*. Euro Money Publication PLC. London.
- Sackmann, R.; Weymann, A. and Wingens, M. (Eds.) 2000. *Die Generation der Wende*. Opladen: Westdeutscher Verlag
- Sampson, A. 1991. *The Arms Bazaar*. London: Holder and Stoughton
- Scriven, M. 1980. "The Methodology of Evaluation." In Worthen, B.R. and Sanders, J.R. *Educational Evaluation: Theory and Practice*. Belmont, CA: Woodsworth
- Seekings J. 2003a. *Social Stratification and inequality in South Africa at the end of Apartheid*. CSSR Working Paper no. 31. Cape Town, Centre for Social Science Research.
- Seekings J. 2003b. *Do South Africa's Unemployed Constitute An Underclass?* CSSR Working Paper no. 32. Cape Town, Centre for Social Science Research.
- Sen, A.K. 1983. *Poor, relatively speaking*. Oxford Economic Papers, 35(2), pp.153-169
- Serrano-Garcia, I. 1990. "Implementing research: Putting our values to work." In Tolan, P., Keys, C., Chertok, F. and Jason, L. (eds) *Researching community psychology: Issues of theories and methods*. Washington, D.C.: American Psychological Association

Setplan. 2008. *Vuna Awards – recognising exemplary service*. Department of Housing and Local Government, Northern Cape

Sheldon, C.G., Strongman, J.E. and Weber-Fahr, M., 2002. *Its not over when its over: Mine closure around the world*. World Bank and International Finance Corporation

Shelton, G. 1998. *South African Arms Sales to North Africa and the Middle East: Promoting Peace or Fuelling the Arms Race?* Johannesburg Foundation for Global Dialogue

Shields and Šolar, 2004. "Sustainable Mineral Resource Management and Indicators: Case Study Slovenia", *Geological Survey of Slovenia*, Ljubljana, Slovenia

Sigma Guidelines, 2004. *Putting sustainable development into practice – a guide for organizations*. www.projectsigma.com (accessed in September 2005)

Simkins, C. 2004. *What happened to the distribution of income in South Africa between 1995 and 2001?* (www.sarpn.org.za)

Sivard, R.L. 1996. *World Military and Social Expenditures 1996*. Washington D.C.: World Priorities

Sköns, E. 2004. "Evaluating Defense Offsets: the Experience in Finland and Sweden," in Brauer, J. and Dunne, J.P. (eds) *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets*. London: Routledge.

Skosana, X. 2002. *Arms Control, South African Style: The dynamics of post-1994 Arms Export Control Policy*. Pretoria: Institute for Security Studies

Smith, A. 1904. *An enquiry into the nature and causes of the wealth of nations*. London: Methuen and Co., Ltd. Edwin Cannan (ed.) 5th edition. Available on www.econlib.org/LIBRARY/Smith/smWN.html

Smith, J.K. 1983. Quantitative vs qualitative research: an attempt to clarify the issue. *Educational Researcher*, 12, pg. 6-13

Solow, R., 1993. "An almost practical step towards sustainability". *Resources Policy*, 19(30), pg. 162-172

South African Every Death Counts Writing Group. 2008. *Every death counts: use of mortality audit data for decision-making to save the lives of mothers, babies, and children in South Africa*. *Lancet* 2008; 371:1294-304

South African Institute of Race Relations, 2001. *South African Survey 2000/2001*. Johannesburg.

Southwood, P. 1991. *Disarming Military Industries: Turning an Outbreak of peace into an Enduring Legacy*. New York: St Martin's Press

Sperling, J., Louscher, D. and Solomone, M. 1995. *A reconceptualization of the arms transfer problem*. *Defence Analysis*, 11: 3, pp 293-311

Statistics South Africa, 1998. *Census of Manufacturing, Statistical Release P 3001*, Statistics South Africa, Pretoria.

Statistics South Africa, 1998. *The People of South Africa Population Census, 1996*. Statistics South Africa, Pretoria

Statistics SA, 2000a, *The People of South Africa – Population Census, 1996, Summary Report*, Pretoria: Government Printers.

Statistics South Africa, 2000b, *Measuring Poverty in South Africa*, Pretoria: Government Printers.

Statistics South Africa, 2004. *Census 2001*. Statistics South Africa, Pretoria

Statistics South Africa. 2005. *Mortality and causes of death in South Africa, 1997–2003: Findings from death notification*. Pretoria.

