

The developmental impact of military budgeting and procurement – implications for an arms trade treaty

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I. Introduction

The aim of this report is to survey literature relating to the economic implications of arms imports for developing countries, so as to draw conclusions for possible ways that developmental impacts may be taken into account in any future Arms Trade Treaty.

Two broad, but interlinked, topics are surveyed: first, in section II, the extensive theoretical and empirical literature on the direct economic effects of military expenditure (milex) – and to a lesser extent arms imports, especially in developing countries. This falls into three broad categories: the effects of on growth, on social expenditure, and (most relevant for arms imports), on debt.

Most of this literature is focused on milex in general rather than arms imports. This is largely because of the scarcity of reliable and consistent financial data on the arms trade, which in turn is due to the opacity of most arms transfer deals, where prices are often not disclosed or, even where they are, information is rarely given on what the deal includes. (E.g. spares, maintenance, etc.). The way in which an arms deal is financed is also rarely revealed, so that the relationship between contract signature, delivery and payment is unclear. It is not generally possible to identify arms imports within a country's overall military spending, and indeed in many cases they are not included at all in the reported military budget. The most consistent and transparent source of arms transfers data is from the SIPRI Arms Transfers Database, but the figures produced by this are explicitly not financial data, but a 'Trend Indicator' value measuring the *volume* of arms transfers, rather than their financial value. However, insofar as arms imports are an aspect (albeit sometimes unreported) of milex, many of the conclusions relating to the latter may also be valid. The specific characteristics of arms imports, which are likely to make their developmental impact more negative, are also discussed.

Secondly, in sections III and IV we discuss literature on governance issues relating to military budgeting and arms procurement respectively. This draws considerably on SIPRI's recent work on budgeting for the military sector in Africa, where it is argued that the policy focus should be less on the *level* of milex than on the *process* by which it is decided, where a transparent, accountable process based on a rational assessment of security needs is crucial both from the point of view of security and of minimizing harmful economic impacts. Corruption represents perhaps the antithesis of a rational,

transparent and accountable decision process, and can distort even processes which on paper are sound. Section IV also considers the evidence for corruption in the international arms trade, and the implications of this for its developmental impact.

The idea that the developmental impact of milex is most positive when meeting genuine security threats, and most negative in the presence of corruption and poor governance, is supported by one recent study surveyed in section II. In the case of arms imports, where most of the likely channels of positive economic impact do not apply, it can be argued that the only way that they can fail to have a negative impact is when they are genuinely required for security, and are not used as an occasion for rent-seeking by decision-makers. Thus the two sets of literature to some degree point to similar policy conclusions, which are discussed in section V.

II. The direct economic impacts of milex and arms imports

Military spending and economic growth

- **There are numerous channels, positive and negative, through which military spending might affect economic growth.**
- **Empirical evidence is very mixed, although there is more evidence of a negative effect than a positive, especially in developing countries.**
- **Some studies show more negative effects for ‘resource-constrained’ countries and for non arms-producers; one shows a more positive effect of milex in the presence of high threat levels, but more negative in the presence of corruption.**
- **Few studies look specifically at the effect of arms imports, although there is some evidence that arms-import dependence makes the effect of milex more negative.**
- **Arms imports probably have less potential positive channels of economic influence to counteract the negative effects than does general milex.**

While the level of GDP per capita is a crude measure of a country’s developmental state, it at least gives some indication of the level of available economic output. It is in this area – the relationship between milex and GDP growth - that most empirical research has been conducted, although with widely varying results.

There are numerous potential channels by which milex might affect growth either positively or negatively. On the one hand, like all government spending it might provide a Keynesian stimulus effect, boosting an economy with underutilized labour and capital. A defence industry may support jobs and high-tech manufacturing capability, while military R&D may generate civil spin-offs. Military service provides stable employment for its personnel, and may also provide valuable education and training. Infrastructure developed for military purposes may also have civilian value. On the other hand, milex may ‘crowd out’ private investment through its effect on government deficits. It may also displace more productive forms of government spending. It may divert skilled labour and research capacity from civil areas with greater direct impact. Aside from these, there is the direct purpose of milex: if it provides a secure environment in which investment take place it may be beneficial: on the other hand if it leads to a repressive, militarized society or exacerbates regional tensions, it may actually reduce security.

It is not possible to conclude which of these arguments is strongest on purely theoretical grounds, and there have been a large number of empirical studies to attempt to determine this, beginning with Benoit (1973)'s finding of a positive impact of *milex* on growth. However, this result has been strongly contested on both theoretical and empirical grounds. (E.g. Ball, 1983). The results of different subsequent studies vary enormously depending on theoretical model, econometric approach, choice of countries, and choice of time periods. The choice of theoretical assumptions may often lead to different conclusions, and any results will often be historically specific, depending on the sample of countries studied and the time period considered. Many of these studies are surveyed in Dunne (1996). Broadly speaking, more studies show negative or insignificant effects than positive, although all three are found. Those that specifically model the three-way relationship between *milex*, investment and growth almost always find a negative effect of *milex* on growth via its crowding-out effect on investment, while those considering only the *milex*-GDP relationship are more mixed.

With country studies, negative effects appear to predominate for developing countries, while more positive effects are found in developed countries. This is supported by a recent study using some of the most sophisticated panel data techniques to look at many countries over time, finding a positive impact of *milex* on growth in developed countries, but negative in developing. (Lee & Chen, 2007)

Some studies have looked in more detail at differences between types of countries. Fredericksen & Looney (1983) and Looney (1989) find that *milex* has a negative impact on growth for 'resource constrained' developing countries, but positive for 'resource unconstrained'. Looney (1989) also finds a more positive effect for countries that produce their own arms. The link between arms trade, *milex* and growth is also pursued in a recent study (Yakovlev, 2007), which finds a negative impact of *milex* on growth across a sample of developed and (mostly middle income) developing countries, but finding this negative impact reduced the more the country is a net exporter of arms.

One recent innovative study is Aizenman & Glick (2003), who condition the impact of military burden on growth by the level of military threat (internal and external) faced by each country. This finds a negative impact of military burden on growth in the absence of threats, but finds this effect reduced and ultimately reversed as the level of threat increases, so that those facing high threat levels experience a positive effect from *milex* (although the majority of countries do not have a high enough threat level for this).¹ They also explore the interaction between *milex* and the level of corruption. Here they find that the effect of *milex* on growth is more negative or less positive the higher the level of corruption, with a slightly negative effect for those at median levels of good governance.

Very few if any studies specifically look at the impact of arms imports on growth. Arms imports form a component of military spending on procurement, which is itself a highly variable share of overall military spending. However, as discussed in section III, many developing countries do not report arms imports within their military budget, sometimes including them under other headings or financing them by off-budget means.² Based on an analysis of SIPRI military expenditure questionnaires returned by national governments, procurement forms a higher share of spending in higher income countries. (Sköns, 2006). (Though it should be noted that as lower income countries have little or no domestic arms industry, they will usually be more import dependent for their arms procurement). In 2004, very low procurement shares were reported by those African and

Latin American countries returning the questionnaires. (10% for 5 African countries, 2% for 7 South American and 0 for 6 Central American.) These shares were almost certainly higher in previous decades when demand for arms was higher in these regions.

The economic impact of arms imports is almost certainly more negative than for military expenditure generally, as few of the likely channels of positive influence apply: they do not stimulate domestic demand, and will create few jobs, they do less to develop domestic industry, and they do not have the same potential for human capital development as personnel spending. Further indirect evidence of this is provided by the fact that negative impacts of military expenditure on growth are more often found in (generally import-dependent) developing countries, and by the specific studies showing a more positive effects for arms producers.

Many countries try to gain some economic spin-offs from arms imports by requiring ‘Offsets’ from the seller companies, who commit to investing a proportion of the deal value in the buyer country. However, offsets tend to increase the price of the deal to the buyer, and most of the available literature (see Brauer & Dunne (eds.), 2004) shows that they rarely produce the economic benefits claimed for them. An exception in some cases is ‘direct offsets’ whereby the importing country’s domestic defence industry is involved in the production of the imported arms, and/or receives investment or technology transfer from the exporter. This may be a means of developing the indigenous arms industry, but is unlikely to have a broader developmental impact; for most developing countries, building up a domestic arms industry is costly, and in many cases will have few spin-offs for civilian industry.

In conclusion, while the impact of military expenditure on growth is ambiguous (although more likely to be negative in developing countries), there are likely to be few if any economic benefits of arms imports; for the most part, they simply constitute a drain on resources. Only if they are helping to provide a level of security necessary for development to take place is their impact likely to be positive. This emphasizes the need for good governance, planning and transparency in arms imports, to ensure that such purchases are made relate to actual security requirements. This is discussed further in sections III-IV.

Military and social budget priorities

- **There is a relatively lower level of education and especially health expenditure as a share of GDP, compared to military spending in the poorest countries.**
- **The higher the level of income, the higher the proportion of GDP devoted to social spending.**
- **Data on military and social expenditure levels should be complemented with an understanding of the popular legitimacy of the budgets and of whether spending levels correspond to the relative needs of each of the sectors.**
- **Evidence of a direct ‘trade-off’ effect—whereby rises in military expenditure lead to falls in social spending, and vice-versa—is limited, with different patterns observed in different places and times.**
- **The relationship between different areas of government spending is the outcome of a historically- and locally-specific process, which is generally more complex than a simple trade-off.**

A national budgeting process involves the allocation of public funds to various categories of public spending, subject to the constraints of the size of the total budget and the size of the national economy.³ This often involves significant redistribution of resources between income groups and generations in order to attain government social policy goals. Two of the main areas competing for resources are the military and social sectors. The purpose of a country's military spending is to provide military defence of its national security (both its state interest and territory) and ultimately, of the security of its citizens. The purpose of social expenditure is to provide social services to the citizens of a country, and to build human capital to promote development.

