RESERVE
2nd
Copy

INSTITUTE OF DEVELOPMENT STUDIES

DISCUSSION PAPER

238

November 1987

Killing the Dream: the Political and Human Economy of War in Sub-Saharan Africa

REGINALD HERBOLD GREEN

Preliminary material and interim research results circulated to stimulate discussion and critical comment

I N S T I T U T E   O F

D E V E L O P M E N T   S T U D I E S

Political economy; socialist strategies; women

International issues; trade; aid; finance

KILLING THE DREAM: THE POLITICAL AND HUMAN ECONOMY OF WAR IN SUB-SAHARAN AFRICA

by

Reginald Herbold Green

DP 238

November 1987

Militarisation, the arms trade, military government and the course of wars in sub-Saharan Africa have been described and analysed. With few exceptions the political and human economic costs of war have not. This is so despite the fact that these costs have exceeded those of drought and are clearly a major (and negative) contextual fact even in respect to non-militarised and pacifically inclined states like Tanzania. They dominate the human and economic context of Mozambique and Angola in particular, and to a slightly lesser degree of Southern Africa more generally. This paper explores the types of wars and of costs with a section devoted to cost estimation for Tanzania.

Author Note

Reginald Herbold Green is a Fellow of IDS (Sussex) who has travelled, studied and lived in Africa since 1960. During that period he has advised several governments and regional international organisations. This paper flows in large part from work in Tanzania, Zimbabwe, Mozambique and for SWAPO (Southwest African People's Organisation) and SADCC (Southern African Development Coordination Conference) but is not based on confidential information, nor does it necessarily represent the views of any government or organisation. Thanks are due to Stephen Lewis, Chris Smith, Charles Harvey and Ann Segrave whose comments and suggestions on an earlier draft have led to improvements in the analysis and - hopefully! - the clarity of the present text. A related publication is Children on the Front Line (UNICEF 1987) partly written by the present author.

Contents

		Page
I	What Terrain?	1
II	War in SSA: Prolegemenon To a Taxonomy	8
III	Aspects and Components of Cost	18
IV	Tanzania: Mountain Tips and Mists: A Mini Case Study	29
V	Some Political Economic Implications	41
Annex:	Military Governments and Wars: What Interaction?	51
	A Note on Sources	54

KILLING THE DREAM: THE POLITICAL AND HUMAN ECONOMY OF WAR IN SUB-SAHARAN AFRICA

Reginald Herbold Green

> This is terrorism but it is not mindless. They [South Africa] seek to kill the dream.
>
> \- Joseph Hanlon, 1987

> To fight the military and the economic fronts of the war separately will assuredly result in losing both.
>
> \- David Martin, 1986

I

WHAT TERRAIN?

This is not a paper about military governments, militarisation as usually defined or studied, the arms trade or general expenditure on domestic security/repression. Those are doubtless related topics but not the present focus.

Nor is it a paper deeply analysing military elements of war - let alone military strategy and tactics as such, except in passing as they relate to costs. Again these are related topics but require a separate paper and also a different author.

Clearly the economic costs of war are one aspect of militarisation. Similarly the greater influence of military leaders during a war may have a permanent effect on post-war resource allocation, choices of military strategy and technology and costs. Nor are human and economic costs truly separable from social disintegration, psychological impact and related topics. The geo-polities of Africa are not hermetically sealed off from the rest of the world. Vide, e.g., the USA's apparent belief that Cuba is both a great power and a pure proxy for the USSR at the same time and its resultant - to a degree self-validating - perception of Angola as an East-West battlefield (with African, South African and Angolan contextual elements secondary or irrelevant). External arms supplies and suppliers may create or escalate as well as react to and supply war and militarisation. The reasons for not pursuing these issues are three - space and time do not permit; the intended area of contribution of this study is to macro and sectoral economic analysis and policy; the author is not an expert on general militarisation issues (or literature) nor adequately grounded in sociology and psychology to attempt such an exercise.

Rather the focus is on the national (macro and sectoral) and human political economic costs and consequences of war in sub-Saharan Africa (SSA). War for these purposes is defined to include: external wars including proxy wars, precautionary armed forces to deter or be able to fight such wars above 'normal' security spending, military solidarity with threatened friendly neighbours and civil war including high and sustained levels of banditry beyond those with which a normal police force can deal. The costs, it should be stressed, are not seen as solely - nor even primarily - lives lost and assets destroyed in fighting, nor the fiscal and GDP burden limited to direct military expenditure during the period of the war. Clearly both the definition of war and of costs are less than precise, and at the margin some situations are debatable as to categorisation. Perhaps there is an analogy to be drawn with African fauna: on a quick sighting a wildebeest (gnu) may be mistaken for a buffalo (but not a Thompson's gazelle or a zebra) but a giraffe is readily identified (except for distant sightings with its head - and neck - down to graze) even if verbal descriptions seem rather inexact.

The reconnaisance technique used involves two parts - a general exploration with an illustrative case in this paper, and a fuller examination of the Southern African war of defence against the regional hegemonic aspects of the Republic of South Africa's 'total strategy' in a related second paper, 'Cutting Off The Flowers'. In the first part a brief survey of what has and has not been studied is followed by an aside on military governments and war before a taxonomy of types of war (as defined here). A review of types of costs precedes a brief Tanzanian illustration of the general review and a summary of the political economic implications - macro and human.

The balance of this chapter reviews the present lack of knowledge; the interlocking impact of drought and war leading to starvation (as opposed to serious malnutrition without starvation when war is subtracted); the special sub-regional case of war in Southern Africa. The second chapter seeks to develop a taxonomy of types of war in SSA with brief concrete examples, while the third makes a similar attempt toward a systematic approach to identifying macroeconomic and human costs of war. In the fourth chapter these approaches are applied to Tanzania as a case study. The fifth chapter seeks to demonstrate that because the macroeconomic costs of war are often large relative to exogenous shocks or economic policy results, it is important to estimate them and to incorporate them into macroeconomic analysis and programming. Because of their scale and resource allocation implications, not to do so is at least as logically unsound as to overlook past and probable future terms of trade evolution or to pay no attention to the price of foreign exchange (i.e. exchange rate policy).

It may reasonably be asked why so few statistics are used and in particular no continental comparative military expenditure and war cost tables. Comparative data on military expenditure are readily available (in the World Development Report tabular annex) but are - at least in all cases the author knows in any detail - incomplete and inaccuracte to various extents. Their inaccurate raw values may well be misleading while correction for 46 countries would require several years and researchers. Military import data are even less available - specialised equipment and armaments are normally excluded and other items for the military lumped with civil use imports. For the other war costs, as analysed in the third chapter neither data nor rough estimates exist for a majority of SSA states.

Terra Incognita: Here Be Dragons

The political and human economy of war as defined - generally, but especially in respect to sub-Saharan Africa - is marked by vast voids and occasional signposts or half completed structures so far as analytical literature is concerned. One is forcibly reminded of medieval maps which, having nailed down a few known points and sketched some roughly known coasts, islands, rivers and mountains with varying degrees of scale and proportion errors, then filled in the pervasive blanks, with wierd and wonderful creatures and captions such as 'here be dragons'. This is no more to denigrate present writers - especially those on related topics - than medieval map draftsmen, who did lay the foundations and identify some of the basic coordinates for the evolution of modern cartography.

There is of course a substantial body of Anglo-American literature on wartime economic management and on economic aspects of military strategies (e.g. strategic and saturation bombing). These are relevant to estimating the short term potential for and costs of resource reallocation to replace specific or local damage, but less so to projecting medium term macroeconomic costs or how to contain them. However, it is less than directly relevant, not simply because SSA economies are not structurally similar to the USA and UK but because the USA (virtually wholly) and the UK (predominantly) fought the Second World War abroad, not at home. For that reason parallel French World War I or Soviet and German World War II literature - which presumably exists but is not widely known - would perhaps have a greater degree of relevance.

There is a body of writing on military regimes and militarism in SSA. Some of it is socio or political economic but its analysis is largely in terms of class and of governmental structure analysis, not of political economic or - systematically - human costs and consequences of war. Further - as the next section outlines - there is not, at least in a majority of SSA cases, any close causal link between military government and war in either direction.

Overall, writing on militarism and the international arms trade does allude to SSA, though Africa is not by any means central to that body of work. Here the problem tends to be twofold. War and arms purchases seem more causally correlated than arms purchases and war. Africa is not characterised by large, well trained, well equipped forces with no actual or prospective wars but by arms purchases related to past, present or impending wars. Similarly, foreign military links appear to have sprung out of actual or perceived threats of war - not to have caused them.

The most probable exception is Angola, where in the absence of initial South African/CIA intervention, the Angolan government would not have called on Cuban combat forces, and the escalation of a civil war to a regional conflict involving major powers (at one remove) - would have been averted. Almost certainly the civil war would have ended in a complete government (MPLA) victory militarily, and probably a substantial degree of mass level reconciliation, with the possible exception of the Ovimbundu Plateau where a genuine, deep regional distrust of all central authority (not just Portuguese) gave UNITA a certain degree of popular support. In any event this literature - which usually treats SSA as a minor theatre - appears to mix up directions of causation, to overstate extra-African factors (or at least to understate African) and to pay little attention to war or macroeconomics as such.

Disasters caused by war have been covered, usually journalistically. However, the breadth and especially depth of the coverage is usually limited. For example, it has rarely been underlined that drought alone did not lead to mass starvation in SSA in the 1980s, even in the context of weak governmental structures and shaky economies. On these counts Mali would have had as brutal a human toll as the Sudan, Chad or Ethiopia. Indeed neither have substantial war costs led to starvation when there was not widespread fighting (or post war banditry) in the country. Tanzania has not had famine deaths.

Drought Plus War Equals Starvation

Drought and war - or even war alone - have resulted in starvation. In both Ethiopia and the Sudan, war has both directly and by the diversion of limited resources led to famine deaths. In Angola and Mozambique famine has become endemic - even in good weather years - because of widespread wars fought on their territories which prevent food production, storage and transport. In 1979-80 Uganda district level starvation resulted from post war banditry and lack of governmental authority, making food distribution impossible. Except in the totally war dislocated West Nile, it has been very rare since because Uganda has few high drought risk areas. In the case of Nigeria (Biafra) war was the sole cause of famine. Dislocation of production and blockade of the secessionist entity were its causes, not general national absence of food, transport or potential external supplies.

There are some apparent exceptions to this pattern. However, of the two most prominent ones, Somalia is basically a war spillover case, with a massive inflow of starving victims from war in Ethiopia. The one clearly valid exception, Ethiopia itself, did in the early 1970s have massive famine without a major war (the then low grade war in Eritrea is not causally linked to Tigrean famine). In that case famine - and a peculiarly inept and callous governmental failure to act to overcome it - in part caused and in part was the occasion for the revolution, and thus indirectly for the subsequent intensifying of armed conflict with Somalia, with/in Eritrea and in Tigre.

Another largely war caused disaster not usually examined from that perspective is the economic collapse and resultant magendo economic system in Uganda. Certainly parallel markets, even on a grand scale, are not unusual in SSA but Uganda magendo as a dominant economic system was, and to a substantial extent still is, unusual. It clearly resulted from the 1978-79 war. Before then the Uganda economy (bolstered by the 1976-77 beverage boom) was not in a state of total collapse, much of the 'parallel market' structure was either state 'licensed' (as in neighbouring Zaire) or to some degree state contained and semi-controlled. There was a substantial, visible 'open' economy. After the war with no effective government (lacking both material resources, legitimacy and priorities beyond survival in purely political power terms) the parallel economy became dominant as discussed more fully in 'Magendo in the Political Economy of Uganda: Pathology, parallel system or dominant sub-mode of production?'(R. H. Green, IDS Discussion Paper 164). In that period (and to a lesser extent still) it was characterised by an oligopolistic structure based on economic power, transport and guns. It remained so until the second Obote regime's 1981-84 stabilisation programme which - whatever else it did - began to restore the legal or open economy to a status comparable to the parallel economy. That exercise perished in mounting civil war and, with continued banditry or civil war threats, the government of President Museveni has had neither its own resources, the ability to raise external resources, the time to define a coherent economic strategy nor the ability to reduce military (war) spending's near absolute priority.

Southern Africa At War

Recently Southern Africa's war has been analysed with a greater attention to macro-economic and human aspects. Destructive Engagement: Southern Africa at War (D. Martin and P. Johnson), Beggar Your Neighbours (J. Hanlon) and Children On The Front Line (R. Green, D. Esrat, M. Mauras and R. Morgan for UNICEF) are the most recent and notable but not the only examples.

These studies seek to provide systematic estimates of the overall economic and - especially in the UNICEF case - human costs of war, as defined above. However, these parts of the volumes - with the partial exception of UNICEF - tend to be largely free-standing and not integrally related to the dynamics of the war. Nor are the questions of joint strategies on the war and economic fronts pursued.

Perhaps the fullest coverage is in the forthcoming Zimbabwe's Prospects volume edited by Colin Stoneman (Macmillan, Basingstoke and Harare, 1988). There are specific chapters on destabilisation and the military threat from South Africa and, as well as passing references in several economic chapters, an attempt to recast overall and, to a limited extent sectoral economic projections for heightened hostilities as a contingency. Even here the military chapter (basically strategy and tactics) and the (basically economic) destabilisation one do not interact, most of the sectoral references are very superficial and the projection rerun is little more than an export loss vector analogue. Progress, yes; seriously integrated analysis, no.

Similarly, the Southern African Development Coordination Conference (SADCC) programme of action was designed to reduce dependence, especially on South Africa, in the context of peace (or at worst armed hostility with limited military clashes). In 1979-80 that did appear to be a reasonable assumption. Since 1981 and - especially - 1983 it has clearly no longer remained so. However, one would not readily grasp that massive contextual change from reading successive SADCC sectoral and project papers - as opposed to overview references to the costs of South African aggression, including a 1985 paper to the OAU setting them out systematically for the first time.