Statistics South Africa. 2006. *Mid-year population estimates, South Africa: 2006*.

Statistics South Africa. 2007. *A discussion note: Constructing comparable household survey data for the analysis of poverty in South Africa (1995–2000)*. Pretoria: Statistics South Africa.

Statistics South Africa. 2008a. *Income and expenditure survey 2005/06*. Pretoria. Statistics

Statistics South Africa. 2008b. *Income and expenditure of households 2005/06*. Statistical Release No P0100. Pretoria: Statistics South Africa.

Statistics South Africa. 2008c. *Income and expenditure of households 2005/06 – Analysis of results*. Report No 01-00-01. Pretoria: Statistics South Africa.

Stephen, C.R., Mulaudzi, M.C., Kauchali, S. and Patrick, M.E. 2009. *Saving Children 2005-2007: A fourth survey of child health care in South Africa*

Stewart, D. W. and Shamdasani, P.N. 1990. *Focus Groups: Theory and Practice*. Newbury Park, California, Sage.

- Stolten, H.E. Undated. *Preconditions for welfare: strings between economy, politics, and redistribution*. Jakobsgaard Research.
- Storper, M. and Walker, R., 1989: *The Capitalist Imperative*, Blackwell, Oxford.
- Strongman, J. 2000. *Mine Closure. An overview of the issues*. Paper presented at the Government of Indonesia Mine Closure Workshop, Jakarta, Indonesia. 24 October 2000.
- Strongman, J. 2002. *Sustainable Mining Development. From Concept to Action*. Paper presented at "Mining and the Community II", Madang, Papua New Guinea. 16 September 2002
- Struys, W. 2001. *The Future of Offsets in Small Countries: The Belgian Case*. Paper presented to the Fifth Annual Conference on Economics and Security, Middlesex University, London. June 2001.
- Struys, W. 2002. *Offsets in Small Countries: Between Scylla and Charybdis?* Paper presented at ECAAR Conference on 'Offsets and Economic Development' in Cape Town, 25-27 September 2002.
- Struys, W. 2004. *Offsets in Belgium: between Scylla and Charybdis?* In Brauer, J. and Dunne, J.P. (eds) *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets*. London: Routledge.
- Sudman, S. and Bradburn, N.M. 1974. *Response effects in surveys: Review and Synthesis*. Chicago: Aldine
- Sudman, S. and Bradburn, N.M. 1982. *Asking Questions*. San Francisco: Jossey-Bass
- Sudman, S.; Bradburn, N.M. and Schwarz, N. 1996. *Thinking about answers: The application of cognitive processes to survey methodology*. San Francisco: Jossey-Bass
- Sunkel, O. 1973. *Transnational Capitalism and National Disintegration in Latin America*. *Social and Economic Studies*, Vol. 22(1), pp. 156-171
- Susman, G.I. and Evered, R.D. 1978. An Assessment of the Scientific Merits of Action Research," *Administrative Science Quarterly*, (23), pp. 582-603.
- Swyngedouw, W.A., 1989: The heart of the place: the resurrection of locality in an age of hyperpace, *Geografiska Annaler*, 71 B, 1, pp 31-42.

- Sylvester, J. 2006. *Legislative Control over the Military: A critical analysis of the strategic arms package*. M.A. Thesis. University of Cape Town
- Szeftel, M. 1998. Misunderstanding African Politics: Corruption and the Governance Agenda. *Review of African Political Economy* (76), pg. 221-240
- Szeftel, M. 2000. Between Governance and Underdevelopment: Accumulation and Africa's "Catastrophic Corruption". *Review of African Political Economy* (84), 287-306
- Tashakkori, A. and Teddlie, C. 1998. Mixed methodology. Combining qualitative and quantitative approaches. *Applied Social Research Methods Series, Vol. 46*. London: Sage
- Taylor, B. (ed) 2002. *Local economic development in action: Critical reflections on our experience*. Report on the LED workshop held in Welkom, 14-16 July 2002. www.led-sa.co.za/Documents/doc77.doc (accessed May 2004)
- Tesch, R. 1990. *Qualitative research. Analysis types and software tools*. New York: The Falmer Press.
- Thomas, M. 2006. *As used on the famous Nelson Mandela. Underground adventures in the arms and torture trade*. Ebury Press
- TIPS (Trade and Industrial Policy Strategies), 2002: *Snapshot of industry-wide trends in value-added, 1991-2001*, TIPS, Johannesburg.
- TIPS, 2003: *A review of the changing composition of the South African economy*, TIPS, Johannesburg.
- Tomlinson, R. 2003. *The local economic development mirage in South Africa*. *Geoforum*, 34, 113-122.
- Tomlinson, R. and Addleson, M., 1997: *Regional Restructuring under Apartheid*, Ravan press, Johannesburg.
- Townsend, P. 1962. *The meaning of poverty*. *British Journal of Sociology*, 13(3), pp. 221-227
- Townsend, P. 1990. *The poverty line: methodology and international comparisons*. In D. Gordon and C. Pantazis (eds). *Breadline Britain in the 1990s, Studies in Cash and Care*. Ashgate: Aldershot
- Townsend, P. and Gordon, D. 1989. *What is enough? New evidence on poverty in Greater London allowing the definition of a minimum benefit*. Memorandum of evidence in the House of Commons Social Services Select Committee on Minimum Income 579, London: HMSO, pp 45-73.

