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SUB-COMMITTEE ON SOVIET ECONOMIC POLICY

WESTERN ESTIMATES OF DEFENCE EXPENDITURE IN
COMMUNIST COUNTRIES

Note by the Chairman

The Sub-Committee has devoted a number of meetings, some attended by experts, to considering how best to assess the real defence expenditure of the Communist countries. The present draft report attempts to summarise the information which has been presented to the Sub-Committee in a wide range of documents. This draft, which might ultimately be submitted to the Council, contains only the main findings of the study undertaken by the Sub-Committee. More information as to the basis of the calculations made will be found in the following notes:

For the USSR: AC/89-WP/229 and series, and the first part of AC/89-WP/246 and series;

For Eastern Europe: AC/89-WP/240 and series, and the second part of AC/89-WP/246.

2. The present document has been put on the Agenda of the next meeting of the Sub-Committee to be held on 2nd May, 1968.

(Signed) A. VINCENT

OTAN/NATO,
Brussels, 39.

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SUB-COMMITTEE ON SOVIET ECONOMIC POLICY
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COMMUNIST COUNTRIES

Draft Summary Report by the Economics Directorate

The published defence budgets of Communist countries give only a single figure without any breakdown or any precise indication of what is covered. However, it is generally agreed that this official defence budget of Communist countries omits a number of items which are usually considered in the West as a part of defence expenditure. These items in the Communist countries are provided for from other funds which are unspecified. In such circumstances, changes in the official budget do not necessarily reflect changes in the total military outlay. Much depends on the image that the Communist leaders wish to present.

2. Western specialists have approached the problem of evaluating the real defence effort in Communist countries in two main ways:

- (a) one, commonly called the "building block approach", seeks to identify and quantify, on the basis of the best available information, each of the physical inputs to the Communist military programmes, to apply suitable prices to these quantities and then to add up the results. This method has generally been adopted by the United States experts for evaluating the actual military spending of the Soviet Union;
- (b) the second approach uses the official defence budget as the starting point and attempts to identify and evaluate additional defence items covered by other budget headings and funds. This method makes use of all openly released information (the state budget, national income, indices of gross value of output, etc.) and where necessary the cost of the additional items is arrived at by considering the cost of comparable items in western countries. The European experts have generally used this approach for evaluating the defence outlays of both the USSR and other Communist countries, while the United States experts adopted this method for the Eastern European countries.

3. In the following paragraphs an attempt is made to present the various estimates, by United States and European experts, of Soviet military spending, in rubles and as a percentage of G.P. A similar description is made for the Eastern European countries. Finally, some comparisons are drawn between the defence efforts of Communist and NATO countries.

I. SOVIET UNION(a) United States Estimates of Soviet Military Spending

4. In so far as they are primarily concerned to assess the trend and pattern in Soviet defence spending (rather than to compare the magnitude of the Soviet defence effort with that of other countries) the United States experts estimate the volume of goods and services annually produced for the Soviet military and space establishment in constant 1955 "internal" rouble prices. They arrived at a figure of 17.5 billion roubles for 1965, 19 billion for 1966 and 20.5 billion for 1967. This last figure has been broken down as follows:

Table IUnited States Estimates of Total Military Expenditure of the Soviet Union in 1967

(in billion constant 1955 "internal" roubles)

Personnel	5.0
Operation and Maintenance	3.5
Equipment	6.0
Construction	0.5
Research and Development	5.5
TOTAL	20.5

5. These data cover all Soviet activities equivalent to those of the US Department of Defence, the National Aeronautics and Space Administration (NASA), and the activities of the Atomic Energy Commission related to defence. They include all outlays for personnel and other operating costs, procurement of all hardware (including nuclear warheads), construction of facilities, military research and development activities as well as all space programmes. They do not include military assistance.

6. The United States have independently calculated the Soviet GNP in 1967 at 230 billion roubles (constant 1955 prices). This figure for GNP at factor cost is arrived at by making allowance for subsidies, turnover taxes, profits, capital charges and land rent.

7. Soviet defence expenditure, as calculated above, absorbs about 9% of GNP at factor cost. Because of uncertainties about prices and subsidies in 1955, however, the defence share of GNP may be put at about 10%.

8. The United States experts have further calculated that if American prices were to be applied to the estimated physical input to the Soviet military programme, the total dollar cost⁽¹⁾ of the Soviet effort in 1967 would represent about 80% of the total military spending in the United States. At the same time, the Soviet GNP has been estimated to represent only about 45% of the GNP of the United States.

