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brief 18

Conversion in South Africa in the 1990s:

*Defense Downsizing and Human
Development Challenges*



Group for
Environmental
Monitoring

Contents

Preface	4
Acknowledgments	5
Zusammenfassung German Summary	6
Introduction	8
Military Expenditure	10
The Defense Industry	19
Defense Research and Development	26
Surplus Weapons	34
Demobilization, Rationalization and Reintegration	41
Base Conversion	49
Conclusions	54
List of Acronyms and Abbreviations	56
References	58

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**Health workers marching in
April 1990**

Rafs Mayet



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***Peter Batchelor, Jacklyn Cock and
Penny McKenzie***

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**Group for
Environmental
Monitoring**

Preface

The main object of the Defence and Development Project (DDP) of the Group for Environmental Monitoring (GEM), based in Johannesburg, is to strengthen capacities in South African civil society to monitor, support and implement disarmament and conversion processes. It attempts to achieve this through empowerment of those people directly affected and by facilitating open public debate on disarmament, security and development issues. The project, which started in 1996, is generously funded by the Heinrich Böll Foundation (Germany). The Bonn International Center for Conversion (BICC) has been involved since the beginning in supporting and advising the DDP in its four areas of focus: 1) the reuse of military land, 2) demobilization/rationalization and reintegration of former combatants, 3) conversion of the arms industry, and 4) the creation of a landmine-free zone in Southern Africa. The cooperation between BICC and GEM has benefited the work of both institutes and the aims of the project by linking South African conversion efforts to those in other countries. It has also helped to link DDP's activities to the international experience of policy formulation and advocacy on conversion issues.

Throughout its design and implementation, the DDP project has been able to draw on a group of highly knowledgeable and committed advisors in South Africa, many of whom have contributed to this publication.

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Peter Batchelor
Penny McKenzie
Cape Town, January 2000

Zusammenfassung

German Summary

Gegenstand dieses *briefs* sind die Leistungen Südafrikas im Bereich der Konversion während des letzten Jahrzehnts - insbesondere seit dem Beginn der Demokratisierung 1994. Vor dem Hintergrund von konkreten Erfahrungen werden die noch bleibenden Herausforderungen der Konversion untersucht, auch im Hinblick auf die Komplexität der Transformation und der Konsolidierung der Demokratie in Südafrika.

Was die **Militärausgaben** angeht, kann Südafrika erhebliche Leistungen vorweisen: Seit den achtziger Jahren hat Südafrika sein Militärbudget dramatisch verringert und teilt derzeit lediglich 1,5 Prozent seiner Gesamtressourcen dem Militär zu. Eine 'Friedensdividende' in Form einer Umwidmung der Ressourcen für Verteidigung auf dringende sozioökonomische Prioritäten ist dem Lande zugute gekommen. Aber diese Prioritäten werden trotzdem noch nicht ausreichend berücksichtigt.

Als Reaktion auf diese dramatischen Kürzungen der Militärausgaben hat die **Rüstungsindustrie**, die zur Zeit der Apartheid erhebliche Ressourcen verschlang, seit den späten Achtzigern einen Umstrukturierungsprozess durchgemacht. Die Verwendung staatlicher Ressourcen für die Entwicklung einer heimischen Rüstungsindustrie in den Siebzigern und Achtzigern hatte die Mittel für Investitionen in die zivile Industrie bereits verringert. Nun haben die Reduzierungs- und Umstrukturierungsstrategien zu massivem Abbau, nachlassender Produktivität, schwindender Profitabilität und einem Verlust beziehungsweise einer Verschwendung der knappen menschlichen, finanziellen und technologischen Ressourcen geführt. Darüber hinaus

hat die Regierung sehr wenig unternommen, um den Umstrukturierungsprozess in der Rüstungsindustrie zu fördern, und hat Rüstungsfirmen nicht ermutigt, auf zivile Produktion umzustellen.

Ebenso hat die Postapartheids-Regierung zu keinem Zeitpunkt versucht, eine Umverteilung dieser finanziellen und menschlichen Ressourcen von **militärischer Forschung und Entwicklung (R&D)** in Richtung ziviler Anwendungen zu unterstützen. Während der Apartheid-Ära nahm der Verteidigungssektor einen unverhältnismäßig großen Anteil Südafrikas knapper Ressourcen für Forschung und Entwicklung in Anspruch. Seit dem dramatischen Rückgang der Ausgaben für militärische Forschung und Entwicklung ab den späten achtziger Jahren sind viele der begrenzten Mittel, die bisher in militärischer Forschung und Entwicklung festsaßen, schlicht verschwunden.

Dieser *brief* zeigt, dass das Thema **überschüssiger Waffen** in Südafrika eine direkte Folge der Abrüstungs- und Entmilitarisierungsprozesse ist, die Südafrikas Übergang zur Demokratie begleitet haben. Der Rückzug der South African Defence Force (SADF) aus Namibia und Angola im Jahre 1989 sowie die Beendigung der Politik der Destabilisierung, Abstriche im Verteidigungsbudget und das Umstrukturieren einer neuen South African National Defence Force (SANDF) haben zu großen Mengen überflüssigen Verteidigungsmaterials geführt. Auch wenn es eine gewisse Vernichtung überschüssiger Waffen gegeben hat - insbesondere von Landminen und Kleinwaffen - ist Südafrikas Hauptstrategie zur Entsorgung überschüssiger Waffen der Export.

Auch im Bereich der **Rationalisierung und Demobilisierung** militärischen Personals wurden Gelegenheiten zur Konversion versäumt. Die Unterstützung zur Reintegration blieb bisher begrenzt. Im Gegensatz zu den anderen Streitkräften Afrikas verfügt das Personal der SANDF über breitgefächerte Fertigkeiten. Es gab aber keine alternativen Zertifizierungsprogramme, die es diesen wegrationalisierten ehemaligen Kämpfern ermöglicht hätte, ihre Fertigkeiten auf eine Anwendung im zivilen Bereich umzustellen. Probleme bei der Konzeptualisierung und Ausführung der Demobilisierung haben dazu geführt, dass den Bildungs-, Arbeits- und psychologischen Bedürfnissen der ehemaligen Kämpfer nicht nachgekommen wurde.

Im Bezug auf einen weiteren wichtigen Aspekt der Konversion wird argumentiert, dass die **Konversion militärischer Liegenschaften** dem Militär eine Gelegenheit bietet, sowohl die Ungerechtigkeit der Enteignung von Land wiedergutzumachen als auch einen positiven Beitrag zum allgemeinen Entwicklungsprozess zu leisten. Die Konversion militärischer Liegenschaften ist im gemeinsamen Interesse sowohl der Entwicklungs- als auch der Verteidigungsgemeinschaft. Ein politisches Rahmenkonzept zur Konversion militärischer Liegenschaften sowie zu Mechanismen der Umsetzung ist im Entstehen. Dennoch bleibt das Tempo der Konversion langsam und eine Quelle der Frustration für mehrere betroffene Gemeinden.

Bei der Überprüfung der Leistungen Südafrikas in diesen sechs Themenbereichen der Konversion wird klar, dass es seit dem Jahre 1994 tatsächlich positive Entwicklungen gegeben hat. Trotzdem muss die Leistung der Postapartheid-Regierung als unsystematisch und ungleichmäßig beurteilt

werden. Während es 1994 noch so aussah, als gäbe es eine Konvergenz der Interessen der Friedensaktivisten mit denen derer, die für die militärische Umstrukturierung eintraten, geschah die tatsächliche Konversion *ad hoc* und wurde vornehmlich durch Kräfte des Marktes oder finanzielle Engpässe erzwungen.

Dieser *brief* führt nicht nur ein starkes Argument für Konversion, er identifiziert und analysiert auch ein signifikantes Politikvakuum: das Fehlen einer eindeutigen, allumfassenden Konversionsstrategie. Es gibt vier Hauptfaktoren für dieses Vakuum: 1) die starken institutionellen Interessen des Militärs und der Rüstungsfirmen innerhalb des Postapartheid-Staats und der Postapartheid-Gesellschaft, 2) das Fehlen einer massen-gestützten Entmilitarisierungsbewegung, die diese Interessen in Frage stellen könnte, 3) ein militaristischer Nationalismus, und 4) eine Erschöpfung und Schwächung der Zivilgesellschaft in Südafrika seit 1994.

Nicht nur fehlt eine starke politische Unterstützung für Konversion, seit 1997 ist sogar ein Abdriften in Richtung des gegensätzlichen Trends - eine schleichende Militarisierung, oder Remilitarisierung, Südafrikas - zu vermerken. Dies wird offensichtlich in der Verpflichtung des Staats zu einem 30 Milliarden Rand-Wiederbewaffnungsprogramm, in der Akzeptanz der sekundären Verwendung der SANDF zur Bekämpfung von Gewaltkriminalität innerhalb des Landes sowie im Gebrauch des Militärs als einem Instrument der Außenpolitik. Diese Interessen wurden von einer einheimischen, massen-gestützten Entmilitarisierungsbewegung, die nur in embryonaler Form existiert, nicht angefochten. Für die Mehrzahl der Südafrikaner, denen unter der Apartheid der Zugang zu vollen Bürgerrechten verweigert wurde, wird dieser Militarismus sehr schwer auszuhebeln sein.

Es ist nötig, die Zivilgesellschaft durch Zugang zu Informationen und alternativen Perspektiven zu befähigen, damit die verschiedenen Politikoptionen umfassend erforscht werden und die Debatte nicht nur von 'Insider'-Rüstungsexperten beherrscht wird. Jetzt, wo Südafrika sich ein pluralistisches politisches System und alle Staaten der südlichen Region Afrikas sich ein universelles Stimmrecht gesichert haben, hängt die Konsolidierung von Frieden und Demokratie davon ab, dass die tatsächlichen Bedrohungen der kollektiven Sicherheit in Angriff genommen werden: nämlich Armut und Ungleichheit. Eine umfassende Konversionspolitik könnte hierzu wesentlich beitragen.

Introduction

This *brief* describes and analyses South Africa's record on conversion in the last decade. Conversion is defined by the Bonn International Center for Conversion (BICC) as the operational process of demilitarization and the practical management of disarmament. In terms of this approach, the relationship between democratization and demilitarization is particularly significant. The brief focuses primarily on the years since the advent of democracy in South Africa in April 1994 and examines the remaining challenges.

Conversion is a multidimensional process that has economic, political and social aspects. BICC examines conversion in six key areas: reduction of military expenditure, redirecting research and development, conversion of the defense industry, demobilization and reintegration, closure and redevelopment of military bases and the management and disposal of surplus weapons. Examining conversion thus takes us deep into the complexities of transformation and the consolidation of democracy in South Africa.

The issue of conversion in South Africa is both compelling and significant. This *brief* makes a strong argument for an overall conversion strategy aimed at shifting military resources towards civilian use and development in South Africa. There are two reasons why this is imperative—the first of these relates to a legacy of thirty years of war and militarization in the region; the second relates to deepening levels of poverty and inequality in post-apartheid South Africa.

During the late 1970s and 1980s South Africa became a highly militarized society, marked by the mobilization of resources for war on political, economic and ideological levels.

Defense expenditure soared (reaching 18.5 percent of total government expenditure in 1977/78) and the power of the apartheid military—the South African Defence Force (SADF)—expanded to the point where it was positioned at the center of state decision-making and penetrated deeply into many aspects of social life. The SADF played a central role in creating a terrorist state, which relied on the spread of extreme fear to maintain its authority.

The dismantling of this terrorist state and the transition to democracy between 1990 and 1994 in South Africa was the result not of a miracle or a seizure of power, but of a negotiated settlement that involved many explicit and implicit compromises. While a potentially catastrophic conflict had been avoided, the resolution was less of a miraculous, historical rupture than an as yet inconclusive beginning to transformation, which left key elements of apartheid power and privilege intact. Some of these elements are located in the new post-apartheid military.

The restructuring of the military that has occurred in post-apartheid South Africa does not mean that the institution has moved to the margins of South African society. On the contrary, it continues to absorb scarce resources. Despite budget cuts (amounting to more than 50 percent in real terms between 1989 and 1998) South Africa is still Africa's largest military spender in absolute terms and accounts for nearly 70 percent of Southern Africa's total military spending. The post-apartheid armed forces—the South African National Defence Force (SANDF)—continue to wield considerable political, economic and ideological power.

The post-apartheid reorganization of the military is part of the process of state demilitarization, which has been underway for some years. It is a rudderless process—shallow, uneven, incomplete and with contradictory consequences. This process is evident

in the shift in South African foreign policy from the destabilization of neighbors to an emphasis on regional cooperation, closure of several military bases, dramatic reductions in defense expenditure, the abolition of conscription, and a downsizing of the military to conform to notions of a 'core force'.

This downsizing has been a particularly uneven process. Between 1990 and 1994, there were significant retrenchments from the SADF, but thereafter numbers increased due to the integration of eight different armed formations into the SANDF. Since integration was completed in mid-1998, there has been another process of downsizing. Overall, thousands of military personnel have been retrenched, retired or transferred in line with demobilization and rationalization programs undertaken by the Department of Defence. The current program aims at reducing the present levels of personnel of nearly 86,000 to 65,000–70,000.

This downsizing is not the only indicator of demilitarization. Demilitarization is also indicated by the 1989 decision to dismantle the nuclear weapons industry, the 1997 ban on the use, production and trade in anti-personnel landmines, and the destruction of large quantities of surplus small arms. Since 1994, there have also been attempts to secure the subordination of the military to civilian control, such as the establishment of a defense secretariat and a re-examination of the mission, roles and tasks of the SANDF through the 1996 Defence White Paper and the Defence Review process which commits the SANDF to a primarily defensive orientation.

While these moves are welcome, the consolidation of South Africa's democracy depends on the capacity of the post-apartheid state to meet human

needs. This means a more drastic and comprehensive shifting of resources away from the military to address the real threats to our collective security—poverty, inequality and unemployment.

South Africa has one of the most unequal distributions of income of any country in the world, and this inequality is deepening under post-apartheid economic policies. The GEAR (Growth, Employment and Redistribution) strategy launched in June 1997 reflects neo-liberal economic thinking. This is evident in the interpretation of macroeconomic stability as requiring fiscal discipline, deregulation, privatization and export-led growth. Under GEAR, the taxation of the wealthy has declined. There has been no significant job creation; in fact, jobs have declined since 1994, unemployment has reached 40 percent and poverty and inequality are deepening.

At the 1998 poverty hearings, which were jointly organized by the South African National NGO Coalition, the Human Rights Committee and the Commission on Gender Equality, it was said that some black South Africans earned as little as 10 rand (R) a day. Vast racialized discrepancies in wealth and income remain, with white families earning on average twelve times as much as black families and more than half of all black South African families living below the official poverty line. Despite affirmative action and the emergence of a new black political elite, the middle levels of the civil service and large parts of the economy remain in the hands of white South Africans.

Post-apartheid South Africa remains a two-nation society marked by extremes of privilege and deprivation. The extent of this deprivation is evident in an extensive crisis which extends into all aspects of the lives of most black South Africans—for example: a housing shortage of at least three million units; poor education services resulting in only 11 percent of black South Africans graduating from high school; a lack of basic infrastructure,

such as sewerage systems, electricity, piped water and waste removal in many communities.

Access to such basic infrastructure is clearly part of social citizenship, but the GEAR policy blocks the resources required to achieve this. It is a policy, which demonstrates how the transformation of South Africa is constrained by the compromises, which marked its negotiated settlement.

In this context, there are rising levels of criminal violence. This violence is rooted in the same experiences of economic deprivation and social exclusion that characterized the apartheid era. Instead of social citizenship, there is a militarization of citizenship that is redolent of the past. A militarized form of citizenship characterized the apartheid era in that political citizenship involved compulsory national military service for white males, while blacks were denied access to ownership of firearms along with conventional political rights. Among many black South Africans, there is now a widespread understanding that access to all levels of a powerful army—the South African National Defense Force—as well as access to legal gun ownership are markers of liberation and of full citizenship in the post-apartheid state.

This phenomenon helps to explain the absence of mass-based protest about the R30 billion rearmament program to which the cabinet has agreed. It also underlines the relevance of publications such as these which—by building capacity to understand defense and security issues—could strengthen a demilitarization movement which demands an overall conversion strategy.

Military Expenditure

Introduction

During the apartheid era, South Africa's levels of military expenditure witnessed sustained increases in absolute terms, as a share of GDP and as a share of total government expenditure (see Appendix 1). By the end of the 1980s, South Africa's military burden (military expenditure as a percentage of GDP) was over 4 percent and, in absolute terms, the country was Africa's largest military spender.

Since the late 1980s, South Africa's defense budget has been cut dramatically in response to the country's changing strategic, political and economic environment. The total value of the defense cuts between 1989/90 and 1998/99 amounted to R6.5 billion, at constant 1990 prices. During that period, there was no explicit government policy of conversion, in terms of using the savings from defense cuts to fund other expenditure, cut taxes or reduce the budget deficit. However, the cuts in defense spending were accompanied by a clear reallocation of resources to other categories of government spending (for example, policing and education) thus suggesting some evidence of conversion and the possibility of a 'peace dividend'.

Trends in military expenditure

A study by Batchelor, Dunne and Lamb (1998) highlights the strategic, political and economic factors that have influenced the demand for military spending in South Africa since 1961. South Africa's military burden (military spending as a percentage of

GDP) was just over 1 percent in the early 1960s, but increased quite quickly to over 3 percent by 1964/65 as a result of the start of the ANC's armed struggle and the imposition of the first UN arms embargo in 1963. Military expenditure began to increase again in the early 1970s as a reaction to growing external and internal opposition to apartheid. In 1973, large-scale strikes in Durban constituted the first serious challenge to the South African government. Moreover the granting of independence to Angola and Mozambique in 1975 was a tremendous psychological boost for South Africa's black population. From the early 1970s, the SADF was deployed in Namibia in support of the South African Police against infiltration by the South West African People's Organisation (SWAPO), and in 1975 South Africa became involved in the Angolan civil war in support of UNITA (National Union for the Total Independence of Angola).

In 1977/78, military spending peaked at 4.9 percent of GDP, and 18.5 percent of total government expenditure. This was in response to the following developments: the 1976 Soweto uprising, the South African government's purchase of large amounts of weapons prior to the imposition of the mandatory UN arms embargo (1977), and the government's implementation of a 'Total Strategy' to combat the perceived 'Total Onslaught' (Cobbett, 1989).

Military spending then declined quite dramatically between 1977/78 and 1980/81 as the government regained control over the domestic political situation. From the mid-1980s, the defense budget began to increase again as a result of South Africa's increasing involvement in Angola, Namibia and Mozambique, as well as the

deteriorating internal security situation stemming from the increasingly violent domestic opposition to apartheid. The development and expansion of the local arms industry during the late 1970s and throughout the 1980s also contributed to the increases in military spending after 1977/78 (Batchelor and Willett, 1998). Military spending peaked again in 1989/90 at 4.1 percent of GDP and 13 percent of total government expenditure, and then declined quite dramatically after that.

The economic impact of these high levels of military spending was felt in a number of different ways. The allocation of significant resources to the military meant that fewer resources were available for other categories of government spending (for example, education and health) (Roux, 1994). In addition to the costs of these trade-offs, a number of studies have highlighted the negative impact of military spending on South Africa's economic growth. A study by Batchelor, Dunne and Saal (1999a) shows that military spending had a negative impact on the performance of South Africa's manufacturing sector, particularly during the 1970s and 1980s.

Other studies have highlighted the fact that the use of government resources for the development of a domestic defense industry during the 1970s and 1980s was a form of 'misinvestment', in that it reduced the resources available for investment in more productive civilian industries (Joffe et al., 1995; Batchelor and Willett, 1998). The 'crowding-out' of investment in civilian industries also contributed to the declining performance of the manufacturing sector during the 1970s and 1980s.

