

Taxation of the global arms trade? An overview of the issues

Michael Brzoska*

I. INTRODUCTION

The idea of taxing the international arms trade is politically attractive. Its proponents have included a number of high-ranking politicians, such as former German chancellor Willy Brandt (Independent Commission on International Development 1980), as well as influential thinkers on development issues, such as the first editor of the Human Development Report, Mahbub ul-Haq (UNDP 1994). The proposal to look into the possible merits of an arms trade tax also came up in the wake of the global summit on development finance, held in Monterrey, Mexico, in 2002, and it was an issue during the G-8 Head of State Summit in Lyon, France, in June 2003. Prior to the meeting of the G-8 with representatives from major developing countries, Brazilian president Luiz Inacio Lula da Silva had declared an international arms sales tax to be one of his favored schemes to fund efforts to eliminate hunger. At least one of the G-8 leaders, French president Jacques Chirac, was publicly willing to contemplate the suggestion to study the proposal of taxing all arms transfers, or those of fire-arms to private citizens (*WorldNetDaily.com*, June 3, 2003).

Obviously there are major practical and also principal problems connected with an international arms trade tax. Given the repeated interest in the issue, a closer look seems more than justified. In some respects, the proposal of an arms trade tax is similar to that for a ‘Tobin’ tax on currency transactions. Unfortunately, different from the Tobin tax, the proposal of an arms trade tax has so far not received serious study (Spahn 2002). The objective of this paper is to review relevant aspects of an international arms trade tax. These include fundamental and ethical issues, but also practical ones, such as the incidence of such a tax, the amount of possible revenue and the possible use of the income of an international tax on the trade in arms.

* Dr., Director of Research, Bonn International Center for Conversion (BICC), An der Elisabethkirche 25, D-53113 Bonn, Germany, e-mail: mb@bicc.de.

II. EARLIER SUGGESTIONS

The idea of an arms trade tax first gained international prominence when selected as one of the major recommendations for further consideration in the 'Brandt-Report' (Independent Commission on International Development 1980), commissioned by World Bank president Robert McNamara. The commissioners argued that a tax on the arms trade would have the effect of increasing the price of arms and thereby reduce arms transfers. They argued that fewer imports of arms would both increase the means for investment into economic development as well as reduce the destructiveness of military conflicts. In addition, the Commissioners also saw an opportunity to rake in income that could be used for development purposes.

The Brandt-Report's suggestion of an arms trade tax was picked up by both non-governmental organizations and some governments in the early 1980s. It was repeated, for instance, in the Report by the Independent Commission on Disarmament and Security (1982), chaired by former Swedish Prime Minister Olof Palme. However, there was also major criticism of and opposition to the proposal, for a variety of reasons discussed below. In the end, there was little follow-on to the suggestion, a fate similar to the rest of the 'Brandt-Report'.

From the late 1980s, the idea of an arms trade tax has been predominantly promoted by Oscar Arias Sanchez, former President of Costa Rica and leader of a group of winners of the Nobel Peace Prize interested in initiatives to reduce the trade in arms (www.armslaw.org). Arias variously advocated to use the income gained from a substantial tax on the arms trade to feed a development fund, or to use the money to support disarmament activities in developing countries (Arias Sanchez 1995, 1996).

Recently, a variant of an arms trade tax has been debated within NGO circles concerned about the wide-spread suffering stemming from the use of small arms (Graduate Institute of International Studies 2003). The German small arms researcher Peter Lock proposed to levy a tax on ammunition exports and to require producers and traders of small arms to pay for compulsory third party damage liability insurance (Lock 1999). The income from these levies should be used to compensate victims of small arms use. A related suggestion for a compulsory third party damage liability insurance was made by a 'Group of Eminent Persons' on small arms issues chaired by former Malian President Alpha Omar Konaré and former French Prime Minister Michel Rocard (Konaré and Rocard 2000).

The proposals by the Brazilian and French presidents of June 2003 were thus based on a long-time debate on proposals for an international tax on arms transfers. However, despite – or possibly because – of the prominence of those mak-

ing the various proposals, little serious thought was given during this period to questions such as how it would work in practice, what its effects on both arms sellers and buyers would be. The debate remained on rather superficial levels, focussing on objectives and obvious objections to its feasibility, such as compliance by major arms sellers.

III. OBJECTIVES OF AN ARMS TRADE TAX

Proposals on an arms trade tax have vented a number of objectives:

- *Reduce the volume of the trade* (and, in turn, global production) in arms to reduce the costs of conflicts. The rationale here is two-fold. One is that arms are traded ‘too cheaply’, that social costs of destruction during war and reconstruction in war are not captured by the market price of arms. The second rationale is the assumption that fewer weapons would reduce the incidence and costs of wars, especially those fought by insurgents with little financial backup.
- *Reduce spending on arms imports*. From the Brandt-Report onward, it has been assumed by proponents of an arms trade tax that higher prices for arms would reduce spending for military purposes and thus allow for higher investment for development purposes.
- *Revenue for an international fund*. Over time, the aspect of raising ‘fresh’ money for various purposes gained in importance. Similar to most proposals for a Tobin tax, most proponents of an international arms trade tax argued for an international fund, administered by the United Nations, to spend the expected volume of revenues.
- *Compensate victims of wars*. A levy on sales of small arms and ammunition to compensate victims of small arms use draws on principles of compulsory insurance to internalize externalities for activities where it is difficult, or not opportune, to arrange for direct compensation. In the case of weapons, it is much simpler to levy the tax on exports, or production, than to try to get hold of users, which often will be rebels or criminals.