(b) European Estimates of Soviet Military Spending in 1967

9. To arrive at the total military expenditure of the Soviet Union, the European experts have sought to ascertain: (a) the expenditure covered by the defence vote and (b) the additional spending for defence covered by funds other than the official defence budget. The total thus arrived at should tally with the NATO definition of defence expenditure.

(i) The Official Soviet Defence Budget

10. The annual defence budgets of the USSR, over the last few years are as follows:

	in billion current roubles	percentage change over the preceding year
1965	12.8	- 3.8
1966	13.4	+ 4.7
1967	14.5	+ 8.2
1968	16.7	+15.2

11. Although no information as to the breakdown of the Soviet defence budget is published, it is generally agreed that the official figure covers:

- all personnel and operating costs (pay and allowances, pensions, clothing, housing and food) as well as expenditure for the maintenance of weapons and equipment (including spare parts and administrations costs);

(1) The various estimates of Soviet defence spending in roubles, while making it possible to evaluate the share of GNP at factor cost devoted to defence, should not, however, be converted into dollars at the usual conversion rates if the comparison is sought with the military effort in western countries. The purchasing power of the rouble in the Soviet Union when used to buy defence goods is considerably higher than that of the rouble used for consumer goods or services; moreover, roubles will buy more labour in the USSR than a corresponding quantity of dollars (converted at the official rate of exchange) would buy in the USA. Therefore, the United States experts, for comparison purposes with military spending in the US, have applied American prices to the estimated physical input to the Soviet military programme. This calculation arrives at a figure of \$57 billion.

- most of the procurement of new weapons and equipment (conventional and other weapons, ammunition, engineering, stores, vehicles POL);
- the construction of military facilities (for land, sea and air forces).

12. Military items not included in the official defence budget are thought to be: internal security forces - personnel and operating costs; part of the cost of naval construction; some investments and subsidies in defence industries; additional procurement of military equipment; strategic reserves; some construction costs for military and space activities; most of defence and space research and developments; and possibly military assistance programmes.

(ii) Estimates of Total Defence Expenditure

13. The results obtained by the various experts of European countries in the evaluation of additional military spending over and above the official defence budget are not identical. By adding these extra items to the official defence vote the estimates of total defence spending are as follows:

Table II

European Estimates of Total Military Expenditure
of the Soviet Union in 1967

(in billion 1967 current roubles)

	United Kingdom Estimates	French Estimates	German Estimates
Personnel	5.8	5.5	5.5
Operation and Maintenance	4.0	4.0	4.0
Weapons and Equipment	5.0-6.0	7.0	7.0
Construction	0.5	1.5	1.5
Scientific research and development	4.5	7.0	6.0
Strategic stockpiling	-	-	2.7
Naval construction	-	0.5	-
TOTAL	19.8-20.8	25.5	26.7

14. Two main differences in the methods used by the European experts on the one hand and the United States experts on the other hand should be borne in mind:

- (a) Whereas the European estimates are in current prices, the American ones, as indicated above, are in constant 1955 rouble prices. For several years, this difference in the prices utilised may not have significantly affected the results, but this may no longer be the case as the recent introduction of economic reforms has been accompanied by a revision of prices;
- (b) Whereas the United States experts have included in their estimates the cost of all space programmes, the European experts have attempted to evaluate separately that part of such programmes which is of military significance and they have not included in their estimates the part which is supposed to be of a predominately civilian character.

15. The European experts have estimated the Soviet GNP on the basis of national income figures as given in Soviet statistics. By adding the value of non productive services and depreciation charges, which are not included in the Soviet calculation, a figure of about 240-245 billion roubles is reached for Soviet GNP at factor cost (current prices).

16. According to these calculations, Soviet defence expenditure absorbs between 8% and 11.5% of GNP at factor cost. It seems, therefore, that an approximate figure of 10% might be accepted.

(c) Actual Soviet Military Spending in 1968

17. All experts, both American and European, agree that the military effort of the Soviet Union will be further increased during 1968. Military research and development will continue to grow at a fast pace, some strategic programmes will be stepped up and the capabilities of the theatre forces improved. Nevertheless, the real increase in military spending will not be as great as suggested by the 1968 budget. It seems clear that part of this rise in the defence vote is merely a book-keeping transaction. Some of the subsidies previously allocated to industries working for defence from funds other than the defence budget - in order to keep the prices of military equipment low - have now been openly charged against the Ministry of Defence account, a reform which is in line with the new system of economic control recently introduced in the Soviet Union.