Reprinted as Townsend, P. and Gordon, D. 1991. *What is enough? New evidence on poverty allowing the definition of minimum benefit*. In M. Alder, C. Bell, J. Clasen, and A. Sinfield (eds.) *The Sociology of Social Security*. Edinburgh University Press, pp. 35-69

Townsend, P. and Gordon, D. 1993. *What is enough? The definition of a poverty line*. In P. Townsend (ed.) *The international analysis of poverty*. New York, London: Harvester Wheatsheaf, pp. 40-78

Transparency International UK, 2002. *Corruption in the Official Arms Trade*. Policy Research Paper 001. London: Transparency International UK.

Tuffrey, M. (undated) *Good Companies, Better Employees*. The Corporate Citizenship Company. London. (www.corporate-citizenship.co.uk)

Udis, B. and Maskus, K. 1991. "Offsets as industrial policy: lessons from aerospace." *Defence Economics* 2(2), pg. 151-164

UNAIDS. 2008. *2008 Report on the Global AIDS Epidemic*

UNDP. 2000. *Human Development Report 2000*. New York: Oxford

UNDP. 2003. *Human Development Report 2003: Millennium Development Goals*. Oxford: Oxford University Press

UNDP. 2007. *Human Development Report 2007/2008: Fighting climate change: human solidarity in a divided world*. Palgrave Macmillan, New York

UNICEF. 2007. *A report card on prevention of mother-to-child transmission of HIV and paediatric HIV care and treatment in low- and middle-income countries. Scaling up progress from 2004 to 2005*. Working Paper. IATT on prevention of HIV infection in pregnant women, mothers and their children. UNICEF, New York.

United Nations, 2003a. *Confronting sustainability in the mining sector: Role for a Sustainability Fund*. New York.

United Nations, 2003b. *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources*. New York: United Nations

Urban-econ, 2000. *Towards an IDZ in the Free State*, Department of Economic Affairs, Tourism and the Environment, Bloemfontein.

Urban-econ, 2003. *A profile of the Free State economy*, Premier's Economic Advisory Council, Bloemfontein.

US Department of Commerce, Bureau of Export Administration, Office of Strategic Industries and Economic Security, 2001. *Annual report to Congress: Offsets in Defense Trade*.

US International Trade Commission – various press releases and other documents

Vahlhaus, M. 2000. *Wie führen wir Wirkungsmonitoring ein/durch? Hinweise, Methoden und Instrumente zur Einund Durchführung*. GTZ 2000. (<http://www.wiram.de/toolkit/navigation.htm>)

Vahlhaus, M. and Kuby, T.H., 2000. *Participatory Monitoring and Evaluation in Projects. Orientierungsrahmen für das Wirkungsmonitoring in Projekten der Wirtschafts- und Beschäftigungsförderung unter besonderer Berücksichtigung armutsmindernder Wirkungen*. GTZ 2000 (<http://www.wiram.de/toolkit/navigation.htm>)

Vahlhaus, M. and Kuby, T.H., 2000. *Wozu Wirkungsmonitoring? - Eine Orientierungshilfe*. GTZ 2000. (<http://www.wiram.de/toolkit/navigation.htm>)

Van der Berg, S. 1999. *Social Policy to Address Poverty*. Working Paper No. 99/30. DPRU, University of Cape Town

Van der Berg, S. 2003. *Poverty in South Africa – an analysis of the evidence*.