A common concern is that excessive military expenditure may often come at the expense of these social expenditures that are so crucial for a country's human and economic development – the so-called 'guns vs butter' trade-off. This section presents an overview of available international data for military, health and education spending across different income groups, and considers empirical evidence for 'budgetary trade-offs', that is on whether military changes have a direct impact on social spending.

Comparative data on military, health and education expenditures.

Although most users of expenditure data look at figures for individual countries, it is also interesting to aggregate the data by country income groups since this allows spending by a specific country to be compared with the average for its income group. The section will present available data on average military and social expenditures as shares of GDP for low-, middle- and high-income countries.

Social expenditure is a broad category, covering support for education, health care, institutional care for the elderly and disabled, retirement pensions, as well as other types of state subsidy.⁴ Only two types of social expenditure are considered here—for the education and health sectors. These are the categories of spending for which it is possible to find roughly comparable data for a large number of countries. (Gupta *et al.*, 2000, Bagir, 2002, Martin & Segura-Ubiergo, 2004) Moreover, providing education and health care are two of the most basic requirements when attending to social needs.⁵

Table 1 presents data on the average proportion of national GDP spent by governments on the military, education and health sectors by country income group. Spending as a proportion of national GDP is used to show the relative burden of the expenditure on the national economy. Data are organized into three country income groups in order to illustrate the pattern for and differences between these three types of countries, for the period 1999–2003.⁶

Three main observations arise from table 1. First, the high- and middle-income countries prioritized spending on education and health care over military expenditure during the five-year period, both on average for the period and for each year in the period. In contrast, the low-income group prioritized spending on the military over health expenditure but prioritized expenditure on education over both. Second, the higher the level of income, the higher the proportion of GDP devoted to social spending. While low-income countries spent on average 5.9 per cent of GDP on health care and education, middle- and high-income countries spent 8.1 per cent and 11.7 per cent, respectively.

Finally, the share of GDP spent on the military remained roughly constant at around 2 per cent in both high- and middle-income countries during the five-year period, while in low-income countries it declined somewhat. At the same time spending on education and

health care as a share of GDP increased in high- and low-income countries but remained relatively stable in middle-income countries. These average figures offer a rough picture of typical national relative priorities between military and social expenditures and could be used to compare the spending of a specific country with the average for its income group.

Table 1. Military and social expenditure priorities, select countries, 1999–2003^a

Figures are averages of the percentage of each country's gross domestic product devoted to each sector

Income group/ Sector ^b	1999	2000	2001	2002	2003	Average, 1999–2003
<i>Low-income countries</i>						
Military	2.7	2.7	2.5	2.5	2.3	2.5
Education	3.4	3.5	3.8	4.0	4.0	3.8
Health	1.8	2.0	2.0	2.2	2.2	2.1
<i>Middle-income countries</i>						
Military	1.9	1.9	2.0	1.9	1.9	1.9
Education	4.8	4.5	4.7	4.6	4.7	4.7
Health	3.3	3.3	3.4	3.4	3.4	3.4
<i>High-income countries</i>						
Military	2.1	2.0	2.0	2.0	2.0	2.0
Education	5.5	5.4	5.6	5.7	5.9	5.6
Health	5.8	5.8	6.1	6.2	6.4	6.1

^a The countries covered are those for which data are available for at least 2 of the 3 sectors throughout the 5-year period, totalling 82 of the 167 countries in the SIPRI Military Expenditure Database. The coverage is uneven between income groups: 24 high-income countries of a possible 37 countries; 45 middle-income countries of a possible 81; and 13 low-income countries of a possible 49 countries in the SIPRI database. In addition, although data were available for Eritrea (a low-income country), it has nevertheless been excluded as a statistical outlier.

^b The data on education and health expenditures refer to general government expenditure, including central, regional and local government. Data on health expenditure include social security contributions and funding from external resources.

Source: Stålenheim, P., Perdomo, C. & Sköns, E., 'Military expenditure', *SIPRI Yearbook 2007: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2007), p. 270

Spending figures are useful only with due consideration of the weaknesses in the data related to the limited sample of countries. Moreover, three additional limitations should be noted. First, data on military and social expenditure are only a measure of input and do not necessarily indicate the level of output, in this case military capability and standards of education and health, since the output also depends on a range of other factors. What the spending figures do indicate are government priorities. Second, if the main purpose of the data is to assess government expenditure priorities, in principle only public expenditure for the general government is relevant, and not private expenditure. However, in some countries there is a significant amount of private expenditure on social services.⁷ A third complication is that, while data-collecting organizations strive to obtain data which conform as closely as possible to their definitions, in practice countries report data compiled according to their own definitions, so that figures are not always completely comparable across countries.

The data indicate that health expenditure is a lower priority than security in low-income countries, and that the higher the level of income, the higher the proportion of GDP devoted to social spending. However, this analysis should be complemented with an understanding of the political, social and economic contexts in each country to establish their popular legitimacy and if spending levels correspond to the relative needs of these sectors. A useful tool for doing this is to look at the budgetary decision-making process, particularly of the military, since it tends to be the one with more legitimacy problems.

Empirical evidence for budgetary trade-offs

The figures discussed above give cause for concern, particularly in terms of the relatively low level of education and especially health expenditure in the poorest countries. This may give rise to the suggestion that these areas could receive more funding if military spending were lowered – the classic ‘guns vs butter’ trade-off. However, the relationship between different areas of government spending may be more complex than that, and may vary between countries and over time. A number of empirical studies have been conducted to attempt to assess the evidence for these direct budgetary trade-offs.

One theoretical difficulty with such studies is that few if any of them contain an explicit model of government decision-making that would explain how levels of military and other spending are co-determined. At one level, any amount of spending in one area *could* in principle be spent on another area, and so the trade-off is always, by definition, one for one. If one is to say anything more than this rather obvious observation, the question arises as to what other conditioning variables should be taken into account (e.g. GDP, tax revenues, budget deficits), and there is no theoretical basis on which to do this. Ultimately, such studies may present empirical regularities – whether, in general, health and education spending tend to be higher or lower when military is higher or lower, but without a clear explanatory framework. Additionally, all such studies are non-generalizable, in the sense that budget decisions are policy choices specific to time and place, rather than some intrinsic property of these categories of spending. There is no reason to suppose that different governments will follow patterns observed in the past or in other countries.

The evidence from econometric studies on the existence of budgetary trade-offs between defence and other areas of spending (most commonly health and education) is mixed, with similar numbers of studies finding negative trade-offs between defence and health/education as failing to find them (or indeed finding positive relationships). Deger (1985) finds a negative impact of military on education spending across 50 developing countries over the period 1976-83, principally an *indirect* effect through a negative effect of military on GDP growth. However Hess & Mullan (1988) found a positive relationship between education and military spending across 77 developing countries for 1982-83.

A number of studies have looked specifically at specific regions. Verner (1983) looked at 18 Latin American countries from 1948-1979, finding only one case of a negative trade-off between military and education, the rest being positive, neutral or mixed. However Scheetz (1992), using a more rigorous dataset for Argentina, Chile, Paraguay and Peru for the period 1969-87, found that military ‘crowded out’ health and education spending. Likewise Apostolakis (1992) found a negative trade-off for most Latin American countries for 1953-87. Looney (1986) also found a negative trade-off between

military and social expenditures in Latin America, although the relationship was positive for arms producers.

Looney (1990) found that, for countries in the Middle East and South Asia (but not in other developing regions), higher milex in 1982 tended to lead to lower education spending in 1986 relative to 1982. However Harris et. al. (1988) found predominantly positive or insignificant relationships between milex and education spending in 12 Asian countries from 1967-82. Looney (1988) found a positive relationship between milex and health and education in Africa in 1980 for non-conflict states, but no relationship in conflict states.

Individual country studies include Looney & Fredrickson (1988) for Pakistan from 1973-1986 (no trade off between milex & health or education), Roux (1994) for South Africa from 1960-90 (no trade-off with education), Ozsoy (2002) for Turkey from 1925-1988 (mixed results) and Gunluk-Senesen (2002) for Turkey from 1983-98 (no trade-off between security and social spending).

It is hard to draw a coherent conclusion from these studies, indeed as discussed there is no reason why there *should* be a coherent conclusion for something so dependent on the idiosyncratic policy choices of particular governments at particular times. Overall, the strongest evidence for the existence of negative trade-offs seems to come from Latin America (the exception being the earlier Verner study, which may be partly due to poor data). These studies cover periods where many countries in the region were ruled by military dictatorships, so it is not evident that similar conclusions would apply to more recent data. Of the general cross-country studies, evidence of negative trade-offs, where it exists, is mostly indirect: the negative effect Deger (1985) found of milex on education spending largely came through reduced growth, with the direct effect negative but insignificant. Looney (1990) found that countries with higher shares of milex in GDP in 1982 tended to have lower shares of education in GDP in 1986, compared to the 1982 level. However, this cannot be considered a trade-off as such, as it does not relate the change in education to the change in milex between 1982 and 1986.