It is true that the projects given higher priority, e.g. Beira and Dar es Salaam transport corridors, do appear particularly critical in a war context. But the nature of the re-ordering of project priorities for this reason - perhaps wisely - remains almost totally implicit. Similarly, it is less than clear that SADCC (perhaps reasonably enough as a sectoral economic coordination body) or the Front Line States (jointly or severally) have done systematic thinking on the war/macroeconomic front interactions. Zimbabwe's solidarity force in Mozambique is clearly in part related to Zimbabwe's economic need for access to nearby, non-RSA port facilities, but the degree of underutilisation of the protected rail, road and dry cargo harbour facilities (the petroleum harbour and pipeline facilities are fairly fully used) suggests less than full coordination even there.

Clearly no sane government can be expected to lay all aspects of linked military/economic strategy and - especially - tactics out for public (including enemy) inspection. But to achieve a strategy at all, much less articulated policies and implementation, requires both political and technical discussion involving numbers of people well beyond the maximum consistent with total secrecy.

Similar considerations may constrain some of the potentially best informed observers. Exposing proposed or actual strategies and tactics of Southern African states to South African eyes prematurely is something the present author, among others, certainly leans over backward to avoid. But this reticence can be overdone - South Africa has an information and analysis system of its own and lack of analysis leading to lack of coherent action can be more expensive to Southern African states than having such analysis and action known in broad terms to South Africa.

World Bank, UN, ECA and IMF studies on economic crises and means to stabilisation, adjustment and recovery rarely list war as a substantial cause of the problems (except in the cases of Mozambique overtly and the Sudan, Ethiopia and Chad more obliquely). Certainly their analysis and proposals do not pay any integral attention to war costs or to the economic implications of attempting economic restructuring during a war.

Arguably there may be no major stabilisation or structural adjustment differences from other exogenous factors such as terms of trade deterioration or drought if war costs are dominantly deterrent/preventative and solidarity forces are abroad, e.g. Tanzania, Zimbabwe. However, that approach would appear to require justification in each case. At the very least the probable future levels of war costs need to be projected with as much care as other major demands on resources. It is far from evident that this is being done.

In the case of economies torn to shreds by war - e.g. Mozambique - or locked into long term, extremely costly domestic wars even if these do not paralyse the core of the economy - e.g. Ethiopia, Sudan - the initial assumption would logically seem to be that these must integrally affect economic strategy, structure, policy and programme. For example, Mozambique's bottom line external balance problems relate to 80 per cent of visible and invisible exports being lost because of war and to over 40 per cent of government spending eaten up by the defence effort. In that context devaluation and price adjustments more generally may well have roles to play. But devaluation can hardly be expected to do much to reduce external balance, nor price adjustments to restore a fiscal position which would be minimally satisfactory in a peacetime context. Yet, on the face of it, the Bank and Fund structural adjustment and stabilisation proposals to Mozambique seem very much 'business as usual', abstracting from the war except in the limited sense that some rehabilitation projects relate to war damage and balance of payments support replaces lost exports.

This survey suggests that there is a gap relating both to the macroeconomic and human costs of war in SSA and to the interaction of economic and military strategy and policy in the context of war. Before attempting a taxonomy of costs, it may be useful to examine briefly the inter-relationships - or lack of them - between military government and war in SSA.

War and Military Governments: An Aside

There is no one to one correlation between war and military governments in either direction. There may be a correlation between war and resultant military governments but, if so, not a very strong one. Similarly, military regimes may be more likely to seek to resolve conflicts by force, but this again seems to be a weak correlation.

Military or quasi-military governments in SSA are common. They are also very diverse. Examining them in detail in relation to war and/or military expenditure alone would require an entire paper or an aside so lengthy as to distract from the main themes of this one. A few additional comments appear as an Annex.

II

WAR IN SSA: PROLEGEMENON TO A TAXONOMY

The taxonomy of SSA war which follows is organised on the basis of macro and human economic impact and of cost patterns, rather than of detailed causation and evaluation of issues of right and wrong. The three broad classes identified are i) anti-colonial wars of independence; ii) civil (domestic) wars and/or conditions of endemic high levels of armed disorder; iii) external wars.

The two present cases of wars for independence against a colonial/occupying power are Namibia and the Sahara Democratic Republic. The four previous SSA cases are Angola, Mozambique, Guinea de Sao and Zimbabwe. An argument could be made out that Kenya (Mau Mau) should be included.

The macroeconomic impact is primarily on the colonial economy - the liberation forces rarely have firm enough possession or civil governmental apparatus to achieve more than local and skeletal medium distance trade structures. The impact has varied. In Guinea de Sao the war destroyed the - always rather minimal - Portuguese colonial economy and made the colony a heavy fiscal drag on the metropolitan treasury. In Angola agricultural output (especially coffee in the north) and to a lesser extent mining were severely affected, the opening-up boom was slowed as was the proving and development of the petrolem sector, except for the Cabinda enclave fields whose location allowed their insulation from the war. Militarily, Angola became a budgetary burden, while on the enterprise side it remained profitable, with the new petroleum growth pole and much of the rest of the economy in good working order.

Mozambique was an intermediate case. Its opening up boom was halted and in the 1970s reversed with Gross Territorial Product declining. While most of the settler and estate agriculture, the transit traffic routes and the new South African power supply sector (Cahora Basa) remained functional, the ability to press ahead with mass Portuguese settlement, and even to maintain infrastructure, was lost. Despite heavy South African subsidies (via traffic routing and sub-market price gold deliveries in return for migrant labour) Mozambique became a significant drain on the Portuguese economy.

Zimbabwe's (then Rhodesia's) post 1974 economic decline cannot be related primarily to the war, although it did divert human and budgetary resources which might otherwise have been devoted to achieving stabilisation and recovery. Nor did it inflict major direct damage to productive or infrastructural assets. However, by 1979 deteriorating infrastructure and directly productive plant and equipment, military demands on personpower and the fiscal and foreign exchange imbalance implications of escalating war had brought the macroeconomic position near breaking point.

The human cost of all four wars was very high. Basic rural services and peasant populations were severely affected by fiscal constraints and forced movements even when not directly caught up in the fighting. The numbers of killed and wounded combatants was high on both sides, as was that of civilian crossfire and/or massacre victims on the African side.

Indeed it was the human, even more than the economic cost of the wars in Africa which toppled the Caetano regime in Portugal. The losses of life and limb increased public discontent to explosive levels, and military failure (at least in Guinea de Sao and Mozambique) triggered an unresisted military takeover which turned into a revolution. In the case of Zimbabwe, the macroeconomic burden of the war (and related economic sanctions) and the mounting human cost (including significant European emigration) combined with the patent unlikelihood of Rhodesia ever winning it (even if military defeat was not immediately in sight) led to Rhodesian acceptance of Lancaster House and the independence process.

In the ongoing wars the costs to the occupying powers have become very high - perhaps two to three per cent of GDP for South Africa and probably a higher proportion for Morocco. The largest element is military, but in the Namibia case another substantial drain is propping up an economically as well as politically bankrupt puppet regime. Even offsetting Namibia's export surplus to countries other than RSA against the foreign exchange costs of the war and private sector profits against budgetary support leaves South Africa in deficit on both heads. In both cases a substantial portion of the armed forces are tied down on the periphery even though military leaders see other significant external and - at least in RSA - internal threats. Neither colonial economy is functioning well. While the basic cause would appear to be world mineral market conditions since the mid-1970s, the independence wars have created a climate of uncertainty and pessimism as well as a drain on state resources preventing stabilisation and reconstruction.

Human costs in Namibia - especially to black civilians - are higher than in the previous cases because over half of the population live in 'operational' war zones leading to production and basic service disruption as well as high incidences of torture, imprisonment and violent death. Military losses are lower although estimates of 3,000 to 4,000 combatant deaths on the SWAPO and also on the South African (including black levies and mercenaries) side are probably of the right order of magnitude. In the Saharan war the civilian cost to the Saouris is total dislocation. Most are refugees in Algeria. To the Moroccans the direct cost lies in South Morocco and the indirect in the heavy fiscal and foreign exchange burden. Military casualties may be comparable to these in Namibia.

The post-war macroeconomic costs of independence wars have proven to be large. Because Angola has never known peace since the early 1970s and Guinea de Sao really had no serious colonial economy, the relevant cases are Zimbabwe and Mozambique.

Zimbabwe inherited a going economy and succeeded in keeping most of its key personnel. Indeed it moved into a boom. However, making good the very heavy costs of maintenance and replacement left undone over 1965-79, and especially 1975-79, has weighed heavily on the balance of payments, as has the 1974-79 shift of incomes against profits and investment toward salaries/wages and consumption. Mozambique inherited a much weaker economy, very few trained black citizens and an exodus of 90 per cent of the Portuguese personnel who filled almost all posts from foremen and artisans up. In addition South Africa halted/reversed the transit routings, labour recruiting and gold price <u>de facto</u> subsidies it had accorded Portugal. As a result it took two years (1975-76) to halt the decline and two more (1977-78) of flat overall performance before macroeconomic recovery (from a floor 15 to 20 per cent below the early 1970s peak) took hold in 1979-81. Even so many key infrastructural assets - especially railways, harbours and highways - remained very badly run down.

It is worth underlining that in neither case was the key post-war cost primarily actual war damage. In both there were very substantial backlogs of undone maintenance and replacement and in that of Mozambique an even heavier burden of losing over 80 per cent of total middle and high level personpower.

Civil Wars: Uncivil Costs

Civil or domestic wars are defined as those breaking out within the borders of an independent state and not primarily the result of external manipulation. The latter does not imply lack of external support - including combat contingents on both sides - only that the basic dynamics of the war are internal even if both sides have substantial external support.

One sub-category is domestic wars in search of independence. The notable examples are Ethiopia/Eritrea (arguably a borderline case with independence wars proper), Nigeria/Biafra and (then) Congo Kinshasa/Katanga (another borderline case because of the degree of Belgian interest and manipulation). Each war was protracted, indeed, after two decades the first is continuing with no end in sight.

The macroeconomic costs of these wars have been high relative both to the size of the economy and to those of other shocks (e.g. drought, terms of trade). (The secessionist/independence seeking side has in each case had, over some periods at least, enough territorial control to describe it as having a macro-economy and civil government.) Costs have been primarily felt in fiscal and dislocation of expenditure terms. The direct human costs have been high too and - in the Ethiopia/Eritrea and Nigeria/Biafra cases - the indirect costs (e.g. starvation, loss of basic health facilities) even higher, at least on the independence/secession side. More specifically direct and indirect war deaths have accounted for a significant per cent of total deaths. Post-war costs are hard to evaluate: the Ethiopia/Eritrea conflict continues to devastate much of Eritrea and to drain resources from Ethiopia; the reasons why Zaire has never regained a healthy economy or a fully functioning nationwide government are much broader than the original Katanga secession interlude; Nigeria was bailed out by an oil boom which both cushioned macroeconomic war costs and fuelled recovery.

Civil wars waged for autonomy rather than full independence include Ethiopia/Tigre and, perhaps, Uganda/Buganda. These tend to be rather like those for independence but on a somewhat smaller scale and with less intensity. The Uganda/Buganda clash certainly does lie at the root of both Uganda's political fragility and - partly resultant - macroeconomic weakness, but has only sporadically been pursued by armed violence.

Civil wars (as opposed to military coups) to seize power at the centre have been relatively rare. The three main country cases (in which they may have become endemic) are Chad, Zaire and Uganda. It is hard to generalise about costs because these have varied sharply from period to period.

In Chad a pre-colonial North/South history of tension re-emerged as a struggle for control of the new state. Initially civilian Southern governments gave way to military as conflict levels rose. These in turn fell to Northern dominated coalitions and to what have been basically intra Northerner civil wars. This series of wars - characterised by heavy foreign support on all sides - has lasted over 25 years. Clearly they have prevented any significant development in Chad and led to human misery symbolised by refugee movements, mortality statistics and starvation in drought years.

At their peak periods in both Zaire - when only outside intervention saved the Kinshasa-based state on at least two occasions - and in Uganda - in 1978-79 (viewing the joint Tanzanian/Ugandan war against Amin as civil) and over 1984-86 (when the present government moved from insurgency and revolt to conquest/liberation) - the wars ravaged the economies of the areas fought over and crippled the macroeconomic functioning of the rest of the country. During periods of war on a lower scale the macroeconomic costs - but not necessarily the human - appear to have been lower. That is, they have not been the dominant shock, policy or resource drains hampering economic performance. Both economies and polities appear to illustrate the high post-war costs of a series of civil wars. Arguably this relates primarily to the difficulty of constructing a government generally seen as legitimate, but that difficulty in turn is gravely aggravated by lack of resources to distribute or economic opportunities to offer.

At the lower end of the intensity scale civil wars merge into widespread, severe armed banditry. The problem in defining such cases is that civil wars usually receive little publicity until they are intense and large scale, and that recognised governments apply the term bandits to what are quite clearly serious contestants for national power, for separate national status or for far-reaching autonomy. The present violence in parts of Uganda and Zaire probably does deserve the title of banditry. Its human costs are - in small areas - appalling; its macroeconomic ones are absolutely and relatively low, but in the context of severely overstretched external and fiscal balances (or rather imbalances) may have a disproportionately damaging impact.

Military coups and attempted coups - as such - are not usually wars, at least as defined here. Most are rapid (whatever the outcome), do little material damage, have limited fiscal impact and do not kill or injure many people (even among the protagonists). However, there can be exceptions to this rule. When a coup leads to a government so violent and represssive as to engender repeated outbreaks of new civil violence (with or without military support) then one does have a process of civil war. Sergeant Doe's and Sergeant Major Amin's coups did lead to governments and dynamics of that kind in Liberia and Uganda respectively as - perhaps - did Colonel Bokassa's in the Central African Republic (although the evidence for a real civil war before the French coup to depose the Emperor is rather thin).

External Wars: Border and Broader

Small-scale external wars - i.e. wars primarily with an external state with at most a secondary foreign backed insurrectionist, secessonist or bandit component - have been common in SSA. To date major ones number four: Somalia/Ethiopia; Uganda/Tanzania; South Africa/Angola; Rhodesia and South Africa/Mozambique.

One class of minor wars has been border clashes. At the upper end of the spectrum is the 1985-86 Burkina/Mali border war with air raids and substantial civilian loss of life. At the lower end are the Nigerian/Cameroun border incidents on ill-marked or naturally changing mountainside riverain boundaries. Another have been by-products of wars of national independence or civil wars, e.g. Portuguese attacks on Angola, Rhodesian on Zambia, incursions by various Zairois forces or factions into Tanzania, and by successive broken remnants of losing Ugandan forces into the Sudan. A third category could to date be treated as part of the second, but given its context and dynamic is perhaps better separated - South African aggression against its neighbours other than Angola and Mozambique (against whom it wages full scale wars).