Similar to proposals for a Tobin tax, as well as taxes on global public goods (d’Orville and Najman 1995, Mendez 1997), proponents for a tax on arms transfers have generally seen benefit both in the reduction of a public ‘bad’, in this case arms transfers, and the raising of income, to be spent by an international organization, for public ‘goods’ such as development, disarmament or the compensation of victims of wars.

IV. COMPLIANCE ISSUES

1. Supplier participation

A standard objection to an arms trade tax – as well as to any other global tax, including the Tobin tax – is that it is unlikely that all, or even the major, governments would participate. There are several issues involved:

- *Incentives to export arms.* Arms producing countries have strong economic incentives to export arms (see below). Governments of arms producing countries will need to be convinced of the benefits of an international arms trade tax, as a lever on levels and intensity of conflicts and the benefits of an international fund fed by the arms trade tax.
- *Strategic behavior.* Unless at least the major supplier states are participating, individual arms producing countries introducing an arms trade tax will lose market shares (Sandler 2000, García-Alonso and Hartley 2000). Other, non-complying producers will gain market shares. As this is known to all suppliers, it is likely that no one will agree to raise the tax unless it is fairly safe that all major suppliers will agree (unless a country has strong national incentives to do so).
- *Absence of an enforcer.* Even if countries agreed to the tax in principle, there would need to be an institution to sanction individual countries in case of non-compliance. For instance, if the tax was raised at the level of producers, there would have to be a mechanism to ensure that producers raise the tax and transfer it to the fund.

2. Illicit trade

Another problem of an arms trade tax not unknown in other areas of taxation is that of tax evasion through illegal activity. Taxation is one of the main factors for the growth of shadow economies (Schneider and Enste 2000). Already a good part of the international arms trade is illicit, as noted elsewhere in this paper. The illicit arms trade encompasses not only the perfectly black market, where stolen or otherwise illegally acquired weapons are sold, but also various types of ‘gray’ markets, for instance covert sales by governments, illegal re-sales of used weapons, sales of weapons as dual-use goods etc.

A tax on arms transfers would be likely to increase the incentives for trading illicitly. It is however unlikely that black and gray markets would grow substantially as long as the major arms exporting countries were willing to enforce such a tax. The high-cost end of the internal arms market is regulated fairly

well, not in the least because it is difficult to hide the transfer of ‘big-ticket’ items. An arms export tax would not change this situation. On the other end of the market, small arms and light weapons, very substantial illicit trading is already occurring (Lumpe 2000). This may well increase. However, compared to the trade in major weapon systems, values in the trade of small arms, light weapons and ammunition are smaller. Tax evasion would probably be much more a problem in this end of the arms transfer market than at the high-cost end.

3. Increased transparency

Because of the potential gains from strategic behavior, governments asked to participate in an arms transfer tax will be concerned about full disclosure of information on arms transfers. The arms market is notorious for its secrecy. One major precondition for participation of a sufficient number of governments therefore is increased transparency in the arms trade. Again, a distinction needs to be made between major weapons and small arms and light weapons. While the level of transparency of the trade in major weapons has been improved somewhat over the years, for instance through the UN Register of Conventional Weapons (disarmament.un.org/cab/register.html), it is not sufficient for the effective operation of an arms trade tax. In particular, reliable information on prices and volumes is lacking. Such data would be necessary for the operation of an arms trade tax.

The situation is much more difficult with respect to small arms and light weapons. Here transparency in general remains low, despite some improvements in data availability during the last few years (Graduate Institute of International Studies 2003).

4. Stimulating domestic production

A tax on trade would very likely stimulate tax avoidance through non-taxed domestic production. It is well established in the literature that past restrictions on the arms trade stimulated domestic production (Brauer 2000, Levine, Mouzakis and Smith 2000). However, domestic arms production in countries that do not possess a diversified industrial infrastructure tends to be comparatively expensive. Most of the expensive arms are high-technology goods with large development costs. Manufacturing of weapon systems, particularly outside of the main producer countries, that is the United States, Russia, France, the United

Kingdom, China and Germany, consists largely of the integration of externally supplied high-tech components (Brzoska 1989, Bitzinger 2003). The stimulating effects of a tax on domestic arms production in recipient countries would be small if the tax covered components for weapon systems in addition to complete weapon systems. Production of many types of small arms, light weapons and ammunition is technically not very demanding and therefore more widespread (Graduate Institute of International Studies 2003). Import substitution is more likely for small arms, light weapons and ammunition than for major weapon systems.

IV. VOLUME AND PRICE EFFECTS OF AN ARMS TRADE TAX

The level of possible revenues from an arms trade tax has not been seriously estimated. One important reason are serious methodological problems. The volume of the arms trade is not well established, and neither are the shape of demand and supply curves for arms.