Overall, there is little evidence of direct ‘crowding-out’ of health and education expenditure by milex outside Latin America. That is, it is not clear that when governments choose to increase milex, they do so at the expense of health and education, or that when they cut milex it is these areas that receive the benefit. Of course this does not alter the fact that, like all expenditures, they have an opportunity cost; rather that in many cases it would appear that increases in milex may be funded either from less sensitive areas of the budget, or from increased deficits, or from growing revenues. Nonetheless, low levels of social spending in developing countries are clearly concerning. But milex levels may not always be the primary culprit for this. Ensuring a proper accountable process for balancing different areas of spending is a key factor.

Military expenditure, arms imports and debt

- **There is evidence that arms imports may be responsible for a significant proportion of Third World debt.**
- **The question of how arms imports are financed is important in determining whether they are likely to lead to increased debt.**

- **However even arms imports paid for with cash may indirectly increase debt if a country is unable to finance their overall imports with export earnings.**
- **There is also evidence that military spending may lead to increased debt in many countries.**
- **The poor quality of data on the financial value of the arms trade means that results in this area are ballpark estimates, and should be treated with caution.**

Another concern frequently voiced in relation to excessive military expenditure and, in particular, arms imports, is its potential impact on Third World indebtedness. High levels of Third World debt are generally recognized as having caused severe harm to development in recent decades, and reducing debt is seen as a key requirement for achieving the Millennium Development Goals (MDG) for 2015 agreed by 189 nations in 2000, many of which relate to education and health.⁸ High debt service requirements greatly restrict poor countries' resources for crucial spending on health, education, and other areas relevant for the MDG. Countries that have received debt relief or cancellation in recent years have benefited from considerable increases in social expenditure.⁹ Thus, even if military expenditure and arms imports lead to increased debt, they may in the long term lead to reductions in social spending through debt service requirements, even if there is not a direct trade-off of the sort discussed in the previous section.

For developing countries that may have fairly limited tax bases, it may be difficult to fund increases in military spending from increased revenues. If one possible source of funding is reductions in other budgetary areas, another may be through increased domestic or international borrowing. In the case of procurement spending, for those countries who are not significant arms producers, imported arms must be paid for in foreign currency, which if not obtained through sufficient exports must inevitably lead to overseas debt. While a number of developing countries do have an indigenous arms industry, almost all are still dependent on imported arms for most of their major weapons systems.¹⁰ The extent to which arms imports will lead to indebtedness will also depend on the extent to which arms may instead be obtained for free as military aid, and the availability of credit financing. By and large, the latter has declined considerably over the last 20 years. While some developing countries, such as China and India, have spent heavily on arms imports fuelled by rapid economic growth, regions such as sub-Saharan Africa and Latin America that in the past have borrowed heavily to fund major weapons purchases have massively reduced their arms imports. For example, while Latin America represented 10.7% of global imports of major weapons systems in the period 1976-1980, this had fallen to 5% for the period 2002-2006. The Sub-Saharan African share fell from 8.4% to 3.2% between the same periods.¹¹

There have been two main approaches in the defence economics literature to analyzing the impact of military expenditure and/or arms imports on debt. One of these uses regression analysis, as is used for the growth and budgetary trade-off analysis, to try to uncover statistical relationships between military spending/arms imports and debt. The other is what may be called an 'accounting' method, which attempts to assess when countries would have been able to afford all imported arms either through military aid or through foreign currency reserves provided by exports, and when they would have had to finance the purchases through international borrowing.

Brzoska (1983) estimated the impact of arms imports on Third World indebtedness over the 1970s through an ‘opportunity cost’ accounting method. The key element of Brzoska’s approach is that it is not only whether a particular deal is debt-financed (something that is often kept obscure) that determines its impact on debt, but the overall external capital position of the importing country. For a net loan importer, even if a given purchase is paid for in cash, the foreign exchange used will thereby be unavailable for other imports.

Thus, Brzoska first looked at the volume of arms imports, then subtracted the estimated Soviet proportion of military aid in exports of 60%, then subtracted arms purchased by US military aid, and finally arms purchases by countries with a net international surplus for the year in question, to obtain a figure for the volume of arms sales that would require international credit – either directly for the arms, or indirectly in that they would necessitate additional borrowing for other imports. He then considered the effect of new loan requirements for debt service. The resulting estimate was that by 1979, 20-30% of all Third World debt was the direct or indirect result of arms imports. A follow-up study (Brzoska, 1994), showed that, under the assumption of a 10-year pay-back period for military debt, accumulated Third World countries’ debt for arms imports grew from \$33 billion in 1979 to \$82 billion in 1987. (A 30-year payback period would give figures of \$41 billion and \$148 billion).

Table 2: Debt increase with weapons imports, major countries in \$USm

Country	1990-1994	1995-1999	1990-1999
Turkey	8,140	9,860	18,000
S. Korea	8,220	9,175	17,395
China	3,381	4,186	7,567
Iran	7,122	0	7,122
Pakistan	3,863	2,033	5,896
Malaysia	2,004	3,070	5,074
India	4,769	0	4,769
Indonesia	1,033	2,651	3,684
Brazil	1,308	1,642	2,950
Thailand	2,544	0	2,544
Romania	1,299	783	2,082
Angola	1,778	0	1,778
Syria	1,772	0	1,772
Czech Rep.	742	723	1,465
Philippines	668	734	1,402
Chile	534	859	1,393
Mexico	1,368	0	1,368
Colombia	806	322	1,128
Hungary	1,041	0	1,041
Myanmar	1,025	0	1,025

Source: Brzoska, M, “The economics of arms imports after the end of the Cold War”, *Defence & Peace Economics*, Vol. 15, No. 2, 2004, p121. (NB: permission should be sought from the publisher if this table is to be reproduced in any published work.)

In the 1990s, after the end of the Cold War (Brzoska, 2004), the availability both of free arms (chiefly from the Soviet Union) and of credit finance for them had declined. Brzoska estimated that 18% of additional debt from the first half of the 1990s could be attributed to arms imports by the opportunity cost method, and 16% in the second half. This included both developing and developed countries. Around \$75 billion of additional debt was incurred directly or indirectly due to arms imports by countries in the developing regions during the 1990s. Table 2, reproduced from Brzoska (2004), shows the countries with the greatest debt increases that could have been avoided if arms imports were limited to available funds. While most countries in the list are not amongst the poorest highly indebted countries, others such as Pakistan, Indonesia, Brazil and Angola give cause for concern. Turkey, the first on the list with \$18 billion of new debt according to Brzoska, while a middle-income country, has been severely hampered economically by its debt burden, with debt service representing 17% of GNP in 2001. (Gunluk-Senesen, 2004).

Gunluk-Senesen (2004) carried out a more in-depth study based on an accounting method for Turkey. Based on a range of assumptions on the one hand for the import component of Turkish arms procurement spending, and on the other on the cash (i.e. non-aid) component of arms imports, she arrives at ranges of estimates of \$10-13 billion and \$8-12 billion for additional borrowing for arms imports over the period 1987-1999. Taking account of interest payments, the lowest of these estimates would make arms imports responsible for 9% of Turkey's external debt in 1999. A further estimate based on available information on Turkey's US Foreign Military Sales (FMS)-related debt stock gives a minimum figure of 8% of Turkey's 1999 debt stock related to arms imports. In another study, Alami (2002) looked at the military-related debt of Arab countries, finding that by 1990 these amounted to \$45-90 billion, 40% of their total debt at that time.

Against all of these figures a very strong caveat must be attached, that they are based on highly uncertain data relating to the financial aspects of the arms trade, a point made repeatedly by Brzoska and Gunluk-Senesen. Several major assumptions need to be made to produce the estimates described above, and the margin of error is quite wide. At best, the above represent ballpark figures. What can be said with reasonable confidence is that arms imports have been a very significant contributor to overall indebtedness.

Turning to econometric studies, Looney (1989) examined the interaction between military expenditure, arms imports and debt for 61 mostly developing countries in 1982. He divided the countries into 38 'resource constrained' and 23 'resource unconstrained' countries, the former generally having a higher debt to GDP ratio in 1982, a higher rate of new loans relative to exports, lower foreign reserves and lower growth in total imports than the latter. The 'unconstrained' countries included many oil exporters, who thus had a ready source of finance for imports. He found that military expenditure was a very significant driver of increasing debt for the resource-constrained countries, but not the resource unconstrained. The effect of arms imports on debt was not directly tested, but it was found that for the resource constrained countries, military expenditure had a much stronger effect on arms imports – thus these countries were more import-dependent, a likely driver of the military-debt relationship. The distinction between resource-constrained and unconstrained countries accords with Brzoska's approach whereby the arms imports of countries with increasing net debt in a given year are assumed to add to that debt.

Turning to country studies, Sezgin (2004) carried out a time-series study for Turkey for the years 1979-2000, looking at the long and short-run interactions between national income, the trade balance, external debt, and (separately) milex, arms imports and equipment expenditure. He found no significant relationship between any of the military variables and debt. However Karagol (2006), looking at Turkish data from 1960-2002, found that higher milex tended to cause increased debt in the long-run.¹²

Dunne, Perlo-Freeman & Soydan (2004a) found a tendency for milex to increase debt for a group of 11 industrializing economies over the period 1960-2000, confirmed by a number of panel data techniques. The same authors (2004b) also examined the cases of Argentina, Brazil and Chile for the period 1970-2000, using a more consistent dataset for milex than had hitherto been available. However, they only found a tendency for milex to increase debt in the case of Chile. Narayan & Narayan (2008) found a strong tendency for milex to increase both internal and external debt for Fiji between 1970-2005, and Kollias, Manolas & Paleologou (2004) found a weak tendency for milex to increase both internal and external debt for Greece over the period 1960-2000.