18. The experts have estimated the the real rate of increase over 1967 would probably be about half the announced one, thus keeping pace with the expected growth of GNP, provisionally estimated at 6 to 7%. If this were so, total military spending while remaining about 10% of GNP (factor cost) would rise to something between 22 to 28 billion roubles.

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(a) Official East European Defence Budgets

19. The official defence votes of the East European countries in the table below are given in national currencies (current prices) :

Table III

Official East European Defence Budgets

<u>Bulgaria</u>			
(million leva)	240	244	264
percentage change over preceding year	+ 3.9	+ 1.7	+ 8.2
<u>Czechoslovakia</u>			
(million crowns)	10,800	12,373	12,900
percentage change over preceding year	+ 5.7	+ 14.6	+ 4.3
<u>Hungary</u>			
(million forints)	5,219	5,559	6,400
percentage change over preceding year	- 9.3	+ 6.5	+ 15.1
<u>Poland</u>			
(million zlotys)	25,276	26,450	29,100
percentage change over preceding year	+ 7.7	+ 4.6	+ 10.0
<u>Rumania</u>			
(million lei)	4,789	4,960	5,187
percentage change over preceding year	+ 5.5	+ 3.6	+ 4.6
<u>Sov. Zone of Germany</u>			
(million DME)	3,300	3,600	5,800
percentage change over preceding year	+ 17.9	+ 9.1	+ 61.1

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20. In the absence of any official definition or breakdown, the items included in the defence budgets of the East European countries are taken, as in the case of the USSR, to cover :

- all operating costs (pay, and allowances, housing, food, administration, etc.);
- a large part of the procurement costs (weapons, ammunition, vehicles, etc. imported or home produced);
- the construction of military facilities.

21. The problem of estimating for the East European countries the military spending not included in the defence budget is similar to that encountered in the Soviet Union. Moreover, little is known about prices and conditions on which the USSR delivers military equipment to these countries or about the financial aspects of the stationing of Soviet troops in some of these countries (Soviet Zone of Germany, Hungary, Poland). Non-budgetary expenditure is thought to arise in respect of (a) payments in the form of exports to the USSR for military equipment and (b) outlay on internal security forces (except in the case of Hungary and Czechoslovakia, where such expenditure is explicitly included in the defence budget). On the other hand, the East European countries, unlike the USSR, do not have large research and development programmes, and only Czechoslovakia and Poland have domestic arms industries of any consequence.

(b) Western Estimates of Eastern European's Military Spending in 1966

22. In the absence of detailed information on the military establishment of the East European countries, the American as well as the European experts have generally used the budget figures for defence as a starting point for calculating the actual spending of these countries. The personnel costs are estimated to absorb roughly one third of the announced military spending while imports of military equipment may account for between one third and one half, according to the country's dependence on such imports. Allowing for expenditure additional to the budget the United States experts have arrived at the following estimates of total military spending (current prices) in 1966.

TABLE IV

Estimates by United States Experts of the Defence Expenditure and GNP of East European Countries for 1966

Country	Unit of Currency	Total Defence Expenditures	GNP	Defence Expenditures as a Share of GNP
Bulgaria	billion leva	0.28	8.0	3½%
Czech- oslovakia	billion crowns	11.8	207.5	5½%
Hungary	billion forints	8.9	208.9	4-4½%
Poland	billion zlotys	33.9	686	5%
Rumania	billion lei	6.1	145	4%
Sov. Zone Germany	billion DME	4.8	109.6	4½%

(c) Actual East European Military Expenditure in 1968

23. In the years 1963/66 there was no distinct trend in the pattern of the defence budgets of Eastern Europe; in Hungary, Bulgaria and Czechoslovakia they declined, but increased in the other countries. Since 1966 the defence budget has risen in all these countries. As regards the proportion of the total budget it represents, this has fallen in Bulgaria, Hungary and Rumania, risen in Poland and the Soviet-Occupied Zone of Germany, and in Czechoslovakia it is back at the 1965 level. Payments for imported military equipment may have been chiefly responsible for an increase in defence spending in recent years. Apart from this, changes in wage and internal prices have no doubt had an effect.

