

# Appendix 7B. Available government and industry data on the arms industry

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## I. Introduction

The arms industry is the supplier of the military means of power. While similar to other industrial activities in its pursuit of economic wealth, goods produced by this industry play a central role for peace and war. It is therefore essential that arms production be subject to rules of public accountability. Accountability in arms production should facilitate oversight and evaluation of the activities of arms-producing companies and of government decisions related to the arms industry.

However, information on world arms production is patchy and generally poor, although the amount of information made publicly available has increased significantly in the past decade. The intense post-cold war effort to reduce overcapacities in arms production led to a profound restructuring of the world arms industry. For all the actors involved in the process—industrial, political, and military leaders as well as individual shareholders—it is essential to gain insight into the size and structure of the arms industry. Available information has also become more easily accessible to the general public through the rapid advances in information technology, which have vastly expanded the possibilities for swift dissemination of information.

Yet, while the sheer amount of available information has grown, open, valid and reliable information on the arms industry (made available through regulated procedures and on a regular basis) has increased only in a few countries. Public understanding of and research into the dynamics of arms production therefore largely rely on information disclosed voluntarily and on an ad hoc basis.

In a large number of countries national security and commercial confidentiality motives severely limit the collection and disclosure of information on the arms industry. While efforts towards an international standardization of reporting rules and practices on related military matters, such as military expenditures<sup>1</sup> and arms transfers,<sup>2</sup> have resulted in some improvements, no similar efforts have been initiated in the area of arms production.

This appendix therefore reviews information on the size of the arms industry that was made available by industry associations and government organizations in the 20 largest arms-producing countries in the late 1990s.<sup>3</sup> The focus is on quantitative information that provides an indication of the economic importance of the arms industry, such as the value of arms sales or arms production and the number of employees in arms production.<sup>4</sup>

<sup>1</sup> See appendix 6D in this volume.

<sup>2</sup> See appendix 8E in this volume.

<sup>3</sup> According to data and estimates of the value of national arms sales in US\$ for the most recent year available, in the period 1996 through 2000 these countries are (in alphabetical order): Australia, China, Canada, France, Germany, India, Italy, Israel, Japan, South Korea, the Netherlands, Russia, Singapore, South Africa, Spain, Sweden, Taiwan, Ukraine, the United Kingdom and the United States.

<sup>4</sup> A possible alternative approach could focus on the number or volume of weapons produced.

In the past decade SIPRI has compiled statistical information on the largest arms-producing companies in the Organisation for Economic Co-operation and Development (OECD) and developing countries. This has been an important tool for analysing the adjustment strategies of arms-producing companies to changes in the military market and in the broader industrial environment.

Company data, however, are inadequate to assess the overall weight of the arms industry in national and international economic and political dynamics for two reasons: the fundamental lack of comparable data for all arms-producing companies, and the difficulty of deriving the overall size of and trends in arms production from company data. As a result of the restructuring of the arms industry in the 1990s the top layer of the world arms industry is made up of large private corporations with a broad shareholder base. These corporations publish a large amount of information on their organization and financial performance. However, few arms-producing companies provide open and clear information on their sales related to the production of arms. While the format of general financial reporting by companies is highly standardized across countries in other areas, there is no obligation for companies to report specifically on the production of military equipment.<sup>5</sup> Information on the number of individuals employed in the arms-producing parts of companies is provided even more seldom than information on the value of output in arms production.

Available company data do not suffice to derive information on the national level or on trends in arms production. Owing to the complex structure of the world arms industry, with large prime contractors with production facilities in more than one country and a large number of subcontractors, a simple addition of company sales or production values does not produce national totals.

For these reasons, and facilitated by the increased availability of data in the late 1990s, SIPRI has begun to complement the collection of data on arms-producing companies with a collection of available national statistics. This appendix presents the results of that process; it addresses only the availability of information on arms production at the national, not the company, level.

## II. Reporting practices

Government organizations or arms industry associations in more than one-half of the 20 largest arms-producing countries in the late 1990s have made available certain information on the size of the national arms industry at some point in time in the 1990s. However, the lack of standardized rules and practices for gathering and disclosing information on the arms industry severely limits the value of what is available.

