4. Economic dimensions of Soviet and Russian arms exports

Ian Anthony

I. Introduction

This chapter examines the economic dimensions of Soviet (and now Russian) arms transfers. From the discussion in chapter 3, it is clear that the primary determinants of Soviet arms transfer decisions were political and strategic rather than economic considerations. However, it is also clear from chapter 3 that the Soviet Union was not indifferent to economic returns from the arms trade. Since the dissolution of the Soviet Union the defence industry has been plunged into a deep, at times seemingly existential, crisis which is described in more detail in chapter 8. Under these conditions it is widely believed that economic motivations have become more important as a causal explanation of Russian arms export behaviour. However, many questions remain unanswered about the economic dimensions of Soviet and now Russian arms transfers.

Differences of view about the historical importance of economic factors in Soviet arms export behaviour are reflected among the Russian authors who have contributed to this book. For example, in chapter 5 Sergey Kortunov writes: 'for decades the Soviet military–industrial complex received guaranteed payments from the government for arms manufactured for export. A significant portion of this military equipment was either sold at concessional rates to foreign countries or, on occasion, given away'. This would suggest that Soviet arms transfers may have represented a net loss to the economy. In chapter 3 Yuriy Kirshin writes that 'the prices for transfers which could bring political benefit to the Soviet Union were reduced. However, this was compensated for by prices charged to partners which were not considered so important'. Kirshin suggests that the overall economic impact of Soviet arms exports was either neutral or made a net contribution to Soviet finances.

At the level of manufacturing enterprises it is also unclear how far Soviet and now Russian exports were and are beneficial to producers and how far revenues were or are retained by the state, either within the state trading companies or within the responsible ministries. In chapter 8 Elena Denezhkina writes that given a choice some enterprises in St Petersburg prefer foreign sales over sales to the Russian Government, which has become known as an unreliable customer. In chapter 11 Alexander Sergounin reports on the disappointment of enterprise managers in Nizhniy Novgorod that success in winning orders in China has produced such limited financial benefits for their enterprises.

Table 4.1. Official estimates of the value of arms exports, 1988–94
Figures are in current US $b.

	1988	1989	1990	1991	1992	1993	1994
State Committee on Defence Industries	12.00	. .	6.05	. .	4.00	2.15	2.80
	. .	. .	. .	. .	. .	4.00	. .
Ministry of Foreign Economic Relations	. .	. .	7.10	3.00	0.61	0.54	. .
Oleg Davydov	. .	. .	. .	. .	2.30	1.20	. .

Source: Després, L., 'Financing the conversion of the military industrial complex in Russia: problems of data', *Communist Economies and Economic Transformation,* vol. 7, no. 3 (1995), pp. 335–51.

These different perspectives give rise to two general questions. Were arms exports profitable to the Soviet (and now Russian) economy? Did arms exports yield hard currency and, if so, how much?

There is no single or simple answer to either question. However, this chapter attempts to shed some light on this aspect of arms transfers.

II. Aggregate data on the value of arms exports

Several sets of data try to capture the volume, value and pattern of Soviet and now Russian arms exports. However, none of them is truly satisfactory.

During the final years of the Soviet Union officials began to make occasional statements about the value of Soviet arms exports. In 1991 I. S. Belousov, Chair of the Soviet Military–Industrial Commission (Voyenno-promyshlennaya komissiya, VPK), stated that the average annual value of the Soviet foreign trade in weapons was 11.7 billion transferable roubles in the period 1986–90.[1]

Between 1992 and 1994 Russian spokesmen made various statements, many of them contradictory, about the value of Soviet and Russian arms exports.

This reflected the general confusion within industry and within the state apparatus during these years. As explained in chapters 3 and 5, responsibility for the management of arms transfers was not centralized in one agency during this period, and cooperation and coordination between existing agencies were far from ideal. Between 1992 and 1994, according to correspondence between the author and the deputy chairman of the then State Committee on Defence Industries (Goskomoboronprom), central industrial organizations found it impossible to collect information either from individual enterprises or from regional industrial associations.[2]

[1] Quoted in Albrecht, U., *The Soviet Armaments Industry* (Harwood Academic Publishers: Chur, 1993), p. 290.

[2] Author's correspondence with G. G. Yanpolskiy, 2 Mar. 1994. Yanpolskiy cited both technical problems associated with economic changes (such as the high rate of inflation and finding a representative currency exchange rate) and the general difficulties of effecting plant-level transformation in the industrial sector as reasons for the difficulty in collecting usable statistics from enterprises and regional offices.

Table 4.2. Export of military and civilian products from enterprises under the State Committee on Defence Industries, 1988–93
Figures are in current US $b.

	1988	1989	1990	1991	1992	1993
Exports of military output	12.00	. .	6.05	. .	4.00	2.15
Exports of civilian output	. .	. .	2.00	. .	0.61	0.54

Source: Després, L., 'Financing the conversion of the military industrial complex in Russia: problems of data', *Communist Economies and Economic Transformation,* vol. 7, no. 3 (1995), pp. 335–51.

Table 4.1 illustrates the range of official data for the late Soviet and early Russian period. In some years widely differing estimates were produced by the same agency. In 1990 the Ministry of Foreign Economic Relations (MFER) released both $7.1 billion and $1.55 billion as values for arms exports, while in 1994 the State Committee on Defence Industries offered both $2.8 billion and $4 billion.[3] To add to the confusion, the Minister for Foreign Economic Relations, Oleg Davydov, released additional estimates in 1994 for the years 1992 and 1993.[4]

In 1994 the State Committee on Defence Industries released data on the value of exports from enterprises falling under its umbrella (see table 4.2). For some years these data were divided into the value of military items and the value of sales of civilian items and were published in US dollars.

In 1996 aggregated data on the value of arms exports covering the period 1985–96 were presented for the first time in public by the state trading company Rosvooruzhenie. These data are presented in figure 4.1 and suggest that the annual value of Soviet arms exports was in the region of $20 billion during the second half of the 1980s—close to the values estimated by Western government agencies such as the US Arms Control and Disarmament Agency (ACDA). For comparative purposes, figure 4.2 shows the value of Soviet arms exports as estimated by ACDA for a similar period. The similarity between the time series is surprising given all that has been published about the inadequacies of Soviet statistics. In the context of foreign trade, dollar-denominated Soviet statistics are said to be of limited value because agreements were denominated in foreign trade or 'convertible' roubles which were converted into dollars at an official exchange rate which was meaningless.[5]

The process by which ACDA estimated the constant dollar value of arms exports from the Soviet Union remains somewhat obscure. It publishes estimates of the value of goods delivered in a calendar year which it receives from

[3] The most likely explanation of the differences is that MFER data are based on the value of licences issued while the State Committee data are based on reporting by enterprises.

[4] *International Defense Review*, May 1994, p. 54.

[5] Information provided in author's correspondence with Prof. Laure Després, University of Nantes, 27 Feb. 1997. See also Tabata, S., 'The anatomy of Russian foreign trade statistics', *Post-Soviet Geography*, vol. 35, no. 8 (1994).