24. Bulgaria : The increase (6.9% over the previous year) in the official defence vote for 1968 over 1967 is roughly the same as the expected increase in GNP. The share which military expenditure not included in the defence budget represents in the total military spending is probably not very important, although it might have fluctuated somewhat during recent years. This may explain, at least in part, why the official defence vote in 1963 was apparently 15% higher than in 1966. Over the last three years, however, the percentage of GNP (factor cost) devoted to defence spending has probably remained constant.

25. Czechoslovakia : The defence budget 1968 shows an increase of 4.3% over the preceding year. It would seem that during recent years the amount of military spending not covered by the official budget has been relatively small, as, inter alia, the costs of internal security troops are already included in the official defence budget. The introduction of economic reforms favouring self financing has probably contributed in 1968 to the process of shifting to the Ministry of Defence account subsidies to defence industries previously covered by the "National Economy" budget as in the case of the Soviet Union. The defence budget figures are in current prices and may, therefore, reflect price fluctuations. It may be noted that in Czechoslovakia the authorities have acknowledged higher prices as a cause for increased defence spending in 1968.

26. Hungary : The interpretation of the defence budget of Hungary presents particular difficulties. Between 1963 and 1966 the official defence vote declined steadily from 6.6 billion forints to 5.2 billion forints. It seems, therefore, likely that the book-keeping adjustments used in most Communist countries may have been especially important in Hungary. The financial aspects of the maintenance of Soviet troops in that country have probably played a part in these fluctuations but little is known about this. It is against the background of economic reforms and the resulting price changes that the increase in the 1968 state budget of nearly 30% should be judged. These various factors also serve to explain the 17.8% increase in the official defence budget for 1968.

27. Poland : The Polish defence budget has been regularly increasing since 1963. The 1968 vote exceeds that of the previous year by 9.4%. In the case of Poland the share of military spending not included in the defence vote may be rather important since the internal security forces are not included in the official figures, and Poland apart from Czechoslovakia is the only country with a defence industry of any importance. Since 1966, it would seem that the rate of increase of actual military spending has been slightly more rapid than that of GNP, reflecting, to some extent, the mounting cost of modern military technology and the high cost of production of military hardware in Eastern Europe.

28. Rumania : The 4% increase in the official defence vote for 1968 remains below the expected rate of growth of GNP (factor cost). Total military spending, including expenditure not covered by the defence budget, has probably increased accordingly. It would seem that since 1965 defence spending, although increasing in absolute terms, has shown a tendency to decline slightly as a percentage of GNP.

29. Soviet Zone of Germany : It is generally felt by the experts that the real increase of defence spending in 1968 will remain well below the spectacular rise in the defence vote announced (61.1% over 1967). The transfer to the defence

budget of procurement of arms and equipment previously accounted for under other budget headings has led to the surfacing in 1968 of previously hidden expenditure. Deliveries of military equipment from the USSR had, in the past, probably been charged against vote other than the defence vote. Changes in domestic prices and wages, and possibly higher prices for Soviet deliveries of more modern equipment, have all contributed to the increase. This is not meant to belittle the Soviet Zone's re-armament. The Zone is currently re-organizing and modernising its military establishment and it should be noted that for political reasons, internal and external, its leaders have apparantly wished to demonstrate their willingness to increase their defence effort at the present juncture. For all these reasons, it is thought that in the case of the Soviet Zone actual defence spending during 1968 will increase more rapidly than its gross national product.

30. These various estimates and trends make up the following overall picture :

TABLE V

Defence Expenditure 1968 as Percentage of GNP
at Factor Cost (Western Estimates)

Bulgaria	3-3½%
Czechoslovakia	about 5½%
Hungary	4-4½%
Poland	5-5½%
Rumania	3½-4%
Soviet Zone of Germany	5-5½%

III. MILITARY EXPENDITURE IN COMMUNIST AND NATO COUNTRIES

31. International comparisons of defence efforts are best made on the basis of percentages of GNP devoted to such efforts. This avoids the difficulty of finding an appropriate exchange rate to convert defence expenditure expressed in national currencies into a common currency. However, in order to have an idea of the real burden of defence spending on an economy, it is useful to take account of the differences in the stages of economic development. A rough indication of this may be

obtained from GNP per head. The main elements available for such comparisons can be found in the table at annex.