Accountability demands that the disclosed data be valid, reliable and provided in a format that facilitates comparison not only across time, but also with production for civilian purposes and across countries. In order to be valid economic statistics on the arms industry have to provide a sound indicator of the economic importance of arms production within the wider economy. Such indicators are the financial value of arms

<sup>5</sup> Within the industry there are various initiatives that are intended to improve and harmonize non-financial reporting by private corporations. The primary focus of these initiatives is on environmental and employment aspects of business activities. See, e.g., Global Reporting Initiative, 'Sustainability Guidelines on Economic, Environmental and Social Performance', June 2000, URL <<http://www.globalreporting.org/>>.

sales for single companies and on a value-added basis on the national level,<sup>6</sup> including a breakdown into domestic and foreign sales as well as by product type. An additional indicator of the economic importance of the arms industry is the number of people employed in the production of arms.

However, the arms industry does not form a distinct industrial sector according to generally accepted industrial codes, and there is no agreement on the definition of 'arms production' and the methodology required for its measurement. The use of other terms, such as 'defence' or 'national security' without any clear definition of their content contributes to obfuscate knowledge about the arms industry. In the absence of a standard definition of 'arms' or 'military goods', published data need be supported by detailed information on the methodology applied for producing them.

External rules for implementing data collection and dissemination are a necessary precondition for guaranteeing reliability. In the absence of such standards and rules vested interests, such as industries that seek government support, may determine the content of the information disclosed.

No government or industry organization in the 20 largest arms-producing countries in the late 1990s provided comprehensive, valid and reliable information on the national arms industry in a single, official document that included employment and financial statistics, as well as information on defence industrial policy issues and developments in the wider economic and political framework in which arms-producing companies operate.

Available information on the arms industry is generally provided in publications with a broad coverage, such as military statistical publications or defence White Papers. Exceptions to this are the arms industry surveys published by the Spanish Government and the arms industry associations of Canada and Sweden.

Detailed statistics on the size of the national arms industry, including financial values and employment statistics, are available for only two countries (France and the United Kingdom), while less detailed statistics are available for Canada, the Netherlands, Spain and Sweden (table 7B). Because of the lack of international standardization the available statistics are not comparable even for these countries.

No regular data on the national arms industry are provided for Australia, China, Germany, Israel, Italy, South Africa and Ukraine. For Australia, Italy and South Africa comprehensive surveys of the state of the national arms industry and its perspective for the future were published in the late 1990s to provide the basis for a review of defence industrial strategy and policy options. The surveys include some statistics on the value of and employment in arms production.

While no regular statistics on the value of the arms sales of the Russian industry are available, the Teleinformation Network of the military-industrial complex, (Teleinformatsionnaya Set, TS-VPK) has provided detailed information on quantitative trends with regard to output and employment in arms production since 1991. These were published only for the months of January to November in 2001 but not for December and not for the full year 2001, and it is unclear whether they have been discontinued.

<sup>6</sup> Because of the difficulty of covering all arms-producing activities within a country and obtaining information on the value-added share of their arms sales, estimates of national arms sales are often based on data on domestic arms procurement expenditure plus arms exports.

**Table 7B.** Open and regular sources for national data on the arms industry in the 20 largest arms-producing countries

Country <sup>a</sup>	Source	Statistics				First year of data
		Output <sup>b</sup>	Employ-ment <sup>c</sup>	Defini-tion <sup>d</sup>	Background information <sup>e</sup>	
USA	Government <sup>f</sup>	–	+	–	–	
	Government <sup>g</sup>	(+)	–	–	–	
	Government <sup>h</sup>	–	–	–	+	1996
France	Government <sup>i</sup>	+	+	+	–	1999
UK	Government <sup>j</sup>	+	+	+	–	
Germany	–	–	–	–	–	
Japan	Government <sup>k</sup>	+	–	–	–	
Russia	Government <sup>l</sup>	Index	Index	–	–	
Canada	Industry <sup>m</sup>	+	+	–	–	1997
China	–	–	–	–	–	
Israel	–	–	–	–	–	
Italy	Government <sup>n</sup>	–	–	–	–	
South Korea	Government <sup>o</sup>	+	–	–	–	
Australia	Government <sup>p</sup>	–	–	–	–	
India	Government <sup>q</sup>	+	–	–	+	
Netherlands	Government <sup>r</sup>	(+)	–	(+)	(+)	1997
Singapore	–	–	–	–	–	
South Africa	Government <sup>s</sup>	–	–	–	–	
Spain	Government <sup>t</sup>	+	+	–	+	1998
Sweden	Government <sup>u</sup>	+	–	–	–	1999
	Industry <sup>v</sup>	(+)	(+)	–	–	1987
Taiwan	Government <sup>w</sup>	(+)	–	–	–	
Ukraine	–	–	–	–	–	

+ = Valid data and information; (+) = invalid data (i.e., company data rather than total national values or numbers, and contract values rather than sales/production values); – = no data or information.