1. Arms trade volume

The volume of the global arms trade is not known. International trade statistics, such as those published by the United Nations or the International Monetary Fund, probably include most of the trade in arms, but mostly in categories that do not distinguish between military and civilian goods. Neither the Standard International Trade Classification (SITC) nor the Brussels Tariff Nomenclature (BTN), the two most widely used international trade classification schemes, provide sufficient detail to separate the trade in arms. Only a few national statistical offices differentiate further than recommended in international classification systems and publish comprehensive data on their exports and imports of arms. Those that do provide statistics that are not fully comparable, as different statistical standards of what goods to include are applied (Brzoska 1995, projects.sipri.se/armstrade/at_gov_ind_data.html).

Estimates of the volume of trade therefore have to rely on other methods. Generally the approach is to find information about the physical transfer of goods. The most ambitious of these efforts is the above mentioned UN Register of Conventional Arms. It came about in 1993 in order to increase transparency of cases of threatening accumulations of weapons. The reporting record on the exporter side has been good, though not comprehensive. However, the Register

only contains data on the number of some types of weapon systems transferred and no financial data.

Other sources provide estimates of the volume and value of the arms trade. The two best known are the US government (United States 2000, Grimmer 2003) and the Stockholm International Peace Research Institute (SIPRI 2003). Methodological basis for estimates and coverage differ substantially among these sources, which leads to large differences in numbers (see *Table 1*). Comparing these sources suggests a rough estimate of about US \$ 30 billion for the trade in major weapons (aircraft, armored vehicles, artillery, ground radar, missiles, ships) in the early 2000s. Multiple sources, including national arms export statistics, international trade statistics, and reports from non-governmental organizations, such as the Small Arms Survey (Graduate Institute of International Studies 2003) need to be added to arrive at an estimate to include other types of weapons (light weapons, ammunition) and spare parts. A rough estimate for the total legal trade in weapons and spare parts for the early 2000s is about US \$ 50 billion. These rough estimates do not include the illegal trade in arms. While there is a plethora of newspaper reports about illegal arms deals and a good number of investigative reports about country-specific illegal supply¹ no good overall data is available. Most of the cases that come to light concern small arms and spare parts. Based on the available information, and expert opinion on their overall significance, the illegal trade in arms has been estimated at between 2 and 10 percent of the legal trade (Lumpe 2000, Graduate Institute of International Studies 2003: 98). Methods of indirect estimation, as have been applied to international trade in general (Yeats 1995) or the 'shadow' economy (Schneider and Enste 2000) have so far not been applied to the arms transfer economy.

2. *Rough estimate of tax income*

A first ballpark estimate for income from an arms trade tax is easily done. Let us consider a simple arms export tax of 10 percent. Ignoring, for the time being, price, volume and tax evasion effects of such a tax, income from such a tax on global arms exports would be US \$ 3 billion for major weapons and US \$ 5 billion for all weapons and ammunition.

1. A leading non-governmental organization in this field is Human Rights Watch (www.hrw.org/arms/). The United Nations has also published reports on arms supply in violation of arms embargoes, authorized by the various sanctions committees of the UN Security Council, see <http://www.un.org/Docs/sc/committees/INTRO.htm>.

Table 1

Volume of global arms trade and share of developing countries, 1990–2002

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>US government data</i>													
Total exports in US \$ bn, prices of 2002	60	53	48	47	44	44	43	49	43	43	36	27	25
Share of 'developing nations' in world imports, in %	74	59	57	54	57	63	59	52	62	63	63	63	67
<i>SIPRI data</i>													
Total exports in US \$ bn, prices of 1990	28	24	22	22	19	19	20	25	23	21	15	16	16
Share of 'developing countries' in world imports, in %	61	59	50	59	65	62	61	57	52	51	64	60	67

Sources: US Department of State, Grimmett 2003, SIPRI 2003

Note: The US government data covers a broad range of arms transfers, SIPRI data covers only the trade in major weapons (aircraft, armored vehicles, artillery, missiles, radars and ships).

3. Arms trade price elasticities

Such a simple estimate of tax revenue needs to be modified, as quantities and prices will be affected by such a tax. In order to study such effects, demand and supply curves for the trade in arms need to be examined.

Few explicit studies are available for the price elasticities of demand and supply of arms transfers. These are either theoretical or based on studies of single cases (Anderton 1995, Levine and Smith 1995, García-Alonso 1999). However, additional information can be gleaned from more general analyses of the international arms trade, where demand and supply patterns are discussed verbally (Laurance 1992, Krause 1995).

There is no agreement in the literature on the price elasticity of supply. Standard economic reasoning, based on decreasing marginal product, assumes that the unit price increases with quantity. However, there are good reasons to surmise that the unit price actually decreases with longer production runs (Hartley and Sandler 2003). One major factor are the high up-front costs of weapon systems, which are often borne by the national procurement authorities and are not recovered in later exports to third countries. Countries with major arms industries have an interest in increasing production runs in order to save on procurement costs for given quantities of weapons, and therefore often sub-

sidize arms exports. A second factor are steep learning costs, resulting in increasing economies of scale. A third factor is time-limited and particular to the post-Cold War period. From the late 1980s, competition among suppliers grew because of the drastic cuts in military expenditures in many countries and the difficulties of arms producing companies to convert into civilian production. Large overcapacities of production ensued, which could only slowly be built down. During this period, many arms producing companies had comparatively large blocks of fixed costs, because of size of production facilities and labor market rigidities, but low variable costs because of large stocks of pre-products and cannibalization of older equipment. Two cases of supply curves are distinguished for simplicity's sake in the following discussion: one where supply increases proportionally with prices (unitary elasticity), the other where supply is not very sensitive to changes in prices.