Both the accounting and the econometric approaches have their difficulties; firstly, both suffer from the patchy availability of financial data on arms imports, a particular problem for the accounting method. Secondly, there are methodological difficulties: the econometric approach has similar theoretical difficulties to the budgetary trade-off literature in that, if one is not to say simply that all military expenditure *could* have been used to reduce debt, then one must make some essentially arbitrary choices of which conditioning variables to include, without a clear model of government decision-making. The accounting approach on the other hand has the problem that it cannot say for certain whether, in the absence of debt-generating imports, the debt would not have been incurred or would have been used to finance other things. However it does provide an estimate of how much debt could have been avoided were it not for the arms imports.

Thus, although there are some exceptions, the majority of studies both using accounting and statistical techniques tend to confirm the hypothesis that both military spending in general and arms imports in particular are significant contributors to external (and in some cases internal) debt. However, this effect is not universal; both Brzoska and Looney's work suggests that a distinction needs to be drawn between those countries able to finance arms imports (and general imports) through their own foreign currency resources, and those that cannot. Brzoska's later study – and an analysis of current data on the arms trade – suggests that this is less of a problem now than in the past, as arms imports for the poorest countries are much lower – in a sense, the bulk of the damage has already been done. But this does not change the potential for arms imports to worsen a country's debt position when they do happen.

The determinants of military spending

The above sections have focused on the economic *effects* of military spending, but there is also a growing literature on the *determinants* of milex, in developing and developed countries. Some studies focus on bilateral 'arms races' between particular countries, for example India and Pakistan or Greece and Turkey, where each side responds to changes in milex by the other, although the evidence for consistent patterns of this nature is mixed. Others seek to explain countries' milex levels in terms of a broad

range of economic, political and security factors. It would be difficult to summarise such a varied literature here, but some broad conclusions include: firstly, unsurprisingly, *milex* tends to increase the higher a country's GDP. However, it is not clear whether the military burden (share of GDP) tends to increase or decrease with higher overall GDP. Secondly, again unsurprisingly, armed conflict, either internal or external, tends to lead to higher *milex*. Thirdly, democracies tend to spend less on the military than non-democracies, other things being equal, although this does not always mean that countries who have recently become democracies will reduce *milex*. Fourthly, a number of studies suggest that a country's *milex* may be influenced by the overall level of *milex* in the surrounding region, and in particular by the overall *milex* of its rivals and enemies. Thus regional peace- and confidence-building, and arms control measures may be important in reducing excessive *milex*. Some relevant studies, listed in the bibliography, include Rosh (1988), Hewitt (1991), Dunne & Perlo-Freeman (2003a, and 2003b), Collier & Hoeffler (2004), and Dunne, Perlo-Freeman & Smith (2007).

While armed conflict leads to higher *milex*, and thus the termination of armed conflict may reasonably be expected to (and often does) lead to lower *milex*, SIPRI *milex* data for individual countries sometimes shows more complex patterns. Following a peace deal, *milex* may not immediately fall, or may even increase, as countries may have major costs for demobilizing and re-integrating former combatants (government and rebel) into civilian life, integrating members of rebel groups into the armed forces, and re-equipping the armed forces for post-conflict security requirements. A 'peace dividend' of reduced military expenditure may thus take some time to emerge. A recent example of this is Angola, where the end of the conflict with UNITA in 2002 has actually been followed by substantially increased *milex*.¹³

III. Transparency and accountability in military budgeting

- **A basic principle of good governance is that the military sector should be treated as any other sector in the government with regard to budgeting.**
- **Budgeting for the military sector should follow the government-wide public expenditure management principles (PEM): comprehensiveness, contestability, predictability, honesty, discipline, transparency and accountability.**
- **A publicly accountable and debated defence policy framework is the starting point for good practice.**

As some studies illustrate, military expenditure is most likely to have a positive effect on economic growth when it is genuinely required for security, that is in countries with high threat levels. However, military expenditure has a more negative or less positive effect the higher the level of corruption. Hence, an effective and efficient military apparatus tailored to respond to the real security needs of a country, and which follows the principles of good governance, would have a less negative or more positive impact on the economic development of a country. To achieve this, the military should follow government-wide financial management and oversight practices.

A defence policy framework is the starting point for good practice, contributing to the planning, programming and budgeting of the military. Without a proper defence policy, most of the decision-making and budgeting becomes ad hoc, not rationalized within a

long-term perspective, and uncoordinated with other government sectors. A defence policy examines the causes and sources of insecurity, the strategies to deal with these causes and the different tasks of each of the security bodies under this strategy. When creating such a policy framework, the participation of different actors, such as ministers of interior and foreign relations, parliament and civil society in general, is useful for promoting an understanding of the military's role and encouragement of transparency.

In general, the issue of confidentiality is used as an excuse to avoid integrating the military sector in transparent government-wide financial processes. There are countries in which this is particularly difficult due to, among other reasons, long years of military or one party rule, strong informal processes, limited capacity and lack of political will, limited democratic experience and strong executives, weak oversight bodies and/or inadequate regulatory frameworks. But if these obstacles can be overcome, and under the assumption that the military sector should be treated as any other sector in the government, the military should adhere to crucial practices in the management of expenditure such as strategic planning, review of previous year's performance, determination of what is affordable, allocation of resources both between and within sectors; and efficient and effective use of resources. (Ball & Roux, 2006).

The public expenditure management (PEM) principles¹⁴ provide a useful framework for evaluating the budgeting process of a country's military sector, and assessing mechanisms of control. While transparency is the most commonly cited principle for effective and efficient military sectors, in practice it is only one aspect of a wider set of principles. As the PEM is merely an analytical tool for financial processes, it should be used along with a broader examination of defence planning and programming.¹⁵ However, even in the most entrenched democracies it would be difficult to find a military sector that follows precisely all the ideal practices of a well-governed financial process.

Examining the process of budgeting in Africa

- **Case studies of 8 African countries found severe deficiencies in the management of the military budget in relation to the PEM principles.**
- **One of the most common deficiencies is the lack of a defence policy and plan that determines the relationship between military spending and true security requirements.**
- **As a consequence of these deficiencies, there is waste of resources due to duplication of activities between services, uncontrolled off-budget spending and manipulated estimation of revenues and expenditures.**
- **Lack of spending discipline and the privileged given to the military, particularly on the grounds of confidentiality, also contributes to higher and inefficient military spending.**
- **The overall effect of these deficiencies in the military planning and budgeting process is likely to be higher military spending than would otherwise be the case.**

National and international actors often focus on a predetermined ceiling on the military expenditure of countries, particularly as a way of assessing a country's commitment to development when granting economic aid. Relative levels of military and social spending are also used by actors, like the European Union Code of Conduct on Arms Exports, as a

way for evaluating the potential impact of an arms export to sustainable development. Nevertheless, the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD) recommends that states focus less on levels of military spending and instead assess the process by which that level is decided.¹⁶

In 2006 SIPRI and Africa Security Dialogue and Research (ASDR) concluded a project aiming to increase understanding of military expenditures in African states, the outcomes of which are presented in Omitoogun & Hutchful (2006). This was done by studying processes of budgeting for defence expenditure, as well as the mechanisms for controlling these expenditures. The study was for a selected number of African countries: Ethiopia, Ghana, Kenya, Mali, Mozambique, Nigeria, Sierra Leone and South Africa. This section will draw from the conclusions of this project, using the PEM principles and the quality of defence planning and programming more broadly as a framework of analysis. The study is for the period 1999-2005, years in which all the selected countries had democratically elected governments. There is an extensive number of principles within PEM, but the study focused on assessing the military budget process on the basis of seven of these principles: (a) comprehensiveness, (b) contestability, (c) predictability, (d) honesty, (e) discipline, (f) transparency and (g) accountability, within the stages of formulation, approval and implementation of the military budget.

As noted above, *defence planning and programming* are key for having a meaningful and assessable military budget. According to the SIPRI/ASDR study, all countries, with the exception of South Africa and Sierra Leone (since 2003), lack strategic defence plans that correspond to a thorough threat assessment and of the respective economic and security realities. This is also due to the absence of well-defined defence policies, from which defence plans usually derive, with the exception of Mozambique.¹⁷ While the existence of a policy does not necessarily mean that the government will put it into practice, having a policy is a major transparency tool for accountability and debate. The absence of a strategic plan can even affect the allocation of resources within the military sector itself, providing resources to each of the services according to their level of political influence instead of according to their strategic importance. This has been the case in Kenya, Ghana and Nigeria, where the army, the navy or air forces get privileged resources according to their political power. Since each of the services tend to lobby for its budget independently and in an arbitrary way, it is very common that there is much overlap in the financing of similar activities, and thus there is duplication and waste of resources. According to the study, the lack of a defence strategy and policy is a fundamental weakness of all the case studies, with the exception of South Africa.

Comprehensiveness in the management of public spending is understood as a budget where all financial operations of the government are included, while prohibiting off-budget expenditure and revenue. Again, with the exception of South Africa, this is a major problem for all the countries under examination. While in the eight cases there are annual spending ceilings for the military, the large amount of off-budget expenditure and revenue demonstrates the irrelevance of these ceilings. In Ethiopia, Ghana, Kenya, Mali and Nigeria, the military has a number of income-generating activities, which are not accounted for in the budget as part of its revenue. One of the main reasons for this is the lack of a clear definition of what should be included or excluded in the military budget. Similarly, and connected to this, important expenditures are not included. For example, arms procurement is very seldom included in most of these countries, excluding South

Africa. While these countries buy equipment rather infrequently, it is usually under circumstances of urgency and without previous long-term planning and assessment. The consequence is that most of these purchases are financed with off-budget resources or by diverting resources from other sectors.¹⁸ This practice of off-budget financing hinders transparency and accountability, since there is no official documentation available for follow-ups.