32. The following observations may be made :

- (i) As far as trends are concerned, it appears that military expenditure in both the Soviet Union and Eastern Europe as a whole has increased at a rate at least equivalent to the growth of their economies. By contrast, in NATO Europe the share of GNP devoted to defence has slightly decreased. It has risen in the United States owing to military operations in Vietnam. When looking at the percentages of GNP devoted to defence, it has to be remembered that the real stepping-up of defence in the Soviet Union is, in fact, greater than would appear from this percentage. This is due to the fact that, from 1966, the GNP in the USSR has grown faster than in either NATO Europe or the United States, (6-7% in the USSR against 4% in the United States and 3.5% in NATO Europe annually).
- (ii) As far as the weight of defence efforts on the economies is concerned, there is no doubt that it is heavier in the Soviet Union than in the United States or NATO Europe. Indeed, while the USSR devotes about the same percentage of GNP to defence as the United States, her GNP per head is only some 38% of that of the United States. The percentage of GNP the USSR is devoting to defence is about twice as high as that of NATO Europe, while her GNP per head is slightly lower. Several Eastern European countries are devoting to defence a higher proportion of their GNP than most NATO European countries, although their GNP per head is lower. Among NATO countries, the United States is devoting to defence a percentage of GNP about twice as high as that of NATO Europe taken as a whole, but the United States GNP per head is also roughly twice as high as that of NATO Europe. Among the Warsaw Pact countries, the USSR is devoting to defence a percentage of GNP twice that of Eastern European countries, although her GNP per head is lower than that of some of these countries and only some 15% higher than the average for them taken as a whole.

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PERCENTAGE OF GNP DEVOTED TO DEFENCE
AND GNP PER HEAD
IN NATO AND WARSAW PACT COUNTRIES

Country	Defence expenditure as % of GNP (factor cost)			GNP (market prices) per head in 1966(1) (US dollars)
	1966	1967	1968	
	<u>A. NATO (2)</u>			
Canada	3.6	3.6	3.3	2,670
United States	9.2	10.1	10.1	3,840
<u>NATO Europe</u>				
Belgium	3.3	3.3	3.3	1,910
Denmark	3.2	3.2	3.0	2,320
Fed. Rep. Germany	4.9	5.3	4.6	2,010
France	6.3	6.2	6.2	2,060
Greece	4.2	5.0	5.4	750
Italy	3.9	3.7	3.5	1,180
Luxembourg	1.6	1.4	1.3	1,930
Netherlands	4.1	4.2	4.2	1,670
Norway	4.0	4.0	4.0	2,020
Portugal	7.0	7.4	7.7	430
Turkey	5.4	5.4	5.4	290
United Kingdom	6.7	6.8	6.5	1,920
Total NATO Europe	5.3	5.1	4.9	1,560
	<u>B. WARSAW PACT</u>			
Soviet Union	9-10	9-10	10	1,440
<u>Eastern Europe</u>				
Bulgaria	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3-3 $\frac{1}{2}$	870
Czechoslovakia	5 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	1,630
Hungary	4-4 $\frac{1}{2}$	4-4 $\frac{1}{2}$	4-4 $\frac{1}{2}$	1,150
Poland	5	5	5-5 $\frac{1}{2}$	1,010
Rumania	4	4	3 $\frac{1}{2}$ -4	800
Sov. Zone Germany	4 $\frac{1}{2}$	4 $\frac{1}{2}$ -5	5-5 $\frac{1}{2}$	1,660
Total Eastern Europe	4 $\frac{1}{2}$ -5	4 $\frac{1}{2}$ -5	5	1,200

Note: Footnotes, see next page.

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- (1) The two series of data in this column referring to the NATO countries on the one hand and to the Communist countries on the other, are not strictly comparable. GNP figures for NATO countries have been converted to US dollars at the official rates of exchange. To apply the official rates of exchange to Communist national currencies would be misleading for reasons explained in the footnote to paragraph 11. The dollar equivalents of the gross national products of the Communist countries have been calculated by comparing the purchasing power of the currencies. If account were taken of the purchasing power relationship between the dollar and European currencies, the GNP figures of NATO European countries would need to be raised by nearly 10%.
- (2) Sources for NATO countries defence spending:
ISM(67)21(Dec 67) and DPQ 1967.
for NATO countries GNP per head:
OECD: Economic Indicators (March 1968).

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