The demand curve for weapon imports seems to be more standard. Levine and others found, in a cross-sectional comparison of arms trade statistics from different sources, a price elasticity of about -0.5 (the only other significant determinant of quantity in their regressions estimation was military expenditures of importers, which was positively related to quantities) (Levine, Mouzakis and Smith 1998, p. 232). However, it is both logical to assume and in line with available historic evidence, that the price elasticity of demand is lower, and may even become nearly inelastic for countries in crisis or at war. In such cases, a certain amount of weapons may be demanded, whatever the price (Brzoska and Pearson 1994).

What follows here is a brief summary of rough estimates of the effects of a tax, depending on price elasticities of demand and supply, with numerical examples for a 10 percent tax on arms exports and based on the assumptions of a pre-tax value of trade of US \$ 50 billion and of linearity in the relevant sections of supply and demand curves:

- With standard price elasticities for arms imports as found in the relevant literature (demand: -0.5 ; supply: 1) the price level will increase by 6.5% and quantities will decrease by 3.2%. The overall value of trade including the tax will increase by 3.0%. Of the overall value of trade of about US \$ 51.5 billion, about US \$ 46.4 billion would accrue to the arms sellers, and US \$ 5.1 billion to the taxing party. Arms buyers would get fewer weapons for a slightly higher amount of money they paid without tax, and arms sellers would have almost 10 percent less income but would also have to supply 3.2 percent fewer weapons.
- With a highly elastic supply of weapons (e.g. a price elasticity of 10) and a standard elasticity of demand (-0.5), a 10 percent sales tax would result in a decrease in quantity of arms exports of 0.5%, and an increase in price of

9.5%. Overall volume of the arms trade, including taxes, would increase by 9.0%, to US \$ 54.5 billion, of which about US \$ 49.0 billion would be paid to arms producers and US \$ 5.5 billion would go to the taxing party. Arms suppliers would almost get the same income for almost the same number of weapons sold, compared to the case without the tax, while arms buyers would have to pay more for more or less the same amount of arms.

- In the case of both a low price elasticity of demand (let us say -0.1) and a highly elastic supply of weapons (10), which seems the most realistic for a period of overcapacity in production and demand driven by countries in crisis, prices would rise by almost 10%, quantities would remain nearly constant and the volume grow by almost 10% to \$ 55 billion, \$ 5 billion of which would be tax.

The rough estimation of the immediate economic effects of an international arms trade tax using realistic assumptions about price elasticities of demand and supply, leads to the conclusion that it would yield considerable revenue, which would largely come about because of an increase in the overall value of the trade in weapons, but only a small reduction in the volume of weapon systems traded.

V. INCIDENCE OF AN ARMS TRADE TAX

Proponents for an arms trade tax seem to assume that the tax would be paid by the exporters. With spending occurring in the developing countries, the money flow is assumed to be predominantly North-South, from arms exporters to low-income beneficiaries. However, this would not likely be the case. An arms trade tax is a typical consumer tax. The burden of consumer taxes is generally shared among producers and consumers, depending on price elasticities of supply and demand. In the three examples calculated above, with little changes in quantities and an increase in prices almost equivalent to the tax, the burden of the cost of an international arms trade tax would almost entirely fall on the buyers.

1. *Tax incidence*

The trade in arms is predominantly a North-South trade, a trade from industrialized countries to developing countries (see *Table 2*). An initial impression therefore would be that a tax on arms transfers would predominantly be a tax on industrialized countries. This assumption seems to be behind ideas to use an arms trade tax as a fund for development purposes. However, as with other con-

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sumer taxes, neither the direction of the trade, nor the place where the tax is raised, determine who actually pays the tax. The incidence of the tax depends solely on the effects on prices and quantities.

Table 2

Main exporters and importers of Arms

US government data			SIPRI		
Main exporters, 1995–2002			Main exporters, 1998–2002		
	in US \$ bn	In % of total		in US \$ bn	In % of total
USA	129	42	USA	37	40
United Kingdom	48	15	Russia	21	23
France	35	11	France	8	9
Russia	29	9	UK	5	5
Germany	13	4	Germany	5	5
China	7	2	Ukraine	3	3
Main importers, 1995–1997			Main importers, 1998–2002		
	in US \$ bn	In % of total		in US \$ bn	In % of total
Saudi Arabia	65	21	China	9	10
Taiwan	20	6	Taiwan	7	8
Japan	10	3	India	5	5
Egypt	10	3	Turkey	5	5
China	9	3	Saudi Arabia	4	4
South Korea	9	3	Greece	4	4
U. A. E.	9	3	South Korea	3	3
Kuwait	7	2	Egypt	3	3

Sources: US Department of State, Grimmett 2003, SIPRI 2003.