In order to ensure that the appropriate relative importance is given to the military, the latter should compete on equal footing with the others sectors of the economy for resources. *Contestability* is in principle part of the military budgeting process in most of the countries in the study, where military expenditure estimates have to be justified to the finance ministry. Unfortunately, in practice there is enough political pressure to limit the debate on military spending to the national security committees, which are restricted to very few members. It is also the case that when it is possible to debate this in parliament, lack of sufficient knowledge from the relevant committees on defence issues impairs their monitoring role. This could lead to approval for funding of unnecessary programmes.

Most of the sample countries lack *predictability* of disbursement of payments to the military sector. This is partly as a consequence of the lack of a defence plan, but is also due to the problem of very volatile income (Mali and Mozambique), irregular disbursement of approved funds (Nigeria) and an over optimistic revenue forecast (Kenya and Nigeria). The problem of volatile income, national or foreign, is rather problematic since it affects the capacity of long-term planning and hence limits tools for promoting transparency. In general, the lack of predictability affects the overall capacity for the military to achieve sets of goals and maintain stable policies.

While most of the countries have tried to correct their lack of comprehensiveness and predictability through the introduction of multi-year planning systems, these efforts are undermined by a lack of *honesty* in the revenue and expenditure estimations. In the cases of Ethiopia, Ghana, Kenya and Mali, the expected incomes of the military are understated, leaving extra resources at their free disposal. Similarly, projections on the expenditure are often exaggerated through the inflation of the number of personnel or the request of unnecessary expenditures.¹⁹ Both these practices are great sources of corruption and are evidence of lack of transparency. In other cases, such as Mozambique and Uganda, donors' pressure to keep a certain "low" level of military expenditure in return for aid, in combination with urgent security conditions, have led to governments hiding military spending through off-budget expenditure or manipulation of the budget with the collaboration of the parliament and ministry of finance, having negative effects on transparency.

In addition, and very much related to the problems mentioned above, most governments in Africa lack financial *discipline* particularly in relation to military expenditure. A shortfall in revenues or an urgent security situation has resulted in countries resorting to extra-budgetary expenditure or raiding the budgets of other sectors. These types of decisions are made with the consent of high political authorities and as a result of an absence of a defence policy that sets limits and helps create political will to control spending. Until 2003, Ethiopia was an example where there was a disproportionate allocation to defence at the expense of other public sectors; while Kenya was an example of those countries with regular overspending of the allocated military budget.

Transparency is often cited as one of the principles for an efficient management of the military (or other sectors) expenditure. Some actors tend to overstate the importance of confidentiality in the military sector for national security reasons, to deny access to information, preventing public scrutiny and participation in the military sector budgetary process. However, confidentiality is not hindered by appropriate systems of clearance and rules for the legislature and other oversight bodies to consult relevant military information. According to the countries examined, confidentiality has been the main reason for lack of scrutiny of arms procurement in Africa, as shown by examples such as Kenya. This lack of transparency of the decision-making process also hinders possibilities for coordination and proper planning across sectors, as in the case with the foreign or internal affairs ministries for peace operations or internal security efforts, respectively. The consequence is last minute planning and hence, off-budget revenues to finance, for example, peacekeeping missions. Finally, without transparency the role of the parliament is seriously constrained. While all the eight countries in the study sent information to their respective parliaments, in some cases the information was too scarce (Ethiopia, Ghana and Nigeria) or too detailed but without useful information (Kenya).

Finally, *accountability* has been seriously affected by the lack of transparency and the existence of informal networks in the decision-making process surrounding the military budget. It is difficult to identify the authority or individual that should be accountable, since the decisions are not taken in specific offices. It could also be the case that, even if there is an officeholder responsible for the management of funds, the legal process is obstructed. In Nigeria the Permanent Secretary of the MoD was apprehended for corruption, but he was able to go unpunished since the government decided to withdraw the case. In Ghana the problem is rather different, where the Parliament can review military revenue projections but cannot change the estimates provided by the executives. In general, with the exception of South Africa, oversight from the parliamentary bodies is rather weak. In cases such as Ethiopia, Ghana, Kenya and Mali, there is an over-concentration of power and responsibilities in institutions that are not familiar or well connected with the defence ministries, and so it is difficult to hold them accountable.

In conclusion, the overall effect of these deficiencies is likely to lead to higher levels of military expenditure. The lack of a defence plan in most of the sample countries has undermined the existence of a link between military expenditure and the real security needs. This lack of planning allows to an overlap in the financing of similar activities within the military services, creating duplication and waste of resources. Military expenditure levels are mostly uncontrolled due to the large number of off-budgetary practices. Additionally, lack of honesty in the revenue and expenditure estimations leads most often to the inclusion of unnecessary expenditures and/or the underestimation of expected incomes, leaving for extra resources for free disposal. The absence of financial discipline has led as well to regular overspending and raiding of resources from other sectors. On paper the military is supposed to compete on equal footing for financing with other sectors, but the reality is otherwise. Lack of transparency and accountability due to an exaggeration of the issue of confidentiality facilitates these higher military expenditures.

IV. Governance issues in arms procurement

- **Good governance in public procurement requires that decision making for the purchase of weapons follow the principles of fairness, impartiality, transparency, cost-effectiveness, efficiency and open competition.**
- **The areas that can cooperate or compete for influence in decision-making on arms procurement are: (a) military and politico-security issues, (b) budget, financial planning and audit issues, and (c) techno-industrial issues.**

As mentioned above, arms procurement is one of the spheres that tend to be less transparent in the military budgetary process, and thus particularly vulnerable to waste of resources and/or corruption. The process of acquiring arms is rather complex, and requires interdisciplinary teams with expertise in engineering, resource management, contracting, and quality and design assurance, resulting in the professionalization of the process. Additionally, procurement of large weapon systems may require particular oversight, since usually a great number of subcontracting is involved which is difficult to control. Access to information about arms procurement varies considerably according to a number of political factors, such as the influence of the military in the decision-making process, the level of democratization of the country, the political culture and the understanding and treatment of the issue of confidentiality. These factors also affect the treatment of the military budget in general. Ideally, decision-making surrounding the purchase of weapons should follow some basic principles of public procurement: fairness, impartiality, transparency, cost-effectiveness, efficiency and open competition.

According to a SIPRI study on the decision-making on arms procurement in 12 different countries (Singh, 1998), there are some key areas that can cooperate or compete for influence in decision-making on arms procurement: (a) military and politico-security issues, (b) budget, financial planning and audit issues, and (c) techno-industrial issues. (Singh, 1998, p5.) Each may be factors whereby the level of transparency and accountability of the procurement process may affect the quality of decision-making.

The *military and politico-security issues* depend on threat perceptions, security concepts and operational doctrines on force planning. A key factor is whether there exists a defence plan and policy where the relationship between national security, military security and military capability objectives is described. In this area, international arms control treaty regimes and national legislation governing arms procurement also play an important role. Also relevant is the level of coordination between the ministries of foreign relations and defence, and the influence each has on defence procurement decisions. The degree to which these two ministries can effectively influence military procurement is partly dependant on the number of arms suppliers—dependence on a single source for arms might decrease such influence.

The second area is *budget, financial planning and audit issues* concerning arms procurement. The key question here is the existence or absence of a specific planning process for procurement of weapons, which includes methods for costing, pricing, tendering and guidelines for offsets. The costing of weapons is very different to any other public procurement procedure, since considerations of cost-effectiveness could be bypassed by arguments of urgency for the protection of national security. Furthermore, the timeframe for the procurement of weapons tends to be rather long: from the inception

to the final acceptance of the product could take around 15 years. So having a flexible planning process that allows for volatile factors, such as market exchange rates, could be useful for more accurate planning. Another issue to take in to consideration in financial planning is including the costs of the life cycle of a system. A methodology for auditing military purchases in terms of performance, operability and serviceability during the procurement process is also important.

The third area affecting decision-making on arms procurement are *techno-industrial* issues. For some countries the decision to buy a certain weapon is largely influenced by the extent in which it promotes the national defence industry. (This can still involve arms imports, via for example licensed production or offsets.) However the extent to which it will be possible to develop a competitive defence industry that is beneficial to the broader economy will depend on a country's capacity to integrate this industry and its associated technologies within a well-developed civil technological and industrial base. The arms industry itself may be subject to very little scrutiny, financial control or competition, allowing severe inefficiency and corruption to develop. Many of these factors have been significant in the relative failure of the Indian arms industry, for example, to develop advanced indigenous design and manufacture capabilities, or to provide broader benefits to civil industrial development. (Singh, 1998, Ch. 3)

Transparency in arms procurement in Africa

- **Most of the case study countries have legislation regarding procedures for arms procurement according to the public procurement principles; however, such procedures are often bypassed or undermined.**
- **The lack of a defence policy and plan prevents the existing legislation from making the procurement process effective and efficient.**

The SIPRI/ASDR study on 'Budgeting for the Military Sector in Africa' included a special section on arms procurement due to the particularity of this area. According to the study, arms procurement is often excluded from the military budgets of the eight countries examined, with the exception of South Africa. The most common argument for this practice is the small amount of military equipment bought by these countries. While this is true, there is still occasional procurement and renovation of weapon systems made by these countries. When the military budget is presented to the parliament it rarely contains allocations for arms procurement, and when allocations are included it is not specified that they are for purchasing weapon, appearing under general headings (e.g. 'other expenditures'). Ethiopia is an example of a country that regularly purchases weapons and rarely details its procurement in the military budget, and Nigeria is a country that has procured military equipment without informing either the parliament or the MoD.