Defense cuts and disarmament measures

Between 1989/90 and 1998/99, South Africa's defense budget was cut by more than 57 percent in real terms, and declined by an average of nearly 9 percent per annum. Military spending as a share of total government spending declined from 13 percent in 1989/90 to 5.1 percent in 1998/99 and as a share of GDP from 4.1 percent to 1.5 percent during the same period. By 1998/99, military spending in South Africa was at the same level as it had been during the early 1970s. The total value of cuts in defense spending between 1989/90 and 1998/99 amounted to R6.5 billion in constant 1990 prices.

The cuts in military spending since the late 1980s have taken place in response to South Africa's changing strategic, political and economic environment. Factors such as the end of the Cold War, South Africa's military withdrawal from Angola and Namibia in 1989, a severe economic recession between 1989 and 1993, the abolition of apartheid, and the transition to majority rule in South Africa created the 'space' for the former de Klerk government to implement cuts in military spending (Batchelor, Dunne and Lamb, 1998).

The cuts in military spending after 1989 were also implemented in conjunction with a variety of disarmament measures. The entire organizational structure and infrastructure of the SADF was rationalized and restructured between 1989 and 1993. Various units were disbanded and a number of military bases and installations were closed and/or scaled down. Conscription for white males was reduced from two years to one year in 1990, and abolished altogether in 1993 (*Citizen*, 25 August 1993). Many of the SADF's major procurement projects were cancelled or postponed, large numbers

of SADF and Armscor personnel were retrenched between 1989 and 1993, and the country's nuclear weapons program was terminated in 1989 (Batchelor and Willett, 1998).

Since coming to power in April 1994, the ANC-led government has continued to cut the defense budget in conjunction with a wide variety of disarmament measures, such as the destruction of South African National Defence Force (SANDF) anti-personnel land mines. The cuts in overall defense spending after 1989 were also accompanied by significant changes in the structure of the defense budget (see Figure 2). Personnel spending as a share of total military expenditure increased from 18.8 percent in 1989/90 to 55.5 percent in 1998/99. The higher share of

personnel expenditure after 1989/90 was also a result of the substantial additional costs associated with the downsizing and rationalization of the former SADF between 1989 and 1993 and the integration and rationalization of the new South African National Defense Force (SANDF), which began in early 1994 (see chapter on demobilization). The SANDF, which comprised 90,000 personnel from the former SADF, 11,000 from the former TBVC (Transkei, Bophutatswana, Venda, and Ciskei) defense forces and 22,000 from the liberation armies of the ANC and the PAC, came into being on 27 April 1994.

Operating expenditure experienced a significant increase in the share of total expenditure after 1989—from 22.6 percent in 1989/90 to 29 percent in

Figure 1: South Africa's defense budget, 1989/90–1998/99

Source: South African Department of Finance, Budget Review, various years

<i>Year</i>	<i>Budget (in million rand, constant 1990 prices)</i>	<i>Percentage change from previous year</i>	<i>Defense/GDP (in percent)</i>	<i>Defense/Total government expenditure (in percent)</i>
<i>1989/90</i>	11,435		4.1	13.0
<i>1990/91</i>	10,071	-11.9	3.6	12.4
<i>1991/92</i>	8,094	-19.6	3.0	9.8
<i>1992/93</i>	7,605	-6.0	2.8	8.4
<i>1993/94</i>	6,589	-13.4	2.4	6.8
<i>1994/95</i>	7,812	18.6	2.6	8.8
<i>1995/96</i>	6,892	-11.8	2.2	7.7
<i>1996/97</i>	6,320	-8.3	1.9	6.2
<i>1997/98</i>	5,679	-10.1	1.8	5.9
<i>1998/99</i>	4,881	-14.0	1.5	5.1
<i>Average 1989–1998</i>		-8.5	2.5	8.4

Figure 2: Structure of the defense budget, 1989/90–1998/99

Source: South African Department of Finance, Budget Review, various years

Year	Total budget (in million rand, constant 1990 prices)	Personnel (in percent)	Operating (in percent)	Procurement (in percent)
1989/90	11,435	18.8	22.6	58.6
1990/91	10,071	21.2	21.7	57.1
1991/92	8,094	27.6	26.9	45.5
1992/93	7,605	27.9	26.9	45.2
1993/94	6,589	31.6	28.3	40.1
1994/95	7,812	38.6	33.5	27.9
1995/96	6,892	39.4	30.0	30.6
1996/97	6,320	48.6	34.4	17.0
1997/98	5,679	52.1	30.5	17.4
1998/99	4,881	55.5	29.0	15.5
Average 1989–1998		36.1	28.4	35.5

1998/99. This was also a result of the internal deployment of the defense force in support of the police, the additional costs associated with the rationalization of the SADF between 1989 and 1993, and the SANDF integration process, which started in April 1994.

The share of procurement expenditure witnessed a significant decline from 58.6 percent in 1989/90 to 15.5 percent in 1998/99, and averaged 35.5 percent during the period as a whole. This was related to the cancellation and postponement of major procurement contracts, particularly after 1991. In fact, most of the cuts in the absolute size of the defense budget were achieved as a result of significant cuts in the size of the procurement budget.

Defense cuts and the ‘peace dividend’?

What has been the impact of these cuts in military spending since the late 1980s? Has South Africa experienced a ‘peace dividend’? A key part of the ‘peace dividend’ are the actual savings which result from cuts in military spending—this is often referred to as the ‘resource dividend’ (BICC, 1996). It is evident that R6.5 billion have been saved through the cuts in military spending that have occurred since the late 1980s. Thus, South Africa’s resource dividend is R6.5 billion over the course of a decade.

When military spending is reduced as a share of total government expenditure, resources are freed which can be employed for alternative uses. The alternative uses to which the savings from defense cuts are allocated is often referred to as the ‘product dividend’ and can include the reallocation of government resources from defense to other categories of government spending, cuts in taxes or a significant reduction in the budget deficit and government debt (BICC, 1996). Finally, there are the potential, positive longer-term welfare effects resulting from the cuts in defense spending. This part of the ‘peace dividend’ is often referred to as the ‘welfare dividend’ (BICC, 1996).

The following section analyzes the trends in government expenditure and revenue between 1989/90 and 1998/99 to ascertain what has happened to the resources that were released as a result of the cuts in military spending.

The share of total government spending taken by defense declined from 13.0 percent in 1989/90 to 5.1 percent in 1998/99, with an average of 8.4 percent during the period 1989/90–1998/99. The defense share increased slightly in 1994/95 due to the additional resources required to fund the integration of the SADF and the former liberation armies into the new South African National Defense Force (SANDF).

Defense was not the only category whose share of total government spending declined during the period 1989/90–1998/99. Economic services (including land affairs, agriculture, water affairs and forestry, mineral and energy affairs and trade and industry) fell by almost five percentage points, largely as a result of the shift in government spending priorities towards social services, and the phasing out of apartheid-era industrial and economic incentives (South African Department of Finance, *Budget Review*, 1999).

Figure 3: Trends in shares of government expenditure, 1989/90–1998/99

In percent

Source: South African Reserve Bank, Quarterly Bulletin, various issues.

^a *Includes Parliament, Office of the President*

^b *Includes Trade and Industry, Land Affairs, Water Affairs and Forestry, Mineral and Energy Affairs*

<i>Year</i>	<i>General government^a</i>	<i>Defense</i>	<i>Police</i>	<i>Education</i>	<i>Health</i>	<i>Social security and welfare</i>	<i>Economic services^b</i>	<i>Interest on government debt</i>
<i>1989/90</i>	9.2	13.0	3.3	17.7	9.8	6.3	14.0	12.4
<i>1994/95</i>	7.6	8.8	6.9	22.0	10.2	9.3	11.7	17.5
<i>1998/99</i>	5.2	5.1	6.8	22.4	11.2	9.3	9.3	21.2
<i>Average 1989–1998</i>	7.6	8.4	5.5	21.1	10.5	8.5	12.3	17.1

The main categories of government spending which have benefited from the decline in defense spending since 1989/90 include education, health, social security and welfare, and police. Education increased its share from 17.7 percent in 1989/90 to 22.4 percent in 1998/99. Social security and welfare increased its share from 6.3 percent to 9.3 percent during the same period. Health increased its share from 9.8 percent in 1989/90 to 11.2 percent in 1998/99, with an average annual growth rate of 10.5 percent. The police also witnessed a significant increase in their share, from 3.3 percent in 1989/90 to 6.8 percent in 1998/99. The increases in the shares for education, health, and social security and welfare reflect the changes in the ANC-led government's spending priorities towards socioeconomic issues. The increases in the police budget are a response to the increasing levels of crime and violence which have accompanied South Africa's transition to democracy.

The trends in government finances during the period 1989/90–1998/99 are presented in Figure 4. Total

government revenue grew by an average of 1.5 percent per annum between 1989/90 and 1998/99. During the same period, government expenditure grew by an average of 1.3 percent per annum. However, during the period 1989/90–1993/94 government revenue declined by an average of 2.3 percent per annum—as a result of the severe recession—while government expenditure increased by an average of 2.7 percent per annum. The fact that expenditure grew faster than revenue during this period led to significant increases in the budget deficit and the size of total government debt after 1989/90. By 1993/94, the budget deficit had reached its highest-ever level, equivalent to 29 percent of total government expenditure. As a percentage of GDP, the budget deficit in 1993/94 was 10.2 percent, up from 4.4 percent in 1989/90 (see Appendix 2).

The absolute size of total government debt (owed to both domestic and foreign financial institutions) also increased significantly after 1989/90, particularly as a result of the unavoidable increases in government expenditures during 1992/93 and 1993/94 associated with the ending of

apartheid and the transition to democracy. By the mid-1990s, South Africa was heading for a 'debt trap', and, by 1996/97, government debt as a percentage of GDP had reached a high of 56 percent. Since then, total government debt as a share of GDP has declined as a result of tighter fiscal policies and the proceeds from the restructuring of state assets (for example, Telkom and the Airports Company). As a result of financial sanctions during the apartheid era, South Africa was severely curtailed from borrowing on international capital markets. Thus most of South Africa's government debt is domestic debt: in 1996/97, 95 percent of total government debt was owed to domestic financial institutions (Batchelor and Dunne, 2000).

The dramatic cuts in defense spending after 1989/90, and the slowing down in the growth of total government expenditure after 1994/95, did not seem to have a significant impact on the absolute size of the budget deficit and total government debt during the period 1989/90–1998/99.

Figure 4: Trends in government revenue and expenditure, 1989/90–1998/99

In percent, based on constant 1990 prices

Source: South African Department of Finance, Budget Review, 1999

Years	Total revenue	Total expenditure	Budget deficit	Government debt
1989/90–1993/94	-2.3	2.7	29.6	4.5
1994/95–1998/99	4.6	0.2	-14.6	8.1
1989/90–1998/99	1.5	1.3	5.1	6.5

Furthermore, the interest on government debt as a share of total government expenditure increased quite dramatically from 12.4 percent in 1989/90 to 21.2 percent in 1998/99 (see Figure 3). By 1998/99, interest payments on government debt were the second largest budget category after education (South African Department of Finance, *Budget Review*, 1999).

The increases in the budget deficit and government debt after 1989 were related to a number of factors. These included the dramatic decline in government revenue as a result of the severe domestic recession between 1989 and 1993, and the National Party government’s inability to curtail the growth in government expenditure, particularly current expenditure, during the period 1989/90–1993/94. Since 1994, the ANC-led government has attempted to limit the growth in overall government expenditure through tighter fiscal policies, in order to reduce the size of the budget deficit and total government debt. Since 1993/94, the budget deficit as a share of GDP has declined from 10.2 percent to 3.7 percent in 1998/99.

In considering whether South Africa has experienced a ‘peace dividend’, it is possible to argue that the cuts in defense spending since 1989/90 have led to a reallocation among other categories of government spending, most notably social security and welfare, health, education and public order and safety (see Figure 3).

The cuts in defense spending between 1989/90 and 1998/99, which amounted to R6.5 billion at constant 1990 prices (the ‘resource dividend’), have not been accompanied by a significant reduction in the budget deficit or the size of the government’s total debt during the same period. However, it is possible that the size of the budget deficit and government debt might have been larger without the cuts in military spending. Thus, the cuts in the defense budget may have helped to limit the growth in the budget deficit and the size of the government’s total debt.

The lack of transparency in budget decision-making makes it difficult to prove that the cuts in defense spending have been specifically allocated to other categories of government spending or used to reduce the size of the budget deficit and government debt. However, based on the trends in government finances, it is possible to argue that the savings from defense cuts have been allocated to alternative uses, including other categories of government spending. It is also possible that the defense cuts may have helped to limit the growth in the budget deficit and government debt. Thus, it is possible to argue that South Africa has experienced a ‘product dividend’.

In terms of identifying a possible

‘welfare dividend’ in South Africa, studies by de Wet et al. (1996) and Batchelor and Dunne (1997) suggest that the cuts in defense spending are likely to result in a ‘welfare dividend’ through reduced levels of government expenditure and a smaller budget deficit. It is suggested that these lower levels of government expenditure will lead to lower interest rates and higher growth in the long run (Batchelor and Dunne, 2000).

In the coming years, it is unlikely that the ANC-led government will continue to cut the defense budget in order to reallocate resources to other categories of government spending. During 1998/99, the government introduced a three-year Medium Term Expenditure Framework (MTEF) for all departmental budgets. In terms of the MTEF, the share of defense in total government expenditure is likely to increase slightly between 1999/00 and 2001/02, although the absolute size of the defense budget will remain relatively constant in real terms over this period.

Notwithstanding the expenditure guidelines contained in the MTEF, the absolute size and share of the defense budget between 1999/00 and 2001/02 will be dependent on two key factors. In the course of 1998, the Department of Defence (DoD) announced plans to reduce the size of the SANDF by as much as 30,000 over the following three years. This rationalization program—which will place short-term upward pressure on the defense budget as a result of the costs associated with rationalization—is linked to the DoD’s attempts to increase the absolute size and share of capital spending in the defense budget (South African Department of Defence, 1998).

The anticipated increase in the size and share of the capital budget is linked to the cabinet’s approval in November 1998 of the SANDF’s R30 billion modernization program, which

includes the purchase of corvettes, submarines, helicopters and fighter aircraft from a number of European suppliers, including the United Kingdom, Sweden, Germany and Italy (*Jane's Defence Weekly*, 25 November 1998). This proposed 'package deal' will also place upward pressure on the defense budget in the coming years.

Conclusions

South Africa has witnessed a dramatic decline in the absolute and relative size of its defense budget since the late 1980s. Currently, South Africa allocates only around 1.5 percent of its total resources to the military, which is significantly less than the average for most other developing countries. The average military burden (military spending as a percentage of GDP) for Southern Africa is around 3.5 percent, which is considerably higher than the figure for South Africa. Despite these cuts, South Africa is still Africa's largest military spender in absolute terms, and accounts for nearly 70 percent of Southern Africa's total military spending (SIPRI, *Yearbook*, 1998).

The cuts in South Africa's military spending which have taken place since the late 1980s were part of a conscious policy on the part of the former de Klerk government to reallocate resources from defense to other categories of government spending. The ANC-led government has continued this policy since it came to power in 1994. Thus, since 1989, the cuts in military spending have been accompanied by a reallocation of expenditure to other categories of spending, such as education, health, social security and police. In addition, it is possible that some of the money

released from the cuts in defense spending has been used to reduce the budget deficit, or at least to limit the growth of the budget deficit and the size of government debt. Thus, it is possible to argue that South Africa has experienced a 'peace dividend' in terms of the reallocation of resources from defense to other more pressing socioeconomic priorities.

The impact of the DoD's rationalization program, and the SANDF's proposed rearmament and modernization program means that it is unlikely that the defense budget will continue to be cut in the coming years. This means that there is unlikely to be any further reallocation of resources from defense to other categories of government spending.

Appendix 1: Trends in military expenditure, 1961/62–1998/99

Sources: South African Department of State Expenditure, Estimates of Expenditure, various years; South African Department of Finance, Budget Review, various years

Note: Government Financial Year: 1 April–31 March

<i>Year</i>	<i>Military expenditure (in million rand, constant 1985 prices)</i>	<i>Percentage change from previous year</i>	<i>Military expenditure/GDP (in percent)</i>	<i>Military expenditure/government expenditure (in percent)</i>
1961/62	617		1.3	7.7
1962/63	1,026	66.3	2.0	11.6
1963/64	1,008	-1.8	1.8	10.5
1964/65	1,886	87.1	3.1	16.6
1965/66	1,803	-4.4	2.8	15.0
1966/67	1,932	7.2	2.9	14.5
1967/68	1,928	-0.2	2.7	13.0
1968/69	1,776	-7.9	2.4	11.2
1969/70	1,783	0.4	2.3	11.2
1970/71	1,627	-8.7	2.0	9.8
1971/72	1,904	17.0	2.2	9.2
1972/73	1,821	-4.4	2.1	9.1
1973/74	2,146	17.8	2.3	10.7
1974/75	2,757	28.5	2.8	12.6
1975/76	3,527	27.9	3.6	14.3
1976/77	4,441	25.9	4.4	16.4
1977/78	4,908	10.5	4.9	18.5
1978/79	4,122	-16.0	4.0	15.6
1979/80	3,714	-9.9	3.4	14.1
1980/81	3,546	-4.5	3.1	13.9
1981/82	4,207	18.6	3.5	15.0
1982/83	4,000	-4.9	3.3	13.9
1983/84	4,005	0.1	3.4	13.9

<i>1984/85</i>	4,365	9.0	3.5	13.8
<i>1985/86</i>	4,274	-2.1	3.5	13.0
<i>1986/87</i>	4,439	3.9	3.6	12.7
<i>1987/88</i>	5,094	14.8	4.1	14.1
<i>1988/89</i>	5,452	7.0	4.1	14.7
<i>1989/90</i>	5,816	6.7	4.1	13.0
<i>1990/91</i>	5,122	-11.9	3.6	12.4
<i>1991/92</i>	4,117	-19.6	3.0	9.8
<i>1992/93</i>	3,868	-6.0	2.8	8.4
<i>1993/94</i>	3,351	-13.4	2.4	6.8
<i>1994/95</i>	3,973	18.6	2.6	8.8
<i>1995/96</i>	3,505	-11.8	2.2	7.7
<i>1996/97</i>	3,214	-8.3	1.9	6.2
<i>1997/98</i>	2,888	-10.1	1.8	5.9
<i>1998/99</i>	2,483	-14.0	1.5	5.1
<i>Average</i>				
<i>1961–1998</i>		5.6	2.9	11.9
<i>1961–1989</i>		10.1	3.1	13.1
<i>1989–1998</i>		-7.0	2.6	8.4

Appendix 2: Government finances, 1989/90–1998/99

In million rand, constant 1990 prices

Source: South African Department of Finance, Budget Review, various years

Year	Revenue	Percentage change from previous year	Expenditure	Percentage change from previous year	Deficit	Percentage change from previous year	Percentage expenditure	Percentage of GDP	Debt	Percentage change from previous year	Percentage of GDP
1989/90	75,327		87,819		12,492		14.2	4.4	91,939		38.1
1990/91	72,011	-4.4	81,380	-7.3	9,369	-25.0	11.5	3.3	96,036	4.5	38.6
1991/92	68,626	-4.7	82,480	1.4	13,854	47.9	16.8	4.9	93,089	-3.1	37.2
1992/93	64,912	-5.4	90,343	9.5	25,431	83.6	28.1	9.3	99,228	6.6	39.5
1993/94	68,244	5.1	96,719	7.1	28,475	12.0	29.4	10.2	109,150	10.0	44.5
1994/95	72,396	6.1	88,374	-8.6	15,978	-43.9	18.1	5.6	123,814	13.4	48.6
1995/96	74,767	3.3	91,876	4.0	17,109	7.1	18.6	5.8	144,896	17.0	54.7
1996/97	84,303	12.8	101,434	10.4	17,131	0.1	16.9	5.4	160,810	11.0	56.1
1997/98	83,117	-1.4	96,902	-4.5	13,785	-19.5	14.2	4.5	157,808	-1.9	55.8
1998/99	85,091	2.4	96,592	-0.3	11,501	-16.6	11.9	3.7	158,951	0.7	55.4
<i>Average</i>											
1989–1993		-2.3		2.7		29.6	20.0	6.4		4.5	39.6
1994–1998		4.6		0.2		-14.6	15.9	5.0		8.1	54.1
1989–1998		1.5		1.3		5.1	18.0	5.7		6.5	46.9

The Defense Industry

Introduction

South Africa's domestic defense industry was built up during the apartheid era in response to a number of strategic, political and economic imperatives. However, since the late 1980s the industry has undergone a process of downsizing and restructuring in response to the dramatic cuts in defense spending which have accompanied the country's transition to democracy. In response to these defense cuts (see chapter on military expenditure), the local defense industry has been forced to pursue a number of adjustment strategies. However, these adjustment strategies have occurred within a policy vacuum. The government has adopted a 'hands off' approach to the downsizing of the defense industry and has done very little to assist the process of defense industrial adjustment and to encourage defense firms to convert their resources to civilian production.