The macroeconomic cost of the minor wars has been very variable and largely indirect. It has been major when the state attacked saw (rightly or wrongly) the clashes as likely to be followed up on a larger scale and allocated substantial fiscal, foreign exchange and human resources to building up military capacity to deter or contain them. Clear cases are Tanzania over 1963-78, Zambia and Botswana (against Rhodesia) in the later half of the 1970s, Zimbabwe/Zambia/Botswana/Tanzania (against South Africa) since 1980.

The direct human costs of these types of war have been low - ranging from losses comparable to a car wreck in the minor clashes to a couple of passenger bus disasters in the largest (e.g. Rhodesian raids on Zambia, Mozambique and Botswana). The indirect costs turn largely on how much was spent on preventative defence, how else it would have been utilised in the absence of the military threat and how severely strained the economy was at the time of the military expenditure.

Somalia's war of territorial expansion/irredentism against Ethiopia in the late 1970s had a high macroeconomic and human cost to both sides (and a continuing one because of deterrent military expenditure on both sides). It laid waste substantial - but economically marginal - areas in Ethiopia before the invaders were repulsed, but the principal direct macroeconomic costs were for military expenditure (in both cases partly met out of grant aid but partly by piling up external debt). The direct human cost was high both for the forces engaged and for (largely ethnic Somali) citizens in the area of Ethiopia fought over. (Ethiopia when victorious did not choose to counter-invade Somalia.) The greatest human costs, however, are those of the Somali refugees, probably of the order of 1,000,000, who have fled to Somalia, cannot be integrated into that country's weak domestic economy, are understandably fearful of returning to Ethiopia and - despite substantial international assistance - survive under uneven but frequently very poor conditions. Refugees are victims - and usually numerous victims - of most wars. However, in most cases the numbers, the suddenness of the flight and the proportion of refugees to host country population have been much lower.

The Uganda/Tanzania war of 1978-79 dates back to the 1971 Amin coup and links to the 1979-82 Tanzania solidarity/support forces in Uganda. Amin was openly hostile to Tanzania from his seizure of power - a hostility heartily reciprocated - and made territorial claims both as to a border area (which was a typical post-colonial geographic oddity but had come to see itself as Tanzanian) and to a corridor to the sea and a port. Tanzania, therefore, began upgrading its military capacity, including a jet squadron, armour and artillery. These added qualitatively different aspects to what were previously very low key and low technology armed forces but - except perhaps for artillery - were below the nominal levels of Uganda's buildup. Since it viewed the Amin regime as wholly illegitimate - it was involved in preparations for a tragi-comic 1972 Ugandan coup attempt (not involving Tanzanian forces) which went totally awry. Ugandan probing raids into Tanzania in 1972 and 1974 were repulsed (the largest with the loss of three Ugandan tanks, as an indication of scale).

Late in 1978, Amin - partly as a result of endemic coup attempts and distrust of the loyalty of the most competent Ugandan units - launched a full scale invasion of the border Kagera area involving about 10,000 troops, armour and air raids. While military casualties were limited, 10,000 civilians were massacred.

Tanzania counter attacked to free Kagera, and after a pause to buildup moved to destroy the attacking units and their bases. Tanzanian public opinion, pressure from Ugandan opponents of Amin, arguments from some Tanzanian leaders that the costs of allowing Amin to recover and threaten a new war would be insupportable and Amin's all too believable threat to massacre the hundreds of thousands of Ugandans who had welcomed the columns seizing the bases, then resulted in Tanzania deciding to join Ugandan opponents of Amin in a war to overthrow the Amin regime.

Following the end of that war (at its peak involving perhaps 30,000 Tanzanian, 8,000 anti-Amin Ugandan, 15,000 pro-Amin Ugandan, 10,000 Nubian and 4,000 Libyan troops), Tanzania - at the request of four successive Uganda governments - kept solidarity forces to maintain some degree of interim security and to allow elections leading to the formation of a stable Ugandan government.

The macroeconomic costs to Tanzania, discussed in a later section, were (and their consequences are) very high, probably in the order of $675 mn on foreign exchange account. This figure is significantly above peak export earnings ($550 mn in 1985) and almost twice current levels.

For Uganda the macroeconomic and human costs of the Amin period and the war have been even more disastrous. Direct deaths from war under Amin and since 1981 have probably exceeded 500,000, while indirect deaths from starvation and destroyed health services related to transport blockages and to fiscal bankruptcy would - if known - be likely to raise the total to over 750,000. Some estimates in press and human rights group reports would come to double that figure. The point is the scale - at least five per cent of the number of Ugandans - and the very real horror that scale implies. The emergence of a predatory dominant parallel economy - magendo - in the post-war vacuum has never been fully reversed. The broken pre-Amin political process (always fragile) has, like Humpty Dumpty, proved impossible to put together again. Even if President Museveni can reconstruct Ugandan polity, society and economy - and this remains problematic - the costs of Amin plus war and their consequences are likely to total at least $15,000 mn lost GDP (1971-1990) contrasting actual 1972-1986 results with a three per cent annual growth average and 1,000,000 direct and indirect loss of life. The direct Tanzania/Uganda war cost is a very small fraction of the total (say $500 mn and 10,000 lives) and the pre-war (Amin) and post-war costs have causes related to internal Ugandan factors other than war. However, in this case it is somewhat articifical to seek to divide up at least over 1972-1986. Uganda was (and to a lesser extent is) a country at war both internally and, on occasion, with its neighbours.

South Africa vs Southern Africa: A Region at War

The South Africa/Angola and Rhodesia/South Africa wars are examined in more detail in an accompanying paper, 'Cutting Off The Flowers'. Their duration and costs are comparable to the total human and macroeconomic costs of Amin, war and failure to recreate a functional, legitimate state in Uganda. Realistically they are unlikely to end until the destruction of apartheid in South Africa, although South African policy shifts induced by raising the cost to RSA of its present approaches (including external pressures) could reduce them significantly.

In Angola the initial 1975 position was one of a civil war between a dominant liberation movement (MPLA) and two much weaker ones (FLNA, UNITA) with a limited regional basis and major to dominant external dependence (Zaire/USA and Portugal respectively). Foreseeing defeat in elections or civil war, the two turned to the USA and South Africa for the forces, equipment and finance to capture power. Both - despite that support - were routed, but UNITA was resurrected as a South African proxy force. At first Angola was used as a buffer for South Africa's occupation of Namibia and a means to prevent stabilisation and development of the Angolan economy. Since 1980 South Africa's goals have broadened, although exactly what they are remains unclear. In this war there has been massive deployment of South African forces up to numbers over 10,000, including mercenaries plus air, artillery and logistic services for UNITA.

The war against Mozambique has a distinctly different profile. Initially it was waged by Rhodesia to destroy the Zimbabwe liberation forces led by Robert Mugabe and to deny them Mozambican bases. Renamo (or MNR, described as armed bandits by Mozambique) was overtly created by Rhodesia as a proxy force to destroy Mozambican support for Zimbabwean liberation by sabotage and terrorism while Rhodesian forces raided Mozambican provincial towns and transport lines as well as Zimbabwean camps.

After Zimbabwean independence the MNR was inherited by South Africa. Until mid-1981 it was used on a limited scale to destabilise Mozambique by low grade sabotage and terrorism. From 1981 it has been steadily upgraded (the 1974 Nkomati non-intervention agreement notwithstanding) to the point in late 1986 that near total collapse of the economy was a reality and effective government in central and northern Mozambique appeared a real possibility. Since then there has been a substantial clawback on the military front and a more problematic one on the economic, but both fronts could still be described as desperate.

While South Africa has staged sabotage raids into Mozambique and supplied logistical, equipment, finance, training and strategic plus some field leadership for the MNR, it has not made any commitment of its own forces, or of financial resources, comparable to that in Angola.

Until late 1986 the MNR - unlike UNITA - made no serious attempts to articulate a political project or mobilise even a regional following. The 1987 efforts have something of the appearance of special effect laid on for foreign observers (like UNITA's South African protected 'capital' enclave of Jamba), but do represent at least a public relations shift. South Africa's goals in Mozambique appear to be destroying Mozambique's transport system, economy and polity as a means to maintain its economic hegemony over the landlocked independent Southern African states, to guard against any military or base area support for the ANC and to 'prove' that independence under black socialist governments can be equated with violence, chaos and economic collapse.

Solidarity Forces: Costs of Defence Cooperation

The final war category is that of solidarity forces. Nigeria sent the first to Tanzania to provide interim defence security and retraining following an army mutiny and violent strike. Nigeria has subsequently taken part in a notably unsuccessful multi-country force (also involving Zaire and several smaller West African contingents) to attempt to provide cover for the creation of a unified government in Chad. It has seriously considered sending similar forces to Angola (1975) and Mozambique (currently) but has not done so, partly because of doubts by the would-be recipients of their effectiveness.

Similarly, Senegal sent troops to Gambia - on the request of its government - in 1981 to thwart a coup attempt. It has kept them there, still on the request of the Gambian government, which has over the period twice been re-elected in competitive elections, to provide stability against further coup attempts or external interventions.

In these cases the solidarity forces engaged in no significant combat and were not intended to do so. As a result, human costs were virtually nil and macroeconomic costs limited. The same is true of Tanzania's small solidarity forces, sent at the request of the governments of the Seychelles and the Comoros. The first thwarted two externally based (one South African mounted) coup attempts; the second was expelled by a successful externally based, mercenary executed invasion/coup.

The Tanzanian (1975-78, 1986-??) and Zimbabwean (1983-??) solidarity forces sent to help defend Mozambique against first Rhodesia and later South Africa and their proxy MNR (and in the second case to keep open Zimbabwe's transport corridor to Beira) are quite different in three respects: they are larger, more costly (especially economically but also in lives) and directly engaged in combat.

In the case of Zimbabwe the cost of up to 12,000 troops in Mozambique to defend the Beira corridor and to conduct joint exercises with Mozambican forces is now estimated as of the order of $350-400 mn a year, and the annual cost in Zimbabwean lives is probably numbered in scores. The Tanzanian involvement is discussed in a later section but has tended to be at lower levels - perhaps up to half as many troops, much less heavy equipment and perhaps a fifth as high maximum annual cost.

III

ASPECTS AND COMPONENTS OF COST

The most evident and cited aspects of war costs are military expenditure above some minimum 'normal' threshold (say five per cent of budget in several cases of SSA states with no - or before they had - serious military threat to their integrity or survival) and/or their foreign exchange content. Less frequently direct war damage is cited. However, these would appear to be only two of seven components of macroeconomic war cost:

1. direct war damage (including non-military aspects such as destruction of roads and physical disruption of non-military production);

2. excess military expenditure (including deterrent and solidarity heads) and especially its foreign exchange content;

3. economic spill-over costs - e.g. transport blockages or cost increases and refugee inflows - from adjacent wars;

4. non-maintenance or non-replacement of capital stock as a result of limited financial or foreign exchange resources directly or indirectly consequential on war costs;

5. when there is a large, sudden leap in war costs (analagous in macroeconomic terms to a severe deterioration in the terms of trade or a major drought), the shock impact on usually fragile macroeconomic systems;

6. the multiplier impact of the three previous items on non-military GDP, especially in the presence of severe budgetary and/or foreign exchange constraints;

7. strategic and policy distraction, i.e. the simple facts that during a major war it is not possible to focus government attention on medium - or sometimes even short - term macro and sectoral economic strategy, policy and implementation and also that - in a serious war context -

military expenditure is harder to control than any other category.

Military bills presumably do not require illustration, nor does literal military destruction. However, the damage to roads of military traffic (especially tracked vehicles), the dislocation of actual production or transport of both agricultural and industrial output as well as of basic rural services, and the cost to production of diverting scarce high and middle level personpower to war are often passed by. The first two were very significant in Tanzania/Uganda, and perhaps to a somewhat lesser extent in Nigeria/Biafra, Ethiopia/Eritrea and Rhodesia/Zimbabwe. They are at their highest in Mozambique/South Africa and Angola/South Africa in which, between destruction and dislocation, GDP in Mozambique and non-oil GDP in Angola have been cut by at least 50 per cent below counterfactual peacetime levels, with dislocation probably more crushing than literal destruction. The personnel cost (i.e. reduction in productivity of non-military sectors) was most evident in Rhodesia where all white males were part-time soldiers, but must be severe in any case in which a substantial number of artisans, professionals and managers have to be reallocated to the armed forces.

Non-maintenance and non-replacement of fixed assets over 1974-79 (and to a lesser extent 1965-73) by Rhodesia, primarily because of war and sanctions scissors effect on foreign exchange available for non-military imports has imposed very heavy burdens on Zimbabwe. This illustrates the post-war costs of war, i.e. asset loss or non-creation during a war will affect flows of income (GDP) unless and until the capital stock shortfall is made good. Because the domestic financial constraints were less severe, maintenance and replacement of low import content assets was largely kept up so that the deferred cost manifested itself in an explosive rise of the investment imports/Gross Fixed Capital Formation ratio in the four years after independence. The Nacala-Malawi railway is an even more extreme case. It was completed by Portugal at the end of the 1960s as the liberation war in Mozambique reached a high level of intensity, albeit it rarely directly disrupted the line. This illustrates the post-war costs of war, i.e. asset loss or non-creation during a war will affect flows of income (GDP) unless and until the capital stock shortfall is made good. Nonetheless, it was nearly non-functional over much of its length by 1980. The reason for this was that line of rail and rolling stock maintenance and replacement was near nil throughout the decade because of both budgetary and foreign exchange constraints imposed by war on both the Portuguese colonial regime and the independent Mozambican governments.

The relative importance of these cost categories varies widely, as do their levels (singly or together) relative to GDP or NDP (net domestic product less asset wear and tear). Each is significant in some SSA economies and at least the first and sixth in a majority of them.

These categories, unless very carefully defined, are not aggregatable without double counting and - in practice - omissions. If there are more exogenous shocks than war the allocation of costs among them poses conceptual problems, because of non-linearity. That is, resilience and ability to live with reallocation decline as the intensity and the duration of the shock rise. This is a general not a war specific characteristic, as has been recognised in constrasting specific SSA economy stabilisation and adjustment efforts and comparative average SSA performance over 1973-75 and 1979 to date.