The study reveals that in all sample countries there is proper legislation regarding procedures for arms procurement. This legislation follows the main principles of public procurement where tender boards should be used for military equipment of a certain value, while it is encouraged to have open and competitive bids from suppliers. Additionally, the legislation establishes that the tender process should begin after the military procurement committee has requested the goods in accordance to strategic needs.

In theory, the procurement committee decides on the bids and designs a contract to be signed by the ministry.

However, and as discussed in previous sections, defence policy and planning is rare in most of the countries under examination, which suggests that long-term strategic needs are not taken into consideration when purchasing weapon systems. When such a large part of the spending of the military is excluded from the budget, it is difficult to exercise any effective control over the military expenditure. Furthermore, this reveals that there is an absence of any type of debate with the parliament or other parts of civil society, regarding the economic impact or quality and relevance of the acquisition of systems. For instance, in 2003 Kenya and the Czech Republic signed a deal, which was initially rejected by the Kenya Air Force, but the defence minister secretly renegotiated the contract without informing to the air force or the parliament. In addition, poor arms procurement procedures could lead to overpricing of weapons, due to kickbacks or the purchase of inappropriate hardware. In 1998 Uganda purchased helicopters for the Uganda People's Defence Force, where corrupt payments to those who negotiated the deal was the most apparent motivation.

Since 1994 South Africa began efforts to democratize its military, and so, positive initiatives to promote good governance and transparency in the arms procurement have been developed. For instance, in terms of how to deal with issues of confidentiality in the acquisition of weapon systems, the 1998 South African Defence Review lists acceptable reasons for confidentiality: protection of third-party commercial information, national security, prevention of harm to conduct international relations, and protection of commercial activities of government bodies and national economic interests. This regulation of confidentiality clauses promotes transparency. It provides a frame for creating systems of clearance and rules, for oversight bodies to consult relevant military information. Similarly, in order to control the complex process of arms procurement, according to the legislation in South Africa, there are three levels of approval for major arms procurement programmes within the Department of Defence, while for very large purchases parliamentary approval might be required.

Corruption in international arms transfers

- **There is strong evidence that corruption is widespread in the international arms trade.**
- **Corruption can occur even in the presence of a theoretically sound procurement process.**
- **A combination of high-value, irregular deals, opaque pricing, and the general level of secrecy and lack of transparency in the military sector make the arms trade particularly vulnerable to corruption.**
- **Both exporting and importing nations bear a strong responsibility for arms trade corruption, through inadequate measures to prevent it, or even tacit complicity. The role of Export Credit agencies is particularly important.**
- **There is considerable evidence of a general negative economic impact of corruption.**

- **Arms trade corruption in particular is likely to lead to excessive spending on the import of arms that do not meet genuine security needs, but which offer lucrative bribe-seeking potential.**

One of the biggest obstacles to an honest, accountable and transparent planning and budgeting process for the military sector is corruption, in particular in relation to arms imports. Transparency International reckon arms procurement to be one of the three most corrupt sectors of international business, along with the oil industry and major public infrastructure.²⁰ The presence of corruption in arms procurement can distort budgetary priorities, lead to purchases with little relation to genuine security needs, and impair public confidence in the security sector.

Hard data for corruption is, by its nature, more or less impossible to come by. However, the prevalence of corruption in the international arms trade is underlined the fact that 50% of bribery complaints recorded by the US Department of Commerce relate to arms deals.²¹ The DoC reported that these bribes were crucial in winning contracts, with bribe-givers – mostly coming from OECD countries - winning 90% of competitions in which bribes were offered. As discussed below, released UK government documents also show that bribery has been considered a normal part of business in the arms trade. Significant corruption allegations – and in some cases convictions – have been prominent in recent years in arms sales from developed countries to, among others, Saudi Arabia, Qatar, Tanzania, Taiwan, South Korea South Africa, India, Pakistan, Bangladesh, Israel and Chile.²²

A number of factors make this business ‘hard-wired for corruption’. (Roeber, 2005). First, in common with other vulnerable sectors such as oil and public infrastructure, arms deals can be very large, one-off deals both of immense significance for the exporter and offering potential for rich personal rewards for those involved in the deal. Furthermore, the deals tend to be complex and individually tailored, so that prices (even where known) are difficult to compare even for the same basic type of equipment. Thus it is easy for kickbacks to be hidden in the overall cost of the deal. But in addition to this, specific to the arms trade, is the secrecy and general poor governance surrounding the military sector, as discussed in the previous section. This allows the details of deals to be hidden behind a veil of ‘national security’, making it very easy to disguise corrupt payments. (e.g. Courtney, 2002, Roeber, 2005, Transparency International, 2006). The fact that procurement is frequently not included in the defence budget or discussed by parliament, and the existence of off-budget and non-transparent sources of funding, as discussed above, also provide potential channels for financing dubious purchases without public or financial scrutiny.

Corruption should not be seen simply as a problem within developing countries. Indeed, Western market economies such as Belgium have been the focus of corruption cases in relation to their own arms procurement. But also in the trade from the developed to the developing world, corruption requires the active participation of the exporting companies and, frequently, the complicity or at least ‘turning a blind eye’ on the part of governments. Major exports can often be make-or-break matters for arms companies (especially in European countries that do not benefit from the enormous US domestic market), and governments frequently regard their arms industries as of crucial strategic importance, and see the promotion of arms exports as an important policy goal. Gilby

(2005) discusses UK MoD documents released under the 30-year rule, which show that top MoD officials were fully aware of – and in early years even involved in - the widespread use of bribery by British firms to win arms exports contracts, and regarded this as a normal part of business. The UK Government role in the huge Al Yamamah series of arms sales to Saudi Arabia since the late 1980s has also been less than transparent in terms of pursuing corruption allegations. A 1992 National Audit Office Report into corruption allegations remains unpublished, highly unusual for such reports. It has been alleged that BAE Systems, the prime contractor for the deals, paid £1 billion to Prince Bandar i-Sultan over the course of 20 years in connection with the deals, with the full knowledge of the MoD.²³ BAE has denied acting illegally, but has not actually denied making the payments – bribing of foreign officials was only made illegal in Britain under the 2001 Anti- Terrorism, Crime and Security Act, by way of implementing the UK’s signing of the 1997 OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions.²⁴ Finally in December 2006, Prime Minister Tony Blair and Attorney General Lord Goldsmith intervened to persuade the Serious Fraud Office to call off an investigation into corruption allegations against BAE in relation to further Saudi arms sales; the OECD Working Group on Bribery expressing ‘serious concerns’ regarding the decision (now the subject of a judicial review), and pointed to continuing deficiencies in the UK’s implementation of the convention.²⁵

The role of export credit agencies (ECAs) is another important way in which developed countries’ governments may be involved in corrupt deals for arms and other major exports – but may also be a means of combating bribery where governments so choose. These agencies, such as the UK’s Export Credit Guarantee Department, provide insurance for exporters in major deals where commercial cover might be hard to come by. A significant proportion of ECA cover often relates to arms sales. ECAs may become complicit in corruption by underwriting the “commissions” paid to agents or middlemen in the importing countries in order to win deals. (Hawley, 2003). These agents, often with close connection to decision-makers or indeed themselves members of a ruling family, are paid large ‘commissions’ on arms deals – as much as 10-20% of the deal value - which are then channelled as bribes to decision-makers, thus avoiding direct involvement by the exporters in payments. ECA cover typically includes the cost of these commissions, yet an OECD Working Group on Bribery study in 2002 found that only 6 out of 28 ECAs monitored set any limit on commission payments. (Hawley, 2003). Former EU Director-General for Development Dieter Frisch described this underwriting of commissions as “an indirect encouragement to bribe”. (Frisch, 1999).

The OECD Working Group on bribery has been encouraging ECAs to do more to help enforce the 1997 Convention. It considers ECAs to have a key role to play in combating bribery, due to their extensive contact with the exporting companies, and are in a position to exercise considerable scrutiny over potential deals to ensure that they do not involve corruption. (Hawley, 2006) Some progress has been made, but peer reviews of different OECD member states’ ECAs conducted between 2002-2005 still showed considerable deficiencies in many cases in areas such as reporting suspicions of corruption, due diligence in investigating potential deals (such as background checks on exporting companies), withholding export cover where there is credible evidence of

corruption, verification of agents' commissions²⁶, and administrative sanctions against companies found to be engaged in corrupt activities.

The consequences of corruption

Corruption involves the payment of personal benefits to public officials in return for favourable decisions or access to services. It can range from payments to petty officials to for example obtain a building permit, to very large payments to top Government figures in return for major contracts.

Corruption entails many negative consequences, political and economic. (E.g. Hawley, 2000). It undermines the rule of law and public confidence in administrative and political processes. It adds to the cost of business, and of public contracts, diverting scarce resources from productive uses. It can be used to avoid, for example, environmental regulations. For the poor in developing countries, it may mean being denied access to services or fair legal treatment, or being forced to spend their slender resources to obtain them.