Van der Berg, S. And Louw, M. 2003. *Changing patterns of SA income distribution: Towards time series estimates of distribution and poverty*. Paper delivered to the Conference of the Economic Society of South Africa. 17-19 September 2003, Stellenbosch.

Van der Berg, S., Burger, R., Burger, R., Louw, M. and Yu, D. 2006. *Trends in Poverty and Inequality since the Political Transition*. Working Paper No. 06/104. DPRU, University of Cape Town.

Vaughn, S., Schumm, J.S. and Sinagub, J.M. 1996. *Focus group interviews in education and psychology*. Thousand Oaks, California, Sage.

Virtual Metals. 2005. *Gold in South Africa*. DTI, AngloGold Ashanti, IDC and World Gold Council

Wallerstein, I. 1979. *The Capitalist world-economy*. Cambridge: Cambridge University Press.

Wallerstein, I. 1981. "Dependence in an inter-dependent world: The limited possibilities of transformation with the capitalist world economy." In Munoz, C. (ed) *From Dependency to Development: Strategies to*

overcome underdevelopment and inequality (pp. 30-58) Boulder, Co: Westview

Warwick, D.P. and Lininger, C.A. 1975. *The sample survey: Theory and Practice*. New York: McGraw-Hill.

Watts, D. C. H., Ilbery, B. and Maye, D. 2005 "Making reconnections in agro-food geography: alternative Systems of food provision", *Progress in Human Geography*, 29, 1, 1-19.

Webb, E.; Campbell, D.; Schwartz, R. and Sechrest, L. 1966. *Unobtrusive Measures: Non-reactive Research in the Social Sciences*. Chicago: Rand McNally.

Wellmann, G. 2004. An evaluation of the Augusta Westland Filk Gold Chains in South Africa National Industrial Participation Project. MA Thesis, Nelson Mandela Metropolitan University

Wellmann, G. 2005. "Sustainable Development through Beneficiation." Paper presented at the *Mining for Sustainable Development: Extracting more benefit for Africa*. Chamber of Mines of South Africa, Midrand, 16-17 November 2005.

Welt, L. 1984. *Trade without money: barter and countertrade*. New York

Wesgro, 2003. *Western Cape Business Prospects 2004*

Western Cape Provincial Department for Economic Development, 2004. *Western Cape Socio-economic Review 2003*

Whyte, W.F. 1960. Interviewing in field research. In *Human Organization Research*. Edited by R. W. Adams and J.J. Preis, 299-314. Homewood. Dorsey

Whyte, W. F. 1984. *Learning from the field: A guide from experience*. Newbury Park, California, Sage.

Wicker, A.W. 1987. "Behavior settings reconsidered: Temporal stages, resources, internal dynamics, context." In Stokols, D. and Altman, I. (eds) *Handbook of environmental psychology*. Vol.1. pp 613-653. New York: Wiley

Willet, S. 1999. *The Arms Trade, Debt and Development*. Campaign against the Arms Trade

Willet, S. and Anthony, I. 1998. *Countertrade and Offsets Policies and Practices in the Arms Trade*. Working Paper No. 20. Copenhagen: Copenhagen Peace Research Institute.

Williams, R. 1998. *Reallocating defence expenditures for development: the South African experience*. In 'Report 12: Converting Defence Resources to Human Development. Bonn International Center for Conversion, October 1998

Williamson, O.E. 1993. "Calculativeness, Trust and Economic Organization." *Journal of Law and Economics*. Vol. 34, pp.453-502

Woolard, I. and Klasen, S. 2005. *Determinants of income mobility and household poverty dynamics in South Africa*. *Journal of Development Studies*, 41(5), pp. 865-897

World Bank and Belgian Ministry of Foreign Affairs, Foreign Trade and International Cooperation, 1999. *Security, Poverty Reduction and Sustainable Development: Challenges for the New Millennium*. September 1999

World Bank. 2000a. *World Development Report 2000/2001: Attacking Poverty*. World Bank, Washington D.C.

World Bank. 2000b: *Local Economic Development: Quick Reference*. Urban Development Division, The World Bank, Washington DC.

World Bank and IFC, 2002a. *It's not over when it's over: Mine closure around the world*. Mining and Development Series. World Bank and International Finance Corporation.