There are five quite different approaches to costing measuring against different counterfactual (i.e. non-war) situations:

a) Short term loss of GDP as normally measured (including 'value added'? in the defence, refugee, additional repair and related sectors, basically their wage bills). In part this results from production directly prevented by war. Another part results from allocating scarce inputs from sectors with higher value added to input ratios. For example, if military spending has a 50% import component and the rest of the economy 25% then current GDP will fall as foreign exchange is shifted from other sectors to the military.

b) Short term loss of non-military GDP (including refugee, excess maintenance and other war related sub-sectors in the deductions). This is the previous estimate of loss plus the GDP which accounting principles assign to the war sectors, but is hard to justify counting as a welfare or production gain.

c) Immediate war costs. This is the hardest to define precisely or to give a clear conceptual meaning - albeit for data availability reasons it is what is usually calculated/estimated. Direct war damage, loss of current production related to war, extra external trade costs (or revenue losses) of the war beyond the production losses, extra repairs and refugee/displaced person costs and some portion of military expenditures are usually included. The 1985 SADCC estimate - and its revised Green and Thompson variant in <u>Destructive Engagement</u> - is basically a fairly sophisticated variant of this approach. What it really estimates - when approximately correct - is current non-military Net Domestic Product loss from that year's (or period's) war. Destroyed assets do not - except for immediate loss of output - reduce GDP. However, because they represent an excess depreciation item they increase the depreciation reduction from GDP necessary to arrive at GNP. Beyond one year this approach runs into problems (as in practice do a) and b)) because of the problem of estimating current year income

(GDP) loss from prior year's detruction of capital stock and reduction of investment.

d) Overall GDP loss. Nominally this could be estimated directly including the present loss of GDP from past loss of assets and investment (including investment in ability of people to work productively, e.g. health, education, water supply lost to war). In practice this has not been attempted in SSA and given data problems may at present be impracticable. An alternative approach is to estimate probable GDP trends in the absence of war costs and calculate the diversion from achieved GDP - the basic approach used in Children on the Front Line.

e) Logically this could be combined with c) to compute Net Domestic Product losses which would then take into account the 'realised' capital stock losses which would result in future (including post-war) GDP losses. In practice this has not been attempted.

Various short cut variants can be employed. One is to estimate foreign exchange costs (assuming the most binding constraint on the economy to be import capacity) of war and to multiply this by the average or incremental GDP/import ratio to arrive at GDP (strictu sensu non-military GDP) loss.

Spill-over Costs: Dislocation of People and Production

Spill-over costs of adjacent wars have three main aspects - military incursions, transport or other cost-raising dislocations, and refugee flows. The first is included in precautionary and deterrent military expenditure, but not the second or third. The most important examples are Southern African and result from South Africa's systematic destruction - directly and by proxy forces - of Angolan and Mozambican transport routes. For Zimbabwe, Malawi, Zambia and Zaire this has resulted in very sharp increases in freight costs (reflected in lower fob prices for exports and higher cif prices for imports) because they are forced to use more distant ports - primarily East London and Durban in South Africa. Semi-official cost estimates for Zimbabwe and Malawi each exceed $100 mn a year (on some estimates they approach $150 mn) and the total for Zaire and Zambia together may be of the same order of magnitude. In the case of Malawi this cost represents about 30 to 50 per cent of export earnings. As a result the macroeconomic cost of war is very heavy, despite there being a small army and no combat. Indeed Malawi arguably, could reduce its war costs by combatting the MNR forces transitting its territory and acting jointly with Mozambique to defend the corridor to its natural port of Nacala. Since December 1986, Malawi has taken some initial steps toward such a strategy.

Refugee flows from major wars have been a particularly heavy burden for the Sudan, Somalia and - during the Rhodesia/Zimbabwe independence war - Zambia. Both war, expulsion of aliens, drought and economic disaster have driven refugees to a majority of SSA states. In the absence of other significant war costs they do not usually represent a crippling burden at the macroeconomic level. They do, however, represent a major human cost of war, a topic treated separately below.

However, most war-dislocated human beings in SSA are not refugees in the formal international definition of that term. They are internal refugees or dislocated persons. Of total war displaced Africans who at present probably number at least 22,500,000 (about 11,000,000 from or, usually, in Angola and Mozambique with the Sudan, Uganda, Zaire, Chad, Ethiopia/Eritrea, the Sahara Democratic Republic and Namibia also the sources of very large numbers). Cross border refugees - not all from war - number under 5,000,000. Another distinction can be made between internal refugees totally dependent on state or outside agency support for survival and displaced persons managing to exist (but often little more, and with high mortality rates especially for infants, young children and the aged) on their own or with purely local assistance. In the case of Mozambique, of 6,000,000 - odd displaced persons perhaps 300,000 are cross-border refugees (though a majority are not internationally recognised or supported as such), 800,000 internal refugees and nearly 5,000,000 displaced persons surviving with little help beyond what nearby relatives or local communities can provide. The problem with the last distinction is that the borderline depends more on resource availability and state access than on need or degree of deprivation. In Mozambique, if the state had the resources and could reach all the displaced persons, the number in the internal refugee category (somewhat confusingly officially termed displaced persons by Mozambique) would probably be increased to over 2,000,000. Certainly Mozambican estimates of those at risk of starvation in the absence of emergency food aid reached 4,000,000 in early 1987, of whom perhaps two-thirds were displaced persons.

The costs of dislocation (normally rural to rural, albeit with urban to rural and rural to urban strands as well) in lost production are very real and not necessarily short term. Dislocation usually involves loss of tools, seed, food stocks, livestock, growing crops and some land improvements or tree crops. Virtually by definition it entails the loss of housing. Therefore first year output losses - except in the rare cases in which a moderate income job or self-employed activity can be found quickly - are likely to be total. In the absence of substantial external support capital stock rebuilding and diversion of attention to recreating a home, output recovery will take several years. Indeed it may take that long even with it. Perhaps 250,000 former Rwandaise and Burundian refugees in Tanzania are now integrated into Tanzanian life (and in a majority of cases citizenship) and probably have at least regained their former levels of production and welfare, as well as recreating or creating new social and communal relations patterns. But most Rwandaise refugees came over 1960-62 and most Burundian over the same period and in 1972. The earliest one could have claimed substantial recovery for the former group was at the end of the 1960s, despite very substantial UNHCR and Tanzanian assistance and a nearly immediate decision to seek to rebuild their lives in villages (or other occupations on an individual basis) in Tanzania with very little time wasted pursuing an unreal hope of return.

Indeed, in cases such as Mozambique full recovery is inconceivable so long as the war continues. Displaced peasants move to areas in which they believe they will be less at risk. These are either areas apparently free from battles or organised 'armed bandit' (MNR) terrorism - a somewhat vain quest so far as the latter goes - or ones where it is believed security forces exist who can protect them. The latter belief may also be misplaced at times - when a Zambesia mine was overrun in mid-1986 the population was about 25,000, 1,000 miners and families and 25,000 displaced persons; the 350 dead in the mid-1987 Homoine massacre probably included many displaced persons reassured by the presence of a police post (which the terrorists did not capture but bottled up) and the absence of any military or any significant economic target.

Both beliefs, however, do inform moves and affect settlement patterns. As of 1980 perhaps 20 per cent of the population in Tete and Sofala provinces lived within 20 kilometres of the Beira-Zimbabwe rail/road/pipeline and Malawi-Zimbabwe highway routes. Now it is estimated that at least 40 per cent (and perhaps as high as 80 per cent in Sofala) do so. Similarly, in the Southern Provinces the armed bandits unabated (indeed increasingly savage) terrorism combined with their general failure and increasing reluctance to attempt attacks on garrisoned towns and key economic installations has concentrated populations in peri-urban areas and along roads and rail lines. This results in heavy spot overpopulation (often on land that was initially marginal) and in growing ecological damage. Together with the risk of further terrorist attacks and/or another forced displacement, these factors guarantee that output recovery will be slow and partial.

The emphasis on support and - especially - production costs is not intended to imply that human and social costs are less. Traumatic shock, social (and often household) fragmentation and disintegration, slow reconstruction of lives and communities, debilitating alienation and loss of morale are humanly every bit as damnable and costly. But they fall into the area of human costs (except as they deter output) not macroeconomic, which is the theme of this section, and they require primarily sociological and psychological, not applied political economic, skills and experience to analyse.

The Macroeconomic Implications of Shock and Distraction

The multiplier effect is a widely used macroeconomic tool whose relevance to any autonomous decrease in supply or increase in non-productive demand should not require explanation. Briefly it points to the secondary and tertiary consequences at any one time and over time of an initial cost or diversion of resources. However, it has to date very rarely been applied to direct detailed war costs in SSA. Given marginal import/GDP ratios and the dislocative impact of war expenditure-fuelled inflation on production generally, and the external balance (or more accurately imbalance) in particular, an estimate of total GDP loss (or at any rate non-defence GDP loss) of the order of five times war foreign exchange costs does not appear to be an unreasonable starting point. In the case of Angola and Mozambique, estimates on this basis for 1980-86 (presented in Children on the Front Line, UNICEF, 1987) tend to confirm - at least as to order of magnitude - estimates built up from direct war costs and specified consequential production losses and those based on counterfactual projections of GDP growth in the absence of war.

Schematically, the basic costs to (non-military) GDP are production destroyed, non-military production prevented by transfer of resources from other sectors to the military, and both production losses and increased (repair or alternative) expenditure resulting from specific assets being out of operation, preventing or crippling production of other assets: e.g. in Mozambique the coal mine at Moatize is itself undamaged but the war's closure of its access rail line has put the mine out of operation. The direct subsequent costs are future production losses from destroyed assets and those not built during the war (because of resource diversion or physical impossibility). Assuming a detailed computable input output matrix, the direct impact of resource losses and reallocations can be measured quite easily. In practice there are three problems: computable, detailed open input-output matrices are not available in SSA and if they were the data are frequently too fragmentary to have much confidence in their use except as a cross check on other methods of estimation. Second, I-O based models are usually designed to measure marginal, gradual changes, not sudden, non-marginal ones. Third, the productivity impact of transferring skilled personnel to the military is not caught by such models nor is the loss of health (ability to work hard), education (productivity of work), time (diverted to household restoration instead of production) and morale resulting from war.

The simpler techniques, e.g. foreign exchange diverted times GDP/imports (or a sectoral breakdown) do not meet the last point. Indeed, it is doubtful that any approach used in SSA to date other than the non-war (counterfactual) versus war (actual) GDP growth has any claim to doing so.

Shock impact has been relatively less explored in macroeconomic analysis of SSA economies. It has, however, been increasingly seen as significant both in relation to major natural disasters (e.g. Sahel droughts) and sudden, massive negative terms of trade movements. The basic proposition is that, beyond some level, increased resource demands (or reduced supply) and policy strains become unmanageable, and macroeconomic term strategy and policy deteriorate into an increasingly fragmented and short term series of measures to postpone disaster until something good turns up. War is particularly likely to have this effect - especially as over-optimism as to the likely duration and level of war costs, as well as underestimation of indirect costs, appears to be endemic, e.g. in Tanzania, Mozambique and Zimbabwe.

Strategic and policy distraction from both short and, especially, long term macroeconomic concerns, once stated, is presumably both self-explanatory and unlikely to be challenged. The history of Rhodesian policy as the liberation war grew is one of decreasing ability to pay coherent attention to non-military issues or to contain military spending. While probably less true on the strategy and policy front (though not the military budget one), the same challenge has confronted Zimbabwe since 1981, and especially since the build-up of its solidarity and transport defence forces in Mozambique began in 1983.

Human Costs - Lives and Misery

Analagous constricted vision and underestimation of costs has characterised the human price of war. Combat and crossfire civilian deaths are the only regularly mentioned aspect, with the exception of the three Southern African studies mentioned earlier and the UNICEF report in particular. It is possible to identify six main aspects or components of costs:

1. direct military/combatant casualties, including militias and semi-organised forces;

2. civilian casualties including crossfire victims as well as those massacred by terrorist tactics, killed in selective sabotage attacks and falling victim to unselective over-reaction by government and/or invader or insurrectionist forces;

3. victims of increased mortality - especially infants and young children - resulting from destruction or breakdown of health and pure water services as a direct or indirect effect of war;

4. victims of starvation resulting from war caused dislocation of food production or blocking of relief food distribution;

5. non-lethal human costs of dislocation of people, production and services caused directly by war;

6. the multiplier (divider) effect on production, incomes and access to basic services.

As with macroeconomic costs, the absolute and relative significance of these components vary widely, but all have been at very high levels in five or more SSA states. Military and combatant casualties are in fact usually a small proportion of war-related deaths - probably under five per cent in Angola and Mozambique and two to three per cent in Tanzania. Genuinely accidental crossfire victims are probably an even smaller proportion. Estimates of direct military casualties (and hopelessly unreliable figures put out by warring parties) do exist, but are not by themselves very useful because they are a small and uneven fraction of war deaths as defined here.

Terrorist tactic victims are much more numerous in some wars - notably Mozambique and Angola/South Africa, but also the Ugandan, Chadian and Sudanese civil wars. Terrorist tactics are here defined as attacks on human or material targets designed to cause fear and dislocation and/or to wipe out highly valued services (e.g. health posts, schools, shops, local transport) and their staff. Their goal is killing the dream of development and undermining perceived legitimacy by reducing both service and security provision, not their direct military or economic impact. In other terminology they are aimed at 'soft targets'. Over-reaction by combatant forces is very common - especially when acquiescence in the presence of forces hostile to those entering or controlling an area from fear is hard to differentiate from willed cooperation, and/or the area is perceived as basically hostile by the forces in question.