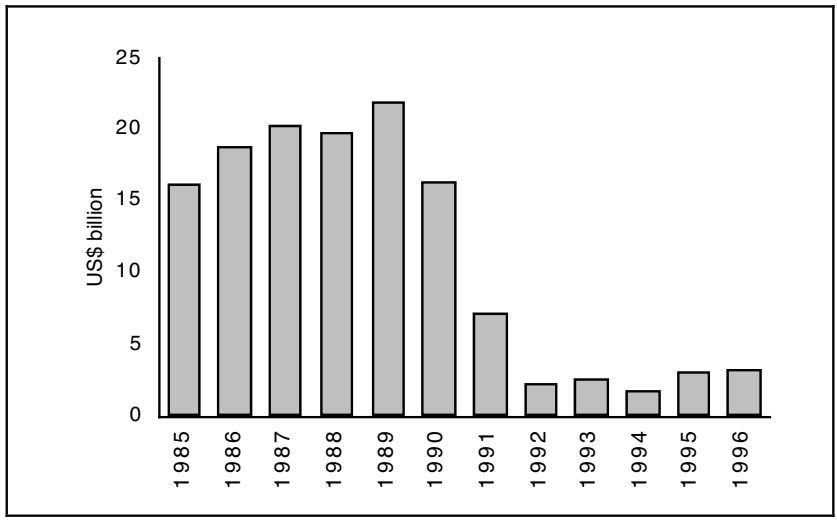

Figure 4.1. Trends in Soviet/Russian arms exports according to Rosvooruzhenie, 1985–96

Source: Tarasova, O., [Rosvooruzhenie calls for unity], *Segodnya*, 1 Nov. 1996 (in Russian).

other US government agencies. These estimates are already denominated in US dollars when ACDA receives them and are then deflated using a gross national product (GNP) index.

During the cold war most dollar estimates of Soviet arms exports were generated in Western government agencies and research institutes using volume indexes rather than estimates of the value of arms sales. However, there were also efforts to identify arms exports in Soviet foreign trade statistics. These estimates produced dollar values very different from those contained in the data released by Rosvooruzhenie.

These data were estimated by eliminating from Soviet foreign trade statistics all categories which were clearly non-military and assuming that most of the remaining exports were for military end-users. The resulting data were converted from roubles into dollars using the prevailing official exchange rate. Comparing the value for 1980 contained in table 4.3 ($5.6 current billion) with the value for 1980 given by ACDA ($8.8 billion), and allowing for the fact that the data in table 4.3 exclude trade within the WTO, there appears to be rough comparability. According to residual foreign trade data the average annual value of Soviet arms exports to developing countries was $3.2 billion (in current dollars) between 1971 and 1980. Looking at ACDA estimates for the same period, the average annual value is $5.6 billion.

These data should not be interpreted as hard currency earnings. The official rouble/dollar exchange rate was unable to capture the relative value of the two currencies because the foreign trade and 'convertible' roubles were not an

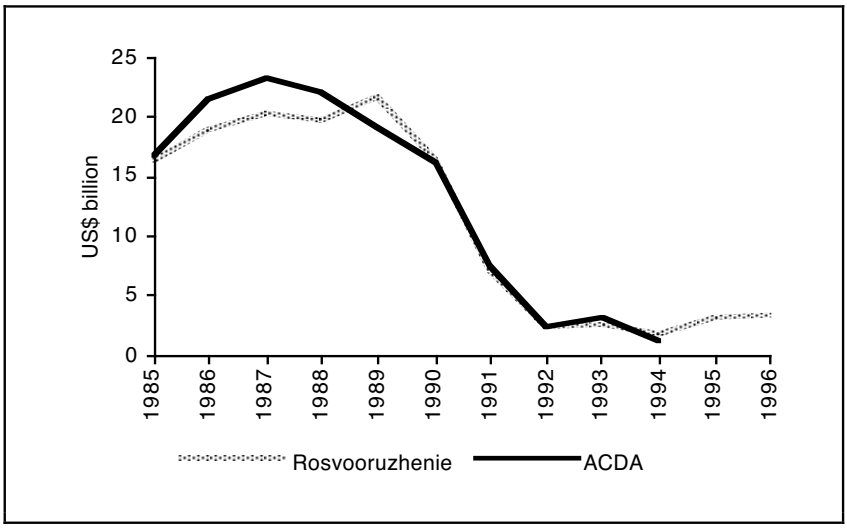

Figure 4.2. Rosvooruzhenie and ACDA data on Soviet/Russian arms exports, 1985–96

Source: US Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers 1995* (US Government Printing Office: Washington, DC, 1996); and Tarasova, O., [Rosvooruzhenie calls for unity], *Segodnya*, 1 Nov. 1996 (in Russian).

accepted form of exchange. Moreover, the data do not reflect the impact of military aid or the different forms of financing (such as barter) that the Soviet Union employed in managing its foreign trade. At best they reflect the broad trends in foreign trade, although longitudinal analysis of Soviet economic activity is made more difficult by the difficulty of measuring the influence of inflation.

In 1996 and 1997 a great deal of international attention was paid to estimates by non-Russian analysts which indicated that Russia had achieved a market share comparable to that of the larger West European arms exporting countries, France, Germany and the United Kingdom.[6] Using official government data (which are not strictly comparable but which give a broad indication of the relative value of arms exports) in 1995 Russia exported arms and military assistance worth $3.1 billion compared with $3.8 billion from France, $3.3 billion from the UK and $1.2 billion from Germany.[7] A preliminary estimate by the General Director of Rosvooruzhenie, Alexander Kotelkin, suggested that the

[6] Nikolayev, A., 'Russia comes second in arms sales', *Power in Russia*, vol. 4, no. 56 (5 Feb. 1997), Internet edition translated by RIA Novosti and distributed by John Pike, Federation of American Scientists.

[7] Anthony, I., Wezeman, P. D. and Wezeman, S. T., 'The trade in major conventional weapons', *SIPRI Yearbook 1997: World Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 1997), table 9.2, p. 270.

Table 4.3. Estimate of the value of Soviet arms exports to developing countries, 1971–80

Figures are in current US $m.

1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
780	1 155	2 331	1 299	2 227	2 670	4 504	5 364	5 585	5 628

Source: Soviet Arms Trade with the Non-Communist Third World in the 1970s and 1980s (Wharton Econometric Forecasting Associates: Washington, DC, 11 Oct. 1983), p. 26.

value of military–technical cooperation for 1996 would be around $3.6 billion.[8] The State Committee for Industrial Policy stated that of this sum $2.5 billion was for industrial goods.[9] The remainder would presumably be for technical assistance of various kinds associated with the systems transferred.

These figures represented the value of goods and services sold rather than new orders for items to be supplied in later years. The value of new orders in 1995 was estimated at over $7 billion by President Boris Yeltsin in his opening statement to a conference of defence industry workers in Moscow in May 1996.[10]

According to Oleg Soskovets, at the time First Deputy Prime Minister and with overall responsibility for Russian military–technical cooperation with foreign countries, around 75 per cent of the arms trade business of Russia in 1995 involved hard currency payment.[11]

Country and regional data for some of the principal recipients of Russian arms have also begun to be published in the past few years. In 1991 the MFER published data which had been used in discussions between the five permanent members of the UN Security Council on approaches to arms transfer control.[12] These data are reproduced in table 4.4 and underline the importance of Asia, Europe and the Middle East as markets for Soviet arms.

