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Cabinet Office

70 Whitehall,

London, SW1

PS(81) 17

3rd August, 1981

Dear Private Secretary,

Soviet Military Expenditure 1970-80 and the Outlook  
for the 1980s

Sir Robert Armstrong has asked me to circulate the attached report on "Soviet Military Expenditure 1970-1980 and the Outlook for the 1980s" to the Private Secretaries to all Cabinet Ministers, and to other Ministers in the Foreign and Commonwealth Office and the Ministry of Defence.

The report is not classified, and may be used by your Minister in the preparation of papers and speeches for public consumption, as required.

Further copies are available on request from Mr. Roscoe on 233 8437.

Yours sincerely,

(Signed) D. J. WRIGHT

SOVIET MILITARY EXPENDITURE 1970-1980 AND  
THE OUTLOOK FOR THE 1980s

INTRODUCTION

1. This paper estimates the growth and scale of Soviet military expenditure in the period 1970 to 1980 and how it has been allocated between the main categories of expenditure and between different forces. We assess the outlook for the rest of this decade and consider the burden which military spending will impose on the Soviet economy and the problems of resource allocation which will face Soviet leaders in the 1980s.

2. This paper brings our last report on the subject up to date. New evidence has allowed us to re-evaluate some elements of expenditure since 1970. The paper concentrates on trends during 1970-1979 with preliminary estimates for 1980.

3. The defence budget published annually by the Soviet Union, which has indicated virtually no change in military spending since 1970, presents an inaccurate picture of the scale and trend of Soviet military expenditure. For this reason, estimates have to be made. They should not be used to compare the absolute level of Soviet military expenditure with that in Western countries, and we have not attempted to cost such expenditure directly in dollars.

SCALE AND GROWTH OF MILITARY EXPENDITURE

4. On the basis of our estimates, which are based on the NATO definition of defence expenditure, Soviet spending on identified military programmes rose from about 44 billion roubles in 1970 to over 76 billion in 1979 in current prices; provisional estimates for 1980 are 81 billion roubles. There are, in addition, several areas of spending which cannot be readily identified or costed. Making allowance for these omissions, we estimate that Soviet expenditure under the NATO definition was between 76 and 81 billion roubles in 1979 and more tentatively, between 81 and 86 billion in 1980 - about five times the published Soviet defence budget. The range of figures for 1980 includes the additional cost of Soviet military operations in Afghanistan. These are estimated to have increased the total by approximately 0.7 per cent during the year.

5. We consider that the average annual increase in Soviet military expenditure during the 1970s was 6.5 per cent in current prices. Allowing for inflation, we estimate that spending grew at 3.4 per cent a year on average in real terms between 1970 and 1979, a real increase of over one third.

6. Annual increases in Soviet military spending have reflected fluctuations associated with the procurement cycles of various weapons systems; those of inter-continental ballistic missiles (ICBM) have been most marked. While new generation equipment programmes for all Soviet forces were a major factor determining the year on year growth in spending in the 1970s, by 1979 many of these programmes had levelled off and others were being introduced. As a result our estimates show the rate of growth of spending to be declining. When the latest programmes have been costed more accurately our estimates for 1979 and 1980 may well be retrospectively increased, thus pushing up the estimated growth rate of military spending in these years and for the 1970s as a whole.

#### MAIN CATEGORIES OF EXPENDITURE

7. The following table compares our estimates of the distribution of Soviet military expenditure in 1979 and provisional figures for 1980 with figures for the United Kingdom (1979) and the United States (fiscal year 1979-80).

	Percentage of Total Military Expenditure			
	USSR 1979	USSR Preliminary 1980	UK*	US*
Military Personnel Costs	11	(11)	23	24
Operations and Maintenance	25	(25)	40	43
Procurement of Equipment	40	(40)	21	22
Research and Development (R and D)	19	(19)	14	9
Construction of Military Facilities	5	(5)	2	2

\* National figures have been adjusted to conform to the NATO definition of military expenditure.

8. Several factors help to explain the striking differences between these allocations. Despite the size of the largely conscript Soviet forces (about 5 million men in 1980), personnel costs absorb a lower percentage of the

total because the conscripts receive low pay, and because living standards for military personnel are well below those in the West. The proportion of Soviet expenditure devoted to operations and maintenance is relatively low because, unlike those of the West, Soviet forces do not employ large numbers of highly-paid civilian workers and because of differences in operating practice.