Note: The US government data covers a broad range of arms transfers, SIPRI data covers only the trade in major weapons (aircraft, armored vehicles, artillery, missiles, radars and ships).

The earlier discussion of effects of a tax can be extended to cover the basics of the incidence of such a tax:

- In the ‘normal’ case, with ‘standard’ elasticities, the tax is split between buyers and sellers: buyers have to pay more for the arms they demand, but, with reduced quantities, producers sell less.
- In the case of nearly perfectly elastic supply, the price rises by almost the full amount of the tax. The tax has to be almost entirely borne by the buyers.

- The case of nearly perfectly inelastic demand is similar, in that the tax burden is also predominantly borne by the buyers.

The brief discussion of the incidence of an arms trade tax indicates that it will mostly be borne by the buyers. Producers are not likely to have to carry more than a part of the burden.

2. Tax incidence and tax objectives

Under realistic assumptions, an arms trade tax cannot facilitate much of a North-South transfer. As most of the income of the tax would stem from arms buyers in developing countries, these would be the source of the majority of funds. Only some of the revenue would be paid by exporters and importers in the industrialized countries.

An arms transfer tax would have more effects on prices than on quantities. It would not reduce arms imports by a large degree, under realistic assumptions. The income from the tax could be sizeable, if effective collection could be organized. This money could be used for a variety of purposes, including those mentioned above. The redistribution of funds effected by the tax would largely be between developing countries.

VI. PRACTICAL ASPECTS OF ARMS TRADE TAXATION

1. Tax collection

An arms export tax would best be collected at the point of export. While in theory there is no difference whether the tax is collected at the point of production, export or import, practical considerations make it more plausible to focus on exports. One reason is that the number of exporting countries is considerably smaller than the number of importing countries (about half as many countries). A second reason is that exporting countries are predominantly industrialized countries which in general have more experience in collecting export taxes and more effective revenue services.

2. Tax basis

While national definitions of weapons differ and international trade statistics do not cover weapons comprehensively, there exist a number of definitions of

weapons which would be readily available for taxation purposes. Two definitions, for heavy weapons and for light weapons have been developed within the UN system (UN 1997, UN 2001). In addition, the Wassenaar Arrangement, an informal information mechanism which includes more than 30 countries responsible for close to 95 percent of all arms exports has developed a comprehensive munitions list (www.wassenaar.org). The European Union has adopted a list which is very similar to the Wassenaar munitions list.

3. Re-exports

The implementation of an arms trade tax would face a number of specific issues that would need to be addressed. One such issue is re-exports. It lies in the logic of an arms export tax that all exports of arms should be taxed, whether they are exports of new or old weapons. Another issue is the export of components for weapons. Some of these components are legally classified as weapons because of their key importance in the production of arms, others are dual-use items, goods useful for the production of arms as well as civilian goods. The experience in existing export control regimes, such as the Wassenaar Arrangement, demonstrates that it is difficult, but not impossible, for major arms exporters to arrive at a joint definition of which goods should be taxed and which not.

VIII. PRINCIPAL ISSUES

The idea of an international arms trade tax raises a number of technical and practical issues, the most important of which were discussed above. However, there are also some fundamental issues involved.

1. Singling out trade

Taxing the transfer of weapons is quite popular, even though arms imports are only a part of the overall spending on weapons. The overall value of domestic procurement is considerably higher. Why taxing the trade in arms and not overall expenditures on arms?

One reason given for the focus on the arms trade by proponents is that for the large majority of developing countries, the import of arms is more important than domestic production (Brzoska 1995). Since one of the objectives of the proponents of an international arms trade tax is to reduce quantities of de-

liveries to developing countries, and thus the presumed negative effects of the accumulation of arms, it would seem to make sense to focus on imports. However, as the above discussion has indicated, a tax is not likely to result in major reductions of quantities.

Another reason is the assumed simplicity of taxing. Many governments have experience in taxing exports. Arms are currently in a special class of exports because of the comparatively high degree of intransparency of the arms trade. However, with improved transparency, export taxation should not present particular problems. Taxation of exports is generally preferred to taxation of imports because of the smaller number of exporters than of importers of arms. In addition, proponents seem to assume that it would be easier to gain consent for a tax from exporters than from importers (Arias 1995).

A final issue, seldomly raised in discussion of an arms trade tax, but always lurking in the background, is that the arms trade has a bad reputation. At least since the days of very open trade in weapons in the late 19th century, when producers such as Schneider in France, Krupp in Germany and Vickers in the UK supplied weapons with little regard to consequences, sometimes to both sides in a conflict, the arms trade has been the object of moral contempt. The foundation for this moral stand, namely that private profit is made from providing the instruments of war, as well as its double-standards, are well presented in George Bernard Shaw's 1905 play 'Major Barbara'. Since the end of World War II, the arms trade has been more tightly regulated by governments, with some exceptions, such as trade from East European countries in the 1990s. Cases of supply to both sides in armed conflicts from one source have been much rarer than before. Still the international arms trade continues to have a negative image. Proponents of an arms trade tax focus on the detrimental effects that weapon imports can have on conflict and the financial means for development. The empirical evidence, however, on both points is weak. The relationship between arms import patterns and conflict is not robust (Pearson 1989, Brzoska and Pearson 1994, Kinsella 1998). Arms imports obviously reduce the means available for other purposes, but they are generally too small to have identifiable effects on economic development, so that in econometric analysis, military expenditures are preferred as independent variable. A majority of studies concludes that there is a negative effect on economic growth, however the empirical evidence is not very strong (for an overview see Dunne 1996).