According to then Prime Minister Yegor Gaidar, Russia concluded arms agreements worth $2.2 billion with China, India and Iran in 1992. Of this sum China accounted for $1000 million, India $650 million and Iran $600 million.[13] According to an article in *Rossiyskaya Gazeta*, China accounted for $2.1 billion of the estimated $3.6 billion sales in 1996.[14]

[8] Interfax (in English) in Foreign Broadcast Information Service, *Daily Report–Central Eurasia* (hereafter FBIS-SOV), FBIS-SOV-96-236, 5 Dec. 1996; and *Jane's Intelligence Review & Jane's Sentinel Pointer*, Jan. 1997, p. 2.

[9] *Atlantic News*, no. 2797 (6 Mar. 1996), p. 4.

[10] Interfax, 29 May 1996 (in English) in FBIS-SOV-96-105, 30 May 1996. Earlier, in Mar. 1996, Rosvooruzhenie had given an estimate of $6 billion for the value of orders in 1995. *Komsomolskaya Pravda*, 30 Mar. 1996 (in Russian) in FBIS-SOV-96-064, 2 Apr. 1996, p. 47.

[11] Interfax, 5 Mar. 1996 (in English) in FBIS-SOV-96-045, 6 Mar. 1996, p. 31; and *Financial Times*, 6 Mar. 1996, p. 2.

[12] See chapter 5 in this volume.

[13] *Defense News*, 7–13 Dec. 1992, p. 3.

[14] *Jane's Defence Weekly,* 6 Nov. 1996, p. 19.

Table 4.4. Regional distribution of deliveries of arms and military equipment by the former Soviet Union, 1991
Figures are percentages.

Region	Share
Middle East	61
Asia	17
Europe	12
Near East	8
Africa	1
Latin America	1

Source: Nezavisimaya Gazeta, 29 Sep. 1992.

III. Managing foreign trade with different recipient groups

Soviet arms transfers can be divided into five categories for the purpose of evaluating their economic impact: (*a*) equipment provided for non-economic forms of payment such as political influence or strategic assistance (including basing rights and shore support for the Soviet Navy), corresponding to grant military aid; (*b*) equipment provided to socialist countries in the framework of the CMEA arrangements; (*c*) equipment provided to non-CMEA countries which did not reimburse the USSR in hard currency and with which bilateral clearing arrangements were used; (*d*) equipment provided against hard currency payments; and (*e*) equipment provided against delivery of commodities.

A comprehensive accounting of the economic benefits derived from arms transfers would require data for each type of transaction which are not available. However, it is possible to examine each type of financial arrangement in general terms.

Grant military aid

Equipment transferred as grant aid was assigned a book value for accounting purposes but no financial transfers took place.

When the United States completed its military operations in Grenada in 1983, a large number of documents were recovered detailing the relations between Grenada and the Soviet Union. The documents included the agreements on deliveries of arms and military equipment to Grenada. In October 1980 the two countries agreed that the USSR would 'ensure in 1980–1981 free of charge the delivery to the Government of Grenada of special and other equipment in nomenclature and quantity according to the Annex to the present agreement to the amount of 4 400 000 roubles'.[15] In a subsequent protocol the value of the

[15] Document 13, 'Agreement between the Government of Grenada and the Government of the Union of Soviet Socialist Republics on deliveries from the Union of Soviet Socialist Republics to Grenada of

goods to be shipped was raised to 5 000 000 roubles.[16] Under another agreement of July 1982, the Soviet Union was to transfer special equipment worth 10 000 000 roubles in the period 1982–85.[17]

Under the terms of these agreements the Soviet Union also provided technical assistance and documentation free of charge. Deliveries of these were made via Cuba, which also performed some training and maintenance tasks. Separate agreements regulated this assistance provided to Grenada by Cuban specialists. Cuba was paid for its assistance by Grenada in US dollars on a per-person per-day basis.

Arms transfers within the CMEA

The membership of the CMEA included all the members of the WTO. Within the WTO an integrated military–technical policy included transfers of equipment and technology between partners.

The CMEA was founded in January 1949 with the objective of integrating its members with the Soviet economy on the basis of specialization of trade and production among member countries. It was a planning mechanism which operated at several levels. Annual plans established quotas for cross-border trade between members in goods that were classified according to nine broad categories and many specific sub-categories.[18]

Beginning in the late 1950s CMEA members attempted to develop multilateral trade relations rather than acting as an umbrella organization managing a series of bilateral relations. To establish these multilateral plans an accounting unit (the 'transferable' or 'convertible' rouble) was invented to compensate for the fact that none of the local currencies in CMEA countries could be exchanged at a market-determined rate. However, according to one analyst the effort to develop a system of prices for trade between CMEA members that was independent of prices in the world market largely failed.[19] Consequently, by the mid-1970s the CMEA conducted annual reviews of prices and adjusted them according to data collected on prices in the wider global economy. If this is correct, then it is likely that the starting-point for establishing prices for arms traded between CMEA members was data collected on the prices of Western equipment sold internationally.

special and other equipment, 27 Oct. 1980', *Grenada Documents: An Overview and Selection*, Released by the Department of State and Department of Defense, Sep. 1984.

[16] Document 15, 'Protocol to the Agreement between the Government of Grenada and the Government of the Union of Soviet Socialist Republics on deliveries from the Union of Soviet Socialist Republics to Grenada of special and other equipment, 9 Feb. 1981', *Grenada Documents: An Overview and Selection* (note 15).

[17] Document 14, 'Agreement between the Government of Grenada and the Government of the Union of Soviet Socialist Republics on deliveries from the Union of Soviet Socialist Republics to Grenada of special and other equipment, 27 July 1982', *Grenada Documents: An Overview and Selection* (note 15).

[18] On the operation of the CMEA, see 'Trading patterns and trading policies', *Quarterly Review* (European Bank for Reconstruction and Development), 30 Sep. 1992, pp. 4–7.

[19] Knirsch, P., 'Economic relations between the CMEA states and the influence of trade with the West', ed. I. Oldberg, *Unity and Conflict in the Warsaw Pact*, Proceedings of a Symposium organized by the Swedish National Defence Research Agency, Stockholm, 18–19 Nov. 1982.

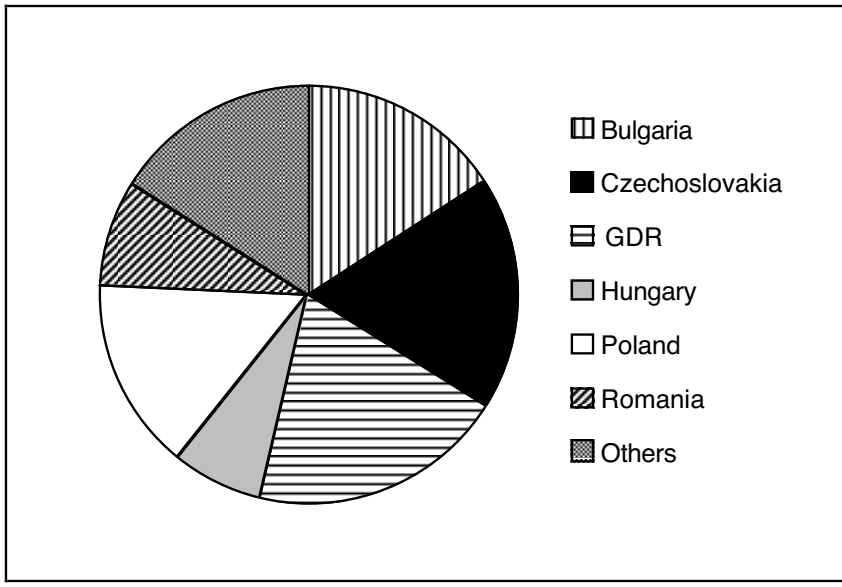

Figure 4.3. Shares of arms exports to socialist countries by the Soviet Union, 1980–83

Note: 'Others' include Cuba, Mongolia, North Korea, Viet Nam and Yugoslavia.