The general negative economic effects of corruption are widely recognized, with institutions such as the IMF and World Bank, as well as NGOs often found on the opposite side of debates to these bodies, sharing a view that it is harmful to development.²⁷ There is some empirical literature on the effects of corruption; Mauro (1996) finds that higher levels of corruption are associated with lower levels of economic growth across countries, and Gyimah-Brempong (2002) finds a tendency for corruption to reduce growth and increase income inequality in Africa. However Svensson (2005) argues that, due to the highly variable nature of corruption worldwide, the strongest empirical effects of corruption can be seen by looking at the micro- rather than the macro-economic level: he points, among others, to studies using company-level data, showing a negative effect of corruption on company growth, and a study of a Ugandan local anti-corruption campaign that led to significant increases in school enrollments and academic achievement.

'Grand corruption' in arms, energy, infrastructure and other such large-scale projects has a further consequence, of diverting budgetary priorities towards these sort of big-money projects that provide the most profitable opportunities for bribe-seeking. Tanzi & Davoodi (1997) in an IMF working paper provide some very interesting empirical evidence of this type of effect, though not looking specifically at arms. They find, based on data for 95 countries for the period 1980-1995, that higher levels of corruption lead to higher public investment as a share of GDP, but lower the productivity of that investment; it leads to lower spending on infrastructure operations and maintenance, and is associated with poorer quality infrastructure, as measured by things such as power outages, roads in poor condition, etc. They argue that the potential for large bribes leads to more large projects, more complex and costly projects, but poorer results as companies skimp on quality to make up the cost of the bribe, and as resources are diverted from infrastructure maintenance (with less profitable bribe potential) to the initial outlays.²⁸ So-called 'white elephant' mega-projects of little – or even negative – developmental value are an extreme form of this.

The corresponding effect for arms, as argued for example by Roeber (2005), is that corruption will lead to more major weapons systems being bought, at higher cost and sophistication, and with less bearing on a country's genuine security needs.

A recent case (Roeber, 2005, Courtney, 2002) that may illustrate this point is South Africa's acquisition of a range of major weaponry, including advanced fighter jets, trainer aircraft, corvettes and submarines from a number of European suppliers, in a deal signed in 1999. The deal has been the subject of numerous corruption allegations, with a senior adviser to then-ANC deputy leader Jacob Zuma, Schabir Shaik, convicted in 2005 of soliciting a bribe from French arms firm Thomson CSF (now Thales) in relation to the deal. A SFO investigation into BAE's role in the deal (supplier of the Hawk trainers and 30% shareholders in the Gripen fighters sold by Sweden) is ongoing.²⁹

A South African parliamentary defence review in 1995-1996 identified a range of options for new arms related to the need for basic territorial and coastal defence, and for South Africa's role in peacekeeping missions. The deal signed in 1999, initially for R29b (\$4.8b), a figure that has now climbed to R66m (\$9.1b), was for equipment considerably more advanced than any of the defence review options, and with little relation to the identified military missions. The advanced multi-role Gripen fighters have little or no peacekeeping role and are massively more advanced than anything possessed by other countries in the region. Submarines and corvettes are well in excess of South Africa's coastal defence requirements. With regard to the trainers, losing bidder Aermachi of Italy put in a complaint after late changes to the contract criteria allowed the more expensive BAE Systems Hawk 100 trainers to win the contest. The South African Auditor General noted that this was: "a material deviation from the originally adopted value system. This ultimately had the effect that a different bidder... at a significantly higher cost, was eventually chosen on the overall evaluation". (Courtney, 2002, p14.)

South Africa, as discussed in the previous section, has on paper the clearest and most transparent military planning and budgeting processes of the various African countries studied in Omitoogun & Hutchful (2006). Yet even such processes which are theoretically sound can be undermined in the presence of corruption.

Dealing with such corruption requires effort from both importing and exporting governments, civil society, and arms-producing companies. Transparency International have developed a number of proposals for tackling this, following a series of round-table conferences involving experts from government, industry and NGOs.³⁰ This includes the use of "Defence Integrity Pacts" in arms procurement processes, whereby mechanisms are established for bidders to air complaints, third party evaluation is made available, bidding documents are published on the internet, and a clear framework of sanctions for violations is established; industry frameworks and codes of conduct; strong involvement by exporters' Defence ministries in anti-corruption; the incorporation of anti-corruption measures into export control regulations; and reform of defence procurement processes.

V Conclusions and implications for an ATT

- **Sustainable Development clauses in an ATT should probably focus more on processes of budgeting and procurement than on levels of millex, or shares of millex in GDP.**
- **One approach an ATT could take is to commit signatories in their capacity as importers to developing transparent, accountable frameworks for military budgeting and arms procurement.**

- **Likewise, signatories as exporters should commit themselves to preventing and prosecuting corruption in arms transfers, with credible evidence of corruption grounds for denying an export license.**
- **The potential influence of an arms transfer on debt may also be a suitable criterion against which to measure proposed transfers.**

Military expenditure in general and arms imports in particular may have a number of potential economic impacts. The effect of military expenditure on economic growth is ambiguous and unlikely to be universal, although especially for developing countries there is more evidence of negative impacts than positive. The effect is least likely to be negative where countries have a significant domestic arms industry, for countries that are not ‘resource constrained’, and where military spending is responding to a genuine security threat. It is not clear in general that increases in *milex* come at the expense of health and education spending (and conversely, that decreases will be used to fund these areas), although this may sometimes be the case, and there is some evidence that this has been a significant factor in Latin America in some periods. On the other hand, there is considerable evidence that military expenditure – and most particularly arms imports – have been a significant factor in exacerbating debt in developing countries.

Arms imports carry few of the potential economic benefits of domestic military spending to offset their costs, and in particular are a drain on foreign currency, through which they may add to external debt levels. There is some evidence also from *milex*-growth studies that the economic effects of *milex* are more negative for arms import-dependent countries. It is all the more important therefore that arms imports should be justified on the grounds of a clearly-identified security need if they are not simply to represent a waste of money.

Given the variability of the economic effects of *milex*, it is perhaps more salient for policy to focus on the *process* by which *milex* is determined than by its level, so that the choice of spending level is transparent and accountable, and based on a publicly-debated analysis of security and other needs. A number of principles of sound practice in military planning and budgeting have been identified; however, SIPRI’s research in Africa shows that in most cases these principles are little observed, although the increased focus on such issues by policy-makers and NGOs is welcome.

A particular concern on this count is the widespread corruption in the international arms trade, which is likely to lead to increased spending on large procurement deals, with little bearing on a country’s actual security needs. Such corruption can occur even in the presence of theoretically sound procurement processes, which means that specific anti-corruption measures must be built into such processes. This must be as much the responsibility of exporting countries, whose companies offer bribes, as of importing countries, whose decision-makers receive them.

Ideas for sustainable development clauses in an Arms Trade Treaty

In view of the above, we would not recommend criteria in an ATT based simply on levels of military expenditure, or total volume of arms imports. We would suggest that the most suitable measures would relate to processes for military budgeting and procurement, and to the specific issue of arms import-fuelled debt.

Such measures could involve commitments by Treaty signatories both in their capacity as *exporters* and as *importers* of arms. From the point of view of developing transparent and accountable national planning and budgetary processes, it is perhaps more desirable that this should be a matter for importers, rather than (mostly developed-world) exporters acting as judges of the processes of (mostly developing world) importers, or of their security needs. However there are some issues – such as corruption – where exporters must also take direct responsibility.

An ATT could include measures committing signatories to follow arms procurement processes adhering to the principles discussed in section IV: fairness, impartiality, transparency, cost-effectiveness, efficiency and open competition, along with appropriate independent financial and technical oversight and measures to prevent, detect and prosecute corruption. This should be part of an overall military budgeting process that accords with the framework of PEM as discussed in section III, and based on a defence policy and plan where the relationship between national security, military security and military capabilities is spelled out. One important aspect of transparency in budgeting and procurement processes is to include arms procurement as an integral part of the overall defence budgeting process, with arms procurement expenditure clearly identified within the defence budget.

In relation to corruption, those exporters who are members of the OECD are already party to the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, committing them to criminalizing bribery of foreign officials, and impartial investigation and prosecution of corruption cases, regardless of considerations of national economic interest or relations with another state – although as discussed in section IV, implementation of this still leaves much to be desired. However, other major arms exporters, such as Russia, China and Israel are not OECD members. One approach in an ATT therefore could be to apply the principles of the OECD convention to arms deals for all exporters. As discussed in section IV, Export Credit Agencies play a crucial role in financing potentially corrupt arms deals, and corruption clauses in an ATT could pay particular attention to these. With regard to specific arms export decisions, the treaty could include clauses to ensure that export licenses are denied in the presence of credible evidence of corruption.

This approach would be innovative, as issues of governance and corruption are not properly covered by current international agreements on arms transfers. For example, the UN Guidelines for International Arms Transfers stipulates that states should engage in efforts to prevent corruption in the arms transfers and that both producers and importers have the responsibility to ensure that the level of armaments corresponds to the legitimate security needs of each country. However, these are relatively vague recommendations and are not legally binding. Similarly, The EU User's Guide to the EU Code of Conduct on Arms Exports takes into consideration countries having appropriate legal instruments and administrative measures to combat corruption, but as an indicator of the recipient's country capability to exert effective export controls for avoiding any risk of diversion of arms sales to unauthorized actors. Therefore, having specific measures for transparency in the military budgetary processes and arms procurement and mechanisms to prevent corruption in arms deals would be important and new points.