*Notes:*

<sup>a</sup> Countries are grouped within broad ranges according to the estimated value of their arms sales. Within these groups countries are listed in alphabetic order.

<sup>b</sup> Values of total arms production or arms sales.

<sup>c</sup> Total, direct, or indirect employment in arms production on a national level.

<sup>d</sup> Clear definition of what is measured.

<sup>e</sup> Qualitative assessment of the development of the arms industry and reference to relevance policy issues.

*Sources* (most recent edition):

<sup>f</sup> US Department of Defense, Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2002*, Aug. 2001, URL <<http://www.dtic.mil/comptroller/fy2001budget>>.

<sup>g</sup> US Department of Defense, Directorate for Information Operations and Reports, *Prime Contract Awards* (annual); URL <<http://web1.whs.osd.mil/peidhome/procstat/procstat.htm>>.

<sup>h</sup> US Secretary of Defense, Deputy Under Secretary of Defense (Industrial Affairs), *Annual Industrial Capabilities Report to Congress*, Mar. 2002, URL <[http://www.acq.osd.mil/ip/ip\\_products.html](http://www.acq.osd.mil/ip/ip_products.html)>.

<sup>i</sup> Ministry of Defence, Observatoire Economique de la Défense, *Annuaire statistique de la défense 2001* [Defence statistical yearbook 2001], June 2001.

<sup>j</sup> Ministry of Defence, UK, Defence Analytical Service Agency, *UK Defence Statistics 2001*, 2001, URL <<http://www.mod.uk>>.

<sup>k</sup> Amount of defence production: Japan Defense Agency, *Defense of Japan 2001*; and contract awards: Japan Defense Agency, annual list of 20 largest contractors.

<sup>l</sup> Teleinformatsionnaya Set, TS-VPK, URL <<http://www.vpk.ru/eng/index.htm>>.

<sup>m</sup> Grover, B., *Canadian Defence Industry 1999: A Statistical Overview of the Canadian Defence Industry*, Dec. 1999, URL <<http://www.cdia.ca/fullreport.htm>>.

<sup>n</sup> Ministry of Defence, Italy, Defence–Industry Committee, *Lineamenti di Politica Industriale per la Difesa* [Defence industry policy outlines], Oct. 1996, p. 41.

<sup>o</sup> Ministry of National Defense, South Korea, *Defence White Paper 2000*, 2001, pp. 159 ff.

<sup>p</sup> Department of Defence, Australia, *Defence and Industry Strategic Policy Statement*, June 1998, URL <[http://www.dmo.defence.gov.au/id/di\\_policy/policy.pdf](http://www.dmo.defence.gov.au/id/di_policy/policy.pdf)>.

<sup>q</sup> Ministry of Defence, India, *Annual Report 2000–2001*, pp. 52 ff., 2001, URL <<http://www.mod.nic.in/reports/report01.htm>>.

<sup>r</sup> National Conventional Arms Control Committee, *White Paper on the South African Defence Related Industries*, 1999, URL <[http://www.polity.org.za/govdocs/white\\_papers/defence/defenceprocure1.htm](http://www.polity.org.za/govdocs/white_papers/defence/defenceprocure1.htm)>.

<sup>s</sup> Domestic orders for military equipment: Ministry of Defence, Directorate General for Armament, *Jaaroverzicht Materieelbeleid* [Procurement policy] (annual); arms export licences: Ministry of Economic Affairs, *Nederlandse Wapenexportbeleid 2000* [The Netherlands arms export policy in 2000], July 2001, URL <[http://www.ez.nl/beleid/ext\\_frame.asp?site=/beleid/home\\_ond/handelspolitiek/hpinx01.htm](http://www.ez.nl/beleid/ext_frame.asp?site=/beleid/home_ond/handelspolitiek/hpinx01.htm)>.