The largest single war-related death toll, especially in the case of combat within a country, is usually increased infant and under-five mortality related to direct destruction of health services, their immobilisation or inaccessibility as a result of combat or human dislocation, and their deterioration because of war claims on fiscal and foreign exchange resources. For Angola and Mozambique over 1980-86, carefully constructed estimates in the UNICEF study total 500,000 war related infant and young child deaths, now running one every four minutes or, as UNICEF Executive Director James Grant put it, comparable to crashing a fully-loaded Jumbo jet of under-fives daily. Even in Tanzania, where the mortality deterioration (relative to pre-1978 trends) is the result of the divider effect of war-caused macroeconomic malaise, this 1979-86 death toll probably exceeds 125,000 souls. War related increases in older child and adult mortality - except for mass starvation - are significant but significantly smaller (and harder to estimate) than for infants and young children because older children and adults (except the aged or already infirm) are less physically vulnerable.

Mass starvation because of destruction of crops, dislocation of farmers, armed intervention to prevent food distribution and the divider effect on food imports capacity has killed several hundred thousand Africans over the past two decades. Usually but not always (e.g. Mozambique over 1986/87 where 3,500,000 to 4,000,000 human beings are in danger of severe malnutrition or literal starvation despite relatively favourable weather) unfavourable climatic conditions have been a catalytic factor. The vast majority of the victims have been Angolans, Mozambicans, Sudanese, Ethiopians/Eritreans/ Somalis, Chadians, Biafrans, Nigerians, South Sudanese and West Nile and Karamojang Ugandans. Except for Somali refugees from Ethiopia in Somalia camps and Ugandan and Ethiopian/Eritrean refugees in the Sudan, all of these cases involve long, bitter wars (whether civil or externally generated) within the country experiencing famine.

Dislocation involves literally millions of households. Estimates include up to half the rural populations of Angola and Mozambique - i.e. 4,500,000 and 5,000,000 human beings respectively and perhaps over a quarter in Chad, Uganda, and the Southern Sudan - of the order of another 6,000,000. Dislocation has high human costs even at the non-lethal level. Refugees from war - as from drought - have usually lost literally everything: home, land, household equipment, tools and seeds, livestock, access to public services. Even if they survive, they are in abject poverty and frequently unable even to begin reconstructing their lives and household incomes without substantial direct and infrastructural suppport. War makes the resources for adequate levels of such support quite literally unavailable for more than a small minority. Security concerns (of the dislocated human being and/or of the state) may force those dislocated to remain in overcrowded or agriculturally unsuitable areas because there they may have some protection, while if they returned to their homes they would have none.

Trans-border refugees are conceptually and humanly an extreme case of dislocation, e.g. of over 6,000,000 displaced Mozambicans 300,000 odd have fled to Zimbabwe, Malawi, Zambia, Swaziland and the Republic of South Africa. There are practical differences: they may be in greater danger of expulsion back into the combat zone (e.g Mozambicans in South Africa); they cannot fully begin rehabilitation of their lives and livelihoods until they are able to return home (as most Zimbabwe refugees in Zambia did after independence) or decide and are allowed to integrate into the host country (as 100,000 Rwandais and Burundians have in Tanzania); because of the international definition of refugee they may receive more international assistance than refugees (dislocated people) in their own country.

The negative multiplier effect of macroeconomic war costs applies to the dislocated and to other citizens of severely war affected countries. Resource diversion means that access to basic services deteriorates (as does their quality), inputs and markets for production shrink as do job opportunities and goods to buy. The percentage of households in absolute poverty rises. These human costs can be very marked even in an economy which has had very little combat within its territory - e.g. Tanzania.

It may need underlining that the cessation of hostilities or major external threats does not bring macroeconomic or human war costs to an end immediately. Nor does it do so even after the armed forces are cut back to 'normal' personnel and expenditure levels - by no means a quick or easy exercise, as Nigeria and Zimbabwe illustrate. The cumulative impact on the economy continues to exist until at the least the past direct and divider war costs no longer prevent normal growth of exports, basic services and GDP or - logically - until recovery has restored these to the levels they would have attained in the absence of war. Even under favourable external and domestic conditions, the former can take several years and the latter over a decade. At worst - as illustrated by Uganda - it may be virtually impossible to make and to sustain a stabilisation, adjustment and recovery strategy for up to a decade after the end of the actual war.

There are a set of interactions between human and production costs which are conceptually and qualitatively relatively straightforward but exceedingly hard to quantify, even approximately. One cluster relates to loss of access to basic services, especially health-education-pure water. Ill health reduces ability to produce directly and by requiring time reallocation by household members caring for sick persons. Lack of education reduces productivity. Albeit this is a future more than a current GDP loss, unless the war situation lasts for many years. A number of SSA wars, e.g. Uganda, Chad, Sudan, Ethiopia/Eritrea, Mozambique, Angola, Sahara Democratic Republic have lasted (with at most brief interludes) for up to a quarter century. Lack of access to improved water sources diverts time from production, e.g. what takes 20 minutes a day to fetch from a villag tap or well can easily take 10 times as long from a spring, watercourse or pond three to five miles away.

A second cluster relates to time (necessarily and properly) diverted from production to household restoration or survival. Persons who are dislocated or whose homes suffer damage need to devote time to locating, patching or recreating a roof over their heads and then to making it habitable. Scattered families spend time looking for missing members. War-imposed goods scarcities result in more absenteeism and less cultivation because people are out hunting for scarce commodities.

A third cluster flows from shock and loss of morale. War in one's immediate vicinity (even if one is personally physically and materially unscathed) often has a profound psychological impact and can be traumatic. While the relevant literature - mostly not on SSA - is largely in the fields of psychology and sociology and so does not attempt macroeconomic or general productivity cost estimates, it is reasonable to conclude that the latter are significant. Initially (and after a victory) a war may boost morale, effort and productivity. A long drawn out war, repeated defeats, problematic futures and the worsened economic and access to services context caused by war bills do erode morale. This has been widely recognised as a factor in driving the rebel Rhodesian government to Lancaster House, and in fact to capitulation. It has been less discussed as a drag on productivity, but is clearly likely to be so even at levels well below those leading to surrender or ending the war on unfavourable terms.

A more extended sketch of types of war involvement and of component and total cost estimates for a single country may be useful to illustrate this and the previous section. A presentation follows for Tanzania as a country with significant war costs - albeit not a civil war, and with very limited fighting on its own soil.

IV

TANZANIA: MOUNTAIN TIPS AND MISTS - A MINI CASE STUDY

Tanzania is a good example of how little the costs of war are assessed in any depth, and how brief passing references may conceal more than they reveal. Despite not infrequent mention of the cost of the war following the Amin invasion of 1978, with very rare exceptions these are not seriously evaluated as a cause of post 1978 economic problems. The costs of near-perpetual preparedness for external war (invasion or incursion) since 1961 and of repeated acceptance of solidarity support costs for threatened neighbours have received even less attention.

Tanzania is a good example for another reason. It does not and never has had either a military government, a substantial military role in the political process nor what can reasonably be called militarisation. Nor has it had a civil war, a policy (actually or in intent) of expansionism nor any desire to use a large military establishment as an instrument to enhance a regional or continental leadership role. The army has never been used - or needed - for police functions, and strike riot, or endemic banditry violence are relatively rare and low level. These factors strongly suggest that military spending in the absence of real war or perceived threats of it would have been low and that actual spending is related to war, not repression nor a 'toys for the boys' accommodation with a politically powerful officer corps.

The one exception to this pattern is the 1974 mutiny of part of the original, British trained (and then still in part officered) army. Even that - especially in retrospect - appears to have been more a violent, trade union style strike for improved terms, conditions and promotion prospects rather than a true military strike for power. In the event it was blocked by use of external solidarity forces - initially British and subsequently Nigerian. The costs of the mutiny in physical damage, demobilisation, rerecruitment and retraining appear to have been quite low and the pattern has never recurred.

However, Tanzania is distinctly atypical in the low level of actual fighting that has taken place on its territory. There have been numerous Portuguese and Ugandan and - less frequent - Rhodesian, Zairean elements (not the governmental forces) and Burundian incursions, raids and sabotage operations, but these were relatively small individually or cumulatively. The only major invasion - of Kagera (then West Lake) Region by Amin in 1978 - was limited in extent and duration even if remarkably sanguinary (probably 10,000 civilians murdered in two weeks) while it lasted.

Cost Elements

The main direct and first stage indirect war costs fall into three categories: preparedness for external aggression, solidarity with threatened or attacked neighbours, and the Amin invasion and its aftermath. The first has been significant since independence and more so from 1963/64 (with the opening of Frelimo's armed struggle for the liberation of Mozambique) and the second - somewhat discontinuously - since 1975 (and the independence of Mozambique). Only the Uganda case has clearcut dates - 1978-82. Within the costs it is the foreign exchange component which is the most critical - Tanzania has normally not had serious shortages of food nor of semi-skilled (i.e. with militia or national service training) recruits and the bulk of other expenditure is directly or indirectly a foreign exchange cost. These can, with some difficulty and little exactitude, be estimated from Tanzania budgets and budget speeches (see also note on sources).

Over 1961-70 the foreign exchange cost of a larger than otherwise requisite armed force to deter or defend against Portuguese, and also Zairean elements, incursions and potential invasions was probably of the order of $150 mn. That in itself was not a crippling cost, but the average of $15 mn a year did represent up to seven and a half per cent of export earnings. This figure includes an element of support to FRELIMO, which was waging its war of independence in part from bases, training camps and civil government structures in Tanzania. Toward the end of this period decisions were taken which were to lead to substantial subsequent expenditure to build up artillery, armoured vehicle and air capacities.

The period 1971 to November 1978 was marked by much higher war (or war deterrence/defence preparation) costs for three reasons. First, the decisions of the late 1960s; second, the creation of an unstable, aggressive and anti-Tanzanian Ugandan state and armed forces by Idi Amin (including border incursions and a probing proto-invasion repulsed in 1972); third, the provision of forces to protect the new state in Mozambique from Rhodesian attack.

The total costs in foreign exchange were probably of the order of $200 mn - perhaps 20-25 per cent relating to solidarity with Mozambique and 65-70 per cent or more to actual and preparatory defence against Amin's Uganda. Costs related to continued protection (until 1974) against Portuguese incursions, Rhodesian sabotage raids and attacks on border areas (nominally against refugees) by Colonel Micombero's Burundian regime were much smaller. Thus by the beginning of the Amin War the cumulative foreign exchange costs of war for a state which had not engaged in any significant fighting except in defence of Mozambican provincial towns against Rhodesian raids, totalled around $350 mn, or about a year's mid-1970s exports. Because earlier exports were lower, the running year by year average would be about seven and a half per cent.

Late 1978/mid-1982 war costs relate almost exclusively to Uganda. The solidarity forces in Mozambique had to be withdrawn to meet the invasion. Subsequent units sent on the request of the governments of the Seychelles (where they foiled the South African based 'rugby coup' attempt) and the Comores (where Robert Denard's mercenaries toppled the rather eccentric government they sought to defend) were on a much smaller scale - in the low hundreds versus perhaps 5,000 troops in Mozambique. However, the total costs were much higher than for any other period, and included more direct or first round dislocation effects.

Imported equipment to fight the war against Amin were of the order of $150 mn. Ultimately, of course, they destroyed his regime, although the equipment purchases for recapturing Kagera, knocking out the bases from which his forces struck and maintaining a border defence cordon would not have been much lower, and most orders were probably placed while these were the Tanzanian objectives. For the 225-250 odd days of real war (with an expeditionary force of up to 40,000) the foreign exchange operating costs were probably somewhat over $1 mn a day for a sub-total of the order of $375 mn.

Following the war, the armed forces were requested by four consecutive Uganda governents to provide security and the costs of training and provisioning Ugandan forces, and these costs over 1979/82 were estimated at around $3 to 3.5 mn a month, almost all in foreign exchange terms (salaries were paid and spent in Uganda and staple food was being imported). This suggests a sub-total of $125 mn.

In addition, Uganda was provided with reconstruction loans - largely in exportables or imports - totalling $75 mn on Ugandan calculations as of the date of lending (much less now as they were denominated in Tanzania shillings). Further war damage to the northern part of Kagera region (and peripherally from Ugando-Libyan bombing of Bukoba and Mwanza), to roads and bridges caused by military traffic far beyond design capacity, including tracked vehicles, as well as to vehicles and dislocation of normal export and import substitute transport may, conservatively, have had a foreign exchange content of $75 mn - say about one third each.

This suggests a total foreign exchange cost of that war of the order of $650 mn or over one-third of 1979-82 exports. This compares fairly well with figures of $500 mn - not including Uganda support costs nor full war damage, although probably including some domestic cost component - suggested early on by the Tanzanian government. It is also broadly consistent with the (still-born) attempts in 1979 to: a) reschedule up to $100 mn of war-related import finance; b) borrow $350 mn medium term to 'reschedule' war cost shock effects on import capacity; c) negotiate a $2.5 mn odd monthly Ugandan offset payment to Tanzanian costs of maintaining army units in Uganda at her government's request (which would have totalled around $75 mn by the mid-1982 final withdrawal) and d) to secure early repayment - in goods or cash - of the $75 mn of rehabilitation loans to Uganda - items which add up to $600 mn.

Spill-over costs have not been estimated. They relate primarily to refugees, as lost Uganda transit traffic was always marginal. Because Tanzania has had large numbers of refugees from a series of countries - the Rwandaise and Burundian totals far exceeding the Ugandan - and has mobilised domestic and external resources to support or integrate them without major macroeconomic stress, the much smaller number of Ugandans probably did not add significantly to total war costs.

War costs in 1982/83 - 1986/87 have been substantially lower. Initially, arguably, they relate in part to problems of rapid demobilisation, but primarily their raison d'etre is the growing perception of a real threat - if not directly to Tanzania then certainly to her Front Line State neighbours and allies - from an increasingly aggressive Republic of South Africa. Following the mid-1986 upgrading of South African proxy force ('armed bandits', or by their own styling, Mozambique National Resistance - Renamo) invasions of

Mozambique and a real if limited improvement in its own economic position Tanzania once again became deeply involved in the defence of Mozambique. It upgraded the ongoing training of Mozambican forces which was never fully halted even in 1978-82 and probably on a rising trend thereafter. More critically in expenditure terms, it restored provision of garrison troops (e.g. for Quelimane, Pemba) and joint operation forces (in Niassa, Cabo Delgado, Nanpula, Zambesia provinces) probably totalling perhaps 5,000 to 6,000.