Source: Calculated from Vanous, J., 'Developments in Soviet arms exports and imports', *Centrally Planned Economies Current Analysis* (Wharton Econometric Forecasting Associates), vol. iv, no. 62 (15 Aug. 1984), p. 4.

Within the CMEA, each producing enterprise dealt only with its national authorities. These national authorities had already decided the scale of production for export and the schedule of interstate payments during their negotiations with the state authorities of other participating countries.

There have been several efforts to quantify the scale of intra-CMEA arms sales and military–technical cooperation using estimates derived from comparing published trade data from the CMEA and the Soviet Union. According to Jan Vanous, the Soviet Union deleted all arms trade data from the trade statistics supplied to the CMEA secretariat but included them in the Soviet foreign trade statistics. By comparing the Soviet *Foreign Trade Yearbooks* with CMEA foreign trade yearbooks, Vanous estimated total Soviet arms exports. According to his estimates, in 1983 the Soviet Union exported arms worth *c*. 9 billion roubles or 13.4 per cent of the value of total Soviet exports in that year.[20] In 1983 arms represented the second largest export category, although significantly smaller than oil and oil products, which accounted for over 41 per cent of Soviet exports. Vanous went on to disaggregate Soviet arms exports to WTO allies using the data on exports by commodity group contained in the Soviet foreign trade statistics. He estimated that in the years 1980–83 the Soviet Union

[20] Vanous, J., 'Developments in Soviet arms exports and imports, 1980–83', *Centrally Planned Economies: Current Analysis*, vol. iv, no. 62 (15 Aug. 1984), p. 2.

exported arms worth roughly 10.7 billion convertible roubles to the group of socialist countries, of which 83 per cent were for WTO allies. The largest shares went to the German Democratic Republic (GDR), Bulgaria and Poland, in order of magnitude.

The main value of these data is that they indicate the magnitude of arms exports relative to other commodity categories and show a rough distribution of arms sales to WTO allies. It seems likely that these data, converted into dollars using the official exchange rate, are contained in those recently released by Rosvooruzhenie.

Under the CMEA arrangements there was probably differential treatment of developed and non-developed members. For example, it is likely that Cuba, Mongolia, North Korea and Viet Nam received significant military assistance and also some grant aid.[21] This military assistance would be excluded from the data presented by Vanous, which are confined to the value of exports. It is not clear whether the book value of military assistance was included in the aggregate trade data.

The multilateral clearing arrangements within the CMEA were intended to produce balanced trade for any given year. In reality this was not achieved and when the CMEA was dissolved the Soviet Union owed significant outstanding debts to some of the other participating states for military equipment paid for in advance but not yet delivered. In recent years arms transfers and military–technical cooperation have been used as a way of clearing some of the debts to Bulgaria, Hungary and Slovakia assumed by Russia.[22]

Soviet arms transfers to non-socialist countries financed through clearing arrangements

The Soviet Union maintained bilateral agreements specifying financial aspects of trade arrangements with roughly 20 Asian, African and Latin American countries which imported large quantities of Soviet arms, including Algeria, Egypt, India and Syria. These agreements defined the trends and structure in trade between the Soviet Union and partner countries.[23]

They also specified arrangements for making payments to clear specific trade deals. Unlike the multilateral arrangement in the CMEA, bilateral arrangements could use one or other local currency (either the rouble or the local currency of the partner) in clearing settlements. For example, under the Soviet–Indian trade agreement all payments for goods delivered to India from the Soviet Union

[21] This differential arrangement was applied in other areas and it is unlikely that military equipment was exempted. Brezinski, H., 'Economic relations between European and less-developed CMEA countries', *East European Economies: Slow Growth in the 1980s*, Selected Papers submitted to the Joint Economic Committee, Congress of the United States, vol. 2: Foreign Trade and International Finance, 28 Mar. 1986 (US Government Printing Office: Washington, DC, 1986).

[22] Described in chapter 10 in this volume.

[23] United Nations Conference on Trade and Development, Institute of Economics of the World Socialist System, *Innovations in the Practice of Trade and Economic Cooperation between the Socialist Countries of Eastern Europe and the Developing Countries* (United Nations: New York, 1970), pp. 8,10.

were made in Indian rupees into the account of the State Bank of the USSR at the Reserve Bank of India. Money held in this account was used to purchase Indian goods.

The prices of goods transferred were also fixed in the framework of these bilateral arrangements. According to President Gafaar Mohammed Numeiri of Sudan and General Sa'ad el-Din Shazli, a former Egyptian Chief of Staff, the prices of arms imported from the Soviet Union under bilateral clearing arrangements were established in roubles and then converted into local currencies.[24] These prices were 'fixed by the partners on the basis of world prices' but 'in determining the prices, the parties strive to eliminate the purely short-term and other accidental price fluctuations on the world market'.[25]

According to several accounts, payment schedules for bilateral trade under clearing arrangements were also adjusted according to the status of the particular recipient. Moshe Efrat refers to two categories of recipient. The first had a form of most-favoured-nation status and was offered a discount on the list price of equipment as well as being permitted to clear an account over a 20-year period at a rate of interest of 2.5 per cent per year. A second category of countries received no discount and was expected to clear an account over a 12-year period, also at an annual rate of interest of 2.5 per cent.[26]

This statement suggests that, as was noted above for intra-CMEA trade, the price index for arms sold to non-socialist countries was probably established with reference to available data on the market value of Western arms.[27] However, it is also known that these prices were adjusted according to the specific political and economic conditions prevailing at the time a deal was made. For example, Roger Pajak has suggested that Egypt was offered reductions of between 40 and 50 per cent on the official export price of Soviet arms during the 1960s.[28]

In 1975 the Egyptian Government presented to the United Nations an account of the value of equipment lost in the 1967, 1970 and 1973 wars against Israel along with the value of replacement.[29] According to these data Egypt received

[24] Quoted in Efrat, M., 'The economics of Soviet arms transfers to the Third World: a case study: Egypt', *Soviet Studies*, vol. 35, no. 4 (Oct. 1983), p. 440.

[25] United Nations Conference on Trade and Development, Institute of Economics of the World Socialist System (note 23), p. 9.

[26] Efrat, M., 'The defence burden in Egypt during the deepening of the Soviet involvement in 1962–73', University of London Ph.D thesis submitted May 1981, p. 35; Heikal, M., *Sphinx and Commissar: The Rise and Fall of Soviet Influence in the Arab World* (Collins: London, 1978), pp. 25–26, 32; and Mohrez Mahmoud El Hussini, *Soviet–Egyptian Relations 1945–85* (Macmillan: Basingstoke, 1987), pp. 96–97.