<sup>t</sup> Ministry of Defence, Spain, *La industria de defensa en España* [The defence industry in Spain], 2000, URL <<http://www.mde.es/mde/infoes/indus3/>>.

<sup>u</sup> Swedish Ministry for Foreign Affairs, *Swedish Arms Exports 2000*, 2001, URL <[http://www.utrikes.regeringen.se/propositionermm/skrivelser/pdf/s20002001\\_114.pdf](http://www.utrikes.regeringen.se/propositionermm/skrivelser/pdf/s20002001_114.pdf)>. The data are compiled by Inspektionen för strategiska produkter [National Inspectorate of Strategic Products], URL <<http://www.isp.se>>.

<sup>v</sup> Association of Swedish Defence Industries, *Facts about the Swedish Defence Industry 2001–2002*, Aug. 2001; and *Statistics 2001*, URL <http://www.defind.se/pdf/statistik.htm>, Mar. 2002.

<sup>w</sup> Ministry of National Defence, Republic of China, *National Defence Report 2000*, 2000, pp. 83, ff.

## Industry associations

Only few of the national arms industry associations provide valid economic statistics on their member companies to the public at large. This is probably a result of the fact that they are established primarily for political lobbying on behalf of their member companies.

Two national arms industry associations, the Canadian and Swedish, published statistics on national output and employment in arms production in the late 1990s. The Canadian association commissioned an ambitious statistical survey in 1997 as the first of a series of biannual publications. Data on total national arms sales compiled by the Swedish association since 1987 are of limited value as they are derived from an aggregation of total company arms sales, rather than value-added sales. The aggregate values therefore include sales of weapon components and parts by sub-contractors, which are also included in the value of sales of final weapons by prime contractors. Until 2000 the industry association used a different definition than the

Swedish Government (Swedish National Inspectorate of Strategic Products, ISP) and published the statistics in the government arms export report to the Swedish Parliament since 1999.<sup>7</sup>

### Government organizations

In the 1990s two countries initiated efforts to enhance the dissemination of statistics on the military sector in order to improve public understanding of its role in the wider economy. The *UK Defence Statistics* has been published since 1992. The publication was initiated in order to ‘improve the availability and presentation of statistical information on defence’, traditionally compiled in the *Statement on the Defence Estimates*,<sup>8</sup> which is presented annually to parliament by the Secretary of State of Defence.<sup>9</sup> The information on the UK’s arms industry that is provided includes arms industry employment statistics, statistics on domestic equipment expenditure and export sales, as well as Ministry of Defence payments to contractors.

The French Ministry of Defence first published its *Annuaire statistique de la defense* in 1999. The publication aims to provide a comprehensive overview of the role of the military sector in the national and international economy. The yearbook therefore contains extensive comparative notes.<sup>10</sup> It also includes a presentation of major arms-producing companies, arms industry employment statistics by sector and geographical region, and arms sales statistics by markets.<sup>11</sup>

No single comprehensive statistical report is provided by the government in the country with the world largest arms industry: the United States. While the US President is empowered to collect data on the national defence technology and industrial base, there are severe limitations on the disclosure of the information.<sup>12</sup> Statistics on prime contract awards, arms exports and employment in arms production are available from separate sources. An assessment of the state of the arms industry and an overview of relevant policy developments has been presented since 1996 by the Secretary of Defense to the Committees on Armed Services of the Senate and the House of Representatives in the *Annual Industrial Capabilities Report to Congress*.

<sup>7</sup> The definition of arms sales used by the ISP is more restrictive than the one used by the arms industry association.

<sup>8</sup> The British *Statement on the Defence Estimates* was published until 1996; it was not produced in 1997 because of the Strategic Defence Review. In 1998 the *Statement on the Defence Estimates* was replaced by the *Strategic Defence Review Report: Strategic Defence Review*; in 1999 it was renamed the *Defence White Paper*.

<sup>9</sup> The decision followed a ‘detailed review of the dissemination of Defence statistics’. Ministry of Defence, *Defence Statistics, 1992 Edition* (Government Statistical Service: London, 1992).