The 1982/83 - 1986/87 (fiscal year) foreign exchange costs are likely to be of the order of $175 mn for a cumulative late 1961 - mid-1987 total of the order of $1,200 mn. Their annual rate as of 1987 is probably of the order of $75-100 mn (well over half the defence budget). By comparison, by 1985 export earnings were $300 mn odd, external debt (including debt and commercial arrears) of the order of $4,500 mn, external debt service (positing 10 per cent arrears reduction) of the order of $350 mn and GDP around $4,000 mn.

Direct Human Costs

The direct human costs have been significantly lower in Tanzania than in most other SSA countries with heavy war bills. The basic reason is straightforward. There has not been protracted, large scale fighting in Tanzania. The largest has been 10,000 civilians massacred in the Kagera invasion. Other civilian deaths from incursions have probably totalled little over 100 (with 15 in a helicopter borne Burundi raid the bloodiest single case) although this may be an underestimate since the 'small' raid and landmine incidents on the (then) Portuguese border were not fully reported. As public sevices and food supplies did not break down over any large area or for extended periods, war associated civilian deaths - related primarily to lack of medical attention - may have been 500. Military casualties are hard to estimate - perhaps 100 in the minor border raids and incursions, 500 in solidarity missions (virtually all in Mozambique), 500 to 1,000 in Uganda (including transport fatalities). The total 11,750 - 12,500 is not small, but is not of the same order as in the Chadian, Nigerian, Ethiopian/Eritrean or Sudanese civil/separatist wars, nor the probable 1,000,000 souls who have died in Angola and Mozambique since 1980 as a result of the war South Africa has waged against their countries.

Damage to human welfare beyond that sketched above is basically indirect - the multiplier effect of foreign exchange costs of the overall Tanzanian economy. One possible exception relates to the little researched 'defence villages' organised in the early and mid-1960s to safeguard peasants from Portuguese border incursions. These villages - almost all in Mtwara and Ruvuma regions - probably grouped 500,000 people prior to the 1967/69 launching of the Ujamaa village programme under which they were subsumed. Very little, however, is documented on their internal socio-political structure, size, access to basic services or economic impact. On balance - especially given post 1970 marketed agricultural output growth and level of basic service access in these two regions - the net human impact of 'defensive' villagisation may well have been positive.

Refugees from Mozambique and Uganda were in general substantively less badly off than dislocated persons in Mozambique or Uganda. Their presence - within an ongoing Tanzanian tradition and programme of 'hosting' refugees as well as of a broader relationship with FRELIMO - does not appear to have imposed unmanageable macroeconomic costs on Tanzania, nor to have had a negative impact on the material condition of her people.

Macroeconomic Costs, Shocks and Distractions

The late 1961 - mid-1987 foreign exchange cost of war, in prices of the year in which it was incurred, has been estimated above at $1,200 mn. In terms of export prices on a comparable temporal basis that is equivalent to about five years total exports, or almost 20 per cent of total export earnings since independence. As the incremental ratio of imports to GDP in Tanzania has probably averaged between 20 and 25 per cent this suggests a GDP loss of the order of $4,800 to $6,000 mn ($9,000 mn converted to 1986/87 prices) or in excess of (roughly twice) 1986 GDP. The calculation is bedevilled by the issue of appropriate exchange rates for conversion since neither the official (after 1978) nor the parallel market one is particularly appropriate. On some calculations average import/GDP ratios were as low as 12.5 per cent in the 1983-84 period but the conversion problem means that these are downward biased.

However, these overall macro magnitudes may not be as revealing as they appear. Up to the Amin invasion, Tanzania's budgetary and external balances do not appear to have been seriously undermined by war expenditure. Doubtless it constituted a drag, but - even in retrospect - probably not a major one. The basic fiscal and external position - with the exception of 1974/75 - was healthy, and the one exception was neither caused by, nor recovery from it evidently slowed, by war costs. At $30-50 mn a year in the middle 1970s they were within national carrying capacity.

The period 1978-82 is quite another matter. The foreign exchange costs of war in that period (slightly under four years) ran at over $150 mn annually or at least a third of export earnings. In the peak period, military spending appears to have accounted for over 25 per cent (versus a less abnormal 10 per cent and a nominal 'target' non-war level under 5 per cent) of total central government spending. The shock impact was severe - how severe is rarely recognised because of failure to pay serious attention to magnitudes and timing.

The economic shock from war-spending over 1978-82 was comparable to terms of trade losses over those four years which averaged around $200 mn a year (compared to 1976 levels). That from the 1979-84 bad weather cycle (following good weather in 1975-78) can hardly have averaged more than $25 mn a year over 1978-82, nor can the actual transitional costs of the 1977 breakup of the East African Community (EAC).

In external accounts terms the shocks were both very severe - comparable to about 40 per cent of average imports and over 80 per cent of average exports for the period - and lengthy (four years for war, six for drought and terms of trade worsening, perhaps four for initial EAC breakup/replacement costs vs two years for main terms of trade and drought shocks over 1973-74). In total they were unmanageable, while without the war (or terms of trade) component they would arguably have been just manageable.

In addition to raising shock levels, war distracted and detracted from capacity to manage them. The middle of a war is not a time at which either medium term stabilisation and adjustment policy can be adopted or in which government economic management efficiency is likely to receive priority attention. The war is - necessarily - the central strategic and policy issue; efficiency within government is forced out of centre stage; debate on cost efficiency by the armed forces is virtually halted even if it did, as in Tanzania, have a certain degree of effectiveness before.

These costs are very clear when 1974/75 and 1978/79 Tanzanian responses to economic crises are contrasted. The main stabilisation, financing and revival strategy that was used to ride out and recover from 1973/74 shocks was basically formulated in the first two months of 1974, adopted within four and in place within six. The 1974/75 fiscal, domestic bank credit creation/allocation, and foreign exchange budgets were integral parts of that strategy.

No such speedy response was achieved in 1978/79 precisely because of the war. The first semi-coherent strategic response pattern was not drawn up until mid-1980. Fiscal control, especially, but not only, over military expenditure, was not regained until 1981. Broadly speaking, domestic bank credit creation and allocation did not come under coherent control until 1981/82, and the foreign exchange budgeting process (perhaps because too much shock damage had been done before the first serious - but in the event unrealistic - reconstruction efforts were made in mid-1980 and mid-1981) never regained its 1972/75 level of performance.

Until mid-1979 this lagged and inadequate performance - like the failure to discover the shambles that had evolved (physically and financially) in the agricultural parastatals - was primarily a cost of focusing on the war and uncertainties as to its length and costs. Thereafter, the costs were those of starting late when a downward spiral had attained momentum and Tanzanian economic and fiscal management had lost control at home and credibility abroad - admittedly partly because of fiscal and foreign exchange management laxity over 1977-79 having little to do with the war, but exacerbated by it. The first increased both the costs and duration of stabilisation (at the most optimistic reckoning not acheived until 1983/84), restructuring (not achieved as of 1987) and recovery (perhaps begun in 1986) and the second - until at the earliest 1986/87 - made it impossible to secure adequate initial external resources to initiate and/or sustain them.

The 1982-87 war costs have been at much lower annual levels. Had the economy been in an otherwise healthy condition, they would probably have proven manageable. In the event they represented one more drag on stabilisation and, especially, recovery. At the same time, the economic debilitation reduced spending to deter external aggression below prudent levels (even if it is imprudent to articulate how and where) and clearly delayed the restoration of the forces acting in solidarity with Mozambique's struggle against external aggression until late 1986. That restoration was made urgent by the stepping up of South Africa's destructive engagement against Mozambique, but to some extent was also influenced by the improvement in economic conditions in the second half of 1986.

The indirect human costs of war bills in the case of Tanzania are very indirect and flow from the impact of macroeconomic constraints on - especially - health, education, water and real wages. These are significant as evidenced by the slowing down of decreases in infant mortality and rises in malnutrition.

It would be quite unreasonable to set up a 1981-86 counterfactual (without the war shock) of five to six per cent annual GDP growth (like 1975-78). The levels and duration of the other shocks, plus imprudent 1977-79 fiscal, credit and foreign exchange policies would have prevented that. But earlier adjustment to smaller shocks probably would have at least held 1978-81 real output constant to slowing rising, allowed a return to three to four per cent growth over 1982-86, facilitated reaching 1986-type Bank/bilateral resource flow agreements that held up by 1979 or 1980, and allowed the 1981 strategic concentration on exports to be articulated, sustained and productive (as opposed to a rough, unsustainable burst, yielding substantial volume gains only in its first year). Since this implies a 1986 GDP 20 per cent above that actually achieved it strongly suggests that to evaluate Tanzania's 1978-86 performance without reference to war costs is seriously incomplete. The foreign exchange cost (excluding export declines from resource reallocations which limited production, processing, transport and investment) is of the same order of magnitude as that from 1972-86 net terms of trade losses and very far above 1973-74 plus 1979-84 drought related foreign exchange bills. Yet these exogenous shocks are nearly universally accepted as requiring sectoral and macro analytical attention and indeed receive it. War and the war bill do not.

Strategy, Goals and Results

The estimation of costs is not intended to imply that the military strategy was in general ill chosen, unable to meet its minimum objectives or evidently substitutable for by less costly means. In most cases quite the contrary.

1. The deterrence of invasion/minimisation of incursion goal was achieved except for Uganda, in 1974. In the absence of credible Tanzanian forces it is likely that Portuguese, Zairean element, Burundian, and Ugandan incursions and Rhodesian sabotage raids would have been more numerous and costly. There might also have been direct Malawian intervention at some point during the water border dispute (on Lake Nyassa-Malawi-Niassa). Certainly the 1972 Ugandan probing invasion would have proceeded had its point tank column not been knocked out at the border.

2. The 1978-79 war achieved its immediate objectives. Amin's forces were contained and repelled and their attack bases destroyed. Support for Uganda's liberation struggle against Amin led directly to his overthrow (probably not an initial Tanzanian goal but one forced by Tanzanian public opinion and Amin's only too credible threats to kill all those who had welcomed Tanzanian troops entering Uganda to destroy the bases from which the invasion into Kagera had been launched). No subsequent Uganda regime has posed a military or strategic threat to Tanzania. The massive use of artillery to blast troops out of defensive positions (in the later stages of the war virtually preventing any sustained resistance) did raise financial costs. But it greatly reduced loss of Tanzanian lives as well as those of Ugandan civilians and - except in the first few weeks - Ugandan property. Kampala, for example, was recovered nearly intact after a two-day barrage focused on the golf course led to the flight of the remaining Libyan forces and Nubian mercenaries fighting for Amin. Equally the alternatives - acquiescing in Uganda's annexation of Northern Kagera or repulsing the invasion, hitting bases but leaving Amin in power - would probably in the end have cost more in terms of permanently higher required defence levels than did the 'one off' war.

3. However, the costs of supporting restoration of legitimate rule and stability in Uganda clearly did not achieve their goal. The semi-stability lasted little longer than their presence. This was not true in prospect and need not have been in retrospect had the UPC (Uganda People's Congress) chosen to form a unity government with the DP (Democratic Party) after the 1980 elections. One can argue that the failure of Tanzanian diplomacy to achieve that goal, rather than the size, duration or actions of the military units, was the cause of the failure of the stabilisation support force to achieve its lasting objective.

4. The 1975-78 solidarity forces in Mozambique appear to have achieved their minimum objective. Raids by Smith forces (and by Renamo, then a Rhodesian proxy) on Mozambican towns were sharply reduced after several bloody receptions. Mozambican forces were freed for active use in rural areas. In the Seychelles, the Tanzanian contingent prevented at least two foreign-based coup attempts and successfully worked themselves out of a job. The Comoros exercise was clearly not a success - the government asking for Tanzanian support was overthrown by a mercenary invasion despite their presence. The ongoing solidarity campaign with Mozambique cannot yet be evaluated in terms of results. To date it has released Mozambican troops from garrison duty and mounted several successful joint operations, but the military situation remains problematic. It should be noted that the installation of a South African puppet (Renamo) government in all of the northern provinces of Mozambique, or the emergence of bandit anarchy over the same area would entail high defence costs to Tanzania to prevent it from spilling over via border incursions, and would result in substantial costs in respect to probably scores of thousands of refugees.

5. That the results could have been achieved at lower cost by optimum armed forces equipment choice, physical and logistical management and financial - accounting - purchasing procedures is in principle and at micro level undeniable. Whether significant savings could actually have been made (especially during the 1978-79 war period) and how is very much less clear. Cost efficiency is not, it would appear, a characteristic of any armed force, and it is by no means evident that Tanzania has a worse than average record. The Tanzania Treasury's ability to limit military spending has in most periods been quite real - the exceptions: a) 1978-79 war; b) 1986-87 restoration of solidarity force operations in Mozambique when military collapse there seemed a real and imminent threat are the type of context in which no Treasury is (or perhaps should be) able to prevent sharp increases in military spending.

Strategic cost evaluations in prospect are highly speculative - not least when conducted by government or other economists and financial analysts. For example, the Morogoro Airbase/jet squadron acquisition and armour/artillery build-up of the late 1960s and early 1970s were queried by some Tanzanian officials on the grounds of cost inefficiency (or literally irrelevance to any Tanzanian military needs). In the event this criticism proved ill-founded. Whatever its limitations, the Tanzanian airforce relatively quickly drove the Ugandans out of Tanzanian skies and off the backs of Tanzanian forces during the invasion/liberation of Uganda. The tanks spearheaded several advances, including the skirmishes leading to the capture of Entebbe and Kampala. The artillery was integral to the low human cost strategy of blasting or frightening the Amin forces out of entrenched positions and minimising the need for hand to hand combat or infantry charges. As opposed to a less sophisticated hand-to-hand or machine gun-to-machine gun war there was less physical damage (at least after the Mbarara and Masaka pitched battles), less civilians killed or wounded and both less and briefer dislocations for most. None of that should be taken to imply Ugandan civilians were unaffected or only slightly affected by the fighting. The point is that alternative Tanzanian war strategies would have raised the costs to civilian Ugandans.

A Counterfactual (very) Rough Estimate

The direct foreign exchange cost of war to Tanzania of $1,200 mn suggests a direct non-military GDP loss of $4,800 to $6,000 mn, or about one year's GDP. The additional military GDP - basically salaries and wages - can hardly have been over $500 mn and, while necessary, was not desired. Given the shock and policy lag results, that range is a minimum estimate and is in fact too low, as it would imply very low post-1982 GDP losses directly or indirectly related to war.