The origins and development of South Africa's defense industry

South Africa's defense industry was established with British aid just prior to World War II (Cawthra, 1986). During the war, the local defense industry manufactured a substantial amount of basic weaponry for the Union Defence Force and the Allied Forces, including armored cars, bombs and ammunition. After the war, most of the wartime arms factories were converted to their pre-war civilian activities (Batchelor, 1998).

The development of a local defense industry in South Africa during the apartheid era was shaped by a number of factors. These included: the imposition of UN embargoes; South Africa's military involvement in a number of regional conflicts, which required a guaranteed source of supply of military equipment; the ideological imperatives of the apartheid state and the desire for self-sufficiency in strategic industries, including armaments; government support for import-substitution industrialization; and the interests of private capital (Batchelor and Dunne, 1998).

The imposition of UN arms embargoes during the 1960s and 1970s severely limited South Africa's access to international sources of armaments, and provided the impetus for the development of an indigenous arms production capability. In 1968, the government created the Armaments Board to deal with the procurement of armaments for the SADF, as well as ensuring the optimal utilization of the private sector for arms production (Simpson, 1989). In the same year the government established the Armaments Development and Production Corporation (Arm Scor), which formed the basis of the public sector defense industry. During the next few years, Arm Scor took over various private sector companies, such as Atlas Aircraft Corporation, and established a number of new production and research and development facilities (Cawthra, 1986).

Increasing international opposition to apartheid and worldwide demands for a mandatory arms embargo against South Africa prompted the government to embark on a major reorganization and expansion of the defense industry during the mid-1970s. In 1976/77, the Armaments Board and the Armaments Development and Production Corporation were merged

to form the Armaments Corporation of South Africa (Arm Scor) (Landgren, 1989). The 'new' Arm Scor assumed responsibility for the procurement and production of armaments for the SADF. It was no coincidence that the reorganization and establishment of the 'new' Arm Scor occurred in the same year as the UN mandatory arms embargo against South Africa (Resolution 418) (Cobbett, 1989).

During the late 1970s and 1980s, the domestic defense industry expanded considerably in response to South Africa's increasing involvement in a number of regional conflicts, which required a guaranteed supply of weapons of ever-increasing sophistication, and the growing militarization of the state. New state-owned research and development (R&D) and arms production facilities were established, and the private sector became increasingly involved in domestic arms production (Batchelor and Willett, 1998). By 1984, more than 2,000 private-sector firms were involved in domestic arms production either as contractors or suppliers of military technology and equipment to the SADF (Arm Scor, 1984). In addition to its investment in arms-production capabilities, the government also pursued self-sufficiency in a number of related industries, such as the manufacture of engines and gearboxes which could be used for armored vehicles (Batchelor, 1996b).

In the early 1980s, the defense industry began to experience a number of economic problems as a result of increasing production costs, excess capacities and declining domestic demand (Cawthra, 1986). These problems were exacerbated by the embargo, which forced the industry to adopt a number of uneconomical practices, such as tooling up for short production runs and stockpiling supplies of certain items which were not readily available in South Africa (Landgren, 1989).

By the end of the 1980s, the defense industry had reached a relatively high level of self-sufficiency and was able to meet most of the equipment requirements of the SADF. However, because of the country's limited R&D resources and the presence of the UN arms embargoes, the local defense industry did not try to reproduce or emulate the R&D which had already been carried out by the major Western arms producers (Brzoska, 1991). Instead, it concentrated on acquiring a capacity for upgrading, modifying and modernizing existing armaments and weapons systems. One of the ways in which South Africa was able to become increasingly self-sufficient in arms production was through its ability to continue to obtain foreign inputs (technology/personnel/components) in circumvention of the UN arms embargoes (Väyrynen, 1980; Landgren, 1989; Brzoska, 1991).

The economic significance of South Africa's defense industry

The establishment and development of a domestic defense industry necessitated massive investment by the state and the large-scale involvement of the private sector. By the late 1980s, the defense industry had developed into one of the most significant 'sectors' of the country's industrial economy, in terms of both employment and contribution to the national economy (Batchelor, 1996b). However, the expansion of the industry during the 1970s and 1980s occurred during a period when the economy was performing poorly, and there is evidence to suggest that the development of a domestic defense industry imposed a substantial 'burden' on the national economy and was a significant contributing factor in the country's deteriorating economic performance during the 1970s and 1980s (Lipton, 1986; Kaplinsky, 1992).

The defense industry emerged as a significant creator of jobs during the 1970s and 1980s, and, by 1989, over 130,000 people were employed (directly and indirectly) in the defense industry. Total defense industry employment as a percentage of total manufacturing employment increased from less than 1 percent in 1961 to 8 percent in 1989, while defense industry employment as a percentage of total employment in the formal sector of the economy increased from less than 1 percent in 1961 to over 2 percent in 1989 (Batchelor and Dunne, 1998).

Most of the jobs that were created in the defense industry were highly capital- and skill-intensive and reserved for whites. Thus, the employment benefits of domestic arms production perpetuated the racist structure of the labor market and were inappropriate for a country such as South Africa with scarce capital and an abundance of unskilled labor. The defense industry also absorbed a disproportionate share of the country's skilled labor at the expense of the civilian economy, thereby inhibiting the development of the more productive sectors of the civilian economy. By 1989, Armscor employed nearly 2,000 scientists and engineers—over 10 percent of the total number of R&D personnel in the national economy (Batchelor, 1996b).

The use of scarce national resources for investment in arms production also had negative consequences for investment in the civilian sectors of the economy. It has been suggested that the excessive share of state investment in strategic industries (for example, Armscor and SASOL, a synthetic fuel company) during the 1970s and 1980s represented a form of 'misinvestment', in that large amounts of scarce resources were invested in the wrong (capital-intensive) sectors and the wrong types of technology (for example, synthetic fuels) because of strategic considerations (Kaplinsky, 1992; Joffe et al., 1995).

The establishment of a domestic defense industry was expected to reduce the cost of arms imports. However, by the end of the 1980s, it was estimated that South Africa was still spending over R2 billion per annum on arms imports. While South Africa became less dependent upon imports of completed weapons systems after 1977, it remained highly dependent upon imports of machinery, technology and components (Batchelor, 1996b). Thus, the development of a domestic arms production capability created new forms of dependence on foreign sources of technology and machinery, and ended up absorbing increasing amounts of scarce foreign exchange resources (Batchelor and Willett, 1998).

In response to the problems of rising overhead costs, excess capacities and declining domestic demand, South Africa made a major push for exports in the early 1980s. As a result of South Africa's willingness to supply arms to fellow 'pariah states' who were similarly excluded from access to the world's major arms producers, the value of South Africa's arms exports increased by nearly 300 percent between 1982 and 1989 (Batchelor and Willett, 1998). Despite the growth of exports, South Africa's trade balance in armaments remained negative between 1982 and 1989 and the defense industry remained a net user of foreign exchange resources throughout the 1980s (Batchelor and Willett, 1998).

In addition to the considerable domestic resources costs associated with the establishment of the industry, the opportunity costs included trade-offs with other forms of public expenditure and the crowding-out of more productive investment in the civilian economy. This would seem to have contributed to the underdevelopment and declining competitiveness of the country's manufacturing sector. Thus, it can be argued that the development of the

domestic defense industry distorted and inhibited the trajectory of South Africa's industrial development and exacerbated the country's income and expenditure inequalities, which were an integral part of the political economy during apartheid.

Defense cuts and defense industry downsizing

Since the late 1980s, South Africa's defense budget has been cut dramatically (see chapter on military expenditure). Between 1989/90 and 1998/99, the defense budget was cut by more than 57 percent in real terms. The procurement budget was cut by nearly 80 percent during the same period, while its share of the total defense budget declined from 58 to 15 percent.

These cuts in defense spending were accompanied by a restructuring of the public sector defense industry. As part of a policy of 'commercializing' public enterprises, Armscor was split into two separate organizations in April 1992. A new state-owned industrial company called Denel was formed under the Department of Public Enterprises, and it inherited most of Armscor's research and development and production facilities. Armscor remained part of the Department of Defence (DoD) and retained responsibility for the procurement of armaments for the SADF (Cilliers, 1994).

The defense cuts had a dramatic impact on the size and structure of the domestic defense industry. The size of the domestic defense market, as measured by total Armscor Acquisition Spending, declined by 81 percent in real terms between 1989/90 and 1998/99—an average decline of nearly 17 percent per annum (see Figure 1).

Figure 5: South African domestic defense market, 1989/90-1998/99

In million rand, 1990 prices

Source: Armscor Annual Report, various years

<i>Year</i>	<i>Armscor: Total Acquisition Spending</i>	<i>Percentage change from previous year</i>
<i>1989/90</i>	6,236	
<i>1990/91</i>	5,126	-17.8
<i>1991/92</i>	3,931	-23.3
<i>1992/93</i>	3,242	-17.5
<i>1993/94</i>	3,162	-2.5
<i>1994/95</i>	2,427	-23.2
<i>1995/96</i>	2,167	-10.7
<i>1996/97</i>	1,984	-8.4
<i>1997/98</i>	1,386	-30.2
<i>1998/99</i>	1,140	-17.7
<i>Average 1989-1999</i>		-16.8

The structure of the defense industry has also changed since the late 1980s. Many small and medium-sized private-sector defense firms have gone out of business or exited the defense market because of the defense cuts. This has made the local defense market increasingly concentrated. Denel, together with the three major private-sector defense companies (Reunert, Grintek and Altech) are now the dominant players in the domestic defense market, accounting for over 80 percent of total domestic acquisition spending (Batchelor and Dunne, 1998). As a result of the cuts in procurement spending, the share of imports in total acquisition spending has declined since the late 1980s, averaging around 20

percent during the 1990s (Batchelor and Dunne, 1998). Total employment in the defense industry declined by nearly 60,000 between 1989 and 1997, which represented a drop of over 40 percent. Employment in the defense industry during this period fell more quickly than in the overall economy, as reflected by the decline in its share of manufacturing and total employment. The share of defense employment in manufacturing employment declined from 8.3 percent in 1989 to 5.3 percent in 1997. The share of defense employment in total employment declined from 2.3 percent to 1.4 percent during the same period (see Figure 6).

Figure 6: Defense industry employment, 1989–1997

Sources: Armscor Annual Report, various years; Denel Annual Report; South African Reserve Bank, Quarterly Bulletin

^a Estimate, including Armscor, Denel and private sector defense industry

Year	Defense industry	Defense/Manufacturing employment (in percent)	Defense/Total employment (in percent)
1989	131,750	8.3	2.3
1990	118,150	7.5	2.1
1991	106,935	6.8	1.9
1992	82,900	5.4	1.5
1993	74,570	5.0	1.4
1994	74,235	4.9	1.4
1995	76,270	5.0	1.4
1996	76,700	5.3	1.5
1997	73,995	5.3	1.4
<i>Average 1989–1997</i>		6.0	1.7

Skilled workers in occupational categories such as engineering and science bore the brunt of the retrenchments in the defense industry, and there is evidence to suggest that many of these retrenched defense workers have found it difficult to find work in the civilian sectors of the economy (Batchelor, 1996b). There was no attempt by government to use the savings from the defense cuts to create employment opportunities for ex-defense workers in the civilian economy.

The cuts in overall defense spending were also accompanied by cuts in spending on defense R&D (see chapter on defense R&D). Spending on defense R&D declined by 78 percent

between 1989/90 and 1998/99. In the context of these budgetary constraints, local defense firms were forced to fund an increasing amount of defense R&D from their own sources.

With such large cuts in demand in the defense sector, the performance of the manufacturing industry was bound to be affected through the impact on defense contractors, sub-contractors and intermediate product suppliers. The downsizing of the defense industry exacerbated the impact of the general recession that occurred between 1989 and 1993 and is reflected in the decline in the value and volume of manufacturing production after 1989 (Batchelor and Dunne, 1998).

Defense industry adjustment strategies

In the face of declining demand for their products, South Africa's defense firms have responded in a number of ways. They have pursued offensive adjustment strategies to maintain or increase their defense business. The most common of these have included increasing arms exports, mergers and acquisitions, and joint ventures with local and/or foreign defense firms. They have also pursued defensive strategies to reduce their dependence on defense. This normally involves some form of conversion and/or diversification. The following section examines the adjustment strategies of South Africa's public and private sector defense firms since the late 1980s.

Vertical integration, mergers and acquisitions

In the last few years, all of South Africa's private- and public-sector defense firms have had to reevaluate their corporate strategies. Denel and the major private-sector defense contractors-Reunert, Grintek and Altech-have all attempted to integrate vertically by outsourcing far less of their defense business than in the past. This has reduced the demand for the output of hundreds of smaller defense firms, particularly those that act as suppliers and sub-contractors for the larger firms. Many small and medium-sized private defense firms have merged with, or been acquired by, larger defense firms in the last few years (for example, Reunert acquired the armored car division of TFM in early 1997), while others have exited the market. This has meant that the domestic defense market and the various sectors of the domestic market (such as aerospace, ammunition and military vehicles) have become increasingly concentrated (Batchelor and Dunne, 1998).

The push for exports

Without exception, all of South Africa's defense firms have pursued export markets quite aggressively since the late 1980s, and particularly since the lifting of the UN arms embargoes in May 1994. Armscor's international marketing efforts, the presence of South African defense firms at international defense exhibitions, South Africa's reintegration into the international economy, together with the support of the ANC-led government, have all contributed to increases in the value of arms exports since the early 1990s.

The value of South Africa's arms exports has fluctuated quite widely since the late 1980s, largely as a result of the 'lumpiness' of export contracts. However, the value of arms exports witnessed average growth of 40 percent per annum between 1989 and 1998, compared to only 7 percent average growth for merchandise exports (see Figure 7). The share of arms exports in merchandise exports has fluctuated around 1 percent since the early 1990s, largely as a result of the sustained real growth in merchandise exports. South Africa's arms exports are dominated by Denel, which has averaged 80 percent of total arms exports in the period 1992-1998 (Batchelor and Dunne, 1998).

International joint ventures

In addition to finding new export markets, most defense firms have also actively pursued international joint ventures with foreign firms in order to strengthen their chances of bidding for, and winning, new defense contracts in South Africa and in foreign markets. Most of these joint ventures are with European firms and are concentrated in a number of key niche markets (for example, electronics and armored vehicles) in which South Africa has a 'proven' international competitive advantage. The announcement in November 1998 of South Africa's preferred suppliers for

Figure 7: South African arms exports, 1989-1998

In million rand, constant 1990 prices

Sources: Armscor Annual Report, various years; National Conventional Arms Control Committee, 1999; South African Reserve Bank, Quarterly Bulletin

<i>Year</i>	<i>Arms exports</i>	<i>Percentage change from previous year</i>	<i>Merchandise exports</i>	<i>Percentage change from previous year</i>	<i>Arms exports/Merchandise exports (in percent)</i>
1989	236		44,170		0.5
1990	163	-30.9	42,735	-3.2	0.4
1991	686	320.7	46,147	8.0	1.7
1992	411	-40.0	42,516	-7.9	1.0
1993	712	73.2	46,974	10.5	1.5
1994	659	-7.6	53,873	14.7	1.2
1995	721	9.5	60,419	12.2	1.2
1996	330	-54.2	66,401	9.9	0.5
1997	802	142.8	71,487	7.7	1.1
1998	380	-52.6	80,005	11.9	0.5
Average 1989-1998		40.1		7.1	1.0

new equipment for the SANDF also led to a growing number of joint ventures and equity partnerships between local defense firms and some of the preferred European suppliers (Germany, Sweden, United Kingdom, Italy). In March 1999, it was announced that a Swedish company, Celsius, had bought a 49 percent equity stake in Grinaker Avitronics (*Business Day*, 1 March 1999). In June 1999, it was announced that Reunert was setting up a new joint venture radar company with a German company, DaimlerChrysler Aerospace (Dasa) (*Business Day*, 9 June 1999).

Diversification and conversion

Both public- and private-sector defense firms have actively pursued strategies of diversification and conversion since the late 1980s. These strategies have included joint ventures, acquisitions and/or mergers with civilian firms, the purchase of existing non-military product lines or licensing agreements and the development of civilian products using existing defense technology and production facilities (such as spin-offs) (Batchelor, 1996b). These diversification strategies have been accompanied by significant investments in R&D and new product development as well as by marketing strategies to identify new (local and foreign) civilian markets.

In the public sector, the outcome of Denel's diversification efforts since 1992 are reflected in the trends in the company's turnover and profitability and in the changing composition of the company's business (see Figure 8). Denel's turnover declined by an average of over 5 percent per annum in real terms between 1992 and 1997, largely as a result of the dramatic decline in the value of its domestic defense business. The company's poor level of profitability over this period was related to the commercially inviable nature of many of the assets and facilities that it had inherited from Armscor and the cancellation of a number of large export orders. The declining contribution of Denel's domestic defense business was offset to some extent by increases in exports (mainly arms exports) and civilian sales. The increasing value and share of the latter was directly related to the company's diversification efforts in some of the groups, such as Denel Informatics.

Only one of Denel's divisions has pursued an explicit strategy of conversion. Houwteq, which was formerly involved in military satellites, converted all its facilities to civilian purposes in 1992, and became involved in the development and marketing of low-earth orbit (LEO) satellites. However, the initiative was not commercially viable, largely because of political pressure, and was terminated in October 1994.

The results of diversification efforts in the private sector have been mixed, given the presence of a number of barriers to exit from the defense market. These barriers have included: expensive plant and equipment; highly paid and highly skilled defense workers; the presence of a severe domestic recession; a highly competitive and overtraded civilian market; and a lack of direction from government with respect to the future of the defense industry. Some firms, such as Grinaker Avitronics, have been relatively successful in developing civilian products (for example, microwave and

voice technology products) from their existing military technologies. However, most small and medium-sized firms have found it more difficult to develop spin-offs because of the resources needed to fund R&D to develop new civilian products. Most of the large defense firms, such as Reunert, have been successful in acquiring civilian firms or civilian product lines through licensing agreements with civilian firms. Conversion has not been popular amongst private-sector firms, as it is perceived as expensive and difficult (Batchelor, 1996b).

Overall, the process of defense industrial adjustment has led to dramatic changes in the size and structure of the local defense market. These changes have included: the increasing concentration and monopolization of the domestic defense market; a dramatic increase in export sales; the increasing internationalization of the industry

Figure 8: Composition of turnover, Denel, 1992–1997

Source: Denel Annual Report

Year	Turnover (in million rand, constant 1995 prices)	Percentage Defense change from previous year	Defense		Civilian		Defense/ Total (in percent)
			Domestic (in percent)	Exports (in percent)	Domestic (in percent)	Exports (in percent)	
1992	3,660		63	16	20	1	79
1993	3,382	-7.6	53	20	24	3	73
1994	3,274	-3.2	48	23	25	4	71
1995	3,401	3.9	45	24	25	6	69
1996	2,805	-17.5	50	14	30	6	64
1997	2,725	-2.9	41	20	30	9	61
Average 1992– 1997		-5.5	50	20	26	5	70

through international joint ventures; a significant increase in diversification and some conversion initiatives; and a continued restructuring of the public-sector defense industry.