<sup>10</sup> The publication of the yearbook represents a clear improvement in the amount and quality of information on arms production provided by the French Government. Hébert, J.-P., ‘L’information économique du ministère de la Défense, Le Débat Stratégique’ [Economic information from the Ministry of Defence: the strategic debate], no. 44 (May 1999), URL <<http://www.ehess.fr/centres/cirpes/ds/ds44/infoeco.html>>.

<sup>11</sup> Data on arms sales are based on government expenditure data rather than on industry sales data. Ministry of Defence, *Annuaire statistique de la defense 2001* [Defence statistical yearbook 2001] (Ministry of Defence: Paris, June 2000), p. 101.

<sup>12</sup> All information that is deemed ‘confidential or with reference to which a request for confidential treatment is made by the person furnishing such information shall not be published or disclosed unless the President determines that the withholding thereof is contrary to the interest of the national defense’. United States Code, Title 10, chapter 148: National Defense Technology and Industrial Base, Defense Reinvestment, and Defense Conversion, section 2507: Data Collection Authority of President. It can be accessed via US House of Representatives, Office of the Law Revision Counsel, URL <<http://uscode.house.gov/uscode.htm>>.

Since 1998 the Spanish Ministry of Defence has published a comprehensive assessment of the national arms industry and its role in the world arms market. The assessment is supported by some statistical information, but it lacks adequate methodological notes.<sup>13</sup> The Dutch Office of Military Production, which is part of the Directorate General for Industry of the Ministry of Economic Affairs, compiles annual statistics on the size of the national arms industry based on a questionnaire which is distributed to companies. Selected results of the survey have been published in recent editions of the government's arms export report to parliament.<sup>14</sup>

The defence white papers of India, Japan, South Korea, and Taiwan contain some information on the size of the national arms industries. However, with the exception of India, the information provided is very limited.<sup>15</sup>

### III. Conclusions

There is a clear need for increased public information on the arms industry. In the 1990s few governments undertook efforts to improve insight into the dynamics of arms production. Significant progress in public transparency was made throughout the 1990s as regards arms transfers. A considerable number of countries report to the United Nations Register of Conventional Arms on transfers of specific categories of major conventional weapons. In Western Europe transparency regarding arms transfers improved significantly at the end of the 1990s. In 1999 the European Union (EU) published the aggregate values of arms exports submitted by its members within the framework of the 1998 EU Code of Conduct for Arms Exports.<sup>16</sup> A significant number of governments of major arms-producing countries have also submitted comprehensive arms reports on export their respective parliaments.<sup>17</sup> The debate on transparency in arms production could effectively build on these efforts.

Commercial confidentiality is among the primary obstacles to increased transparency and accountability as regards arms exports and production. In order to avoid putting companies in a disadvantageous position with respect to competitors, the issue needs to be addressed within the framework of the debate on international harmonization of government regulation.

An open debate on transparency in arms production could lead to the establishment of common reporting rules and procedures. In the current situation corporate self-regulation with regard to public transparency prevails over government regulation.

<sup>13</sup> Data on the arms exports share in total arms sales for 1998 have been reduced substantially in the 2001 edition, as compared to the 2000 edition, without explanatory notes.

<sup>14</sup> See also Ministry of Economic Affairs, Office of Military Production, *De Nederlandse defensiege-relateerde industrie, Een inventarisatie van omvang en kenmerken* [The Dutch defence industry: an inventory of its size and characteristics], 18 Mar. 1999, is available at URL <<http://www.ez.nl/cmp/doc/industrie.pdf>>.

<sup>15</sup> Since 2000 the Department of Defence Production and Supply of the Indian Ministry of Defence has also made a considerable amount of information available to a larger public on its Internet site, including financial information on arms-producing companies. Ministry of Defence, Government of India, 'Defence production & supply', URL <<http://www.mod.nic.in>>.

<sup>16</sup> The 1st and 2nd editions of the report are available on the SIPRI Export Control Project Internet site at URL <[http://projects.sipri.se/expcon/eu\\_documents.html](http://projects.sipri.se/expcon/eu_documents.html)>.

<sup>17</sup> A comprehensive review of reporting practices in Europe is provided by Mariani, B. and Urquhart, A., *Transparency and Accountability in European Arms Export Controls: Towards Common Standards and Best Practice*, Saferworld, Dec. 2000, URL <<http://www.saferworld.co.uk/pubtrans.htm>>.