The $4,800-6,000 mn is aggregated at current prices and exchange rates of the years in which it was incurred. Converting to 1986 prices and exchange rates might give a current price loss of at least $8,000-10,000 mn or of the order of twice 1986 GDP. This is not to argue that 1986 GDP would have been three times as high without the war costs. Most reduced private and public consumption in the year in which they were incurred or (via initial short term import finance constraining subsequent imports) with a lag. Only a rather smaller proportion reduced fixed investment and export base thus reducing 1986 capacity and capacity utilisation - and therefore GDP.

Alternatively one could assume in the absence of the Amin war and its aftermath:

a) development of a crisis management stragegy (including parastatal reform and tightened fiscal policy) in the first quarter of 1979;

b) successful negotiation of a programme loan package with the World Bank and consequential programmes with bilateral sources by the end of 1979;

c) more as a condition for b) than as a source of finance, an IMF agreement going marginally into the second credit tranche by mid 1979 (but fully retired by 1986);

d) adoption of an inflation offsetting, frequent, marginal exchange rate adjustment policy (and a basket not overloaded in 'favour' of the US dollar) by the end of 1980 when the trend appreciation of the dollar had become clear;

e) the arrears and supplier credit overhang build-up would have been averted or contained.

On that basis, instead of declining by a total of four to five per cent from 1978 through 1982, constant price GDP might have stagnated in 1979 and risen on average two per cent a year over 1980-82 for a counterfactual 1982 GDP 10 per cent above that actually attained. Instead of a growth total of eight to nine per cent over 1983-86 it could probably have risen three and a half to four per cent a year. In that event 1986 GDP would have been of the order of 20 per cent above projected actual 1986 and 25 per cent (vs 5 per cent actual) above 1978, more or less parallelling population growth. The cumulative GDP loss on this basis over 1979-86 was of the order of \$4,800 to \$6,000 mn in recurrent and \$6,750 to \$9,000 mn in 1985 prices. Moreover, this is an interim and incomplete figure. No matter how rapid, 1987-90 recovery can hardly make good a 20 per cent starting loss of output. In addition it takes no account of export and concessional financial flow losses. (Tanzania had little or no soft procurement finance). Export levels would probably have grown modestly from 1981's export rehabilitation strategy levels instead of falling 20 per cent. Thus 1985 export earnings would have been of the order of \$450 mn (vs \$300 mn) and the cumulative additional exports over 1982-86, \$500-600 mn. In addition, the earlier negotiation of a World Bank backed rehabilitation (structural adjustment) programme and a Paris Club debt rescheduling exercise would have increased net external resource transfers (which fell markedly after 1980) by about the same amount. This means that added earnings and inflows would have totalled \$1,000-1,200 mn. If that had been the case it is reasonable to assume that arrears would have been avoided (always a policy goal even if one which proved increasingly unattainable), IMF drawings (excluding Trust Fund) reduced to nil versus \$50 mn odd, and external foreign exchange reserves increased/Bank of Tanzania commercial bank credits cut by \$50-250mn. This is a conservative assumption of use but one in line with previous Tanzanian practice: avoiding arrears (none to 1979), repaying IMF drawings as fast as possible, holding three months (say $250 mn) foreign exchange reserves).

The human cost is even harder to estimate. Infant and under five mortality rates, after falling rapidly from the early 1960s to the late 1970s, appear to have stagnated around 185 per 1000 live births - at least through 1984. Had funding to maintain and build up primary health care and pure water been available, it is reasonable to assume that the decline would have continued and the 1984-86 level been at most about 150. If that is the case, excess under five deaths in 1986 could have been around 30,000-32,500, and the cumulative 1979-86 loss of infant and child lives 125,000-145,000. Adding the Kagera massacre and combat related deaths (12,500) and loss of older children and adult lives from deteriorated or not improved access to health and pure water, (25,000 - 30,000) would raise the total to 162,500-187,500.

Similarly, both in respect to real incomes (especially of wage and urban informal earners) and of basic health, education and water services (especially to rural and outlying small town dwellers) the indirect costs of the war represented by the potential GDP loss have been high. The number in or just above absolute poverty, instead of declining (as it did from 1967 through 1978, with the probable exception of 1974/75) has risen. What the difference is as of 1986 is very hard to estimate, but 2,500,000 - 3,250,000 (10 to 15 per cent of the total population) may be a resonable guesstimate.

Even though Tanzania has not had a civil war nor fought a major war on its own soil, the direct and indirect impact of war since 1978 has been 'killing the dream'. As of 1978, universal access to basic education, health, pure water, 125-150 infant and under five mortality rates, 60-year life expectancy, elimination of severe malnutrition and reduction of the proportion of Tanzanians living in absolute poverty to under one quarter were reasonable dreams and basic national goals backed by priority allocation of resources. In 1986 Tanzania is further from achieving them than in 1978, even though they remain objectives and still have priority in allocating shrunken resources. Certainly external environmental hostility (terms of trade and drought) and domestic economic management sloppiness (partly itself the result of too sharply increased a level of challenges) played a part, but without the costs of the Amin war the 1978-86 direction of change could still have been upward.

V

SOME POLITICAL ECONOMIC IMPLICATIONS

Given the macroeconomic magnitude of war in many SSA economies, it appears unsound not to give it specific, detailed attention as it would be to pass over major droughts or terms of trade shifts as minor passing aberrations which could be ignored, treated as afterthoughts or safely 'ridden out'. That way lies theoretical error and applied disaster. Yet that is exactly the way economic analysis and, very often, political economic strategy, planning, policy and programming does proceed nationally in SSA and by bilateral and multilateral development agencies. Dragons really do lie in wait for the traveller down that path.

Serious estimates of probable war-related expenditure broken down by scarce resources required are a necessary input into medium term national planning and into annual macro and sectoral budgeting exercises. Similarly, economic policies and projects need to be viewed in terms of their vulnerability in respect to potential hostilities, e.g. the Sudan oilfield development was always a dangerous venture without a stable benefit-sharing agreement with the South, and Mozambique's concentration of domestic and foreign resources on rehabilitating tea estates isolated far inland in Zambesia province and palpably vulnerable to armed bandit raids (which have now wrecked nearly all of them, despite energetic defence efforts by worker militias in several cases) in retrospect appears to have been very absent-minded, very reckless or both. The history of external financial commitments to the Limpopo Valley (Maputo-Zimbabwe) corridor also illustrates this point. They were initially made without serious consideration of whether it was likely to be attacked or, in that event, whether it could and would be defended effectively enough to remain functional. In none of these cases do the economic decision-takers and - especially - technocrats and external aid/finance bodies appear to have considered war risk factors, nor did military decision-takers and technical officers consider the specific defence possibilities (or impossibilities) of these projects separately, let alone with the economic and military sides conferring together. It is doubtless not aid agency business to become operational geostrategic or military experts let alone to become active parties to wars. They may not be able to avoid the latter, e.g. in Mozambique rebuilding transport is a hostile act from a South African pespective and not to do so is a hostile act from a Mozambican. But it is very much their business to consider not unlikely exogenous shock's effects on probable project or programme viability and to take into consideration the costs and levels of maintenance likely to be necessary and (which may be a quite different thing) forthcoming. This is as true of war as of floods, terms of trade, cargo diversion for economic reasons, drought or general shortages of maintenance personal and material/financal resources.

To fight for development on the economic front without reference to the military is likely at best to be highly inefficient in terms of avoidable investment destruction and production dislocation, and at worst to be a rapid way of killing the dream of economic recovery. To fight for security on the military front without coherent knowledge of key economic installations and prioritised defence for them is, at the least, sure to cause avoidable losses of export and state revenue urgently needed to meet war costs, and at worst to allow the economy to be shattered even though the armed forces (until supplies run out) are rarely defeated in combat. Such uncoordinated tactics on the two fronts are ideally suited to achieving defeat on both.

The issues posed above are neither simple, easy to resolve nor given to yielding wholly unproblematic answers. For example, anyone with a working knowledge of Southern African transport systems and external trade volumes can identify reopening the Maputo-Chicualacuala rail line to Zimbabwe as a one-off technical solution to the central landlocked states (Zimbabwe, Zambia, Botswana) fully escaping from dependence on South African routes, even if the Beira and Dar corridors remained at their present capacity. Little more technical knowledge (and no secret information) is required to know that Maputo harbour could handle the traffic; that the technical task of rail rehabilitation is relatively straightforward and could - war permitting - be carried out in 8 to 12 months, and that substantial sums are committed by external sources to rehabilitation of the line and to rehabilitation plus replacement of rolling stock, including locomotives.

'War permitting' are the key words without which economic analysts and transport technicians are unlikely to be able to form a sound judgement. The line for extended distances on both sides of the Zimbabwe-Mozambique border runs near the South African frontier, i.e. it is ideally placed for MNR or South African hit and run raids. Further, both in the documents captured at the Ngorongoza MNR base and in revealed preference (the greatest intensity and continuity of MNR attacks in Southern Mozambique have been devoted to keeping the line virtually or totally closed for four years) South Africa has clearly expressed its priority for keeping the line closed and its willingness to wage at least proxy and sabotage war to do so. The bottom line question is whether, in the context of the total demands on them, the Zimbabwean and Mozambican armed forces can allocate the personnel, equipment and funds to protect the line during rehabilitation and operation. Equally, the reason for posing that question to them is that technically, economically and in terms of vulnerability reduction, reopening the line is a top priority.

This example has been chosen because it is important, well-known and widely believed to be under discussion among Zimbabwean and Mozambican senior transport and security personnel. The only secret is what decision or what postponement of a final decision will be taken on what time scale. It would require remarkable obtuseness on South Africa's part not to be able to identify the issues posed and, indeed, not to have drawn up contingency plans of some type and within some limits on what action it would take via its proxy forces and/or directly to abort or cut short reopening.

The secret on that side is how high an escalation and how open and undeniable a use of the South African armed forces (e.g. ground or helicopter borne sabotage parties? Long range howitzers? Jet aircraft strikes?) it is prepared to use in any such attempt to keep the Chicualacuala line closed.

Wars and war cost are exogenous shocks. To say it is desirable to avoid them is true but either trite or an entry into an area of analysis not much illuminated by macroeconomics. To say that given any actual level of war costs and any contextual reality or probability of war it is important to minimise specific and overall shocks is more relevant to economic policy making. This is the point of seeking to know probable resource allocations required by war in advance in order to budget for them. It is equally one basic reason for integrating strategies in respect to the military and economic fronts of war.

Shock reduction is of very high political economic priority in SSA. Most economies and most polities are fragile and a majority are debilitated by their experiences since 1979. Any additional shock may set off a chain reaction toward disintegration that would not occur were they less fragile and less debilitated. Even if it does not, resilience is low so that clawing back the damage done is likely to be slow, unlike Europe over 1945-1950. In the context of structural adjustment shocks raise short term costs, reduce or postpone benefits and increase the strain on what are usually (by national and World Bank estimates) significantly underfunded programmes. It would be fatuous to say that the cost of defence against Rhodesia and South Africa was the immediate primary cause of the collapse of Zambia's 1984 and 1985-87 structural adjustment programmes. It is not at all unreasonable to argue that those costs had debilitated both the economy and the polity and that failing to take them into account helped lead to over-commitments and under-performances which were more than marginal in making the programmes unsustainable.

Conundrums of Projection and Containment

War costs are perceived to be notoriously difficult to project or to control. Up to a point this is true, but so are drought and terms of trade shifts. That is no reason for not trying. Nor, in the event of major unpredicted cost increases, is it an excuse for failing to conduct a reassessment of macro and sectoral economic strategy and policy, rather than just jotting in the new costs and/or reduced revenues and doing little more. That is hardly even effective crisis management, much less flexible medium term planning and programming. In extreme cases (on drought and terms of trade as well as war) it looks rather more like sleepwalking toward a cliff.

Certain rules of thumb are possible. War cost levels - in the absence of hard evidence and demonstrable trends to the contrary - should rarely be projected as falling in real terms. In five year and annual plans a substantial contingency line (for all unexpected costs, not least war) should be included. Similarly the projections should be systematically updated as trends, levels and likely contingencies alter. These rules of thumb are deliberately cautious - it is hard to deal with unpredicted cloudbursts with no contingency reserves to hand, but it is relatively easy to adjust to utilise rainbows with gold at their end. Unfortunately, economic experience over the past quarter decade in SSA also suggests that it is much more frequently necessary to face the first than the second.

War costs are harder than most to control. The combination of highly specialised technical knowledge and the need to keep substantial portions of contingency plan strategy and tactics secret does have that result.

However, strategy in broad outline is often deducible from publicly known and unconcealable facts, e.g. the Tanzanian airforce and armour build-up combined with very light defence of the immediate Uganda border area strongly suggested a strategy involving no Tanzanian opening of hostilities, defence in depth, at least neutralising the Uganda airforce, and a major counter-attack to and probably beyond the border spearheaded by armour and covered by artillery barrages - a correct reading as it happens, though apparently not the one Amin or his field officers made. Therefore confidential discussions of military resource requirements in the context of broad strategies among senior military, finance and relevant sector ministries (e.g. transport) are likely to be possible and to raise cost efficiency without reducing security.

This will not eliminate shocks, e.g. in 1980 Tanzania suddenly found itself forced to feed the bulk of the Uganda army as the Tanzanian forces commander found the Uganda government was unable or unwilling to do so, and neither he nor the Tanzania Treasury was willing to answer for the probable consequences of fed and unfed armed units side by side, or indeed for the actions of an unfed national army in a country in respect to which Tanzania had accepted a security responsibility. Similarly, military procurement and accounting - in time of peace but even more during war - even when competent in its own terms, does place abnormally high priority on speed, safety margins and technical certainty, and abnormally low emphasis on minimum cost attainment of set targets. Those characteristics appear to be global and at best containable, not eradicable. However, in that regard the military are an extreme technical ministry case not a unique one - health, for example, often exhibits the same characteristics.

War As Context For Policy

Finally war - or high war-related costs more generally - is a context different from peace. Normal peacetime targets, priorities and phasings, as well as the possible meaning of policy instruments, need to be reconsidered in that context.