World Bank and IFC, 2002b. *A Primer: Developing and Implementing Local Economic Development Strategies and Action Plans*. Mining and Development Series. World Bank and International Finance Corporation

World Bank, 2003. *World Development Indicators*. Washington, USA. April 2003

World Gold Council, 2000. *Gold Demand Trends*.

World Trade Organisation, 2004. *Overview of the Agreement on Government Procurement*. Downloaded from www.wto.org

Wrigley, C. 2003. *The South African Deal: A Case Study in the Arms Trade*. London: Campaign against the Arms Trade.

Yavas, B.F. and Freed, R. 2001. *An economic rationale for countertrade: Liquidity Constraints*. *The International Trade Journal*, Volume 15, Issue 2, April 2001: 127-155

Yin, R.K. 1981. The case study as a serious research strategy. *Knowledge (3)*, pg. 97-114

Yin, R.K. 2002. *Case study research, design and methods*. Third edition. Newbury Park, Sage Publications

Yoffie, D. 1984. *Profiting from Countertrade*. Harvard Business Review. May/June 1984:8

Zaaijer, M. and Sara, L.M. 1993. *Local economic development as an instrument for urban poverty alleviation: a case from Lima, Peru*. Third World Planning Review. Vol. 15, No. 2, pp. 127-141

Zacarias, A. 1998. *The South African Defence Industry and the New Thinking on Security*. The South African Institute of International Affairs

Zappel, G. 2003. *Corporate Citizenship and the Role of Government: The Public Policy Case*. Commonwealth of Australia

Newspapers/internet news sites:

Africa Confidential, March 03, 1995

Africa Confidential, March 27, 1996

Africa News, July 31, 2003.

Arms Trade News, November 26, 1993

Army Quarterly and Defence Journal, 127 (97), pp 261-270

Business Day, August 28, 1999

Business Day, March 20, 2003

Business Report, November 16, 2001

Business Times, March 07, 1999

Cape Times, March 01, 1995

Cape Times, May 14, 1995

Ceasefire, February/March 1997

Daily Telegraph, August 22, 1994

Daily Telegraph, June 20, 1997

Defense News, April 10, 2000

Defense Systems Daily, August 25, 1999

Defense Systems Daily, September 17, 1999

Defense Systems Daily, October 29, 1999

Der Spiegel, 07 February 2007

Engineering News, February 10, 2000

Engineering News, November 05, 2004

Financial Times, November 26, 1998

Financial Times, January 18, 1999

Financial Time, June 09, 2003.

Global News Wire: Africa Analysis, September 5, 2003.

Gripen News, October 12, 1999

Gripen News, October 04, 2000

Independent, August 22, 1997

IMF, January 1984

Jane's Defence Weekly, November 30, 1996

Jane's Defence Weekly, September 23, 1997

Jane's Defence Weekly, February 18, 1998

Jane's Defence Weekly, November 25, 1998

Mail and Guardian (South Africa), February 7, 1997

Mail and Guardian (South Africa), April 24, 1997

Mail and Guardian (South Africa), April 15, 1998

Mail and Guardian (South Africa), February 20, 1999

Mail and Guardian (South Africa), March 29, 1999

Mail and Guardian (South Africa), August 8, 2002

Mail and Guardian (South Africa), October 04, 2002

Mail and Guardian (South Africa), August 21, 2003

Mail and Guardian online, February 18, 2004.

Mining Weekly, April 16-22, 2004

News24.com, June 09, 2005

South African Press Association, February 17, 2004.

Southscan, July 19, 1996

Sunday Independent, July 22, 2001

Sunday Times (South Africa), May 21, 1995

Sunday Times (South Africa), May 24, 1998

Sunday Times (South Africa), February 21, 1999

Sunday Times (South Africa), August 24, 2003

The Argus, February 23, 1995

The Argus, April 12, 1995

The Guardian, UK, July 17, 2002.