[27] Similarly, the prices of other commodities such as Egyptian cotton were adjusted from world market prices. Foley, T., 'The mighty transformation: Soviet aid and Arab liberation', *New World Review*, vol. 38, no. 4 (fall 1970), p. 35. In a large study of the economic aspects of Soviet–Egyptian military–technical cooperation Moshe Efrat concluded by examining a control sample of goods and commodities that there were relatively minor differences between the prices used in bilateral trade with the Soviet Union and with other industrialized countries. Efrat (note 26).

[28] Pajak, R., 'Soviet arms and Egypt', *Survival*, vol. 17, no. 4 (July–Aug. 1975), p. 165.

[29] United Nations, Permanent Sovereignty over National Resources in the Occupied Arab Territories, Report of the UN Secretary-General, UN document A/10290, 3 Nov. 1975, quoted in Efrat (note 24), p. 445.

Table 4.5. Major developing country debtors to the Soviet Union in 1990
Figures are in m. roubles. Figure in italics is a percentage.

Country	Debt
Cuba	15 490.6
Mongolia	9 542.7
Viet Nam	9 132.2
India	8 907.5
Syria	6 742.6
Iraq	3 795.6
Afghanistan	3 055.0
Ethiopia	2 860.5
Algeria	2 519.3
North Korea	2 234.1
Ten largest developing country debtors as a % of total developing country debt to the Soviet Union	*81.0*

Source: Izvestiya, 1 Mar. 1990.

equipment worth $10.2 billion in the period 1967–73. A very high proportion of this would have been from the Soviet Union. Comparing these data with other public statements by Egyptian officials—for example, the head of the Economic Committee in the Egyptian Parliament and the Deputy Prime Minister for Economic Affairs—Moshe Efrat estimates that Egypt received discounts of roughly 33 per cent before 1967 and around 50 per cent after 1967.

As with the rules governing multilateral clearing within the CMEA, for bilateral clearing arrangements the objective of both sides was that trade should be balanced on an annual basis. In practice this was not achieved. In 1991 the Soviet Union released data showing the scale of the debts owed by various countries (see table 4.5). All the countries on the list were recipients of Soviet arms.

Russia has subsequently tried to recover these debts but the process has been complicated by both political and technical problems. In some cases, for example, that of Syria, Russian efforts to address the issue of debt have been made more difficult by the general deterioration in bilateral political relations. In other cases, such as that of India, the bilateral political relationship has remained strong but there have been technical problems in calculating the debt.

Even in 1997 neither the rouble nor the rupee is fully and freely convertible at market rates—that is, it is not possible to buy rupees outside India or roubles outside Russia. The discussion in 1992 revolved around what would be a reasonable rate at which to convert roubles to rupees.[30] One element in the discussion was the respective value of roubles and rupees against the US dollar.

An agreement was reached during the visit of President Yeltsin to India in January 1993. In India the government was criticized for accepting an exchange

[30] *Aviation Week & Space Technology*, 25 July 1994, p. 58.

rate which favoured Russia as the basis for converting India's debt. Roughly two-thirds of the debt was converted at a rate of 19.92 roubles to the rupee. This part of the debt was to be repaid over a 12-year period at an annual rate of interest of 2.4 per cent. The remaining third of the debt was to be converted at a rate of 31.57 roubles to the rupee but repayable over a 45-year period with no interest charged.[31] At the time the intergovernmental agreement was reached the debt was valued at between $9.3 billion and $11.6 billion including the interest payments.[32]

Under the agreement reached India will pay Russia $800–$900 billion each year between 1994 and 2006 to clear the largest part of the debt. This money is paid to Russia's account at the Central Bank of India and is available for the purchase of Indian goods or to finance joint projects in India.[33]

Soviet arms transfers paid for in hard currency

During the cold war there were countries which seem to have conducted their arms trade with the Soviet Union almost entirely on a hard currency basis. Oleg Baklanov, Secretary of the Communist Party Central Committee, estimated in 1990 that in a normal year about one-third of Soviet arms transfers were made in hard currency.[34] It is likely that this applied mostly to the countries with large oil revenues such as Angola, Iraq and Libya.

The Soviet Union apparently did not receive payment in advance from these countries. Iraq was said to have 'an unusually good repayment record. With hard currency earnings from oil exports, Iraq was better able than any other Soviet client to meet its repayment obligations to Moscow'.[35] However, in 1990 it was revealed that Iraq was among the countries that owed large debts to the Soviet Union.

In some cases countries which had bilateral clearing arrangements permitting use of local currency to finance arms imports also occasionally conducted arms trade with the Soviet Union on a hard currency basis. This seems to have been particularly true for Arab countries that made financing arrangements which involved third parties. For example, imports by Egypt were part-financed using grants provided by other Arab countries. During the 1973 October War between

[31] While both the rouble and the rupee have lost value against the US dollar in recent years, the depreciation in the rouble has been much faster. Indian critics argued that the rapid decline in the value of the rouble was predictable at the time the agreement with Russia was reached and should have been taken into account in deciding an exchange rate. *Financial Times*, 29 Jan. 1993, p. 3; *Far Eastern Economic Review*, 18 Feb. 1996, p. 18; and 'Focus on technology transfer, new weapons', *The Hindu,* 22 July 1993.

[32] *Asia–Pacific Defence Reporter*, Feb.–Mar. 1993, p. 22; *Hindustan Times*, 22 July 1993; *Segodnya,* 25 Oct. 1994 (in Russian) in FBIS-SOV-94-207, 26 Oct. 1994, pp. 11–12; and *Defense News*, 9–15 Jan. 1995, p. 25. Not all of this debt was incurred through arms purchases. The Soviet Union supplied India with large quantities of energy, heavy industrial goods and both raw and semi-processed materials.

[33] According to Alexander Belikov, Deputy Head of the Asia Department, Russian Ministry of Foreign Economic Relations, quoted by Interfax, 2 Aug. 1995 (in English) in FBIS-SOV-95-149, 3 Aug. 1995, p. 8; and *Financial Times*, 24 May 1996.

[34] Information provided in an interview between Baklanov and Milton Leitenberg, 12 Nov. 1990.

[35] Pajak, R., *Soviet Arms Aid in the Middle East* (Center for Strategic and International Studies, Georgetown University: Washington, DC, 1976), p. 30.

Israel and a coalition of Arab states Libya is believed to have provided $500 million to Egypt and Syria to pay for 70 MiG-21 fighter aircraft of different versions.[36] These agreements, reached outside the framework of normal trade channels, reflected the immediate requirement of Egypt for rapid delivery of equipment.

In some cases it appears that hard currency payments were not made directly but integrated into financial arrangements involving several countries. For example, in some sources it is claimed that Libya transferred to the Soviet Union the right to the proceeds from the sale of 70 000–80 000 barrels of crude oil per day, part of which was to cover the costs of Libyan arms imports and part of which was to cover the cost of assistance to Syria.[37] This oil generated revenue when it was sold on the world market by brokers.