These changes in the local defense market, and the dramatic downsizing and restructuring of the domestic defense industry, have taken place within a policy vacuum. Despite vague support for conversion and diversification from the ANC-led government at the level of political rhetoric (for example, the Reconstruction and Development Programme (RDP), *Defence White Paper*, *Science and Technology White Paper*), there has been no explicit policy or strategy to assist with the conversion of defense industry resources to civilian purposes. In addition, the labor movement has been largely excluded from any decision-making around the possible conversion of the defense industry (Spratt, 1999).

The announcement in November 1998 of the list of preferred suppliers (United Kingdom, Sweden, Italy and Germany) for the SANDF's R30 billion modernization program will provide a much-needed boost for the local defense industry. It is estimated that the R30 billion arms deal will result in up to R15 billion worth of work for the local defense industry as a result of offset offers from the European suppliers (*Star*, 29 July 1999). While the arms deal will certainly provide short-term work for the local defense industry, the fact that the government has decided to procure all the SANDF's new weapons from foreign suppliers undermines the long-term viability of the local defense industry and creates opportunities for further conversion.

Conclusions

The cuts in South Africa's defense budget since the late 1980s, which prompted the downsizing and restructuring of the country's domestic defense industry, provided the ANC-led government with the perfect opportunity to convert the apartheid-era defense industrial base. With the right policies and strategies, the defense industry's significant financial, human and physical resources, which had been funded by massive state investment during the 1970s and 1980s, could have been reoriented and/or converted to civilian purposes. Such a strategy of conversion could have been used to assist the manufacturing sector's lack of investment resources and to reinvigorate the country's industrial base.

In the absence of an explicit conversion strategy, the domestic defense industry has pursued a 'market-led' process of adjustment, which has resulted in massive retrenchments, declining productivity and profitability, and a loss or wastage of scarce human, financial and technological resources. As a result most of the opportunities for defense industry conversion which existed in the late 1980s and early 1990s have disappeared.

In the context of defense industry downsizing, most local defense companies perceive conversion to be a difficult and expensive adjustment strategy because of the significant barriers to exit from the defense market. The lack of government support for conversion, together with a poor economic climate, has confirmed these firms' negative perceptions of conversion. In addition, the vested interests within the defense industry have been able to convince the ANC-led government of the strategic and economic benefits of maintaining a domestic defense industry, which in turn has undermined the government's interest in or commitment to defense industry conversion.

The recent announcement of a R30 billion rearmament program for the SANDF, together with the possible privatization of Denel (or parts of the company), has further diminished the likelihood of any significant conversion initiatives in the private and public sector defense industry.

In April 1999 the government released a policy document, *A Discussion Document on South Africa's Defense-Related Industry*, which had been in development for more than two years. Not surprisingly, the document only makes vague reference to the issues of diversification and conversion. It states that the government will take steps to create a policy and economic environment conducive for conversion, but that the government will not intervene or interfere in individual firms' conversion efforts. The paper makes no specific reference to government support for conversion, and therefore, by default, commits the government to its existing 'hands-off' policy towards defense industrial adjustment in the future.

Defense Research and Development

Introduction

The presence of a domestic defense industry usually requires a local defense research and development (R&D) capability, which in turn needs to be funded by government and/or private resources. South Africa's drive to develop an indigenous defense industry during the apartheid era (see chapter on the defense industry) led to the development of a local defense R&D capability. During the 1970s and 1980s, the defense R&D sector absorbed an increasingly disproportionate amount of the state's financial and human R&D resources.

With the cuts in South Africa's defense budget since the late 1980s (see chapter on military expenditure), spending on defense R&D activities has declined dramatically. However, there has been little attempt by the government to assist the reorientation or conversion of these defense R&D resources to civilian purposes, apart from well-intentioned but vague policy statements. As a result, many of the scarce financial and human resources which were previously tied up in the defense R&D sector have disappeared.

History of defense R&D

Defense R&D began in earnest in South Africa in 1961. The imposition of a voluntary UN arms embargo against South Africa in 1963 severely limited South Africa's access to foreign sources of armaments, and a National Institute for Rocket Research (NIRR) was established within the Council for Scientific and Industrial Research (CSIR) in Pretoria. The NIRR was converted into the National Institute

for Defence Research (NIDR) in 1965 with the goal of developing those capabilities in science and technology associated with modern weaponry, and in particular guided missiles (Cilliers, 1996). In the years after 1965, the CSIR was contracted to supply a wide range of defense R&D functions to the SADF, and performed the role of a typical defense research institute.

Important components of the South African arms industry originated from the CSIR. In 1978, a large part of military R&D previously carried out by the NIDR was transferred to the Armscor subsidiary Kentron (Landgren, 1989). Teklogic, which became part of the Altech group, and Atlas, which became part of Armscor, and then Denel, also originated from the CSIR (Cilliers, 1996).

During the 1970s and 1980s Armscor established a number of R&D and testing facilities to support the local arms industry's drive for self-sufficiency and to provide the SADF with in-house R&D capabilities. In 1975, the Institute for Maritime Technology (IMT) was established in Simon's Town, near Cape Town, to provide R&D support for the navy. In the 1980s, new R&D and testing facilities such as the Advena Central Laboratories and the Overberg Testing Range were established. By 1989, Armscor had nine R&D and testing facilities, in addition to twelve manufacturing subsidiary companies (Batchelor and Willett, 1998).

In the early 1970s a Defence Research Committee (DRC) was established in the SADF to coordinate and manage military R&D programs. In 1978, the Defence Research and Development Council (DRDC), supported by a technical secretariat, was established in the office of the Chief of Staff/

Logistics of the SADF. The DRDC was tasked with identifying the SADF's R&D needs and coordinating and managing R&D efforts in order to fulfill them (Batchelor and Willett, 1998).

Kentron, together with the Atomic Energy Board (AEB), which had been established in 1949, was largely responsible for coordinating the R&D work on South Africa's nuclear weapons program, which started in earnest in the late 1970s (Fig, 1998). The DRDC was also involved in coordinating R&D work for the SADF's chemical and biological warfare program (Project Coast) which expanded considerably during the 1980s (Fig, 1998).

During the late 1970s, and throughout the 1980s, military R&D activities were carried out in some of the Armscor subsidiary companies (such as Kentron and Advena), a number of state institutions (including various divisions of the Council for Scientific and Industrial Research (CSIR)), certain universities and private sector defense companies (Landgren, 1989).

By the end of the 1980s, South Africa's arms industry had reached a relatively high level of self-sufficiency and could meet most of the equipment requirements of the SADF. However, because of the country's limited R&D resources and the UN arms embargo, the local arms industry did not try to reproduce or emulate the R&D which had already been carried out by the major Western arms producers (Brzoska, 1991). Instead, the local arms industry concentrated on acquiring a capacity for upgrading, modifying and modernizing existing armaments and weapons systems (Brzoska, 1991; Landgren, 1989).

Spending on defense R&D

As a result of the development and expansion of the local arms industry, spending on defense R&D increased quite dramatically during the late 1970s and 1980s. After 1977, military R&D was funded directly from the defense budget either through the Special Defence Account, or from Armscor's operating subsidy (paid out of the General Support Programme of the defense budget). The Special Defence Account was established in 1974 to provide funding for the SADF's procurement projects and other activities, including military intelligence and covert operations. Armscor administered the Special Defence Account on behalf of the SADF.

Between 1977 and 1989, expenditure on defense R&D increased by nearly 500 percent in real terms (average annual increase 36 percent). In 1979,

spending on defense R&D as a percentage of total national R&D amounted to 19.3 percent; by 1987, its share had increased to 54.2 percent, before declining slightly to 48.2 percent in 1989 (see Figure 9). The marked increases in spending on defense R&D in the late 1980s occurred during a period when total R&D spending and private sector R&D were declining in real terms (Kaplan, 1995). It seems, therefore, that the allocation of national resources to military R&D during the 1980s may have 'crowded out' investment in non-military R&D.

In addition to high levels of spending on defense R&D, a significant proportion of the country's scarce human R&D resources were also absorbed by the defense sector, particularly the defense industry. By the late 1980s, Armscor and the public sector defense industry employed around 2,000 scientists and engineers. This represented almost 10 percent of

South Africa's total number of scientists and engineers (Batchelor, 1996b). The overall number of scientists and engineers in South Africa as a share of the population was lower than in many other developing countries (for example, Brazil and South Korea) in the late 1980s. The gap between South Africa and these other developing countries increased during the late 1980s when military R&D spending was increasing, thus providing some evidence that military R&D activities were dampening R&D activities in the overall economy (Kaplan, 1995).

The possible opportunity costs associated with diverting scarce R&D resources to the military sector during the 1980s were evident not only in the decline in civilian R&D expenditure during the same period but in the stagnation of technological activity as measured by scientific outputs (Batchelor and Willett, 1998). South Africa's patenting activity, both within the country and internationally, declined between 1982 and 1989 (see Figure 10), which corresponded with the significant increases in expenditure on military R&D during the same period. This suggests that military R&D did not have a positive impact on the country's technological performance, and that spin-offs from defense to the civilian sector during the 1980s were insignificant, despite the increases in military R&D expenditure (Willett and Batchelor, 1994).

Figure 9: Defense R&D expenditure, 1977–1989

In million rand, constant 1985 prices

Source: Foundation for Research Development, 1993; Batchelor and Willett, 1998

<i>Year</i>	<i>Defense R&D</i>	<i>Total R&D</i>	<i>Defense R&D/Total (in percent)</i>	<i>Defense R&D/Defense budget (in percent)</i>	<i>Defense R&D/GDP (in percent)</i>
<i>1977</i>	86	-	-	1.7	-
<i>1979</i>	124	642	19.3	3.3	0.6
<i>1981</i>	167	778	21.4	3.9	0.6
<i>1983</i>	169	999	16.9	4.2	0.8
<i>1985</i>	259	1,077	24.0	6.1	0.9
<i>1987</i>	550	1,016	54.2	10.8	0.8
<i>1989</i>	492	1,020	48.2	8.6	0.7

Figure 10: South Africa's patenting activity, 1980–1989

Sources: Foundation for Research Development, 1993; United States Patent Office, 1990; Batchelor and Willett, 1998

<i>Year</i>	<i>Defense R&D expenditure (in constant 1985 million rand)</i>	<i>Number of South African patents registered in South Africa</i>	<i>South Africa's share in foreign patents registered by the US Patent Office (in percent)</i>
1980	133	827	0.30
1981	167	1,059	0.42
1982	157	1,436	0.30
1983	169	1,417	0.25
1984	178	1,413	0.28
1985	259	1,278	0.30
1986	422	1,162	0.27
1987	550	1,088	0.27
1988	515	1,231	0.28
1989	492	1,211	0.30

Cuts in defense R&D spending

Cuts in defense spending may not necessarily be accompanied by corresponding cuts in defense R&D spending, because there may be pressures to protect defense R&D budgets. In South Africa, however, the cuts in defense spending which occurred after 1989 were accompanied by dramatic cuts in spending on defense R&D. Between 1989/90 and 1998/99, the defense budget was cut by 57 percent in real terms—an average of 8 percent per annum.

During the same period, defense R&D was cut by 78 percent in real terms—an average of 15 percent per annum (see Figure 11). The decline in the absolute levels of defense R&D spending was also reflected in the decline in the share of defense R&D in the overall defense budget, from 8.6 percent in 1989/90 to 4.4 percent in 1998/99. The share of defense R&D in total national R&D declined from 48 percent in the late 1980s to around 18 percent in the mid-1990s (Batchelor and Willett, 1998).

Figure 11: Defense R&D spending, 1989/90–1998/99

In million rand, constant 1990 prices

Sources: South African Department of Finance, Budget Review, various years; Armscor Annual Report, various years

<i>Year</i>	<i>Defense budget</i>	<i>Percentage change from previous year</i>	<i>R&D budget</i>	<i>Percentage change from previous year</i>	<i>R&D/Total (in percent)</i>
<i>1989/90</i>	11,435		985		8.6
<i>1990/91</i>	10,071	-11.9	793	-19.5	7.9
<i>1991/92</i>	8,094	-19.6	580	-26.9	7.2
<i>1992/93</i>	7,605	-6.0	467	-19.5	6.1
<i>1993/94</i>	6,589	-13.4	342	-26.8	5.2
<i>1994/95</i>	7,812	18.6	342	0.0	4.4
<i>1995/96</i>	6,892	-11.8	342	0.0	5.0
<i>1996/97</i>	6,320	-8.3	329	-3.8	5.2
<i>1997/98</i>	5,679	-10.1	259	-21.3	4.6
<i>1998/99</i>	4,881	-14.1	216	-16.6	4.4
<i>Average 1989–1998</i>		-8.5		-14.9	5.9

The structure of defense R&D spending also changed quite significantly after 1989/90 (see Figure 12). In the context of the dramatic cuts in procurement spending, which had a negative impact on the domestic arms industry (see chapter on the defense industry), a larger share of the defense R&D budget was allocated to technology development projects, as opposed to the R&D components of procurement projects. In 1989/90, 18 percent of total defense R&D was allocated to technology development. By 1998/99, this had increased to 56 percent. This internal reallocation of defense R&D resources was motivated by a desire to retain key defense technologies and capabilities within the local defense industry (Batchelor and

Willett, 1998). This is in line with international trends, where defense R&D spending is often maintained although procurement spending is cut. In this way, weapons systems are only developed to the prototype stage (for example, technology demonstrators) or are only produced experimentally (BICC, 1996).

Figure 12: Structure of defense R&D spending, 1989/90–1998/99

In million rand, constant 1990 prices

Source: Armscor Annual Report, various years

<i>Year</i>	<i>Total R&D</i>	<i>Technology</i>	<i>Percentage of total</i>	<i>Procurement</i>	<i>Percentage of total</i>
1989/90	985	180	18	806	82
1990/91	793	163	21	630	79
1991/92	580	340	59	240	41
1992/93	467	321	69	146	31
1993/94	342	210	61	133	39
1994/95	342	188	55	154	45
1995/96	342	196	57	147	43
1996/97	329	180	55	150	45
1997/98	259	127	49	132	51
1998/99	216	122	56	95	44
<i>Average 1989–1998</i>			49.9		50.1

The impact of the decline in defense R&D expenditure was felt most acutely in terms of human capital resources. Armscor, for example, shed almost 40 percent of its engineers and scientists (nearly 800) between 1989/90 and 1992/93 (Batchelor and Willett, 1998). These trends were reflected in the private sector, according to interviews with private sector company officials.

Conversion of defense R&D resources

In South Africa, as in other countries, defense R&D activities have traditionally been kept separate from civilian R&D activities. Furthermore, for security reasons, information on defense R&D activities and spending has not been publicly available. This makes it difficult to assess the returns from defense R&D and to pursue

options for the conversion of defense R&D resources. The general characteristics of defense R&D (such as secrecy and performance orientation) also make it difficult to convert defense R&D resources to civilian use (BICC, 1996).

With cuts in military expenditure, it is possible to reallocate defense R&D resources to alternative uses. The reallocation of defense R&D resources—both financial and human—to civilian R&D activities could, it is argued, have a positive impact on the performance of South Africa’s civilian economy. This is because it is evident that the allocation of scarce R&D resources to the defense sector in the 1970s and 1980s dampened investment in civilian R&D, which in turn had a negative impact on South Africa’s technological activity.

There have been little or no conscious attempts in South Africa to facilitate the conversion of defense R&D resources to civilian purposes, partly because of the barriers to conversion and because of a lack of political will on the part of government. The vested interests of the defense industry and the defense R&D community have also acted as a significant barrier against defense R&D conversion. While it is evident that the allocation of financial and human resources to defense R&D has declined quite dramatically since 1989, there has been no conscious policy to reallocate, or convert, these resources. There is also no information available publicly as to where these defense R&D resources ended up after they were released from the defense sector.

In terms of financial resources, figures from the Foundation for Research Development (FRD) seem to suggest that resources previously allocated to defense R&D may have been reallocated to forms of civilian R&D (both private and public) since the late 1980s. The share of defense R&D in total national R&D declined quite dramatically from nearly 50 percent in the late 1980s to less than 20 percent in the mid-1990s (Batchelor and Willett, 1998). However, the absolute amount of total national R&D expenditure increased in real terms after 1989/90 (South African Department of Arts, Culture, Science and Technology, 1996a). These figures seem to suggest that there was some reallocation of

resources from defense R&D to the civilian sectors of the economy, and that the 'crowding-out' impact of defense R&D during the 1980s was significantly reduced after 1989 (Batchelor, 1996b).

In terms of defense R&D human resources, certain trends can be identified from interviews with personnel from the public and private sector defense industry. Many scientists and engineers working in the defense R&D sector left South Africa or moved into non-military R&D markets as a result of the downsizing of the defense sector. The emigration of scientists and engineers is evident from the decline in the absolute number of

engineers and scientists in South Africa after 1989, and the declining share of engineers and scientists as a percentage of the total labor force (Kaplan, 1995). At no stage has the government put in place any policies to assist with the integration of former defense R&D personnel into the civilian R&D sector.

Given the limited amount of data, it is extremely difficult to ascertain whether the reallocation of resources from defense to civilian R&D has had a positive impact on the performance, productivity and competitiveness of the civilian economy, and more specifically on South Africa's scientific activity.

Figure 13: South Africa's scientific activity, 1989–1994

Source: Foundation for Research Development, 1996

<i>Year</i>	<i>Total number of patents granted in South Africa</i>	<i>Total number of patents granted to South Africans by SA Patent Office</i>	<i>Column 3 as a percentage of Column 2</i>	<i>Number of South African publications in Science Citation Index (SCI) (in percent)</i>	<i>Share of patents granted to South Africans by US Patent office (in percent)</i>
<i>1989</i>	5,597	1,211	21.6	0.56	0.30
<i>1990</i>	5,478	1,170	21.4	0.53	0.23
<i>1991</i>	4,535	1,377	30.4	0.53	0.19
<i>1992</i>	5,039	1,417	28.1	0.54	0.19
<i>1993</i>	4,439	1,106	24.9	0.49	0.19
<i>1994</i>	5,025	858	17.1	0.48	0.20

From Figure 13, it is evident that the total number of patents granted in South Africa declined from 5,597 in 1989 to 5,025 in 1994. The number of patents granted to South Africans by the SA Patent Office also decreased after 1989, although there were increases in 1991 and 1992. In an international context, South Africa's share of publications in the Science Citation Index (SCI) declined after 1989, while South Africa's share of patents granted by the US Patent Office showed a marked decline after 1989. The information in Figure 13 presents an incomplete and contradictory picture. It appears that there has been a slight downward trend in South Africa's scientific activity since 1989, despite real increases in the absolute amount of total R&D spending and a reallocation of resources from military to non-military R&D activities. More recent figures for South African scientific activity since 1994 are not available.

Since 1989, there have been no major changes in the way in which defense R&D is funded and/or organized. Defense R&D is still funded out of the Special Defence Account and the General Support Programme of the defense budget. Armscor also uses some of its operating subsidy to fund defense R&D activities and continues to place defense R&D contracts with both public and private sector defense companies. The management and acquisition of defense R&D is still performed by the Armaments Technology Acquisition Secretariat, which in turn reports to the Defence Research and Development Board (DRDB), the successor to the DRDC.

With the establishment of Denel in 1992, a number of R&D activities that had previously been carried out in Armscor's subsidiary companies were transferred to Denel's new divisions and companies. Since 1992, Armscor has consolidated and rationalized its

R&D and testing facilities. Some facilities (for example, the Institute for Maritime Technology) were not transferred to Denel in 1992 but remained part of Armscor. Other facilities which were initially transferred to Denel in 1992—for example, the Gerotek Test Facilities—have been transferred back to Armscor because they have not proven commercially viable. Armscor has also purchased a number of private sector R&D companies (for example, Protechnik Laboratories in 1994 and Hazmat Protective Systems in 1995) in order to retain certain key technologies and capabilities in the local defense industry. Armscor has six subsidiary companies which are involved in R&D and testing (*Armscor Annual Report*, 1998).