Frequently this is not done, or at least not done systematically. The IMF, the World Bank and bilateral donors are particularly prone to this oversight. One reason for this is the desire to appear apolitical and to avoid interfering with military tactics and budgets. Up to a point that is doubtless correct, but it is not adequate if it leads to avoidance of taking the actual war cost context into account in assessing macro and sectoral (and indeed project) strategy and policy, let alone in framing viable stabilisation or structural adjustment programmes.

A few examples may be illustrative. Very few countries anywhere have consistently maintained balanced budgets under war conditions. Nor in industrial economies has it usually been contended that such action was generally possible, or even desirable.

The argument has been that war costs should be spread over a period of time (an argument analagous to that for phased stabilisation and adjustment with higher interim levels of external resource transfers). In respect to real costs this must mean lowering new fixed investment and maintenance or deferring replacement of part of the existing capital stock and/or increasing net external resource inflows. Domestic borrowing to finance the war effort can also have the same effect if it actually raises real savings rates and thus defers part of normal consumption demand. Forced money creation can - via inflation - reduce effective non-military demand, but unless linked to rationing of essential items which are then sold at fixed (whether or not subsidised) prices, a disproportionate portion of the burden is likely to fall on the poor and vulnerable.

If these principles applied to the British and USA economies during World War II, it is hard to see why they do not apply to, e.g. Mozambique, Angola, Zimbabwe, whose domestic bank and quasi-bank borrowing requirement is dominated by war costs, and Tanzania. The point is not that budgetary and external balance are irrelevant during a war or recovery from a war - far from it. It is that the means, sequences, instruments and phasing may need alteration.

Similarly price - including exchange rate - policies need reconsideration in a war context. What do they mean? What can they achieve? For example, official grower prices for domestic food are usually irrelevant in SSA (because by-passed) if substantially below market clearing prices. War is likely to result in precisely that situation unless the crops are purchased on a quasi-barter basis with parallel sales (also at official prices) of goods farmers want. Mozambique has tried that route, admittedly with limited succcess, first, because the import capacity for production inputs or final consumer goods were and are lacking, and second, because war had disrupted and continues to disrupt transport, so that getting goods in or crops out was often literally impossible. Prices will not substitute for goods to buy with crop proceeds, for transport, or for security to produce crops.

The oddity of normal exchange rate analysis during a war is starkly illustrated by Mozambique. The bottom lines of the external balance crisis are that about 80 per cent of 'peacetime' (1978-80 growth trend projection) visible and invisible exports have been cut off by war, and that military import requirements probably exceed total actual export earnings. In this context talk of an equilibrium exchange rate is surrealistic.

Again this is not to say that exchange rate - like other price - adjustments are pointless. Mozambique was probably wise to devalue for four reasons:

1. the adjustment in itself kept the fact that there was a serious price problem in this area on the agenda;

2. building up huge discrepancies from any plausible post-war exchange rate is building an unnecessary barrier to post-war reconstruction. Movement toward such a rate - which is probably far from the parallel market rate of MM 1,500 or 900 to the US $ (depending on whether one uses the direct $ rate or the Rand cross rate) but is clearly not MM 40 to the $ (the pre-devaluation rate) and is probably above the present MM 200 to the $ - is desirable even if its exact level is unknowable. As present Mozambique inflation rates are likely to cancel out much of the devaluation relatively rapidly, a process of small, excess inflation offsetting adjustments (as in Zimbabwe and Tanzania) would also appear prudent;

3. raising the cost of officially imported and allocated goods (and taxes on them) is likely to reduce unintended windfall rents to non-priority enterprises and individuals and to augment state revenue;

4. re-sold (monetised) commodity aid should now substantially reduce the domestic budgetary gap even after the wage and salary increases adopted at the same time.

Parallel questions arise about rationing. It is normally seen as appropriate for disaster relief and for programmes as varied as Indian food for work and the USA food stamp scheme. Therefore, its use under wartime conditions in SSA (as in the

UK and USA during World War II) seems logically unassailable if viable allocational, distributional and price/cost relationship procedures can be devised and implemented.

All of these points bear a family resemblance to those accepted in principle - and to a degree in practice - for other major exogenous shock contexts, e.g. terms of trade shifts, droughts. Neither in those cases nor in war is there any implication that causation largely beyond national control somehow frees a country from the need to respond and to adjust. It does not. The questions are how, how fast, with what limits, under what constraints?

In Summary - 'A Lutta Continua'

At least ten substantial conclusions can be drawn from the preceeding tour d'horizon and mini-case study.

First, war is of substantial (negative) political economic importance in SSA and in a significant number of SSA economies both at the macroeconomic and human condition levels.

Second, the macroeconomic and human condition implications of war/war costs have been the subject of very little systematic description, let alone analysis, with the recent and partial exception of Southern Africa.

Third, war for political economic analytic purposes includes civil wars, external wars, solidarity/mutual defence forces, precautionary or deterrent expenditure to ward off or contain wars above 'normal' defence levels. Military coups and domestic repression - unless they turn into civil wars - are for this purpose probably best excluded.

Fourth, macroeconomic costs include direct military spending (both financial and foreign exchange), direct war damage, costs of deterrence or contingency defence, spill-over costs of adjacent wars and of solidarity forces and the multiplier (divider) effect of the autonomous changes (withdrawals of scarce resources) on the overall economy.

Fifth, human costs include direct combat deaths (military and civilian), increased mortality - especially among infants and small children - as a result of war or war cost disruption of health and related services, starvation resulting from combat and dislocation impact on food production and distribution, non-lethal misery and poverty costs of mass dislocation, poverty increasing impact of divider effect on overall economy.

Sixth, the orders of magnitude of both the macroeconomic and human costs are very high in several cases - not only in Mozambique and Angola where they have been previously studied. Even in the case of Tanzania the total GDP loss is of the order of at least a year's output, the negative shock effect over 1978-82 (the years of the Uganda war and its aftermath) comparable to that of terms of trade collapse and the loss of life (dominantly from inability to maintain primary health care for mothers, infants and young children) of the order of 140,000. The most severely affected independent countries are Mozambique, Angola, Chad, Sahara Democratic Republic, Ethiopia, Sudan, Uganda, Tanzania, Zimbabwe, Zambia, Malawi and at least historically - Nigeria, Zaire, Somalia and Guinea de Sao.

Seventh, these macroeconomic magnitudes, together with their initial shock and post-war lag effects, are such as to require their specific consideration in macro and sectoral economic analysis and its application to decision taking and in particular to medium term strategy including stabilisation, rehabilitation, structural adjustment and recovery.

Eighth, the human costs - especially 'excess' infant and young child mortality and mass dislocation - are so appallingly high as to demand specific programmatic attention to their reduction both during and after the period of combat/maximum direct war costs.

Ninth, to fight the military and economic fronts of war separately is a route to losing both - selection of neither economic nor of military priorities should be taken without reference to the opportunities provided and constraints imposed by the other discipline; a principle by no means always understood or applied.

Tenth, the human and macroeconomic costs of war - and of failing to recognise, to analyse and to take them into account in strategy and policy, selection of priorities and sequences, application of instruments and time frames is quite literally killing the dream of development - of liberation, of a better life, of peace, of access to basic health, education, food, shelter and clothing - for scores of millions of human beings in over a dozen sub-Saharan African independent states (as well as in occupied Namibia and the Republic of South Africa).

'A lutta continua' - the struggle continues. This is - regrettably or even damnably but also realistically - true for war costs in many SSA economies. Of the most severely affected states (Angola, Mozambique, Ethiopia, Chad, Sahara Democratic Republic, Sudan, Zimbabwe, Tanzania, Uganda, Zambia, Malawi) only Chad and perhaps Uganda have realistic prospects of significant cost reduction in the foreseeable future.

More positively the struggle needs to continue to understand the political and human economic costs of war in SSA and in specific states more clearly, in greater detail and in more eonomic process related and dynamic terms. Progress in that struggle is important to informing and increasing the efficiency of efforts to develop appropriate political and human economic strategies, policies, programmes and projects to contain costs and facilitate recovery and to relate these to the military front of the wars. One must hope that the second line of the Lusophone African liberation movements - 'Vittoria e certe' (victory is certain) - is applicable to these struggles.

What is certain is that if this intellectual and economic struggle is not waged and won, the chances of winning the military one, and of restoring peace, will be lower, and war will continue to kill the dream.

Annex

Military Governments and Wars: What Interaction?

At least in SSA, wars do not automatically lead to military governments. Nor do military governments necessarily lead to war.

This is true even in the case of states born out of armed liberation struggles. Angola and Zimbabwe have had civilian governments despite both emerging from armed struggle and facing external intervention repeatedly since. Mozambique has had two elections since independence and while President Machel was a military commander, his predecessor - President Mondlane - and successor - President Chissano were civilians, as are a substantial majority of the Party leadership and cabinet.

In the cases of Chad and the Sudan it is reasonably clear that the strains and costs of unresolved civil war led to military rule. On the other hand the military governments in their turn fell in large part because they could not resolve the civil wars, so that the Sudan has an elected civilian government and the present Chad leadership is not military in the normal sense of the word, although its authority rests largely on the credibility of its armed forces.

In Uganda it is arguable that the tensions in Buganda - which had erupted in violence - and the rumbling of civilian coup efforts paved the way for Amin's seizure of power. Certainly his regime's conduct guaranteed civil war a l'outrance as more and more Ugandans turned against him until, at the end, only a small group of 'marked men' plus Nubian mercenaries and a Libyan expeditionary force stood with him. In the case of Nigeria it is arguable that the self-destructive nature of the civilian political process - especially its raising of tensions likely to explode into massive violence - caused both military coups against civilian regimes. On the other hand it is also arguable that the war of Biafran secession (or at one stage secession and conquest) would have been less inevitable under a civilian regime.

Zaire is a clear case of military seizure of power in the context of a multi-faceted de facto civil war among civilian fractions plus a secessionist war. Whether the regime has remained purely military is arguable (its dominant power base clearly is fractions of the armed forces). In any event it has not resolved the levels of discontent, including regionalism, which gave it the opportunity to seize power and has barely kept the lid on them while embroiling itself in a cold - and occasionally hot - state of hostility with Angola. In Ghana per contra, the current (PNDC) government led by Lieutenant Rawlings came to power not in the context of actual (or probably even potential) civil wars but of widespread disgust with first military and then civilian regimes which were basically self-destructive. On the first occasion it ran a very brief clean-up campaign and electoral process safeguarding operation before handing over to the civilian winners, and in the present case it moved very rapidly to transform itself into what is - despite its origins and the lack, to date, of any formal civilian validation process - basically a civilian government.

External threats and defence/deterrence against them do not appear to lead to - nor result from - military governments. Angola, Mozambique, Zimbabwe, Botswana and Tanzania do not have military governments. Ethiopia-Somalia tensions and initial clashes predate the government of President Mengistu, nor do they appear to have been the primary cause, much less occasion, of the revolt by which it secured power.

Amin did pursue an aggressive expansionist policy which certainly raised the level of threats to his neighbours - especially Tanzania but also Kenya, and potentially the Sudan. This resulted in increased war deterrent costs to both Tanzania and Kenya but not to militarisation, still less to military governments in either. It led also to border skirmishes and - in combination with the suspected disloyalty of key units - to the Kagera invasion, full scale war and the demise of the Amin regime. However, it would probably be a mistake to relate this pattern to General Amin's being a military man or his government a military one rather than to his own character, ambitions and style of governance. Nigeria's military governments, for example, have never shown any inclination to use their undoubted regional military superiority to resolve border disputes, even when offshore oil was potentially involved, or other political tensions.

Solidarity contingents for mutual defence are also not particularly linked to military governments. The largest and best known cases within Africa are Tanzania and Zimbabwe to Mozambique - a triad of civilian governments. The lesser Tanzanian cases (Seychelles, Comores) also involve civilian governments, albeit ones which came to power by force majeure. Nigeria's early retraining and interim security force to Tanzania was from the civilian government in Nigeria, and while the subsequent military governments have, in principle, been willing to supply solidarity contingents to Southern Africa this has not in fact happened. Senegal's rescue of the elected Gambian government (in a multi-party competitive election) from an attempted coup or insurrection also involves two civilian governments. The two exceptions are the despatch of the Libyan expeditionary forces to prop up the Amin regime and various factions in Chad which were between military regimes.

This aside is not a general discussion of military rule in SSA as to causes, nature or effects. Rather it seeks to demonstrate that war and military government are not - at least in SSA - generally integrally related causally in either direction. As it happens, the Republic of South Africa would be a better study of interactions in both directions even though it does not - yet - have what could reasonably be described as a military government, despite a growing degree of militarisation of domestic and regional strategy and policy as well as of the decision-taking process.

A Note On Sources

A large part of this paper is constructed from a great number of fragmentary oral communications and newspaper articles heard or read over a span of 27 years. In the cases of Tanzania, Mozambique and the Southern African region more generally it results in part from first hand experience. None is based on official materials viewed as confidential by these governments.

Among the works with more substantial treatment of issues included in this study are:

Green, R. H. and X. Kadhani, 'Parameters As Warnings And Guideposts: The Case of Zimbabwe', Journal of Development Studies, No. 15, United Nations, New York, 1985

Hanlon, J., Beggar Your Neighbours: Apartheid Power in Southern Africa, James Currey/Indiana University Press for CIIR, London/Bloomington, 1986

Martin, D. and P. Johnson, Desructive Engagement: Southern Africa at War, Zimbabwe Publishing House, Harare, 1986

Stoneman, C. (ed), Zimbabwe's Prospects: Issues of Race Class and State in Southern Africa, Macmillan, Basingstoke and Harare, 1988

UNICEF (by R. H. Green, D. Esrat, M. Mauras and R. Morgan), Children On The Front Line: the impact of apartheid, destabilisation and war on children in southern Africa, UNICEF, New York, 1987

OUT OF PRINT.

DO NOT REMOVE THIS COPY UNDER ANY CIRCUMSTANCES

FOR FURTHER INFORMATION ON IDS PUBLICATIONS
AND A FREE CATALOGUE, CONTACT:

IDS PUBLICATIONS
INSTITUTE OF DEVELOPMENT STUDIES
AT THE UNIVERSITY OF SUSSEX
BRIGHTON BN1 9RE
ENGLAND

ISSN 0308-5864