Based on the widespread negative image of the trade, it already receives special attention in several ways. For instance, almost all countries have regulations for licensing arms exports on the basis of political criteria. Also, as was mentioned above, the UN maintains the Register of Conventional Weapons, an instrument of early warning of excessive accumulation of arms put into place

after Iraq's armaments programs of the late 1980s had helped it to be an aggressive military power. Arms exports restrictions are also the major form of sanctions under Chapter VII of the UN Charter mandated by the UN Security Council in the 1990s (Brzoska 2001). Finally, the UN has held special conferences on the trade in small arms and light weapons (Graduate Institute of International Studies 2003). An arms trade tax would be a further, though not radically new, step in differentiating arms from other goods.

2. Different treatment of production for domestic purposes and international trade

A particular problem of an arms trade tax is that it privileges domestic production over trade. Countries which are importing weapons will be disadvantaged compared with those producing them domestically. It has been argued that this is unfair because it rewards domestic arms production, which is likely to be more costly than arms imports. Domestic production may also have worse effects on the incidence and severity of conflict, as arms exports by most suppliers are regulated on the basis of political criteria, while there are no restrictions on domestic production.

In summary, it is questionable to only tax the trade in arms and not domestic production. Proponents have chosen to focus on trade for practical reasons, and because of the widespread negative image of the arms trade. It is easier to tax the arms trade than, for instance, all procurement or total military expenditures.

3. Correcting market distortions through subsidies

The taxation of the arms trade is a proposal with an uncertain future. But its fiscal opposite, subsidization of the international arms trade, is a current reality. As mentioned above, arms exports are heavily subsidized by exporter countries (Brzoska 1992, US GAO 1995, Hébert 1998, Gold 1999, Assemblée Nationale 2000, Hartley 2000, Brittan 2000). Export subsidies include the following forms (Brzoska 2004):

- *Direct subsidies.* A number of suppliers financially support buyer countries, or buy weapons from producers and sell them, below production costs, to allies. An example of such a subsidy is the grant portion of the United States' Foreign Military Financing program. The US government spent US \$ 3.7 billion under this program in the Fiscal Year 2002, predominantly for arms transfers to Israel (US \$ 2 billion) and Egypt (US \$ 1.3 billion).

- *Indirect subsidies.* A form of indirect subsidy results from the transfer of partly fungible resources to buyer governments which then use these resources, or their own resources freed by these transfers, to purchase weapons. The US government for instance provided, in the Fiscal Year 2002, US \$2.3 billion of foreign aid under the Economic Support Fund, which predominantly is used to help Egypt and Israel defray the costs of weapons bought from US companies. Another form of indirect subsidy is the linking of military and civilian projects. The UK government, for instance, funded the Pergau Dam in Malaysia with the tacit understanding that the Malaysian government would buy British Hawk aircraft. A High Court ruled this an illegal use of development aid money in October 1994 (<http://ebooks.whsmithonline.co.uk/encyclopedia/40/M0045540.htm>).
- *Export financing schemes.* A number of countries maintain subsidized export credit schemes that regularly also cover arms sales. In addition, major supplier governments also give direct credit. The German government, for instance, is directly covering sales of submarines to Turkey at a concessional rate of interest. Military exports are explicitly exempted from the OECD's Guidelines for Officially Supported Export Credits (for the text see www.oecd.int/ech/act/xcred/arrngmnt.htm) as well as from the authority of the World Trade Organization (on the basis of Art. 21 of the General Agreement on Trade and Tariffs of 1947, and Art. 14 of the General Agreement on Services, see http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm1_e.htm).
- *Marketing subsidies.* Marketing of arms is often supported at government level, in the British case, for instance, by the Defence Export Services Organization (www.deso.mod.uk). Centralized government marketing can be an instrument to ensure that the seller government receives a part of the proceeds from arms exports, such as in the case of Russia's Rosoboronexport (www.rusarm.ru), in other cases, however, the government subsidizes sales through government agencies.
- *Operational support.* In many cases, governments are willing to provide training support to purchasers of weapons, either in their own countries, as a form of military aid, or in the buyer country. Sweden, for instance, has trained Indian officers to use Bofors guns sold to the country.
- *Payment of initial research and development.* Exports of weapons are often calculated on the basis of variable unit costs, not total costs. Initial research and development costs, which often are a large chunk of total costs are predominantly borne by the original producer government and not charged to export customers.