One of the clearest potential negative economic effects of arms imports are their impact on debt. While in an ideal world it might be preferable for importers to determine

their own criteria for when the need for an arms import justifies the debt incurred, given the fact that many governments or procurement processes may lack transparency and accountability and the potentially severe deleterious consequences of debt, this is perhaps also an area in which exporters should also commit to exercising restraint.

It is difficult to specify a clear criterion related to this issue. While one option would simply be a clause that exporters would “take into account” the potential impact on the recipient’s indebtedness in deciding whether to grant a license, there is a danger that this would be too open to interpretation to have teeth. One possible approach would be that exporters would commit to developing a framework for evaluating potential exports in relation to this criterion, in consultation with other governments, international organizations and NGOs. Factors that could be considered in such a framework might include the volume of the recipient’s arms imports (both the deal in question and overall), the extent of the recipient’s current debt problems (measured by, for example, external debt as a share of GNP, and debt service level as a share of GNP and/or export earnings), and whether the deal is likely to add to the recipient’s debt problems (depending both on the mode of finance of the deal itself - e.g. aid, cash or credit, and - following Brzoska’s ‘opportunity cost’ reasoning - the ability of the recipient to finance all current imports through export earnings). Again, one specific focus could be the role of national Export Credit Agencies, as these have historically been a major source of arms-related Third World debt. (E.g. Hawley, 2000, 2003).

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¹ The effect of *milex* on growth is neutral for a country with 3.5 years of war (1,000+ battle deaths) summed over its different internal and external adversaries, over the period 1970-1998.

² SIPRI seeks to include arms imports in the *milex* figures it reports, and can in some cases find information on some off-budget spending, but this is not always the case.

³ In the standard neoclassical model, nation states are represented as rational agents which maximize a welfare function for their citizens depending on the security and economic situations and subject to budget

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⁴ Organisation for Economic Co-operation and Development (OECD), *1980–1998, 20 years of social expenditure: the OECD database*, Paris: OECD, URL <<http://www.oecd.org/dataoecd/3/63/2084281.pdf>>.

⁵ United Nations Development Programme (2005) *Human development report 2005: international cooperation at a crossroads—aid, trade and security in an unequal world*, New York, N.Y.: UNDP, 18–19, URL <<http://hdr.undp.org/reports/global/2005/>> (last checked by the author April 2008). See also the definition of social opportunities in Sen, A. (1999) *Development as Freedom*, Oxford, pp.11, 295

⁶ Data are not available for all countries in each income group. In particular, data are available for a higher proportion of high-income countries than low- and middle-income countries, and thus the figures for the former group are more representative than those for the latter groups. Caution should therefore be exercised when using these figures since the averages could differ if data for more countries were available.

⁷ E.g. in Chile, China and Paraguay private expenditure constitutes as much as 40% of total education expenditure. UNESCO and Organisation for Economic Co-operation and Development (OECD), World Education Indicators Programme (2003), *Financing education: investments and returns*, Paris:OECD, 102, URL http://www.uis.unesco.org/ev.php?ID=5245_201&ID2=DO_TOPIC (last checked by the author April 2008)

⁸ UN Millenium Development Goals, <http://www.un.org/millenniumgoals/> (last checked by the author April 2008)

⁹ E.g. Jubilee USA website, <http://www.jubileeusa.org/truth-about-debt/debt-the-millennium-development-goals.html>. (last checked by the author April 2008)

¹⁰ China has an increasingly sophisticated arms industry now able to produce relatively advanced weapons across the full range of systems, but must still import its most advanced weapons and technology from Russia, which has made it one of the world's leading arms importers in recent years (SIPRI Arms Transfers database). Many developing countries have at least some domestic arms industry, although in some cases this may only be for small arms & ammunition, components, and/or assembly of foreign-designed equipment. No other developing country arms industry comes close to self-sufficiency.

¹¹ According to the SIPRI Trend Indicator Values, which measure volume of arms rather than monetary value.

¹² Apart from the difference in time period, a possible reason for the opposite results may be that Sezgin included the trade balance in the regressions, while Karagol didn't. The nature of regression analysis is that it determines the effect of each given variable, *holding the others constant*. But since the main reason millex is likely to lead to external debt is that it worsens the trade balance through arms imports, then holding the trade balance constant is likely to hide this effect. Essentially, Karagol was asking the question "What happens to debt if you increase millex?", while Sezgin was asking "What happens to debt if you increase millex, but the trade balance doesn't change?"

¹³ The case of Angola is discussed more thoroughly in the Military Expenditure chapter of the forthcoming SIPRI Yearbook 2008. (NB: text available to Oxfam on request, subject to embargo)

¹⁴ The World Bank suggests 10 principles of PEM: Comprehensiveness, discipline, legitimacy, flexibility, predictability, contestability, honesty, information, transparency and accountability. For further description on each of the principles please see World Bank Poverty Reduction and Economic Management Network (1998), *Public Expenditure Management Handbook*, Washington, DC: World Bank, URL <http://www1.worldbank.org/publicsector/pe/handbook/pem98.pdf> (last checked by the author April 2008)

¹⁵ 'A defence plan is the document that specifies the measurable outputs that the military sector will produce in pursuit of government's objectives, measured against the identified financial allocation within

the medium-term expenditure framework. The defence programmes convert the strategic defence plan into a format with clear responsibility and accountability of the programme managers.’ see Ball, N. and L. le Roux (2006) ‘A model for good practice’, in Omitoogun and Hutchful (eds.) (2006): 29, 32

¹⁶ Organization for Economic Co-operation and Development - Development Assistance Committee (2005) ‘Security Sector Reform and Governance: DAC Guidelines and Reference Series’, Paris: OECD: 37

¹⁷ Nigeria has a defence policy that has been drafted since 2001 and its contents are not widely known, while Mali has a code of conduct for the armed forces but it does not state the aim of the government policy in the military sector. See Omitoogun, W. (2006) ‘A synthesis of the country studies’, in Omitoogun, W. and E. Hutchful (2006): 228

¹⁸ For instance in the case of Ghana major weapons are financed through peacekeeping funds; in Nigeria through special oil revenue accounts or in Kenya under special fund provided from by the Office of the president.

¹⁹ Nigeria in the late 90’s provide with examples of the inflation of personnel and the request of unnecessary military equipment, see Omitoogun, W. (2006) ‘A synthesis of the country studies’, in Omitoogun, W. and E. Hutchful (2006): 241

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²¹ US Department of Commerce (2002) ‘The National Export Strategy: Report of the Trade Promotion Coordinating Committee’, Washington, DC: US Department of Commerce

²² See, *inter alia*, Roeber (2005), Transparency International (2006), Courtney (2002), <http://www.timesonline.co.uk/tol/news/uk/crime/article3022314.ece>, David, L. and E. Rob (2007) ‘Chile: The Guardian Country Profile’, <http://www.guardian.co.uk/world/2007/jun/07/bae26>, <http://www.guardian.co.uk/world/2007/jun/07/bae9>, David, L. and E. Rob (2007) ‘Tanzania: The Guardian Country Profile’, and David, L. and E. Rob (2007) ‘Qatar: The Guardian Country Profile’, <http://www.guardian.co.uk/world/2007/jun/07/bae25>. (All (last checked by the author April 2008))

²³ BBC News (2007) ‘Saudi Prince Received Arms Cash’, <http://news.bbc.co.uk/2/hi/business/6728773.stm> (last checked by the author April 2008)

²⁴ The Convention may be downloaded from [http://www.oilis.oecd.org/olis/1997doc.nsf/LinkTo/NT00000B7E/\\$FILE/04E81240.PDF](http://www.oilis.oecd.org/olis/1997doc.nsf/LinkTo/NT00000B7E/$FILE/04E81240.PDF). ((last checked by the author April 2008))

²⁵ OECD (2007) ‘OECD to Conduct a Further Examination of UK Efforts Against Bribery’, http://www.oecd.org/document/12/0,3343,en_2649_201185_38251148_1_1_1_1,00.html ((last checked by the author April 2008))

²⁶ The use of agents as middlemen is often crucial to the operation of corruption in the arms trade. These agents, often with close connection to decision-makers or indeed themselves members of a ruling family, are paid large ‘commissions’ on arms deals – often as much as 15% - which are then channelled as bribes to decision-makers, thus avoiding direct involvement by the exporters in payments.

²⁷ See for example IMF (2005) ‘The IMF’s Approach to Promoting Good Governance and Combating Corruption and Promoting Good Governance – A Guide’, <http://www.imf.org/external/np/gov/guide/eng/index.htm>; World Bank ‘Corruption is the Greatest Obstacle... to Reducing Poverty’, <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPUBLICSECTORANDGOVERNANCE/EXTANTICORRUPTION/0,,menuPK:384461~pagePK:149018~piPK:149093~theSitePK:384455,00.html>; and Christian Aid ‘Evil of Corruption’, <http://www.christianaid.org.uk/stoppoverty/powercorruption/background/index.aspx> (all (last checked by the author April 2008))

²⁸ As a striking example, they cite the city of Milan where, following the *Tangentopoli* corruption scandal in the 1990s and the resulting removal of corrupt officials, the cost of major public projects (road, rail and airport) fell by over 50%!

²⁹ David, L. and E. Rob (2007) 'South Africa: The Guardian Country Profile', <http://www.guardian.co.uk/world/2007/jun/07/bae11> ((last checked by the author April 2008))

³⁰ Transparency International 'Project PCOAT: Preventing Corruption in the Official Arms Trade', paper presented at the Araundel Confence, England, 8-10 June 2004 http://www.transparency.org/global_priorities/public_contracting/key_sectors/arms_trade (last checked by the author April 2008)