In the last few years there have been a number of policy developments which have had a significant impact on defense R&D. Most of these policy developments have attempted to make defense R&D more transparent and to integrate defense R&D activities and funding into national R&D activities.

The 1996 White Paper on Science and Technology deals specifically with defense R&D. It highlights the issue of converting the skills of the defense sector to civilian use in order to broaden South Africa's industrial skills base. Furthermore, it stresses the importance of refocusing R&D policy away from the classical model of defense research—where research institutes exist to fulfill roles rather than to follow the market—towards a dual-use model of innovation. It rejects the view that defense technology should be phased out in favor of civilian technology, or converted,

arguing that this is untenable. Rather it suggests that the defense industry should be encouraged to leverage spin-offs in the civilian sector, and to develop relationships with civilian institutions to promote spin-ons. The White Paper also mentions that the defense R&D budget should be displayed in a national R&D budget, as well as in the defense budget, in order to give government and the public an opportunity to evaluate the entire R&D system in an unfragmented way (South African Department of Arts, Culture, Science and Technology 1996b).

The 1998 Defence Review provides details of the technology acquisition management process in the Department of Defence (DoD). It also commits the DoD to full cooperation with other government structures for science and technology and to provide transparency in its technology development programs within the bounds of military security (South African Department of Defence, 1998). The 1999 Discussion Document on South Africa's Defence-Related Industries also deals with the issue of defense R&D and outlines strategies for retaining strategically essential defense technologies and capabilities. Both these policy documents make reference to the recommendations of the 1996 White Paper on Science and Technology, but do not propose any concrete strategies for integrating defense R&D activities into civilian R&D activities, or for facilitating spin-offs and spin-ons with the civilian sector. Neither of these policy documents explicitly supports the development of dual-use technologies nor the conversion of defense R&D resources for alternative uses.

Conclusions

During the apartheid era, the defense sector absorbed a disproportionate share of South Africa's scarce R&D resources—both financial and human. This was evident from the significant increases in defense R&D spending and the number of scientists and engineers employed in the defense sector during the 1970s and throughout the 1980s. During this period, the amount of resources invested in civilian R&D declined quite substantially. Thus, defense R&D 'crowded out' investment in the more productive civilian sector, thereby contributing to South Africa's deteriorating economic performance, particularly in the manufacturing sector. South Africa's innovative and scientific activity also declined during this period, suggesting that the investment in defense R&D had very little impact on the country's technological activity.

Since the late 1980s, South Africa's defense R&D spending has declined quite dramatically and there has been a reallocation of financial resources from defense to civilian R&D activities. The share of spending on defense R&D in total R&D has declined since the late 1980s, thus making more resources available for civilian R&D. In addition, the overall amount of financial resources available for R&D has increased during the same period. The cuts in spending on defense R&D have also been accompanied by a reallocation of defense R&D human resources, both in the public and private sector defense industry. Many scientists and engineers from the defense sector have either emigrated or exited the defense market.

At no point since the late 1980s has the South African government attempted to assist the reallocation of defense R&D resources, both financial and human, towards civilian purposes. Despite the existence of a number of important policy developments, such as the 1996 White Paper on Science and Technology, there has been no political support for conversion and, as a result, the government has made no practical attempt to support defense R&D conversion. The reallocation of financial resources has not, for example, been geared towards investing in dual-use technologies, and there has been no attempt to facilitate the transfer of defense R&D human resources and skills to the civilian sector. The government has also not attempted to create new non-defense R&D markets for the R&D resources that are surplus as a result of defense downsizing. As a result of this lack of political will, many of South Africa's scarce R&D resources have been squandered in the last few years.

The fact that the defense budget seems to have stabilized and is unlikely to decline any further in coming years means that the dramatic decline in defense R&D activity has probably been halted for the foreseeable future. Furthermore, the recently announced R30 billion procurement package for the SANDF will in all likelihood create new demand for local defense R&D activity, thus prompting a possible increase in defense R&D spending in the next few years.

Surplus Weapons

Introduction

South Africa's domestic defense industry (see chapter on the defense industry) expanded quite dramatically during the 1970s and 1980s in response to various political, strategic and economic factors. As a result of this expansion, the local defense industry began to experience a number of economic problems by the early 1980s, including rising production costs, excess capacities and declining demand (Batchelor and Willett, 1998). These problems were exacerbated by the fact that the presence of the UN embargo forced the industry to stockpile up to four years' supply of certain items that were not available in South Africa (Landgren, 1989).

Arms exports were seen as the solution to the problem of surplus capacity, while at the same time helping to reduce costs and preserve accumulated skills and technologies. South Africa's appearance at an international defense exhibition in Greece in 1982 marked the country's official entry into the international arms market. In the following years, South Africa embarked on an aggressive international sales drive targeted specifically at developing-country markets, and, by the late 1980s, South Africa had emerged as one of the developing world's leading arms exporters (Wulf, 1993; Batchelor, 1996a).

A key feature of South Africa's arms export drive during the 1980s was the sale of surplus weapons and defense equipment. However, no detailed figures on the value of sales of surplus arms and equipment are available for the period 1982–1992. Recent evidence suggests that most of the recipients of South Africa's exports of surplus arms during the 1980s were 'pariah' states or non-state actors such as rebel armies. For example, countries such as Cambodia (Khmer Rouge), Iran, Iraq,

Chile and Taiwan are reported to have purchased arms and military equipment from South Africa during the 1980s (Willett and Batchelor, 1994).

In addition to the export of locally produced armaments and military equipment, large amounts of defense material (mainly small arms) were captured by South African forces in Angola between 1975 and 1989. Most of this material—which was generally of Soviet origin—was not appropriate for the SADF and was either stockpiled or 'transferred' to South Africa's surrogate forces in Angola (UNITA) and Mozambique (Renamo) (Ohlson, Stedman and Davies, 1994). There were very few, if any, controls over the transfer of this surplus equipment to both UNITA and Renamo during the 1980s. South Africa's military withdrawal from Namibia and Angola in 1989, together with the implementation of cuts in defense spending and disarmament measures, resulted in a large amount of the SADF's armaments and defense equipment becoming surplus. The defense cuts and the cancellation or postponement of large procurement contracts led to large surplus capacities and inventories in the local defense industry.

Since the late 1980s, the SADF/SANDEF and Armscor have pursued a number of strategies to dispose of this surplus. Export sales and donations have been the most popular disposal strategies. While there has been little or no attempt to convert the SADF/SANDEF's surplus weapons, in recent years the ANC government's commitment to disarmament has resulted in the destruction of various categories of surplus weapons (for example, landmines and small arms).

Causes of surplus weapons

The issue of surplus weapons arises as a result of a number of different factors: unilateral or international disarmament initiatives; the end of a war or conflict; a modernization decision; and/or financial constraints on defense budgets. The generation of surplus weapons also depends to a large extent on various national laws and export regulations as well as the provisions in disarmament treaties requiring the destruction of weapons (BICC, 1996).

Between 1989/90 and 1998/99, South Africa's defense budget was cut by more than 50 percent in real terms (see chapter on military expenditure). The cuts in defense spending, the dramatic improvement in South Africa's external security environment—as a result of the demise of the Cold War and the ending of apartheid—together with significant changes in South Africa's defense policy and strategic doctrine since April 1994 have all contributed to the SANDF's large and growing supply of surplus weapons. In addition, the downsizing of the local defense industry, and the need for defense companies to 'off-load' their stock of weapons and defense equipment has also contributed to the growing supply of surplus weapons.

Since 1989, certain types of equipment have been withdrawn from service in the SADF/SANDEF. For example, between 1989 and 1994 more than 300 aircraft (nearly half of the total in-service inventory in the late 1980s) were withdrawn from service (South African Institute of Race Relations, 1995). These included Canberra and Buccaneer bombers, Super Frelon and Wasp helicopters and Harvard trainers. Most of these aircraft were disposed of or sold to other countries. Some army equipment which had reached the end of its serviceable life (for example, troop carriers, towed artillery and

general utility trucks), or which was no longer useable because of wear and tear, was taken out of service and became surplus in the early 1990s (BICC, 1997). The lifting of the UN arms embargoes in May 1994 meant that the need for stockpiling disappeared, and the SANDF was left with a surplus of defense material.

Since April 1994, there have been significant changes in South Africa's defense policy and strategic doctrine. A new White Paper on Defence was approved by Parliament in May 1996. It states that the SANDF shall have a primarily defensive orientation and posture. It also defines new secondary roles for the SANDF (such as support to the police) and commits South Africa to participation in international peace support operations (South African Department of Defence, 1996). During 1998, parliament approved the Defence Review, which outlined the SANDF's force structure, force design and equipment requirements (South African Department of Defence, 1998).

The implementation of a defensive strategic doctrine, together with a new force structure and force design, has meant that some existing (offensive) equipment may become redundant. This includes relatively new equipment, such as Cheetah medium fighters and Oliphant main battle tanks, as well as older equipment such as Daphne class submarines, which are already close to obsolescence.

Some of the SANDF's new roles, which are defined in the 1998 Defence Review, may also require the purchase of new equipment—for example, transport aircraft—which will contribute to the supply of surplus equipment. Current and proposed procurement projects, such as the

Rooivalk attack helicopter, patrol corvettes and jet trainers—which are intended to replace or upgrade existing capabilities—will also result in some existing equipment, such as the navy's strike craft and the air force's Impala jet trainers, becoming surplus.

South African participation in, and ratification of, certain disarmament agreements such as the Nuclear Non-Proliferation Treaty, the Chemical Weapons Convention, the Inhumane Weapons Convention, and the Ottawa Treaty have also created surpluses of certain types of defense material (for example, anti-personnel landmines).

Quantity of surplus weapons

Since the early 1990s, the quantity of the SANDF's surplus weapons has grown significantly, as a result of ongoing defense cuts and disarmament measures. Armscor and the SANDF have a continuous policy of disposing of surplus weapons through various strategies such as destruction, mothballing, conversion, donations (gifts) and export sales (BICC, 1997). In recent years the SANDF has provided information to Parliament concerning its supply of surplus

weapons. During the Defence Review process in 1996, the SANDF stated that certain types of equipment in the various arms of service, such as naval combat ships, submarines and jet trainers, were nearing the end of their serviceable life, and/or would probably become surplus by the end of the decade.

At the briefing, the SANDF also stated that, in addition to these surplus conventional weapons, it had large surpluses of small arms and ammunition (both local and foreign). The small arms included machine guns, assault rifles, pistols, mortars and rocket launchers. Most of the SANDF's foreign surplus weapons were either captured during the Angolan war or imported clandestinely from countries such as China and Bulgaria (Cameron Commission, 1995a). The local surplus weapons are either old or obsolescent weapons that were produced locally for use by the SANDF and the security forces. Both the army and the air force have large amounts of surplus ammunition (both local and foreign) which were stockpiled during the arms embargo and for use in the Angolan war (Cameron Commission, 1995a).

Figure 14: SANDF surplus conventional weapons, 1996

Source: Briefing to Joint Standing Committee on Defense, 19 March 1996

<i>Equipment</i>	<i>Inventory (excluding surplus)</i>	<i>Surplus</i>
<i>Main battle tanks (MBTs)</i>	224	0
<i>Armored combat vehicles (ACVs)</i>	4,706	413
<i>Artillery</i>	140	159
<i>Combat aircraft</i>	165	42
<i>Helicopters</i>	132	15
<i>Combat ships</i>	20	0

In November 1998, the government approved the planned purchase of R30 billion worth of new equipment (fighter aircraft, submarines and patrol corvettes) for the SANDF based on the equipment requirements of the 1998 Defence Review (*Business Day*, 19 November 1998). Most of the new equipment is for the air force and the navy. The planned procurement of new equipment will render much of the SANDF's existing equipment surplus.

Most of the army's equipment is relatively new and will remain in service for another 20 years. However, nearly 3,000 troop carriers and most of the self-propelled and towed anti-aircraft systems in the army's current inventory will become surplus around the year 2000. This is in addition to the over 400 troop carriers and 150 artillery systems which were already surplus in 1996 (see Figure 14) (South African Department of Defence, 1998).

In the air force's current inventory, nearly 100 jet trainers, 20 helicopters and more than 10 transport aircraft will have become surplus at the end of the century. This is in addition to the 42 combat aircraft and 15 helicopters which were already surplus in 1996 as a result of rationalization measures in the air force during the early 1990s (see Figure 14). The planned purchase of 52 new fighter aircraft and jet trainers, 40 light utility helicopters and 4 maritime helicopters will render much of the air force's existing equipment surplus (*Salut*, January 1999).

According to the SANDF, all the navy's surface combat ships (strike craft, minehunters and minesweepers) and submarines would be obsolescent by the turn of the century. The announced procurement of 3 submarines from Germany and the planned procurement of 4 patrol corvettes from Germany will render the navy's 9 strike craft and 3 Daphne submarines surplus (*Salut*, January 1999).

The disposal of surplus weapons

The Department of Defence (DoD) has provided information on the surplus weapons and defense equipment that were disposed of during the period 1990–1998. These included 258 Saracen troop carriers, 1,200 Eland (Panhard) armored cars, 120 Harvard aircraft, 40 Puma helicopters, 10 Super Frelon helicopters, 6 minesweepers, 2 air and sea rescue launches, 1 navigator boat, 105,000 anti-personnel mines and 199 Buffel mine-protected vehicles. Arms and equipment that are in the process of being disposed of include, *inter alia*, 2,701 Buffel mine-protected vehicles, 37 Impala MKII aircraft, 12 Cessna aircraft, 22 Mirage F1 AZ aircraft and 1 naval tugboat. The Armscor Stock Sales Department continues to advertise the SANDF's current surplus stock through its normal marketing channels, as well as through its own dedicated website.

Strategies for the disposal of surplus weapons

Faced with a large, and growing, supply of surplus weapons, the SANDF and Armscor have pursued a number of strategies in recent years for disposing of surplus defense material, including destruction, mothballing, donations (gifts), and export sales.

Destruction: The strategy of destruction has been used for material which is old, unstable, and which is not fit for sale due to wear and tear, or for which no buyers can be found. This strategy has also been used for material that is controversial and cannot be sold or transferred because of disarmament agreements or domestic legislation (for example landmines or nuclear weapons).

Nuclear weapons: The de Klerk government terminated South Africa's nuclear weapon program towards the end of 1989. By that time, South Africa had constructed six complete gun-type nuclear devices and one incomplete device. The pilot uranium enrichment plant at Pelindaba was closed in early 1990 and the seven nuclear devices were dismantled. Thereafter, the highly enriched uranium (HEU) used in the devices was melted down and recast into a form that made it unsuitable for use in a nuclear weapon. South Africa acceded to the Nuclear Non-Proliferation Treaty in 1993, and in the same year new 'non-proliferation' legislation was passed, including the Non-Proliferation of Weapons of Mass Destruction Act No. 87 of 1993 (Batchelor and Willett, 1998; Fig, 1998; Howlett and Simpson, 1993).

Landmines: In May 1996, South Africa announced a permanent ban on the use of anti-personnel landmines (*Mail & Guardian*, 10 May 1996). In January 1997, South Africa announced a ban on the use, production and trade of anti-personnel landmines. It also announced its intention to destroy existing stocks, except for a very limited and verifiable number (18,000) to be used solely for training specific military personnel in de-mining techniques and for research into assisting the de-mining process (Vines, 1998). During 1997, the DoD destroyed 243,423 anti-personnel landmines (*Citizen*, 26 November 1997). In December 1997, South Africa signed the Ottawa Treaty, which banned the production, use, export and stockpiling of anti-personnel mines.

Small arms: In February 1999, the South African government announced that, during 1998, it had destroyed 70 tons of small arms and ammunition, as well as 100 tons of small arms and ammunition on site in Mozambique (*Inter-Press Service*, 21 January 1999). In May 1999, the DoD, in accordance with a decision of the National Conventional Arms Control Committee (NCACC) and Cabinet, announced that it intended to destroy

all surplus, redundant, obsolete and confiscated weapons of a caliber less than 12.7 mm that were in the possession of the state. As a result of this decision, the DoD announced in July 1999 that it intended to destroy 262,667 small-caliber weapons by the end of 1999 (*Daily Despatch*, 13 July 1999). Details of the surplus small arms to be destroyed are provided in Figure 15. The decision to destroy the SANDF's stock of surplus small arms is a particularly positive development, given the growing problem of small arms proliferation in South and Southern Africa.

Mothballing: Mothballing—which involves storage of existing equipment—has also been used as a

strategy for dealing with surplus weapons. Both the army and the air force have found it to be a useful strategy because it means that expensive equipment, such as combat aircraft, can be brought back into service at a future date.

Conversion: The strategy of converting weapons or other military equipment (for example, radar, trucks, helicopters and boats) to civilian use has not been widely used by the SANDF and Armscor.

Donations: Another strategy for dealing with surplus weapons has included donations or gifts. During the apartheid era, the SADF disposed of some its surplus weapons, including

foreign weapons, through donations to its surrogate forces in Angola (UNITA) and Mozambique (Renamo). More recently, the SANDF has donated surplus material and equipment, including ammunition and armored vehicles, to some of South Africa's neighboring countries (*Star*, 7 August 1997). During 1998, South Africa donated large amounts of surplus military equipment to Namibia, including 150 Samil 100 trucks and 24 G-2 140mm howitzers (*Jane's Defence Weekly*, 28 October 1998). This transfer was highly controversial because it was assumed that Namibia would use the weapons for its military campaign in the war in the Democratic Republic of Congo (DRC).

Export sales: Export sales are the SANDF's preferred strategy for disposing of surplus weapons. Since the mid-1980s, Armscor has acted as the agent for the SANDF's surplus weapons. Armscor is entitled to retain a 5 percent commission on all sales of surplus weapons, and the Department of Finance allows the income from the sales to be retained by the SANDF to fund new procurement projects (Cameron Commission, 1995a). This situation has encouraged Armscor to pursue the sale of surplus weapons quite vigorously and with little regard for the consequences that these sales might have.

The lifting of the UN arms embargoes in 1994 and the dramatic improvement in South Africa's foreign relations, together with support from the ANC-led government, has led to a dramatic increase in the value of South Africa's arms exports. At the time of the lifting of the arms embargoes, Armscor announced its intention to increase South Africa's share of the global arms market from 0.4 percent in 1994 to 2 percent, increasing the value of sales from R800 million to roughly R2.4 billion (Batchelor and Willett, 1998). A key component of this arms export drive has involved the sale of surplus SANDF weapons and defense equipment.

Figure 15: SANDF surplus small arms, May 1999

Source: South African Department of Defence, 12 May 1999

<i>Description</i>	<i>Total</i>
7.62mm R1 rifle	198,506
7.62mm R1 rifle (Paratroop)	1,326
7.62mm M1 rifle	3,708
7.62mm R1 heavy barrel	2,914
Bren LMG	3,637
Vickers MG	2,256
7.62mm R2 rifle	12,237
Uzzi SMG	1,259
12.7mm Browning	412
Other small caliber weapons	36,412
Total	262,667

Figure 16: South Africa's arms exports and sales of surplus arms, 1992–1998

In million rand, constant 1995 prices

Sources: Armscor Annual Report, various years; National Conventional Arms Control Committee, 1999

<i>Year</i>	<i>Total exports</i>	<i>Percentage change from previous year</i>	<i>Surplus sales</i>	<i>Percentage change from previous year</i>	<i>Surplus/Total exports (in percent)</i>
1992	645		101		15.7
1993	1,054	63.5	87	-13.4	8.3
1994	928	-12.0	72	-17.9	7.7
1995	1,033	11.3	64	-10.5	6.2
1996	502	-51.4	83	29.7	16.6
1997	1,135	126.3	71	-14.4	6.3
1998	512	-54.9	49	-32.0	9.5
<i>Average 1992–1998</i>		13.8		-9.7	10.0

Between 1992 and 1998, the value of South Africa's total exports fluctuated quite widely, with an average increase of nearly 14 percent *per annum*. During the same period, the value of sales of surplus arms declined quite significantly, with an average decline of nearly 10 percent *per annum*. However, the share of surplus sales in total arms exports has averaged 10 percent *per annum* between 1992 and 1998, despite the real decline in the value of surplus sales. This highlights the importance of sales of surplus to South Africa's overall arms export performance. The contribution of surplus sales in total exports is much more significant for South Africa than for other major arms sellers such as the United States, Germany and the Netherlands (BICC, 1997).