The Tribune Chandigarh, India, October 06, 2002

The Wall Street Journal. May 18, 2005

Weekend Argus, May 28, 1995

Weekend Star, April 23, 1995

Websites

<http://iafrica.com/news/sa/307387.htm>

www.anc.org.za

www.anglogold.com

www.corporate-citizenship.co.uk

www.countertrade.org

www.dbsa.org

www.demarcamation.org.za

www.denel.co.za

www.dti.gov.za

www.defensenews.com

www.econlib.org/LIBRARY/Smith/smWN.html

www.ecospherics.net
www.engineeringnews.co.za
www.e-offsets.com
www.fdc.co.za
www.gripen.com
www.guardian.co.uk
www.harmony.co.za
www.idc.co.za
www.idp.org.za
www.iss.co.za
www.implats.co.za
www.mg.co.za
www.musuku.com
www.news24.com
www.projectsigma.com
www.saab.se
www.southafrica.info/doing_business/trends/empowerment/bee.htm
www.the-alliance.org
www.thedti.gov.za
www.transport.gov.za
www.un.org/overview/rights.html
www.wassenaar.org/docs/criteria.html
www.wesgro.co.za
www.worldbank.org/poverty/voices
www.wsj.com

APPENDIX A

Results of informal two-minute questionnaires conducted in Virginia

The survey was administered in Virginia central business district in May 2007.

Fifty respondents were chosen at random, irrespective of gender and economical background. Questions were asked both in English and Afrikaans.

The following questions were asked:

6. Do you know about the weapons deal? 47 said yes, 3 no.
7. Do you know about offsets? 12 said yes.
8. Do you know about SARM? 17 said yes
9. When did you hear about SARM:
 - Before the opening of the factory = 0
 - During the time the factory was functioning = 3
 - After the closing of the factory? = 14

Most respondents heard about the arms deal due to the press. All 17 respondents who had heard about SARM heard so via friends or acquaintances. Some said that they also read about the theft of the gold in newspapers. None of the respondents knew about the link between SARM and the arms deal.

Appendix B

People Interviewed

Person Interviewed	Date
Dr. R. Williams	12 July 2002 02 August 2002
Ms Chandrika Jogessar, DTI	19 September 2002
Ms. Wasima Herabai, Deaf Federation of South Africa	02 September 2003
Mr. Mark Tarlie, OroAfrica	June 2003 November 2004 21 April 2005 18 October 2005
Mr. Zikode, DTI	06 August 2003 08 December 2004
Mr. Luis Perez, SARM	19 April 2004
Ms Lebo Mogotsi, AngloGold Ashanti	12 October 2004
Mr. Dieter Rowe-Setz, Wits Technikon	12 February 2005
Mr. Peter Cloete, Cape Jewellers and Goldsmith Union	02 September 2003 16 May 2006
Mr. Ferdi Dippenaar, Harmony Gold Mining Company	15 March 2005
Mr. Dion Haroldt, DTI	23 June 2005
Mr. Kevin Jacobs, IDC	07 July 2005
Mr. Linden Birns, BAE Systems/SAAB	05 July 2005
Mr. Roger Baxter, Chamber of Mines	06 July 2005
Ms Alta Wessels, Harmony Jewellery School	12 March 2006
Dr. Paul Jourdan, Mintek	08 July 2005 07 February 2006
Mr. Denzel Young, Musuku Beneficiation Systems	12 July 2005 21 September 2005 15 February 2006
Mr. Steven Nathan, OroAfrica	11 March 2006
Ms Marjory, COSATU	16 May 2006
Mr. J. Diemond, US Department of Commerce	19 October 2006
Mr. Michael Wightman, Musuku	26 March 2007

Beneficiation Systems	
De Wet Schutte, Harmony Gold Mining Company	03 April 2007
Mr. Johan Smit, Silplat (Pty) Ltd	31 August 2007 12 September 2007 01 November 2007
Mr. Gary Nathan, OroAfrica	31 August 2007
Mr. Anton Meinesz, OroAfrica	31 August 2007
Mr. Derek Engelbrecht, Implats	12 September 2007
Mr. Konrad van Essen, OroAfrica	01 November 2007
Mr. Bernard Stern, Metal Concentrators	01 November 2007 12 November 2007
Ms. Joanne Jones, AngloGold Ashanti	07 December 2007
Mr. Rudi Jordaan, Gold Fields	05 December 2007
Mr. Tim Buchanan, Gold Fields	12 May 2007

Appendix C

Description of arms purchased in the deal

In Holden (2008: 18-20), the weaponry purchased in the arms deal are described as follows:

The corvettes: Four German-built corvettes were purchased. Measuring 121 metres, they are smaller than the frigates that the Navy previously used. They are equipped with a sophisticated system, which makes up 40 percent of their total cost. The corvettes are supposed to be the workhorses of the Navy, providing the capacity for search-and-rescue operations, maritime patrols with an eye on law enforcement, and a helicopter launching-pad, which substantially increases surveillance range. The corvettes also have 'blue sea' capacity (the ability to sail in parts of the ocean far away from the shore), which means that they can sail as far south as Marion Island. (Information gained from 'The hardware', *SABC Special Report*. Available at www.armsdeal-vpo.co.za)