There are a number of estimates of arms export subsidies for individual countries which range between a few percent of the total value to more than a third

of the value. The global amount of dedicated aid for military exports has declined since the Cold War but it is still substantial (Brzoska 1992, 2004, Hartley 2000). It is particularly extensive in countries with large arms industries, which have strong lobbies for the support of these industries. The United States alone has spent close to US \$ 6 billion to support arms transfers in 2002. Not included in the data on arms trade subsidies are generally cases of defaults by customers. Arms trade debts are generally not separated from other forms of debt and are, if need be, rescheduled as part of general debt relief. However, it is known that around the time of the Second Gulf War the US and other industrialized countries canceled close to US \$ 10 billion of debt outstanding from arms imports by coalition countries. Iraq, on the other hand, had until recently debts of similar magnitude to France and Russia for arms deliveries prior to the Second Gulf War (Brzoska 1992).

Depending on elasticities, arms transfer subsidies benefit both producers, who can sell larger volumes, and buyers, who get weapons at lower prices. An arms trade tax could partly correct for the general market distortion brought about by these subsidies. However, as mentioned, subsidies vary considerably among suppliers. A flat tax rate would not eliminate the distortion among suppliers but would reduce the financial benefits of current subsidies for importers and producers. Importers would pay prices more closely related to production costs. If subsidies, which are predominantly paid by taxpayers in producing countries, and an international arms trade tax, which would predominantly be paid by arms importing countries, were in place in parallel, the combined financial flows would be predominantly from tax-payers in arms exporting countries to the international arms tax fund. The net position of producers and importers, who both gain from subsidies and lose from a tax, would depend on the exact elasticities of supply and demand, as well as the extent of taxes and subsidies.

4. Windfall profits for illicit traders

Another fundamental issue raised by some opponents to an arms trade tax is that it would benefit black and gray market arms dealers (Lock 1999). These would be able to charge prices which included the tax without paying the tax. As argued above, the financial aspect seems to be less of a concern, particularly if an arms trade tax was parallel to improvements in transparency. The trade in small arms and light weapons would present greater problems than the trade in major weapons.

The best way to deal with this issue, common to any tax including the Tobin tax, would be to reduce the amount of illicit trade. An important step in this di-

rection would be the improvement of transparency in the arms trade. Another is to improve investigation and sanctioning of black market activities. The international community has made some efforts in this direction. One is related to arms embargoes, where monitoring has been strengthened through the establishment of special investigative panels since the mid-1990s (Brzoska 2001). The other focuses on the trade in small arms, where the fight against illicit trade is a priority in a Program of Action adopted by a UN conference in 2001 (Graduate Institute of International Studies 2003).

5. Fungibility of foreign aid

According to the analysis presented in this paper, the recipients of arms who are predominantly in developing countries, would bear most of the burden of an international arms tax. Many of these, however, are also recipients of development assistance. So the question arises, to what extent an arms trade tax would be paid for by development aid.

The issue of the fungibility of foreign aid for the purchase of arms was first raised by Bruno Frey (1975; see also McGuire 1982, Brzoska 1992). An increase in the cost of arms caused by an arms trade tax will likely lead to a higher share of resources available to an importing government to be used for arms imports. Development donors have some countermeasures available, such as linking foreign aid to conditions on arms spending or allocating aid to projects the recipient government would not be willing to fund from its own resources. However, such projects are rare, and in practice it is difficult for external actors to influence the priorities of a government which is receiving development aid (Devajaran and Swaroop 1998).

An additional issue arises from the distribution of funds from an international arms trade tax for development purposes, as envisaged by some of its proponents. Transfers from an international tax fund to an arms buying government would at least partially help that government to cover its additional costs resulting from the imposition of the international arms trade tax. This would clearly be counter to the objectives of an international arms trade tax. Funds from an arms trade tax should therefore in principle not be allocated to countries who are buying weapons in large quantities. In case there are good development policy reasons for such allocations, funds should go to specific projects which are clearly benefiting development.

A better alternative would be to prioritize the spending of revenue from an international arms trade tax in countries which are reducing their arms imports and military expenditures. Disarmament, such as the demobilization and re-

integration of armed forces, the destruction of weaponry and the conversion of defense industries could also be funded directly (Arias 1995).

IX. CONCLUSIONS

Many valid objections have been raised, earlier and in this paper, against naive proposals for an international arms trade tax assuming that this would provide a North-South transfer mechanism of money for objectives such as development funding. Using realistic assumptions about the economics of the arms market, particularly the price elasticities of supply and demand imply, however, that an arms trade tax is likely to be predominantly funded by arms buyers, most of which are developing countries. Spending on imports of arms, including the tax, by developing countries is likely to be higher with tax than in the absence of a tax. Other important objections question the logic of taxing arms transfers, and not all procurement or military expenditures. The moral base for an arms *trade* tax is indeed weak, however, there are good practical reasons to focus on arms transfers.

On balance, the idea of a tax of weapons remains attractive. The revenue of an international arms transfer tax could be quite sizeable. A 10 percent export tax, for instance, could raise up to US \$ 5 billion. However, in order for an international arms trade tax to reach the stated objectives, the spending of tax revenue would have to be more targeted than foreseen in earlier proposals. Unless predominantly going to countries reducing arms imports and military spending, the tax revenue may partly be used to fund the increase in the cost of arms imports.