The real decline in the value of sales of surplus arms after 1992 is not surprising. Prices of new, and particularly used, arms and military equipment have declined throughout the 1990s due to the large oversupply of arms in the international arms market which has accompanied the end of the Cold War. In the highly competitive 'buyers market' that now exists in many sectors of the international arms market, South Africa has struggled to realize real increases in the value of its arms sales, particularly sales of surplus arms and military equipment.

Most of South Africa's sales of surplus weapons since 1992 have been to foreign customers. There has been little or no attempt to sell surplus defense material—even non-lethal equipment (such as general utility trucks)—to local buyers. The major recipients of South

Africa's surplus weapons have tended to be developing country governments or non-state actors who cannot afford new weapons, or who do not have access to the formal international arms market. Foreign arms dealers have also become purchasers of South African surplus weapons, particularly small arms and light weapons. Until March 1995, exports of SANDF surplus weapons did not require an export permit. This meant that Armscor was under no obligation to exercise strict control or restraint over the export of SANDF surplus material.

The increases in the value of South African arms exports since the early 1990s have also been accompanied by scandal, particularly concerning the sale of surplus weapons. Before 1995,

South Africa's arms export drive was characterized by a lack of restraint and an absence of effective controls (Cameron Commission, 1995a, 1995b). Many of South Africa's recent arms sales have been to undemocratic and authoritarian regimes, to countries that are experiencing some form of internal conflict and/or to rebel groups and non-state actors.

In September 1994, a consignment of surplus small arms, supposedly intended for Lebanon, was diverted to Yemen, which was involved in a civil war and was a prohibited destination for South African arms sales (*Star*, 1 October 1994). The consignment, which included over 9,000 AK-47 assault rifles, 15,000 G-3 assault rifles and some 14 million rounds of ammunition, was the second part of a dual shipment, the first having found its way, illegally, to the former Yugoslavia (Cameron Commission, 1995a).

In November 1994, it was alleged that elements within the South African armed forces had continued to supply arms to UNITA in Angola for several years after the Bicesse Accords. It was also alleged that Armscor shipped consignments of weapons—mainly surplus—to southern Zaire in late 1992 and early 1993, and that these weapons were intended for UNITA (Human Rights Watch Arms Project, 1994). In mid-1995, it emerged that certain South Africans had sold arms to the Hutu-dominated government in Rwanda before its defeat in 1994 by the Rwanda Patriotic Front (*Mail and Guardian*, 2 June 1995). In October 1995, the Office for Serious Economic Offences began investigating certain irregularities in the commissions paid for the sale of 12 ex-SANDF Puma helicopters to Rumania in March 1994 (*Star*, 21 October 1995).

New arms trade policy

In response to these various arms trade scandals, the new ANC-led government appointed a ministerial committee in March 1995 to make recommendations on government arms trade policy and possible export control mechanisms (Van Dyk, 1996). Before April 1994, Armscor controlled the export of conventional arms. However, there was an anomaly in the system, in that Armscor was responsible for both the marketing of arms and the issuing of export permits (Van Dyk, 1996). In addition, no export permits were required for the export of SANDF surplus weapons. During 1994, Armscor recommended that the function of issuing export permits be transferred to the DoD (Cameron Commission, 1995a).

Following the recommendations of the ministerial committee, a cabinet memorandum was issued on 30 August 1995 and provided details of the government's interim arms trade policy. The 1996 White Paper on Defence also contained a statement of government policy on the arms trade, and provided details of the new control processes and structures. In terms of the new policy, all arms exports, including exports of surplus arms, require an export permit, which has to be processed and approved by a four-level control system, including a cabinet committee: the National Conventional Arms Control Committee (NCACC).

Despite the presence of a new arms control system, South Africa has continued to pursue arms exports—including the sale of surplus arms—quite aggressively in the last few years. South Africa has concluded a number of large arms deals with various countries. During 1998, Chile purchased 24 155mm G-4 towed

artillery pieces for US \$2.5 million (*Jane's Defence Weekly*, 15 July 1998). In early 1999, India purchased 90 Casspir mine-protected vehicles for approximately US \$12 million (*Jane's Defence Weekly*, 28 April 1999).

Conclusions

The issue of surplus weapons in South Africa is a direct consequence of the dramatic processes of disarmament and demilitarization which accompanied the ending of apartheid and South Africa's transition to democracy. The SADF's withdrawal from Namibia and Angola in 1989, and the termination of the country's policy of regional destabilization, together with severe cuts in South Africa's defense budget, the implementation of various disarmament measures and the rationalization and restructuring of the SANDF, have resulted in the creation of a large supply of surplus defense material.

The South African government, through the SANDF's acquisition agency, Armscor, has used a number of strategies, including destruction, mothballing, donations (gifts), and export sales to deal with the disposal of surplus defense material. Since 1994 the ANC-led government has used the strategy of destruction to deal with the disposal of surplus weapons, including anti-personnel landmines and small arms. However, South Africa's preeminent strategy for the disposal of surplus defense material is export sales. Since the mid-1980s, Armscor's Stock Sales Department has acted as the agent for the SANDF's surplus arms and defense equipment.

The sale of surplus weapons has become a key component of South Africa's arms export drive, which moved into high gear following the lifting of UN arms embargoes in May 1994. Between 1992 and 1998, sales of surplus weapons accounted for an average of 10 percent of total arms exports *per annum*. Some of the sales of surplus weapons in recent years have been accompanied by scandal and/or have involved the transfer of weapons to undemocratic and authoritarian regimes and/or rebel groups and non-state actors.

The positive effects of disposing of surplus weapons needs to be critically assessed in terms of a number of factors. Disposing of surplus arms may not necessarily result in a reduction in the inventory stocks and equipment holdings of the SANDF. The process of disposing of surplus weapons which began in the early 1990s will be offset by the planned procurement of new equipment for the SANDF. The procurement of new equipment will thus contribute to the SANDF's already large and growing supply of surplus weapons. This in turn will lead to growing pressure on Armscor to dispose of these surplus weapons, in order to fund the SANDF's new and existing procurement projects. Thus, it is likely that the value and quantity of South Africa's sales of surplus weapons will increase in the coming years.

In addition, the irresponsible sale and/or donation of surplus weapons to countries that are enduring or anticipating conflict may undermine the positive effects of disposing of surplus weapons. In this context—and given South Africa's recent arms trade record—the government will have to find the right balance between restraint and responsibility with respect to the disposal of surplus arms, particularly exports and donations of surplus arms.

Demobilization, Rationalization and Reintegration

Introduction

South Africa's armed forces have undergone dramatic changes in the period since 1994. The creation of an integrated defense force from seven armed forces has posed numerous human resource challenges. One of the key challenges in the future will be to trim the defense force to levels appropriate to the reduced defense budget. Planning is underway for the rationalization of personnel from the level of nearly 86,000 to the desired level of 65,000–70,000. This rationalization process poses both difficulties and challenges. It occurs in a context of high levels of unemployment, minimal economic growth, and growing crime. Personnel with high levels of education and training and experience have skills that more than likely can be converted and used in a skills-deficit economy. For those more vulnerable members of the defense force, the challenge of equipping them for civilian life and assisting in finding alternative economic opportunities is enormous. If the process fails to provide for the social and economic integration of personnel, there is a potential threat to society through increased political and social instability. If they cannot find work, there is a danger that they will fall back on what is often the only skill they have—the use of weapons—resulting in increased crime and possible insurrection. In post-conflict societies, the easy availability of weapons makes this a more acute danger.

Demobilization is defined as the significant reduction of people employed by the military and their reintegration into civilian life. It includes “the reduction of the size of regular military and paramilitary forces, as well as the number of civilian personnel employed by the armed forces” (BICC, 1996, pp. 144–146). In South Africa, demobilization is divided into two distinct processes, known as ‘demobilization’ and ‘rationalization’. Demobilization occurred from 1996–1998 and was aimed solely at soldiers from the liberation armies who either did not meet the standards for integration into the new South African National Defence Force (SANDF) or did not wish to be integrated. This process affected 7,238 soldiers from the former liberation armies (South African Department of Defence, 1998, p. 73). Rationalization refers to the process of downsizing the integrated SANDF from nearly 86,000 to the desired level of 65,000–70,000.

Although it was envisaged that the rationalization process would begin formally in 2000, there was a process of natural attrition in the interim. Nearly 13,000 people took the voluntary severance packages available to all public servants as part of the government's attempts to trim the public sector. This means that the rationalization process will involve smaller numbers than when rationalization was first mooted in 1998.

This section focuses primarily on the initial demobilization process because the planned rationalization process is still to occur. It argues that demobilization in South Africa was poorly planned, badly executed and wholly inadequate in meeting the needs

of ex-combatants. In view of the relatively small number of people demobilized, it is unlikely that there will be any major social or political ramifications. However, it has provided an opportunity to learn from the experience and to ensure that the proposed rationalization process does not repeat these mistakes.

Background to demobilization

The militarization of South Africa from the mid-1970s onwards saw the dramatic expansion of the defense force from 269,000 in 1974 to nearly 500,000 in 1979, larger than the combined forces of at least twelve African states in the Sub-Saharan region (Leonard, 1983, pp. 99 and 107). In 1977, compulsory conscription for white males was extended from one year to two years. In 1982, the active reserve period was extended from eight years to twelve years, of which 720 days of training camp had to be completed (Leonard, 1983, pp. 107–108). In 1979, the defense force comprised 40,000 permanent force members, 60,000 national servicemen, 180,000 in part-time service and 14,000 civilian employees (Leonard, 1983, pp. 107–108).

Four armies also existed in the so-called ‘independent homelands’. At independence, a ‘homeland’ was given military units which were often SADF battalions constituted on ethnic lines. They were initially led by white officers seconded from the SADF (Shaw, 1994, p. 4).

There were two liberation armies, namely, uMkhonto we Sizwe (MK) of the ANC and the Azanian People's Liberation Army (APLA), aligned to the Pan Africanist Congress (PAC). It

was estimated that 10,000–12,000 members received formal training outside the borders of South Africa, and a large percentage of the 28,000 members received internal training. APLA force levels were unknown and claims varied between 10,000 and 15,000, but only 5,500 APLA combatants were integrated into the SANDF (Liebenberg, 1997, p. 125).

From the early 1990s, there was an informal process of demobilization, particularly in the SADF and MK. The reduction in military expenditure from the late 1980s and the changing political circumstances resulted in a process of rationalization of the SADF. Between 1989 and 1994, 9,000 full-time military personnel were retrenched, and conscription was abolished in 1993.

From 1990, exiles began to return to South Africa, including MK soldiers. Cock, in a survey of 180 MK combatants in 1993, uncovered the educational, employment, psychological and social needs of ex-combatants. She found that although they were not a homogenous group in terms of age, gender and educational level, they shared similar difficulties. For example, the majority of Cock's sample were unemployed, living in poverty and relying on their families for food and accommodation. An informant commented, "I am sick and tired of being a burden to my family. I am totally dependent on my parents. They suffered emotionally when I left for exile, and now they must suffer financially" (Cock, 1993, p. 11).

Many had personal problems of either an emotional, social or physical nature. For example, one ex-combatant described himself as "an emotional wreck. I have twice come close to committing suicide. I stopped because of my children but I am useless—to them and myself." Another commented, "I get seriously depressed to the point of illness. I have had headaches which the doctor says are from stress" (Cock, 1993, p. 13). According to Cock—

although the informants did not use the term—it was clear that many were suffering from post-traumatic stress disorder (PTSD). Very few psychological services offer support specifically geared to people suffering from PTSD. In Cock's survey, only 11 percent of the respondents reported receiving help for psychosocial problems (Cock, 1993, p. 14).

Many felt disoriented on their return to South Africa, and had found reintegration into society stressful. "When I returned I felt utterly disoriented and had no one to explain basic things such as how one finds a telephone number in a telephone book or how one opens an account" (Cock, 1993, p. 16). Some required assistance in dealing with a complex market economy. In exile, combatants generally handled small amounts of money and many of their day-to-day needs were met by the organization. An MK official explained, "Life in MK did little to equip men and women to face the responsibilities of family, managing money, work and a routine existence. In exile everything was provided. Everything was taken care of. You didn't even see money" (Cock, 1993, p. 17).

Many MK combatants had been soldiers for long periods of time, had missed out on education and training opportunities, and lacked capital and access to support networks in the community. An MK combatant commented, "I have tried to find a job but I have failed because I have low education, no skills and no experience of any job in civilian life," while another said, "I want education because I dedicated my youth to the struggle. I do not want to be a nuisance in the new South Africa" (Cock, 1993, p. 81).

When negotiations over the future of the military began in March 1993, there had thus already been an informal process of demobilization. However, there were enormous inequalities in the packages given to members of the

SADF versus the paltry amounts given to returned exiles. The formal process of demobilization which took place from 1996 to 1998 was integrally linked to the integration process during which the seven armed forces united to form the SANDF. Demobilization was designed as a mechanism to deal with those ex-combatants from the liberation armies or non-statutory forces—MK and APLA—who did not meet the standards for integration into the SANDF, or who did not wish to be integrated.

The integration process

The integration process was determined in 1993 by the Joint Military Co-ordinating Committee of the Sub-council on Defence of the Transitional Executive Council (TEC). The TEC was the body mandated to oversee the process of political transition from the apartheid regime to a democratic government. It was agreed by the TEC that six armed forces—the SADF, the four armies of the so-called independent homelands (the TBVC forces) and MK—were to integrate to create the SANDF. The PAC did not participate in the political negotiations, but combatants from its armed wing (APLA) were later included in the integration process in 1994 by a cabinet decision and an amendment to the Interim Constitution. In 1996, it was decided to include Inkatha Freedom Party (IFP) members in the SANDF. Approximately 2,000 people, primarily from the IFP's KwaZulu Special Protection Force (KZSPF), which had been set up in the 1990s, entered the SANDF—not as part of the integration process, but as new recruits.

It was intended that the integration process would be completed by the end of 1994, but, because of a range of difficulties, it was decided to extend it, and the last mass intake was in July 1998. The Joint Military Co-ordinating

Committee determined that the statutory forces (SADF and TBVC forces) had the necessary training and qualifications for the new defense force, and that only the non-statutory forces would have to undergo bridging training and be processed in order to standardize and accredit training.

Prior to the 1994 election, all armed forces had to submit a list of their personnel to the Certified Personnel Register (CPR), which formed the basis of the integration and demobilization process (see Figure 17). All personnel who were on the CPR were automatically eligible to become members of the SANDF, which came into existence at midnight, 26 April 1994.

Once the Certified Personnel Register (CPR) was compiled, the process of integration could begin. There were four stages to the process:

- Non-statutory personnel were regionally mustered under the auspices of MK and APLA.
- Non-statutory personnel were brought together at bases such as Wallmansthal and DeBrug, and were included in the personnel and financial systems of the SANDF.
- The placement process included appearing before a placement board comprising representatives from all the forces as well as the British Military Advisory and Training

Team (BMATT). Combatants who did not have formal military or education qualifications were tested and graded in categories from 1 to 10. Those in categories 1–3 were not integrated; categories 4–6 were accepted as non-commissioned officers; and categories 7–10 were eligible to become officers. The placement process was followed by bridging training to orient ex-guerrillas to a conventional defense force, and specific training for the corps to which they were allocated.

- Soldiers were placed into corps.

Given the history of conflict and polarization in South Africa and the role of the SADF, it is not surprising that the integration process was contested. Many of the decisions on integration taken at the TEC were not discussed with rank-and-file soldiers in the liberation armies, and many disagreed with the compromises and decisions that were made. An MK veteran argued that “integration was a bit lopsided, a bit one-sided because only MK and APLA had to go before the panel and answer questions and undergo tests before they could be accepted for integration and given status. Those from the SADF remained as they were. It looked more like MK and APLA were joining the SADF and not forces being integrated as such. I personally felt it was not a very fair exercise” (MK veteran quoted in Motumi and McKenzie, 1998, pp. 190–191). Ex-combatants initially complained about the slowness of the process, administrative difficulties, the language of instruction, the lack of respect for cultural differences, and the placement of people in ranks which were deemed lower than deserved.

Figure 17: The Certified Personnel Register (CPR)

Source: Motumi and Hudson, 1995, p. 114

^aThe non-formal CPR was created to accommodate those people whose names had not appeared on the CPR.

Statutory forces:		
Former SADF (excluding part-time forces but including civilians)	90,000	
Former TBVC defense forces	11,039	
Sub-total		101,039
Non-statutory forces:		
MK	27,801	
MK non-formal CPR ^a	1,087	
APLA	6,000	
Sub-total		34,888
TOTAL		135,927

The initial demobilization process, 1996–1998

Sixteen months into integration, the Minister of Defence, Joe Modise, announced the demobilization process. He defined demobilization as “the voluntary release of former non-statutory members who are constitutionally part of the SANDF, but who do not wish to serve in the full-time force or who are unable to do so” (Department of Defence, media briefing, 21 August 1995).

Demobilization was not so much an attempt to reduce force numbers as a way to deal with ex-combatants from the liberation forces who did not qualify for integration, or who chose not to be integrated. Demobilization only applied to those who were:

- not eligible for integration on the basis of age, education level or health
- eligible, but chose not to be integrated into the SANDF

- not satisfied with their rank or package after placement.

The demobilization package had three components: 1) one-off gratuities; 2) limited counseling over a two-week period on personal matters, careers, social services and finance; and 3) the opportunity of joining the military’s Service Corps (SC) for 18 months and receiving training in basic skills, life skills and adult literacy. It was not compulsory to join the SC, and many non-statutory force members took their packages and left, sometimes even without the limited counseling. No further training or social reintegration assistance was offered.

There was some debate about who would be eligible for gratuities. Legally, all combatants named on the CPR had to be integrated or offered demobilization packages. Some argued that the CPR should have consisted only of those people who wanted to be integrated and not all members of the liberation armies, since many ex-

combatants chose self-demobilization as they found jobs in the civilian sector or returned to studies. Demobilization would then have applied only to those who failed to meet the standards of integration, rather than including those who did not intend to integrate (Motumi and McKenzie, 1998, p. 199).

By April 1998, 7,238 people had demobilized and the total amount of gratuities paid was R167,985,805 (South African Department of Defence, 1998, p. 73). The amounts paid per category are indicated in Figure 18. The figure of 7,238 excludes those who did become successfully integrated and then chose to leave the defense force.

Figure 18: Categories and commensurate demobilization gratuities paid

Source: South African Department of Defence, 1998, p. 72

Category	Period in service	Years of former service	Amount paid per category
A	Jan. 1961–Dec. 1972	22–23	R42,058
B	Jan. 1973–Dec. 1976	18–21	R34,313
C	Jan. 1977–Dec. 1982	12–17	R28,721
D	Jan. 1983–Dec. 1989	5–11	R20,201
E	Jan. 1990–Apr. 1994	0–4	R12,734

Evaluating demobilization

To evaluate the demobilization process in South Africa, two questions need to be answered. Firstly, to what extent did it meet the needs and wishes articulated by ex-combatants? Secondly, to what extent did the process contribute to the successful reintegration of ex-combatants into society?

The answers to both these questions suggest that the demobilization process was flawed. The demobilization process did not adequately deal with the educational, employment and psychological needs of ex-combatants. There were problems in the planning and implementation of demobilization, the content of the packages, and the attempts at reintegrating ex-combatants into civilian life.