In some cases the Soviet Union was prepared to defer or relieve debts. According to some sources debt rescheduling (often involving a degree of debt relief) was a regular occurrence.[38] However, there were cases of relief not being available. In one rather specific case, after the decision by Egypt to break its ties with the Soviet Union in 1974, Soviet leaders refused to reschedule Egypt's debts.[39]

IV. The impact of domestic reform on foreign trade

The defence industrial sector has been deeply affected by the changes which followed the end of the Soviet Union. Political and economic reforms have changed the relationship between the state and manufacturing industry. Price and currency reforms have changed the terms of trade.[40]

Within the state socialist system the needs of the military were given special priority. Consequently, according to a view expressed by the Soviet General Staff in the early 1960s, 'the country's entire economy is constantly subordinated to military planning, in particular, to the requirements for mass production of modern weapons'.[41] This approach was a product of the Stalinist world view compounded by the experiences of World War II and the cold war. Across time as the threat of a central confrontation receded and pressures for investment in civilian economic development grew the impact of this way of thinking was attenuated. Nevertheless, the organizational structures established to meet

[36] Glassman, J. D., *Arms for the Arabs: The Soviet Union and the War in the Middle East* (Johns Hopkins University Press: Baltimore, Md., 1975), p. 146; and Pajak (note 35), p. 38.

[37] To add to the complexity, these deals were apparently brokered by a Finnish trading company operating on the international oil market. *The Times*, 15 Feb. 1978. See also Pajak, R., 'Arms and oil: the Soviet–Libyan arms supply relationship', *Middle East Review*, vol. 13, no. 2 (winter 1980/81), pp. 51–56.

[38] *New York Times*, 5 Sep. 1967, pp. 1, 24.

[39] *New York Times*, 2 May 1975. Moreover, after the break between Egypt and the Soviet Union a cooling of relations between Egypt and Libya meant that Egypt no longer received as much external financial assistance.

[40] See chapter 8 in this volume.

[41] Sokolovsky, V. D. (Marshal), *Military Strategy: Soviet Doctrine and Concepts*, translated by R. L. Garthoff (Praeger: New York, 1963 edn).

what was perceived to be an overriding security requirement also created what Michel Checinski has called 'structural causes' for Soviet arms exports.[42]

The Soviet economy used the concept of price in a way which was different from its use in a market economy. This was particularly true where military production was concerned. Checinski noted that the decision to retain a massive arms production capacity could only be transformed into operational reality if three questions were addressed: what numbers of which weapons were to be produced; over what time-scale production plans were to be fulfilled; and how the bottlenecks in production and distribution that were ever-present in Soviet industry could be overcome.[43] Soviet economic planning gave high priority to addressing these problems and price policy was one important element in this planning system. As in a market economy, prices were seen as an instrument to achieve efficient distribution of goods and services. However, efficiency was measured against a narrow definition of military security and not against wider social and economic considerations.

As a result of this set of priorities, under the state socialist system neither costs nor prices were established through bargaining in a market but were established centrally by administrative decision. Numerical requirements were turned into rouble-denominated quotas by applying centrally maintained price lists to the number of any given item to be acquired. These quotas were translated into micro-decisions through national planning agencies which would distribute production between state-owned enterprises.[44] The enterprises could receive instant payment in local currency against certification that a specific quota obligation had been met using the price schedules determined by the planning authorities.

While the needs of the Soviet armed forces were the dominant factor in planning, at different times the existence of foreign suppliers and foreign markets was probably helpful both from a production perspective (to fill gaps in any given production line) and also in price setting. In Soviet foreign trade different price lists were used as the basis for negotiations with foreign buyers. However, the final price in any given transaction appears to have been set in negotiations and could vary for the same weapon system on a case-by-case basis. In this way foreign sales may have given some indications about the accuracy of domestic price lists. Goods produced for export were integrated into the overall defence order alongside goods produced for the Soviet armed forces. In practice the

[42] Checinski, M., 'Structural causes of Soviet arms exports', *Osteuropa Wirtschaft*, vol. iv, no. 3 (Mar. 1977) (in English).

[43] Checinski (note 42), p. 174.

[44] In practice the process was probably more complex in that managers at particularly important enterprises could and did lobby central authorities to gain preferences in either production quotas or unit prices. For example, Arthur Alexander describes how on at least 2 occasions chief designers at the Yakovlev and Tupolev design bureaux overturned decisions taken by the planning apparatus by making direct appeals to Stalin and Khrushchev, respectively. Alexander, A. J., 'Decision making in Soviet procurement', eds D. J. Murray and P. R. Viotti, *The Defense Policies of Nations: A Comparative Study* (Johns Hopkins University Press: Baltimore, Md., 1982) pp. 161, 175–76. According to Alexander this was not unusual behaviour, although the impact of these lobbying efforts remains controversial between analysts.

application of this system meant that the price charged to a foreign buyer for any item was not coupled to the price at which the state trading company acquired it from the manufacturer. In these circumstances the trading companies may have been able to generate significant profits for the state by exploiting differentials in price that existed between foreign and domestic trade.

There are some suggestions that the prices of Soviet goods sold in foreign markets were not always low. Soviet intelligence and planning authorities collected information about weapon prices in the United States and elsewhere and used this as a guideline to establish foreign trade price lists. However, revenues from foreign sales were never passed directly to manufacturers who instead had access to a hard-currency allocation provided to them by the relevant sectoral ministry as a privilege. The sums involved were described by one Soviet designer as 'miserable'.[45]

In 1992 two important economic policy decisions were taken which should have had a major impact on Russian trading practices. First, the government decided to remove some internal price controls, thereby changing the costs of production for defence manufacturers and the relative advantage of exporting manufactured products. Second, it was decided that all foreign trade negotiations would be conducted on the basis of prices quoted in hard currency.

At the same time in some of its features the Russian defence sector differs from the wider economy. Its domestic prices remain fully regulated, and the prices in foreign trade are heavily influenced, by the state authorities. State authorities still manage the revenues from export sales. Before 1994 the MFER was responsible for distributing hard currency proceeds from arms sales. In 1994 this function was taken over by Rosvooruzhenie.[46] This continued state control over the distribution of proceeds from arms sales has led to arguments between government and industry about whether the money received has been distributed fairly and honestly. In 1993 the MFER was criticized by industrialists, in particular by the League of Assistance to Defence Enterprises and its chairman, Alexander Shulanov.[47] In an August 1994 interview then Rosvooruzhenie General Director Viktor Samoylov described the payment system in operation. According to Samoylov, Rosvooruzhenie retained between 1.5 and 3 per cent of the purchase price for itself. Around 10 per cent of the purchase price was used to cover costs of insurance, transport and related services. The remaining money was distributed to the manufacturers. However, Samoylov added that there was no clear method for determining the distribution of funds between the design bureau that created a system, the plant which manufactured it and the plants which made components that went into the system.[48]

[45] Bogdanov, O., 'Antonov Design Bureau and its activities in the new environment'. Unpublished paper, Apr. 1993.

[46] ITAR-TASS, 26 Jan. 1994 (in English) in FBIS-SOV-94-018, 27 Jan. 1994, pp. 22–23.

[47] *Kommersant Daily*, 16 Apr. 1993 (in Russian) in FBIS-SOV-93-075, 21 Apr. 1993, p. 35; and *East Defence & Aerospace Update*, May 1993, p. 2. The criticism of the MFER was echoed to some extent by the then State Committee on Defence Industries.

[48] Moscow Russian Television, 20 Aug. 1994 (in Russian) in FBIS-SOV-94-183, 21 Sep. 1994, pp. 17–20.