9. Soviet allocations for procurement of equipment and R and D reflect not only the scale of the programmes but also the relative isolation of the military from the civilian economy. Soviet military industries cannot benefit from a generally high level of civil industrial technology as is the case in the West. Although expenditure on military construction appears proportionally higher than in the United States or United Kingdom, it should be noted that in NATO terms this category includes only "capital outlays for the construction of fixed installations necessary for exercise of command and the efficient functioning of military forces, including costs of directly installed and directly associated equipment". By definition, our estimates for this category therefore exclude investment in defence factories and shipyards.

#### SPENDING BY TYPE OF FORCE

10. The distribution of Soviet military expenditure between the various branches of the Soviet Armed Forces since 1970 is indicated by the selective estimates in the table below.

Table 2

	Distribution of Expenditure by Type of Force (percentages)			
	1970	1975	1979	Preliminary 1980
Ground Forces	23	22	21	21
Naval Forces (including Naval Air Force)	18	17	18	18
Strategic Rocket Forces	10	8	9	9
Air Defence Forces (including Fighter Air Defence Force)	17	16	15	14
Other Air Forces (Long Range Air Force, Military Transport, Aviation, Tactical Air Force)	16	21	20	21
Command and Support (including manpower costs of military construction)	16	16	17	17

Although the table excludes expenditure on R and D and on construction materials for military facilities, which cannot be attributed to individual branches, it covers the remaining three-quarters of total estimated military expenditure. The trend of expenditure on each of the forces and the reasons for it are given in Annex A.

#### THE ECONOMIC BURDEN OF MILITARY SPENDING

11. On the basis of the NATO definition, we believe that military expenditure has accounted for a gradually increasing percentage of Soviet Gross National Product (GNP) since 1970<sup>(1)</sup>. In the first half of the 1970s we calculated the defence burden came within the range of 11-13 per cent of GNP at factor cost, and since then within the range of 12-14 per cent. This is far higher than the comparable figure for any NATO country; in 1979 military expenditure accounted for about 5.6 per cent of GNP at factor cost both in the United Kingdom and the United States.

12. The allocation of a large share of GNP to the military sector continues despite a slow-down in the rate of Soviet economic growth. Soviet arms programmes deprive the civil sector of considerable R and D resources, while the huge and expanding arms factories absorb a significant share of investment resources in certain important industrial sectors. For example, our estimates suggest that the military sector absorbs about one-third of the output of the metallurgical and machine tool industries and over one-seventh of total energy output. Civil consumption and services suffer as a result of Soviet military spending; we estimate that in 1978 Soviet expenditure on education and health combined was only 66 per cent of military expenditure, whereas United Kingdom spending in these fields was almost double defence expenditure.

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(1) The Soviet Union does not itself use the concept of GNP but instead uses "national income" which excludes administration costs, most services and depreciation. We therefore have to make our own estimates of Soviet GNP. We calculate GNP at factor cost to eliminate the effects of indirect taxes and subsidies. In order to make up for any inaccuracies in our estimates of GNP and uncertainties about the absolute level of military expenditure, we quote a percentage range for the assessed military burden.

### THE OUTLOOK FOR THE 1980s

13. Extensive Soviet R and D effort continues unabated over the whole spectrum of military activity and a new cycle of procurement appears to have begun. High priority continues to be attached to missile development. In particular, the considerable R and D effort on naval missiles will continue and a further generation of ICBMs may be introduced from the mid-1980s. Soviet nuclear tests continue to be undertaken frequently.

14. A number of new aircraft types are expected to enter production during the next few years. Research on new designs as well as on progressive improvement of existing aircraft also continues, ranging from the areas of great success, such as helicopter design, to those which lag behind the West, such as aero-engine technology; the Soviet Union has still to introduce into service a high power, low specific fuel consumption engine. We believe that a new aircraft carrier will be built which will be larger than KIEV, probably nuclear powered and able to operate conventionally launched fixed-wing aircraft. The first unit of this class could be completed by the late 1980s. At least one new class of nuclear powered attack submarine is expected to appear by 1990. Work is also in progress on further new ground equipment, including medium tanks.

15. The Soviet Union is engaged in an extensive research programme to improve its chemical warfare capability and is continuing research and exploratory development in all aspects of electronics, and satellite communications. Heavy investment into directed energy weapons will also continue. The Soviet Union may also be considering the development and deployment of an extensive defensive system against cruise missiles, which would be very costly. A major expansion of the already costly space programme is likely particularly in the military sector.