Problems with planning

The key problem of the demobilization process was that there was inadequate planning. It only began in earnest when a crisis emerged over what to do with the elderly and infirm ex-combatants who had failed to meet the standards set for integration. Demobilization planning was inadequate and unsystematic. Evidence of this was reflected in the absence of any attempt to win political support for demobilization. The process was decided on in a top-down manner, without much ex-combatant involvement in planning or implementing the programs. It was also largely exclusive of civil society.

The planning process was not informed by detailed research and analysis of the needs of ex-combatants. Data should have included the socioeconomic profile, education and training levels, skills and career aspirations of ex-combatants. Motumi and Hudson (1995) argue that

information was also lacking about the families of ex-combatants, the circumstances in the areas where they would live after demobilization, criteria to evaluate reintegration into society, mechanisms for continuing support and employment opportunities. *“The possible effects of neglect here could negate all the other components of the process, and highlight a lack of foresight relating to the overall management of the process”* (Motumi and Hudson, 1995, p. 122). Policy was not informed by an analysis of the economic and development needs of the economy. Employment opportunities in the formal and informal sector should have been assessed to match the retraining offered.

The late announcement of demobilization also led to several problems. Those combatants who reported early but were not accepted for integration had to spend months waiting at the Wallmansthal base for the process to be agreed upon. Some spent as long as 18 months doing little more than military drill and sweeping out their tents.

Problems with implementation

The implementation of demobilization was beset by bureaucratic bungling and legal problems. For example, the APLA did not submit names to the CPR before the April 1994 deadline. This meant, technically, that its members were not part of the SANDF and not eligible for demobilization. President Nelson Mandela had to make a concession to add APLA names to the CPR. Also, demobilization began without the necessary legislation in place. This led to the process being halted at the end of 1995 and the Demobilization Bill only being tabled in Parliament in October 1996. Those eligible for demobilization could not obtain their benefits until the Bill was passed.

Problems with the demobilization packages

As mentioned above, demobilization packages consisted of one-off cash payments, limited counseling, and the opportunity to join the Service Corps (SC). The packages were inadequate to meet the needs of ex-combatants, but many took just the cash and chose not to have counseling or join the SC. Evidence from other demobilization programs points to the pitfalls of one-off gratuities. Cash payments are a short-term solution and do not encourage long-term productive activity. A World Bank study established that cash payments need to be supplemented by other reintegration programs, or at least accompanied by mechanisms to encourage their expenditure on education and productive investments; otherwise, a significant proportion of former combatants have difficulties using the payments to increase their long-term income (World Bank, 1995, p. 20).

Some ex-combatants were able to supplement their demobilization gratuities with the pensions they received in terms of the Special Pensions Act. This Act aimed at helping those who were unable to provide for their pensions because they suffered a permanent or total disability as a result of full-time service to a political organization which helped establish the democratic South Africa, or who were banned, detained, exiled, prohibited or imprisoned for a total or combined period of five years while in the full-time service of such a political organization. However, former non-statutory force members under 35 years of age at the time of accession of the Act by the President in October 1996 were not eligible. Some have argued that this is discriminatory, since many joined the armed struggle at an early age. Other critics have suggested that the Special Pensions Act is insufficient, even for those who qualify.

A further problem with the demobilization package was that it was standard and inflexible. For example, some of the older people were reluctant to join the SC since they would be separated for long periods from their families and would not be paid enough to support their dependants.

The Service Corps

The SANDF attempted to provide for social reintegration through the establishment of the Service Corps (SC). However, the SC encountered a range of problems, and it is debatable whether it has achieved its objective of social reintegration.

The SC was launched on 31 January 1995, ostensibly to help ex-combatants to integrate into civilian life and contribute to the rebuilding of the country. The Minister of Defence described it as one of the largest contributions the military could make to the Reconstruction and Development Programme (*Star*, 1 February 1995). Initially targeted at demobilized soldiers, it aimed to extend its services to training the unemployed and the youth. The objectives of the SC are:

- to help prepare people for civilian life through assessment and career profiling
- to help trainees investigate career path options
- to assist trainees to reflect and gain more self-knowledge
- to provide information about career options inside and outside the SC
- to sensitize trainees about issues in the broader environment that have an impact on the decisions they make.

The SC consists of a headquarters, a vocational training center and an SC unit in each region. It falls under the ambit of the SANDF as an auxiliary organization and its headquarters are located at defense force headquarters. It is a military structure in that its members wear the uniform of the old Venda Defence Force, it is staffed entirely by seconded SANDF personnel, and its culture and ethos are military-dominated (Williams, 1996, p. 17).

The SC provides 18 months of training, comprising 3 months' literacy and adult life skills training, 3 months of vocational training and 12 months of practical experience. Introductory training covers issues such as career development, leadership, outdoor activities, social initiatives, technological issues, personal and organizational behavior, personal and functional discipline, physical training and sport. Life skills taught in this phase include: communication, conflict handling, life planning, problem solving, social interaction, self-esteem, decision-making, personal stocktaking and work ethos. Vocational training is linked to the Department of Labour's national training centers and includes building, catering, transport and engineering. The SC has established its own vocational training center in Gauteng. Practical training occurs through contributions to SANDF and other government projects. These include the building and repairing of houses and schools, the provision of sanitation and other urban services and rural development programs (SANDF, not dated, pp. 12–14).

Problems with the Service Corps

Due to its location in the military and its narrow focus on basic-level training, the SC has been hampered in supporting the reintegration of ex-combatants into civil society. There are compelling reasons why the military is

not the most appropriate vehicle for reintegrating soldiers into civilian life. The demobilization program needs many components, including psychological counseling, career counseling, life skills and employment advice, and military people are often not equipped for these tasks. Also, the military ethos of command, discipline and hierarchy is not conducive to encouraging people to think critically and to take responsibility for their lives, which is essential for successful social reintegration.

Non-military organizations may be seen as more legitimate than a military structure by soldiers whose relationship with the military may be strained. *“People who go to the Service Corps are people who failed the potential tests, the disabled; the system designs who goes there and basically it is people who feel let down. There is bitterness, anger and hurt, and people feel worthless. And in that situation, they are moved from one section of the defense force to another”* (MK soldier quoted in Motumi and McKenzie, 1998, p. 201).

The location of the SC in the military also limits funding possibilities. The military is unlikely to get increased funding and there may be a reluctance on the part of donors to fund a military structure.

A major weakness of the SC is that it focuses primarily on non-statutory force soldiers and only offers basic-level skills training. There is concern that it does not provide quality training, experience and employment opportunities, and perceptions exist that it is the ‘dumping ground’ for ex-MK and APLA soldiers.

Reintegration into society

The importance of a demobilization program that supports social reintegration was highlighted by reports of the involvement of disaffected ex-combatants in crime and violence. In 1995, there were reports of a group of ex-MK and APLA combatants, calling themselves 'Mkaplas', wreaking havoc in the KwaZulu-Natal townships of KwaMashu and Umlazi (*Mail & Guardian*, 22–28 September 1995). In November 1995, disgruntled former APLA combatants threatened to embark on a crime spree unless irregularities regarding the integration of APLA members were addressed (*Business Day*, 9 November 1995). It is, however, difficult to determine the extent to which ex-combatants were involved in criminal activities, given the existence of a clandestine SADF project called 'Operation Echo' run in the early 1990s, which was aimed at discrediting the ANC. Part of this strategy included linking MK combatants to criminal activities (Submission by the ANC to the Truth and Reconciliation Commission, 19 August 1996).

Very little evaluative research has been done to assess the impact of the demobilization program and to assess the extent to which ex-combatants are reintegrated into society. However, two small-scale studies suggest that many ex-combatants have faced considerably difficulty in adjusting to civilian life (Mokalobe, 1999; Mashike, 1999). For example, many of Mokalobe's respondents found that the gratuity was too small, that the training that they received was often in skills which were in over-supply on the market and some regretted forgoing the counseling opportunities. They commented:

"How could a man with a wife and three children whose life has been dedicated to the liberation of his country be rewarded with such little money. I am very bitter to my comrades in power. It seems we mean nothing to them" (Former APLA cadre quoted in Mokalobe, 1999, p. 21).

"I thought after a training course in computers I would find employment. However, I am unemployed. I am financially dependent to my mother who is a pensioner. I spend most of my time drinking to forget my problems. My life is very lonely" (Former MK cadre quoted in Mokalobe, 1999, p. 21).

"Every time when he is upset he threatens to shoot us. The situation is worse when he is drunk. He threatens to shoot all those he suspects of hating him in the community. People complain almost every weekend about him to my brother. They resent him". (Brother of a former MK cadre quoted in Mokalobe, 1999, p. 21).

"It is now that I start to realise the importance of counseling. I am depressed and miserable. I wish I could have seen the importance of counseling before being reintegrated. Maybe things would have not been the same. Now I don't have money for medical treatment" (Former APLA cadre quoted in Mokalobe, 1999, p. 22).

There have been some successes. For example, ex-combatants have established two major security companies, Sibuyile and Thuthuka (Mokalobe, 1999, p. 24). The MK Military Veterans Association has raised money from British Aerospace to start up a training center. It is envisaged that the money will also go towards establishing small-scale farming and a pig and poultry project.

Future challenges: the rationalization process

The integration process has produced a bloated defense force that has to be downsized. Initial estimates of the numbers to be rationalized have varied from 30,000 to 50,000 (Williams, 1998b, p. 219). On 1 April 1998, the SANDF stood at 93,324 and the Defence Review identified the appropriate strength as 70,000. This number takes into account the desired proportion of the budget to be spent on personnel (40 percent), operating costs (30 percent) and capital renewal (30 percent) (South African Department of Defence, 1998, p. 77).

However, it is likely that the number of personnel to be rationalized will be far smaller than initial estimates, and more likely to be in the region of 15,000 to 20,000. This is because there has been some natural attrition through contract expirations, resignations, retirement and death, and a number of people have taken the voluntary severance packages that have been available to all public servants as part of the government's attempts to trim the size of the public sector. For example between 31 August 1996 and 1 April 1998, 12,465 people took voluntary severance packages, and sources in the Department of Defence (DoD) suggest that as many as an additional 7,500 people have taken these packages since then (South African Department of Defence, 1998, p. 77). There has been no research done to track what has happened to these people but anecdotal evidence suggests that many have moved into the private sector—for example, as consultants to the security industry.

The proposed rationalization process was likely to begin in 2000 and would affect all levels of military personnel. Although the demobilization process was beset by a number of difficulties

and failed to meet the needs of ex-combatants adequately, it did provide a useful learning exercise for the DoD as it prepared for rationalization. There is some evidence that the DoD will not repeat some of the more obvious mistakes of the demobilization process. For example, there has been a process of stakeholder identification and consultation; planning has been more thorough; resources have begun to be mobilized for rationalization; attempts have been made to secure additional donor funding; there are plans to transform the Service Corps; and the necessity of a comprehensive needs analysis has been recognized.

The DoD has seemingly taken the issue of rationalization very seriously, as evidenced in the establishment of a Directorate of Personnel Separation to deal specifically with the rationalization program. A Transition Support Centre, consisting of a multidisciplinary team of psychologists, human resource personnel, social workers, religious persons and nursing professionals, has also been designed. It will support and prepare personnel in dealing with personal matters.

One of the key difficulties of any rationalization program will be the ability of the economy to absorb personnel. South Africa's level of unemployment stands at around 40 percent, and it is unlikely that all personnel will find formal employment. This increases the importance of the rationalization program in providing training that meets the skills requirements of the economy.

Rationalization, however, also presents many opportunities. As Williams (1998b) notes, unlike many other African armed forces, SANDF personnel have a wide skills base. These skills include leadership and management, effective written and oral communication, team building, strategic capabilities and an ability to work with large groups of people. Most senior and middle-ranking officers have graduate qualifications from civilian tertiary institutions and

defense staff colleges. Junior officers and senior non-commissioned officers have completed a range of military courses in areas of functional specialization in addition to basic management skills (Williams, 1998b, p. 219). Williams points to the skills shortage of appropriately trained and experienced managers in both the public and private sectors and argues that rationalized SANDF personnel can potentially meet this skills gap. He argues for alternative career certification programs that would allow rationalized personnel to convert their skills to gainful use in the civilian sector.

Conclusions

Problems in the planning, content and implementation of the demobilization program have meant that many demobilized soldiers have not been effectively reintegrated into society. However, the small number of people demobilized means that they are unlikely to constitute a major political threat. The rationalization process cannot afford to repeat some of these mistakes, given the large numbers of people involved.

It is overly pessimistic to argue for well-planned and executed rationalization and reintegration programs on the basis of the potential threat disgruntled ex-combatants may pose. It is equally important to recognize that the forthcoming rationalization process also offers positive opportunities. There are opportunities to convert and utilize the extensive skills of military personnel in other sectors. In addition, a smaller defense force will free financial resources for development purposes. Investment in the process of rationalization will hopefully pay off in increased security, peace and development.

Base Conversion

Introduction

The apartheid military used many resources, including vast tracts of valuable land. At the height of the apartheid era, the South African military was the country's fourth largest land-controlling authority. In 1993, Nelson Mandela, then president of the African National Congress (ANC), stated that a new government would redress land inequality through, among others, redistributing land controlled by the South African Defence Force (SADF) (*Farmer's Weekly*, 1993, p. 10). The democratic government elected in 1994 was committed to land reform, increasing the possibility of converting this land from defense to development purposes. Yet, progress on base conversion was disappointingly slow during the government's first term. By late 1999, the SANDF still controlled 493,200 hectares of state land (0.4 percent of the total South African land surface). This is approximately one quarter the size of the Kruger National Park.

Base conversion generally involves the civilian reuse of redundant military facilities. This conversion usually takes place in several phases, namely: the identification phase, the closing down of the military site, and the re-use phase. In the South African context, base conversion would free land and infrastructure for reconstruction and development. At a symbolic level, it would also afford the military an opportunity to make reparations for the forced removals from which it benefited under apartheid. However, although defense policy on land restitution clearly recognizes the rights of dispossessed communities to regain their land, only four of the thirteen cases involving the military were settled during the period 1994–1999. The other nine are bogged down in protracted negotiations.

The ongoing transformation of the defense force will increase the pressure on the second democratic government to hasten the process of base conversion. The 1998 Defence Review redefined core military activities and force design, leading to a reevaluation of the need of the South African National Defence Force (SANDF) for land and buildings. Wide-ranging base closures are anticipated as a result of this review.

These twin processes of land reform and defense force transformation will continue to be the key drivers behind base conversion in South Africa. In addressing these pressures, the government will have to:

- develop a clear policy framework for base conversion
- speedily resolve outstanding restitution claims
- improve coordination between the departments of Defence, Public Works and Land Affairs.

History of bases

The land used by the SANDF can be divided into two categories: state land and leased land. The SANDF does not own state land but is allocated land for its use by the Department of Public Works, which is the national custodian of all state land and facilities. Defence Endowment Properties are a special category of state land. This land is the historic 'war department' land and buildings that were transferred directly from the government of the United Kingdom to the government of the Union of South Africa in 1921. These assets are for the exclusive benefit of

the military and such land may only be disposed or leased with the approval of the Minister of Defence. The Department of Defence (DoD) also leases land for purposes such as shooting ranges for use by local part-time defense force members. The DoD has 'rights of use' agreements with landowners which allow certain land to be used for DoD purposes.

The military's use of land has been historically controversial because some of the land was acquired through the systematic dispossession and exclusion of people who either owned the land or enjoyed access to it. As the Defence Review states, "*The DoD's current property portfolio mostly reflects the previous era that was characterized in part by operations in Angola and Namibia and adversarial relations with neighboring countries*" (South African Department of Defence, 1998, p. 105). The military benefited from a number of forced removals and were directly implicated in some removals. For example, in the Northern Cape province, 46 percent of defense force land was acquired as a result of the forced removal of the communities of Riemvasmaak, Schmidtsdrift and Lohatla. The people of these communities were 'dumped' in barren, isolated places where they struggled to survive. These communities received little or no compensation. For example, in the Riemvasmaak case, victims of the removal were paid R8,000. The South African Defence Force (SADF) was then allocated this land and used it primarily for training. Although the SADF was not explicitly involved in these three removals, these particular communities view their dispossession as being inextricably linked to the SADF's need for land (McKenzie, 1996). At St Lucia, a game reserve in northern KwaZulu-Natal province, the military was directly involved in the removal of a community in order to establish a missile testing range. In the Western Cape province, the establishment of a testing range

alongside the De Hoop Nature Reserve resulted in the displacement of holiday homeowners, farmers and a fishing community (McKenzie, 1996).

Not only were people who resided on the land excluded from these areas, but this exclusion also extended to people who had previously enjoyed access to these areas for recreational purposes. This was the case at St Lucia and De Hoop, as well as two other areas in the Western Cape: Rooiels, where a testing range was established in the Kogelberg mountain area, and Donkergat, which was closed for recreational purposes when the military established a base for its elite Reconnaissance unit.

In most of these cases, the military gained access to the land without the consent of the affected people. Decisions were imposed on people in the name of narrowly defined, militaristic notions of security and the national interest. Ironically, national security was invoked as the pretext for fundamentally threatening the security of thousands of people through their exclusion from their land.

Because of South Africa's past, the closure of military bases occurs in a unique social and political context. As in many other countries, base closure in South Africa is a result of the reduction in military expenditure and armed forces (BICC, 1996, p. 174); however, there is the added dimension of base closure being driven by the need to address past land inequalities.

Closing SADF bases pre-1994

In 1993, the SADF controlled 600,000 hectares of land, which amounted to approximately 0.5 percent of South Africa's total land area. In a 1993 statement, the SADF said that 500,000 hectares of this were undeveloped and used for training areas, bombing ranges, firing ranges and buffer zones around airstrips and ammunition depots (McKenzie, 1996, p. 7).

Figure 19: Map of South African bases



Defense budget cuts in the early 1990s resulted in a process of rationalization of military land. Between 1986 and 1998, the SANDF handed back approximately 234,000 hectares to the Department of Public Works (South African Department of Defence, 1998, p. 106). There were two examples of base conversion in this period. An air force base at Pietersburg, in the Northern Province, was converted into a civilian facility known as Gateway International Airport. It is now an international export and import center for trade with neighboring countries. Activities at the airport include a fresh produce market, an international taxidermy operation, copper works, shops and travel agencies. The air force base at Hoedspruit, in the Northern Province, has also been partially converted. It hosts an operator called Eastgate that uses the base facilities to handle tourist flights (US-SA Binational Commission, 1999, p. 7).

Closing and converting SANDF bases, 1994–1999

In 1994, the election of a democratic government with new developmental priorities resulted in a shift in defense thinking on base closure and conversion. Prior to this, base closure was based on a mindset of 'locking the gate' and 'lowering the flag', with no attention paid to redress or base conversion for development purposes (US-SA Binational Commission, 1999, p. 12).

A new conceptualization of base conversion slowly developed during the first term of democratic rule. However this new thinking on base closure and conversion has tended to be piecemeal and uncoordinated. There have been two strands to the policy process. One strand has focussed on the restitution process and the other more broadly on base conversion. The pressures for restitution have meant that the DoD has tended to focus on restitution. The DoD has a draft policy on land

restitution but there is no comprehensive policy as yet on base conversion. Progress in developing policy has also been impeded by the lack of coordination between the key departments of Defence, Public Works, and Land Affairs.

Restitution

The restitution strand of base closure has been the primary focus for the DoD, and detailed draft policy exists. In fact, the first case of land restitution in post-apartheid South Africa concerned the former military base of Riemvasmaak in the Northern Cape province. The commitment of the DoD to the land reform process was made explicit in the White Paper on Defence, which was approved by Parliament in May 1996. The chapter on Land and Environmental Issues states that the DoD will participate in the national land restitution process in a spirit of social justice. Decisions on restitution will be made in consultation with other government departments and key stakeholders, including—in particular—affected communities (South African Department of Defence, 1996, p. 32).