In spite of these explanations Rosvooruzhenie was heavily criticized by industry for a variety of reasons. Some complained that it retained too high a share of payments as compensation for its own service and complained of the lack of control and transparency in its accounting practices; some made accusations of outright corruption.[49]

The relationship between price and cost

In general the pricing methods used by the Soviet Union benefited the manufacturing industry. In 1990 the State Committee on Statistics (Goskomstat) compared Soviet trade assuming world market prices with trade at official prices in order to estimate the impact of abolishing price controls on the terms of trade.[50] The outcome suggested that the price controls which operated in the energy and raw material sector kept prices of these inputs well below their true market value and in this way represented a large subsidy to producers of manufactured goods.

Defence manufacturers are heavy consumers of, for example, energy and non-ferrous metals. Domestic prices of these inputs in Russia were increased but not decontrolled and did not reach world market prices for some key items.[51] Nevertheless, the prices charged to manufacturers have risen significantly in recent years.[52]

Under the conditions in 1992–93 some Russian defence manufacturers also took advantage of the relative absence of enforceable state regulations to sell stockpiles of raw and semi-processed materials, which had been bought at internal, regulated prices, on foreign markets.[53] This was usually accomplished

[49] After an investigation of Rosvooruzhenie in Nov. 1994 Samoylov was sacked. Press reports of the decision listed irregularities in the handling of payments as one of the reasons. *International Defense Review*, July 1995, pp. 55–56.

[50] Tarr, D. G., 'The terms-of-trade effect of moving to world prices on countries of the former Soviet Union', *Journal of Comparative Economics*, vol. 18, no. 1 (Feb. 1994).

[51] Price controls from 2 sources remain on key inputs. Some are imposed on producers who are designated as having a monopoly in a given area. Others are imposed (usually but not always) by the Ministry of Economics. In spite of controls, prices have usually been increased in line with overall inflation in wholesale prices. Webster, L. W., Franz, J., Artimiev, I. and Wackman, H., *Newly Privatized Russian Enterprises*, World Bank Technical Paper no. 241 (World Bank: Washington, DC, 1994), p. 23.

[52] The impact of cost increases is offset to some extent by the fact that defence manufacturing enterprises have been allowed favourable conditions regarding value-added tax, favourable corporate tax rates (ranging from reductions of 50% in tax to complete tax exemption) and access to credit on favourable terms. From 1 Jan. 1996 military equipment and armaments were among the categories of Russian goods relieved of export tariffs. Enterprises regarded as particularly important to the defence industrial base are also eligible for direct funds from the federal budget for plant reconstruction, buying new equipment, developing manufacturing techniques and developing new materials. Interfax, 1 Sep. 1995 (in English) in FBIS-SOV-95-171, 5 Sep. 1995, p. 25.

[53] The impact of price liberalization on industrial enterprises (not specifically defence enterprises) is described in Moody, S. S., 'Decapitalizing Russian capitalism', *Orbis*, vol. 40, no. 1 (winter 1996). For sectoral discussions, see Evangelista, M., 'From each according to its abilities: competing theoretical approaches to the post-Soviet energy sector', ed. C. A. Wallander, *The Sources of Russian Foreign Policy after the Cold War* (Westview Press: Boulder, Colo., 1996); and Haglund, D. G. and MacFarlane, S. N., *The Former Soviet Union in International Minerals Markets: The Resurrection of 'Strategic Minerals' Policy?*, Occasional Paper no. 47 (Centre for International Relations, Queen's University: Kingston, Ontario, June 1994).

through dealers located in neighbouring countries (the Baltic states being particularly prominent).[54]

As the Goskomstat simulation predicted, price reforms seem to have had a severe impact on Russian manufacturing industry in general and some have expressed concern that Russia may face 'deindustrialization' as manufacturing has become an economically irrational activity.[55] The defence sector—which remains the most closely controlled element of the state sector in Russia—has probably been affected more directly than any other group of enterprises.

Whereas state procurement plays a limited (and steadily declining) role in setting prices in the Russian economy in general, in the defence sector equipment prices are still heavily regulated. In 1992 and 1993 the Ministry of Defence prepared a draft Law on the Defence Order and the Status of Plants which Fulfil It, which was to have been completed by May 1993. Under this law the relations between the Ministry of Defence and the manufacturers would have been regulated by state contracts. While there is a definition of state contracts in the Law of the Russian Federation On Deliveries of Products and Goods for the State, this does not apply to the Ministry of Defence. Under the draft law, different standard contracts for scientific research on and development and purchase of military equipment were being developed by the Ministry of Defence. These contracts would include the work schedule, a protocol of agreement about prices, a protocol of agreement about the dispensation of funds and compensation for default, and a protocol of agreement about modifying the contract price.[56]

If it had been adopted, this practice of using contracts to regulate procurement would have forced the Ministry of Defence to accept the implications of changes in the cost of production. However, the draft never became law and in practice procurement discussions with industry still refer to a central index of prices.[57] Another dimension of the proposal to move to a contract-based procurement system was that prime contractors would have become solely responsible for managing relations with subcontractors and suppliers of other inputs. In practice these relationships are still managed to some extent by state organizations—notably the Ministry of Defence Industry—on behalf of manufacturers.[58] An exception to this may be those subcontracting relationships that exist between Russian enterprises and enterprises located in other members of the CIS. In interviews with Russian enterprise managers partners in other CIS

[54] Kolpakov, S. and Drugov, Y., 'Effects of industry demilitarization and radical economic reform in Russia on the branches providing materials for military production'. Unpublished manuscript, Apr. 1996.

[55] For a general discussion, see Hanson, P., 'The future of Russian economic reform', *Survival*, vol. 36, no. 3 (autumn 1994).

[56] Vlasov, V. I., 'The supply of arms and military equipment for the Russian armed forces: tendencies in development of Russian defense industries'. Unpublished paper, Apr. 1993.

[57] This was partly because of the difficulties of negotiating with industry against a background of massive inflation. However, the discussions also became part of a wider discussion about the division of responsibility between government agencies in the management of the Russian defence industry. This discussion principally involved the Ministry of Defence, the State Committee on Defence Industries (later the Ministry of Defence Industry) and the State Committee for Property Management.

[58] In Mar. 1997 the Russian Government abolished the Ministry of Defence Industry with implications that are not yet clear.

states were often named as the worst offenders as regards late payment or payment default.[59]

Russian weapon prices in foreign trade

Manufacturers of defence equipment therefore find themselves 'squeezed' between the need to pay increased prices for inputs and the inability to pass on these costs in full to their only domestic customer, the government. This means that in Russia the prices applied in domestic trade are still established on a different basis from the prices applied in foreign trade.

For a brief period in 1992–93 Russian manufacturers and trading organizations believed that they could deal in arms in the same way as other goods and services. However, efforts to negotiate contracts with foreign governments without state assistance usually failed and it is now understood that neither government nor industry can conduct large-scale arms exports successfully unless they cooperate.[60]

Statements by Rosvooruzhenie suggest that price negotiations take into account both what is known about Western pricing policies and information from Russian enterprises about their cost base after the partial liberalization of input prices described above.[61]

Since 1994 Russia has moved towards a system in which negotiations with foreign governments are undertaken by mixed teams of government officials, including representatives from several ministries, and representatives of industry. The negotiations move in stages. First, a decision is reached about the types of system which may be desired by the buyer and whether or not these will be released for sale by the Russian side. After the release of the systems requested by the buyer has been approved, questions of quantities and prices are addressed. In these discussions the needs and views of Russian industry now receive a much more prominent place than was the case in the Soviet period. After a broad framework of quantities and prices has been agreed between the Russian Government and the foreign buyer, enterprises discuss with the Russian Government who will produce which items.