The submarines: Three submarines were purchased to replace South Africa's Daphne submarines, on the assumption, Terry Crawford-Browne has noted, that submarines make small navies important (Crawford-Browne, 2007:130). Thus deterring foreign powers from attacking the country, the submarines are also intended to provide a stealthy way of protecting South Africa's coastal trade, by being able to spy on illegal activity and feed this information to surface ships, and to provide support in peace-keeping operations (Information gained from 'The hardware', *SABC Special Report*. Available at www.armsdeal-vpo.co.za)

The Cape Argus (05 December 2007) speculated that due to a lack of skilled staff to operate all the purchased submarines, two of the three would have to be mothballed.

The Gripen: Twenty-eight Gripen were purchased. A 'multi-role combat aircraft', according to its official website, which also calls it 'the wings of your nation' (www.gripen.com). This nippy supersonic attack fighter has replaced the Cheetah C and Cheetah D fighters that were on the SAAF's inventory. It can be used to provide armed cover and support for land-based attacks, reconnaissance, air-borne dogfights and airspace control (Information gained from 'The hardware', *SABC Special Report*. Available at www.armsdeal-vpo.co.za). Built as a joint initiative by Britain and Sweden, it is also used by the air forces of Sweden, the Czech republic, Hungary and Thailand.

The Hawk: Twenty-four Hawks were purchased. Built by British Aerospace, the Hawk provides trainees with flight experience before they move on to the supersonic Gripens. It can also do limited search and rescue missions, reconnaissance and patrolling ('The hardware', *SABC Special Report*. Available at www.armsdeal-vpo.co.za). It replaces the Impala trainers used by the SAAF, and was chosen over the cheaper Italian Aeromacchi MB339. The selection of the Hawk attracted considerable criticism. Even the UK's Royal Air Force (RAF), which uses the Hawk, found that the Aeromacchi was 'far and away better than anything the RAF currently possesses' ('A significantly inferior product', *The Citizen*, 7 January 2004).

The Helicopters: The 30 Light-Utility Helicopters were bought from Agusta in Italy to replace the SAAF's 40-year old French Alouette helicopters. They can accommodate up to eight people, and can also be used to carry up to two stretchers. They are intended to be used for search and rescue operations, medical and humanitarian assistance, helping with police patrols and patrolling South Africa's borders (Information gained from 'The hardware', *SABC Special Report*. Available at www.armsdeal-vpo.co.za).

Appendix D

The SAAF tier training system

The following table was compiled by Holden (2008:95) to describe the South African Air Force's (SAAF) tier training system.

	TIER ONE	TIER TWO	TIER THREE
1995 Three-tier system	Astra trainers. Pilots would train on the Astra fighters before moving on to the impala trainers. The SAAF did not want to replace the Astras.	Impala MKI and MKII trainers. Pilots would train on these planes before moving on to the actual war-time fighter. The SAAF originally wanted this tier to be replaced with an aircraft that could be used for training and combat.	Cheetah fighters. After training on the previous two tiers, pilots would graduate to the Cheetah, which was the war-time combat fighter. The SAAF wanted to replace these fighters, but only at a later stage as the Cheetahs would still be operational for over a decade.
Early 1997 Two –tier system	N/A	Astra trainers. Pilots would train on the Astra and move directly on to the supersonic war-time fighter.	An ALFA (advanced Light Fighter Aircraft). The SAAF recommended purchasing a new fighter to replace the aging Cheetahs that would be used to fight in combat.
Late 1997 Three-tier system	Astra trainers. Pilots would learn to fly combat planes in the Astra and graduate to the second tier.	The Lead-In Fighter Trainer (LIFT). Pilots would train for supersonic flight in the LIFT before graduating to the ALFA. Importantly, the LIFT would have no combat role functions, unlike what was proposed in	The Advanced Light Fighter Aircraft (ALFA). After completing training on the LIFT, pilots would graduate to flying the war-time combat fighter. BAE's Gripen was the ALFA chosen in 1999.

		1995. BAE's Hawk was the LIFT chosen in 1999.	
--	--	-----------------------------------------------------	--