There have been 13 claims made on land that is used by the military. Some of these claims have been bitterly contested. The case of the army battle school at Lohatla, in the Northern Cape, is particularly contentious and remains unresolved after many years of protest, negotiation and mediation. Lohatla is one of only three such facilities in the world where mock battles are fought. The DoD seems intent on retaining the base and views it as a national strategic asset. It was the site of the much-publicized ‘Operation Blue Crane’ in April 1999. The exercise had aimed to prepare Southern African Development Community (SADC) defense forces for peace support operations.

A broader policy framework

A broader policy framework on base closure and conversion does not yet exist, although there have been a number of initiatives dealing with base closure and reuse. The White Paper on Defence committed the SANDF to a process of rationalization regarding the land under its control, in the interests of cost-effective utilization of resources and assisting the process of land redistribution.

In October 1997, the Cabinet approved a joint memorandum on base closure submitted by the departments of Public Works and Defence. The memorandum outlined a strategic plan for the identification, closure, reuse and disposal of military bases. It also made provision for the establishment of an interdepartmental steering committee, three interdepartmental committees and a specialist consultancy to manage base closure and reuse on behalf of the Department of Public Works (South African Department of Defence, 1998, p. 110).

In 1997, the Policy Directorate of the Department of Defence initiated discussions on a National Defence Conversion Strategy. A key element of this conversion strategy is the proposed Base Closure and Community Economic Realignment Strategy (BCCERS). Unfortunately, there has been no further work done to develop the BCCERS (Williams, 1998a).

In March 1998, the Defence Review chapter on Land and the Environment was presented to Parliament. It acknowledged that the DoD would need to reexamine critically its existing land, facilities and buildings in light of the downsizing process. It stated that the *“DoD is continually striving to improve its efficiency and effectiveness, driven by the need to fulfil its constitutional obligations to the people of South Africa, at the least possible cost. The transformation process and the introduction of new management models in the department are likely to result in the*

disposal of excess facilities and infrastructure” (South African Department of Defence, 1998, p. 105). The chapter highlights the principles and policies underpinning DoD policy on base closure and the challenges associated with the closure, reuse and disposal of military bases and facilities. It also deals with environmental management issues, and the role of the DoD in the clean-up of military bases and facilities which are being handed back to the Department of Public Works for reuse, redevelopment or as a result of land restitution claims.

Interdepartmental cooperation

The Defence Review of 1998 proposed that interdepartmental committees would take the process of base closure forward and would:

- analyze defense force property holdings and utilization and align these to the DoD’s strategic direction and rationalization imperatives
- develop a strategic plan that will locate military base conversion within micro- and macroeconomic development and other policies of government
- contextualize base reuse within the broader context of defense downsizing and transformation of South African society
- assess the existing resources, opportunities and constraints presented by individual and collective properties
- collect and collate baseline data relating to each property’s reuse abilities and time frames
- compile feasibility studies pertaining to potential use and users
- provide a real estate and general marketing service for base reuse

- act as a focal point for facilitating all stakeholders interested in and affected by base closure and reuse
- monitor and evaluate base reuse

(South African Department of Defence, 1998).

Even a year after the Review's recommendations, the proposed interdepartmental committees between the departments of Public Works and Defence had still not yet been established. This resulted in both departments pursuing initiatives on base closure without the participation of the other. The DoD was engaged in the process of drafting a manual on base conversion under the auspices of the US–South Africa Binational Commission, while the Department of Public Works raised money from the World Bank to conduct a pilot project on base closure and conversion.

The Binational Commission between South Africa and the United States established a defense committee, which included a working group on environmental security issues. The aim of this working group was to address the issue of closure and conversion of military bases. One of the outputs of this working group was a manual on base conversion which aimed to “help ‘base converters’ execute their facilities management function and to help DoD personnel understand how their individual efforts directly contribute to the overall conversion process” (US–SA Binational Commission, 1999, p. 11). One of the key shifts in the SANDF's thinking, which is stated in the manual, is that they now see that the DoD has a role in the conversion process. The DoD's thinking has shifted from simply base closure to embrace the notion of base conversion. The manual outlines that “the conversion of military bases implies that Defense takes a step further than was traditionally the case when it approached the closing down of bases in the past. This additional step has to do with closing down a facility in such a way so as to create a conducive environment in which PWD [Public

Works Department] can successfully manage the conclusion of the process whereby a redundant facility is converted” (US–SA Binational Commission, 1999, p. 12).

The Department of Public Works has raised funds from the World Bank for a two-year project on military base closure and reuse. The project aims to develop the capacity of the Department of Public Works to manage, implement and monitor the government's program on military base closure and reuse. There have, however, been delays in launching the project.

One of the key problems in making base conversion a reality is that the departments of Defence and Public Works have not been involved in these respective initiatives. Furthermore, the responsibility to drive the process rests with Public Works where there appears to be a lack of staff to champion the issue.

Key challenges

Base conversion presents many opportunities for development. Potentially, base conversion:

- facilitates the transition of land use from military to alternative uses and tenure
- provides for cross-sectoral partnerships amongst the relevant stakeholders at the level of central, regional and local government, as well as other interested and affected parties
- addresses socioeconomic imbalances which occur at local level as a result of the transition of tenure during the process of closure of military installations and the emigration of military personnel from an economically functional community (US–SA Binational Commission, 1999, p. 2).

However, base conversion also poses enormous challenges for government and civil society. The three key challenges include:

- developing better processes and mechanisms for intergovernmental coordination
- empowering communities to participate in base conversion projects
- ensuring adequate clean-up of bases.

A key obstacle in implementation of existing policy on base closure is the lack of coordination between government departments. There is also a lack of coordination between different tiers of government. Very little effort has been made to include relevant provincial and local governments in the policy-making process. Unless government allocates resources—both human and financial—to deal with this issue, important opportunities for conversion will be lost.

Successful base conversion relies on the involvement of local communities. In many of the restitution cases, the communities are poor, rural and sometimes illiterate, and special attention has to be paid to building their capacity to participate in conversion. The experience at Riemvasmaak provides rich lessons for the base conversion process in South Africa (McKenzie, 1998). It highlights the complexities of transferring bases from military to civilian control. The Riemvasmaakers' struggle was far from over when they regained their land from the SANDF. Instead, the struggle has taken on different forms as the people attempt to develop their land and rebuild a sense of community after twenty-one years apart. Development at Riemvasmaak has been a complex, protracted, and, at points, conflictual process. This is the result of a range of factors, including inadequate assistance from an ill-equipped Department of

Land Affairs, social divisions in the community along gender, ethnic, class and political lines, and a lack of community capacity to engage in development processes. Riemvasmaak demonstrates that—for effective conversion to take place—planning processes have to be thorough and inclusive of affected stakeholders, who need to be empowered to participate in conversion efforts.

Finally, the DoD has to build its capacity to clean up bases and to educate returning communities or the new occupants about the dangers of unexploded ordnance. Many of the restitution cases involve bases that have been used for training, and there is a high level of unexploded ordnance. At Riemvasmaak and Lohatla, there have been serious and even fatal injuries. In both communities, the danger has been exacerbated because people collect the scrap metal to sell, even though it is dangerous to do so. The DoD should develop ordnance awareness material in local languages, train teachers and parents, and involve local people in ordnance clearance. It also needs to budget for clean-up to ensure that bases are returned in the condition in which they were received.

Conclusions

Government thinking on the issue of base closure has developed over the last few years. There is an emerging policy framework on base closure and proposed mechanisms to deal with the issue. However, the pace of base closure and conversion has been slow and a source of frustration for affected communities.

South Africa's 'divided past' must be taken into account during the process of base closure and conversion: the base conversion process provides an opportunity for the military both to contribute to the broader process of development and to right an injustice. Base conversion is in the common interests of both the development and defense communities. It presents

unique opportunities for the military and civilians to work together towards development. If base closure and conversion is to succeed, it needs to be located within the broader context of a national defense conversion strategy which includes conversion of human and financial resources, inventories and armaments. As the DoD itself recognizes, the conversion of defense assets to civilian assets and capabilities is the most significant measure by which the department can support the Reconstruction and Development Programme (South African Department of Defence, 1998, p. 146).

Conclusions

This *brief* has examined South Africa's record on conversion over the last decade, and particularly since the advent of majority rule and democracy in 1994.

In the case of **military expenditure**, this record is strong. South Africa has witnessed a dramatic decline in the absolute and relative size of its defense budget since the 1980s, and currently only allocates around 1.5 percent of its total resources to the military. In this sense, the country has experienced a 'peace dividend' in terms of the reallocation of resources from defense to other more pressing socioeconomic priorities. However, as was shown in the Introduction, these priorities have still not been adequately addressed. Despite reductions, South Africa is still Africa's largest military spender in absolute terms and accounts for nearly 70 percent of the region of Southern Africa's total military spending.

In response to these dramatic cuts in military spending, this *brief* shows that **the defense industry**—which absorbed considerable resources during the apartheid era—has undergone a process of restructuring since the late 1980s. It is shown that the use of government resources for the development of a domestic defense industry during the 1970s and 1980s was a form of 'misinvestment', in that it reduced the resources available for investment in more productive civilian industries. Since the 1980s, the defense industry has undergone a process of downsizing and pursued various adjustment strategies in response to the dramatic cuts in defense spending. These have resulted in massive retrenchments, declining productivity and profitability and a loss or wastage of scarce human, financial and technological resources. This *brief* shows that these adjustment strategies occurred within a policy vacuum. The government has done very little to assist the process of defense industrial adjustment and to encourage defense

firms to convert their resources to civilian production. The *brief* demonstrates that a strategy of conversion could have been used to assist the manufacturing sector's lack of investment resources and to reinvigorate the country's industrial base.

Similarly, at no point has the post-apartheid government attempted to assist the reallocation of **defense R&D** resources, both financial and human, towards civilian purposes. The *brief* demonstrates that during the apartheid era the defense sector absorbed a disproportionate share of South Africa's scarce R&D resources, both human and financial. Spending on defense R&D activities has declined dramatically since the late 1980s, and many of the scarce financial and human resources that were previously tied up in the defense R&D sector have disappeared.

The *brief* describes how the issue of **surplus weapons** in South Africa is a direct consequence of the dramatic processes of disarmament and demilitarization which have accompanied the ending of apartheid and South Africa's transition to democracy. The SADF's withdrawal from Namibia and Angola in 1989, as well as the termination of the policy of destabilization, cuts in the defense budget and the restructuring of the SANDF have resulted in a large supply of surplus defense material. While there has been some destruction of surplus weapons—particularly anti-personnel landmines and small arms—South Africa's main strategy for the disposal of surplus defense material is export sales. Between 1992 and 1998, sales of surplus weapons accounted for an average of 10 percent of total arms exports *per annum*. In this sense, the post-apartheid state has fueled violence and armed conflict in unstable regions throughout the world. Furthermore, in terms of a commitment to conversion, the process of disposing of surplus

weapons will be offset by the planned procurement of new equipment for the SANDF.

The *brief* documents another lost opportunity for conversion: **rationalization and demobilization** programs. Unlike many other African armed forces, SANDF personnel have a wide skills base including leadership and management skills. However no alternative certificate programs have been put into place that would allow rationalized ex-combatants to convert their skills to gainful use in the civilian sector. Problems in the conceptualization and operation of the demobilization process generally, and the Service Corps specifically, meant that the educational, employment and psychological needs of ex-combatants have not been met. Many unskilled, demobilized ex-combatants have not been effectively reintegrated into society in the sense of being given access to marketable skills, resources and supportive social networks.

In relation to another important aspect of conversion, it is argued that base conversion provides an opportunity for the military both to right the apartheid injustices of land dispossession and removal of indigenous communities, and to contribute to the broader process of development. The apartheid military absorbed many resources, including vast tracts of valuable land, to become the country's fourth largest land-controlling authority. **Base conversion** is in the common interests of both the development and the defense communities and presents unique opportunities for them to work together. It is shown that there is an emerging policy framework on base closure and proposed mechanisms to deal with the issues. However, the pace of base closure and conversion has been slow and a source of frustration for several affected communities. It is argued that this process cannot be done in a piecemeal fashion. If base closure and conversion is to succeed, it needs to be located within the broader context of a national conversion strategy. This is what post-apartheid South Africa lacks.

In reviewing the record of these six conversion areas, it is clear that there have been some positive developments since 1994. However, despite these achievements, the record of the post-apartheid government of South Africa is still patchy and uneven. While in 1994 it seemed that there was a convergence of interests between peace activists and those committed to military restructuring, what conversion that has occurred has taken place in an *ad hoc* manner and has largely been driven by market forces (for example, in the case of the local defense industry) or by budgetary constraints (for example, the closure of military bases).

By implication, this *brief* not only makes a strong argument for conversion, it also identifies and analyses a significant policy vacuum: the absence of any clear, overall conversion strategy. Four main factors help to explain this vacuum: 1) the strong institutional interests of the military and the arms manufacturers within the post-apartheid state and society; 2) the absence of a mass-based demilitarization movement to challenge these interests; 3) a militarist nationalism; and 4) a depletion and weakening of civil society in South Africa since 1994.

Not only is there no strong political support for conversion, but there has been a drift towards the opposite trend—a creeping militarism, or remilitarization, in South Africa since 1997. This is evident in the post-apartheid state's commitment to the R30 billion rearmament program, a reliance on the secondary deployment of the SANDF within the country to contain violent crime, and the use of the military as an instrument of foreign policy—demonstrated by the military intervention in Lesotho in September 1998, which cost R30 million in the first three months of operation.

The R30 billion rearmament program involves the purchase of fighter aircraft, submarines and corvettes. It includes nine Gripen and twelve Hawk aircraft which will be purchased from British Aerospace/Saab. It should be noted that these weapons cannot serve any socially useful purpose. They are weapons designed to inflict death and destruction. The SANDF is also going to acquire 12 Rooivalk attack helicopters at the cost of almost R1 billion. These are attack helicopters, which cannot be used for situations such as disaster relief.

It has been said that, when the last of South Africa's new jet fighters is delivered in 2011, the SANDF will 'pack a powerful punch', enabling it to fulfill its constitutional obligations of protecting the country (*Star*, 17 September 1999). But it is a phantom enemy that these weapons will protect the South African people against. They are living in an unstable region scarred by poverty, environmental degradation and social disintegration. The rearmament program will aggravate this instability by provoking a regional arms race. Botswana and Zimbabwe have already justified new arms purchases by reference to the SANDF program.

This rearmament program dramatically illustrates the drift to remilitarization, which sits uneasily with the shallow and uneven process of state demilitarization, which is also underway. It reflects the continued power that the military and the defense industry still wield in post-apartheid South Africa.

These interests have not been challenged by an indigenous, mass-based demilitarization movement. A demilitarization movement only exists in embryonic form in organizations that are marked by a social shallowness—being extremely small, fragmented, and mainly white and middle class. Under apartheid, peace became a contaminated notion that was widely interpreted to mean acquiescence to apartheid rule. During the 1990–1994 period of transition, no

strong grassroots movement emerged to challenge the alliance of militarists from the various armed formations. A militarist nationalism links prestige in international relations to military power; it claims that the power of an independent nation-state is expressed through the weaponry it controls rather than its capacity to feed and house its people. For the majority of South Africans, who experienced the denial of access to full citizenship under apartheid, this militarist nationalism will be very difficult to dislodge.

Furthermore, under apartheid, defense and security issues were shrouded in secrecy. There is thus a need to empower civil society through access to information and alternative perspectives so that various policy options are fully explored and the debate is not dominated by insider defense experts.

Muffled voices from this civil society have underlined that high military expenditure in the South African context is like dismantling a house in order to erect a fence around it: that poverty, inequality and unemployment are the real threats to South African security. They have stressed that the R30 billion rearmament program is—in the words of the government chief negotiator, Jayendra Naidoo—not a job-creation program (Interview, September, 1999). Criticisms of increasing arms exports to unstable regions throughout the world have also been voiced. These voices need to be amplified to reach down into the grassroots of South Africa's poor and excluded communities, as well as up into the realms of the policymakers.

Now that South Africa has secured a pluralist political system and universal franchise in all the states of the Southern African region, the consolidation of peace and democracy depends on addressing the real threats to its collective security—poverty and inequality. A comprehensive conversion policy could make an important contribution to this.

List of Acronyms and Abbreviations

ACV	Armored combat vehicle
AEB	Atomic Energy Board
ANC	African National Congress
APLA	Azanian People's Liberation Army
Arm Scor	Armaments Development and Production Corporation/after 1977 Armaments Corporation of South Africa
BCCERS	Base Closure and Community Economic Realignment Strategy
BICC	Bonn International Center for Conversion
BMATT	British Military Advisory and Training Team
CCR	Centre for Conflict Resolution
CODESA	Congress for a Democratic South Africa
CPR	Certified Personnel Register
CSIR	Council for Scientific and Industrial Research
DDP	Defence and Development Project
DoD	Department of Defense
DRC	Defence Research Committee (SADF)
DRC	Democratic Republic of Congo
DRDB	Defence Research and Development Board (Successor to the DRD Council)
DRDC	Defence Research and Development Council (Predecessor of DRD Board)
FRD	Foundation for Research Development
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution Programme
GEM	Group for Environmental Monitoring
HEU	Highly enriched uranium
IFP	Inkatha Freedom Party
IMT	Institute for Maritime Technology

JMCC	Joint Military Co-ordinating Council
KZSPF	KwaZulu Special Protection Force
MBT	Main battle tank
MK	uMkhonto we Sizwe (armed wing of the ANC)
MTEF	Medium Term Expenditure Framework
NCACC	National Conventional Arms Control Committee
NGO	Non-governmental organization
NIDR	National Institute for Defence Research (Successor to NIRR)
NIRR	National Institute for Rocket Research (Predecessor of the NIDR)
PAC	Pan Africanist Congress
PTSD	Post-traumatic stress disorder
PWD	South African Public Works Department
R	Rand
R&D	Research and Development
RDP	Reconstruction and Development Programme
Renamo	Mozambican National Resistance
SADF	South African Defence Force (before 1994)
SANDEF	South African National Defence Force (since 1994)
SC	Service Corps
SCI	Science Citation Index
SWAPO	South West African People's Organisation
TBVC states	Transkei, Bophutshatswana, Venda and Ciskei
TEC	Transitional Executive Council
UN	United Nations
UNITA	National Union for the Total Independence of Angola

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About the Center

The Bonn International Center for Conversion (BICC) facilitates the processes whereby people, skills, technology, equipment, and financial and economic resources are shifted away from the defense sector and applied to alternative civilian uses. BICC supports governmental and non-governmental initiatives as well as public and private sector organizations by finding ways to reduce costs and enhance effectiveness in the draw-down of military-related activities. As a result, BICC contributes to disarmament, demilitarization, peace-building, post-conflict rehabilitation and human development.

International think tank

BICC conducts research and makes policy suggestions. Experts provide comparative analyses and background studies on topics such as military expenditures and the peace dividend, management and disposal of surplus weapons, and the conversion of military research and development (R&D) infrastructures.

Project management and consulting services

BICC provides practical support to public and private organizations in a range of conversion projects. For instance, BICC staff advise local governments confronted with the difficult task of redeveloping former military installations. They help former defense industries cope with the transition to producing civilian goods. BICC also links development assistance and conversion by providing help with demobilization, reintegration and peace-building.

Clearinghouse

Using its independent status, BICC provides conversion support and information to international organizations, government agencies, non-governmental organizations, companies and the media as well as to individuals and organizations of the private and public sector. In this role, it mediates and facilitates the conversion process at all levels—local, national and global.

BICC's six program areas:

- *Reduced military expenditures—
A lasting peace dividend?*
- *Reorientation of military R&D—
A potential largely untapped*
- *Defense industry restructuring—
Facing a changed environment*
- *Demobilization and reintegration—
Opportunities for human development*
- *Base closure and redevelopment—
A challenge for communities*
- *Surplus weapons—Dismantling the
remnants of conflicts*

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