Available evidence suggests that compared with the Soviet period more recent arms exports have gradually increased the share of currency in overall payment. Under the 1991 agreement with China to supply Su-27 fighter aircraft as much as 70 per cent of the value of the deal was to be covered by transfers of Chinese consumer goods to Russia.[62] After 1992 Russian negotiators appear to have reversed the balance so that 70 per cent or more of the value of contracts with China are paid in hard currency.

[59] Webster *et al.* (note 51), p. 17.

[60] According to Rosvooruzhenie only one of the enterprises permitted to conduct independent foreign trade activity—aircraft manufacturer MiG-MAPO—has chosen to do so. Tarasova, O., [Rosvooruzhenie calls for unity], *Segodnya*, 1 Nov. 1996.

[61] 'Russian defence exports: the insider's view', *Military Technology*, Sep. 1996, pp. 65–67; and *Nezavisimaya Gazeta*, 28 June 1996 (in Russian) in FBIS-SOV-96-126, 28 June 1996, pp. 26–27.

[62] For details, see chapter 11 in this volume.

Table 4.6. Financial aspects of the 1994 Malaysian MiG-29 agreement

	Malaysian $m.	US $m.
Total cost of aircraft	1 516.35	590.02
Cost of training package	3.40	1.32
Avionics retrofit	238.22	92.69
Simulator	114.27	44.46
Infrastructure support	142.60	55.49
Total	**2 014.84**	**783.98**

Note: Converted at the exchange rate existing at the time the agreement was signed.

Source: Asian Military Review, Aug.–Sep. 1993, p. 16.

One of the test cases through which the procedures for negotiating arms contracts were developed was the agreement with Malaysia over the transfer of Russian fighter aircraft.

The case of MiG-29 fighter aircraft supplied to Malaysia

In June 1994 Russia and Malaysia signed an agreement on the transfer of 18 MiG-29 fighter aircraft. This case has provided fairly detailed information about the economic and financial aspects of a bilateral arms transfer.

The agreement included the supply of 16 MiG-29M multi-role fighters and two MiG-29UM trainer aircraft. However, the trainer aircraft were to be equipped with all systems needed to make them fully combat-capable. Table 4.6 summarizes the financial details of the agreement. Russia agreed to supply the armament for the aircraft under a separate agreement. The figures in the table below therefore exclude R-27 medium-range air-to-air missiles, R-73 short-range air-to-air missiles and internal twin-barrel 30-mm calibre guns.

While the aggregate value of this agreement was over $780 million excluding the primary armament for the aircraft, which would in itself have a significant value, this does not translate into equivalent revenue for Russia because of the way in which the agreement was structured.

First, two elements of the overall package were to be supplied by third parties. The training package was to be implemented by a team of Indian pilots, technicians and engineers who were already operating the MiG-29 in Indian Air Force service. The avionics retrofit was to be conducted by British company GEC Marconi which supplied the aircraft with new tactical navigation and attack systems, a new identification/friend or foe (IFF) system and new ultra-high frequency (UHF) and very high frequency (VHF) telecommunications.

Second, the Russian parts of the agreement (together worth $690 million) were not all to be financed through currency payments. Around 60 per cent of the value of the contract was to be in hard currency while the remaining 40 per

cent was to be provided in goods such as palm oil and textiles.[63] The structure of the offset element of the package was itself complex. The entire value of the contract was to be provided to Russia immediately. The Malaysian Government was to borrow this money and a series of different lending options were considered including borrowing from banks in Singapore, from a consortium of European banks or from the Russian Central Bank. Under the agreement Russia would meet its offset obligations in two ways. Those Russian enterprises involved in the programme would guarantee to buy goods in Malaysia up to a value of $150 million which would be credited to Russia's offset account.[64] In addition, the Russian Government would provide certain services to Malaysia which would also be credited to Russia's offset account. In one joint initiative, Russian technicians would be assigned to the Aerospace Tech Systems Corporation. This company, registered in Malaysia, is expected to provide repair and maintenance for the MiG-29 aircraft beyond the warranty period under which they are maintained by Russian personnel under the original agreement. In a second initiative, Russian engineers and technicians provide courses at the University Sains Malaysia north of Kuala Lumpur.[65]

In this case the full value of the equipment and services provided under the Russian-controlled elements of the agreement was transferred in cash. Under these conditions exports certainly contribute directly to revenues.

V. Conclusions

In the introduction to this chapter two questions were posed. First, were arms exports profitable to the Soviet (and now Russian) economy? Second, did arms exports yield hard currency and, if so, how much? The information available suggests tentative answers to both questions.

During the Soviet period arms exports seem to have brought significant economic benefits if allowance is made for the peculiarities of the overall economic and industrial system in which they were located. Since the production system was developed primarily to meet Soviet military requirements—and would have existed regardless of decisions to export or not to export—the costs of production for export were treated as marginal costs. However, there is evidence that in a large number of its bilateral arms relationships the Soviet Union acquired either currency or goods that were needed and would otherwise have been difficult to obtain.

The amount of hard currency derived from arms sales during the Soviet period remains impossible to quantify in spite of the recent release of information about the earlier period by Russian authorities. The data which have been released still appear to refer to the estimated value of exports and so do not

[63] *Asian Recorder*, 2–8 July 1994, p. 24070; *Aviation Week & Space Technology*, 8 Aug. 1994, p. 28; and 'MiG-29 planes to be delivered to Malaysia', ITAR-TASS (in English), 17 Aug. 1994 in FBIS-SOV-94-160, 18 Aug. 1994, p. 11.

[64] *Asian Recorder* (note 63).

[65] *Defense News*, 10–16 Mar. 1997, p. 16.

allow for special factors in Soviet trade such as clearing arrangements in multilateral and bilateral trade, non-cash payment (i.e., barter) and non-payment or default.

The information available suggests that Soviet arms exports were far more profitable to the central state authorities than they were to the manufacturing enterprises. However, this appears to be changing in line with the overall process of economic and political reform. As government and industry develop and implement procedures that enable them to work together there is evidence that enterprises (in particular those that can sell large, complex systems) will prefer exports over sales to the Russian Ministry of Defence.

Paradoxically, this fact is not necessarily good for Russian economic prospects. Some of the factors which assist Russia in exporting arms have a negative impact on other economic areas. First, achieving profits through the distortions created by maintaining price controls means that an effective subsidy is paid to manufacturers by other parts of Russia's economy. Second, the measures taken to give financial relief to manufacturers in the form of special tax exemptions and centrally financed funds and subsidies is a barrier to the development of a more simple and more enforceable system of financial regulation.[66] Third, because foreign trade is often denominated in dollars Russian producers who depend on exports prefer a weak rouble which has a corresponding impact on the costs of imports.

The main barrier to successful exports from a company perspective is the reality of the post-cold war arms market in which foreign contracts are relatively few and difficult to win against fierce competition.

At the same time equipment has also been transferred to CIS states as grant military assistance as part of the attempt by Russia to develop cooperation in defence and security matters.

[66] This is not unique to Russia, although the need for a more effective system of regulation is probably greater in Russia.