There are many practical problems of an international arms trade tax, though fewer than for other international taxes, such as the Tobin tax, where the tax base is more difficult to delimit and evasion is easier. The most important problem is the current low level of transparency of the international arms trade, particularly the trade in small arms and light weapons. Without major improvements in transparency, an international arms trade tax would be doomed to fail.

The most important obstacle is political. Despite recently renewed interest, an arms trade tax is not close to becoming a reality. There are strong interest groups both in exporting and importing countries supporting international arms transfers. However, with conflict and lack of development looming larger on the international policy agenda, mostly because of their obvious link to the fight against poverty, but also because of their potential relation to international terrorism, proposals for an arms sales tax may find more support in the future than in the past.

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SUMMARY

A number of proposals for a tax on the international trade with weapons have been made during the last 25 years, most recently prior to the G-8 summit in Lyon, France, in June 2003. Originally, the major objectives were both to reduce the level of trade in arms and raise money for purposes such as development and disarmament. Later proposals included the compensation of victims of the use of specific types of weapons. Various objections have been raised against the suggestions for an international arms trade tax. Major points include the difficulties of achieving sufficient levels of compliance, tax evasion through increases in domestic production and a stimulation of the illicit trade in arms. There are also fundamental objections against demeritorizing arms transfers only, and not also domestic production of arms. In order for an international arms trade tax to work, the level of transparency in the international arms trade would need to increase. A major part of the tax burden would be borne by buyers of arms, who are predominantly developing countries. However, these are currently also major beneficiaries of large-scale subsidies on arms exports. An international arms trade tax will lead, using available estimates of price elasticities, to an increase in expenditures on arms import. Transfers from a fund fed by an arms trade tax should be spent in those countries which substantially reduce their spending on arms imports. In general, an arms trade tax makes more sense as a measure for disarmament than as a measure for development.

ZUSAMMENFASSUNG

Mehrfach ist in den letzten 25 Jahren vorgeschlagen worden, den internationalen Waffenhandel zu besteuern, zuletzt während des G-8 Gipfeltreffens in Lyon, Frankreich, im Juni 2003. Ursprüngliche Hauptziele waren sowohl die Einschränkung des internationalen Handels mit Waffen als auch die Erzielung neuer Einnahmen zur Förderung von Entwicklung und Abrüstung. Spätere Vorschläge betrafen die Kompensation von Opfern verschiedener Waffentypen. Gegen die Vorschläge einer Abgabe auf Waffentransfers sind verschiedene Einwände vorgebracht worden. Wesentliche Argumente sind die Schwierigkeiten der Befolgung, Steuervermeidung durch erhöhte Eigenproduktion und die Verdrängung des Waffenhandels in die Illegalität. Es gibt auch grundsätzliche Bedenken gegen eine Besteuerung nur des Waffenhandels und nicht der Produktion. Eine wesentliche Voraussetzung für eine internationale Waffenhandelssteuer ist die Erhöhung der Transparenz im internationalen Waffenhandel. Ein Grossteil der Steuerlast würde von den Käufern getragen, die überwiegend Staaten der Dritten Welt sind. Diese sind aber zur Zeit auch Nutzniesser von Subventionen des Waffenexportes. Eine Waffenhandelssteuer würde, unter realistischen Annahmen über die Preiselastizitäten, zu einem Anstieg der Ausgaben für Rüstungsimporte führen. Mittel aus einem Fonds, der durch eine Waffenhandelssteuer gespeist wird, sollten in Länder fließen, die ihre Rüstungsimporte substantiell verringern. Zusammengefasst macht eine solche Steuer auf Waffentransfers mehr Sinn als Abrüstungsmassnahme denn als Quelle von Entwicklungsfinanzierung.

RÉSUMÉ

A plusieurs reprises pendant les 25 dernières années, et dernièrement au sommet des G 8 à Lyon, on a proposé de taxer les ventes internationales d'armes. A l'origine, les objectifs étaient autant la limitation des ventes internationales d'armes que l'accès à de nouvelles sources de revenus pour favoriser le développement et le désarmement. Des propositions ultérieures concernaient la compensation des

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victimes des différents types d'armes. Plusieurs objections ont été faites contre ces propositions pour la taxation des ventes d'armes. Les arguments essentiels sont la difficulté du contrôle de l'exécution d'une telle mesure, l'incitation à une production d'armes endogène pour éviter la taxation et l'encouragement à la production clandestine d'armes illégales. Il y a aussi des réserves fondamentales contre une taxation des ventes d'armes qui ne prendrait pas en compte leur production. Une des conditions primordiales pour une taxe sur les transferts d'armement est une transparence accrue des ventes d'armes. La plus grande partie des charges incombera aux acheteurs qui sont, principalement, des pays du tiers monde. Et pour le moment, ceux-ci profitent aussi des subventions accordées aux exportations d'armes. Une taxation des ventes d'armes pourrait mener à une augmentation des dépenses pour l'importation d'armes. Les moyens financiers d'un fonds nourri par la taxation des ventes d'armes devraient être utilisés par des pays qui réduisent leurs importations d'armes de manière substantielle. En résumé, une telle taxation des transferts d'armement a plus de sens en tant que mesure pour le désarmement que pour le financement du développement.

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