16. The current assessed growth rates in military expenditure are likely to rise again as new systems at present under development enter series production. This could lead to higher estimated growth rates becoming apparent by the mid-1980s. All the signs are that such growth will be maintained by the present leadership even though the economy faces increasing difficulties in the 1980s, with slowing overall growth and major problems in key sectors. On the basis of the NATO definition of military spending

continues to grow at the same rate as in the 1970s, it will account for an increasing proportion of the GNP in the coming years, approaching 15 per cent by 1985. The civilian sector will suffer still more from the priority given to military programmes, since these have first call on the advanced products required. Despite military demands, the proportion of GNP devoted to civil investment will probably have to be increased if the demands of agricultural and Siberian development are to be met. This could only be achieved by cutting the rate of growth of consumption, with a consequent stagnation in general living standards.

17. The dilemma over the future allocation of Soviet resources will therefore become more acute as the decade progresses. The successors to the present leadership may be less willing to accept that military expenditure should absorb an ever-increasing share. Despite the Soviet commitment to military power, we cannot rule out the possibility of a shift in resource allocation priorities which would ultimately manifest itself in a reduction in the growth rate of military spending to correspond with slacker growth in the economy as a whole. Even if such a cutback did occur, the absolute levels of spending would still be very high, there would still be ample provision for substantial modernisation programmes throughout the Soviet forces.

#### CONCLUSION

18. We conclude that -

a. Soviet military expenditure is very high: in 1980 it represented 12 to 14 per cent of Soviet Gross National Product (GNP) and it continues to rise; it imposes a far heavier burden on the economy than is the case for any NATO country. An estimated 19 per cent of the total is being spent on Research and Development (R and D) and 40 per cent on the procurement of equipment.

b. Although the assessed rate of growth of expenditure has declined slightly in the past few years, it is likely to pick-up again as new weapons procurement programmes gather momentum. Current R and D programmes provide for a systematic extension and improvement of the capabilities of all elements of the Soviet armed forces. Together with

development across the whole range of military production activity, this suggests strongly that a wide range of major new equipment programmes will be introduced. Soviet military expenditure is likely continue to grow on average at the rate of the 1970s and by 1985 could account for 15 per cent of GNP (based on the NATO definition).

c. Though economic problems could force a future Soviet leadership to curb the rate of growth of military expenditure, such a slowdown is unlikely to become apparent in the next few years. We see no prospect of a reduction in the high absolute level of Soviet military spending. Even a reduced rate of growth would allow for significant additions to the Soviet arms inventory. Compared with that of NATO countries, military expenditure in the Soviet Union will continue to absorb a much higher proportion of GNP.



## TRENDS IN EXPENDITURE BY TYPE OF FORCE

1. We note below the main trends in expenditure on particular forces during the 1970s. These are largely determined by spending on equipment procurement; other components of expenditure tend either to be relatively constant or to be linked to the introduction of new weapons systems with the forces.
2. Ground Forces. Expenditure grew in real terms at an average annual rate slightly below the general average (see above, paragraph 5). The growth is attributable particularly to the introduction of new missiles, tanks and other expensive equipment such as self-propelled artillery. Numbers of personnel also increased.
3. Naval Forces. Expenditure rose at about the general average rate in real terms. There was increased spending on advanced surface ships (including KIEV, KIROV, SOVREMENNIY, UDALOY and BLACK-COM-1), the BACKFIRE bomber for the Naval Air Force, and submarine launched ballistic missiles. Expenditure on submarines increased in the latter part of the decade as construction started of important new types - particularly OSCAR and TYPHOON.
4. Strategic Rocket Forces. Expenditure tended to fluctuate over the period. It declined in the early 1970s but increased rapidly between 1974 and 1977 with the beginning of deployment of four new-generation ballistic missiles, the intercontinental SS-17, SS-18 and SS-19 and the intermediate range SS-20, levelling off in the last years of the decade.
5. Air Defence Forces. Expenditure on air-to-air missiles and aircraft has tended to fluctuate, while spending on surface-to-air missiles increased steadily throughout the period.
6. Other Air Forces. Expenditure rose rapidly at well above the average annual rate in real terms, because of a modernisation programme and the introduction of more sophisticated and therefore more expensive types of aircraft such as BACKFIRE, FOXBAT, FLOGGER, FENCER, the new FITTER variants and CANDID. Large numbers of helicopters were also supplied, including the

HIND attack helicopter. Growth was rapid in Military Transport Aviation and in the Long Range Air Force. Expenditure on the Tactical Air Force dipped temporarily in the mid 1970s but has since started to grow rapidly again.

7. Command and Support. Expenditure rose at about the average annual rate in real terms, reflecting the growth in spending on other forces described above.