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ECONOMIC COMMITTEE

APPRECIATION OF THE ECONOMIC POSITION OF NATO AND  
WARSAW PACT COUNTRIES FOR THE PERIOD THROUGH 1980

Note by the Chairman

In response to the request of the Defence Planning Committee(1) an appreciation of the economic position of the NATO and Warsaw Pact countries for the period through 1980 is attached. This appreciation has been prepared in accordance with the revised procedures for the NATO Planning Review of May 1971(1), specifying that a basic Economic Appreciation, looking at the economic position of the Alliance and the Warsaw Pact over the same time-span as the Military Appreciation, and including possible trends in defence expenditures, be prepared by the Economic Directorate of the International Staff and reviewed by the Economic Committee. In accordance with these instructions and recommendations made by the Defence Review Committee in July 1972(2) the Appreciation has now been completed and copies are herewith forwarded to the Defence Review Committee.

2. The preparation of this Appreciation has been based on the information available from the OECD and national sources concerning the NATO countries, and NATO and national sources concerning the Warsaw Pact countries. Close consultation has also taken place with the NATO Military Authorities responsible for the Military Appreciation(3) and the annual report on Soviet Bloc Strength and Capabilities(4).

3. It is to be noted that any projections of future growth rates involve substantial uncertainties. The information drawn upon is however the best available, but the validity and usefulness of data relating to possible future developments rests very largely on the assumptions adopted. For trends of defence expenditure more than one assumption has been used while for the economic growth projections the latest figures from OECD sources are reported. The latter should not be interpreted as forecasts of future economic growth rates, but only as providing reference data for assessing possible future developments. In particular, the future economic

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growth rates of individual countries are likely to show greater variance from the projections than the aggregate trends for total Warsaw Pact and total NATO. In view of the above and the changing economic situation up-dating of this paper might be considered useful as soon as new information becomes available.

(Signed) Y. LAULAN

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- (1) DPC/D(71)10, paragraph 5(b) and Paragraph 8, Annex I
  - (2) DRC/DS(72)11
  - (3) MCM-10-73
  - (4) MC-161-73

This document includes: 1 Annex

APPRECIATION OF THE ECONOMIC POSITION OF NATO AND  
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APPRECIATION OF THE ECONOMIC POSITION OF NATO AND  
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PART I INTRODUCTION

A. Economic development in NATO countries up to 1970

The countries of the Alliance today possess the experience of a quarter of a century of virtually uninterrupted economic growth - an unprecedented record in economic history as regards both the duration and the strength of the expansion. This record points to the existence of strong forces built into modern economies favouring growth. Increased international economic co-operation and the commitment of virtually all governments to full employment and economic expansion has strongly contributed to the growth performance. The period of growth has, however, not been without problems. No countries have succeeded in keeping their economies on a balanced growth path all the time. Inflation and balance of payments problems were aggravated by the weakness of the international payments system and mounting international monetary problems, particularly over the last decade. Total defence expenditures continued to grow during most of this period, but the defence burden declined. This was particularly the case for European member countries in the 1960s when economic growth was considerably higher than the growth of defence expenditures, the latter actually dropping slightly in real terms during the second half of the decade.

2. The rate of economic expansion has been faster in Europe than in North America over the last two decades, the rate of growth of their gross national products (GNP) averaging 4.8% and 3.6% respectively. The economic growth and increasing interdependence of the European member countries has been such that they are now emerging as a major economic power in their own right which in some measure competes with the United States. An additional impetus to growth was the creation in Europe of two trade groupings which promoted trade not only within and between the groupings, but also with North America and the Third World. Recent developments show that the process of economic integration in Europe will continue. The creation of a huge economic community will continue to change the balance between Europe and North America. During this process it will be increasingly important to achieve agreement with North America not only on economic questions but also on all important areas of foreign policy including defence, on relations with the Third World and on efforts to preserve a healthy environment.

3. Taking the years since 1950 as a whole, price and cost developments were relatively satisfactory in the countries of the Alliance. Prices increased less in North America than in Europe during this period, 2.4% and 3.8% respectively calculated as a yearly average. However, by the end of the last decade the inflationary development worsened considerably in all

countries and continues to be a major problem in spite of strong measures taken to fight it. A more satisfactory price development, a narrowing of the wage differential between the United States and other major industrial powers, and the realignment of exchange rates which has taken place are factors which might be expected to make US goods more competitive in future years and help solve the serious balance of payments problem of the United States.

4. The United States balance of payments deficits which reached a record of \$31 billion on official settlements in 1971 alone and economic imbalances in other major industrial countries were important elements behind the present international monetary difficulties. The Smithsonian agreement in December 1971 was concerned mainly with realigning exchange rates. It did not attempt to deal with structural weaknesses in the international monetary system. These have still to be remedied before it is possible to build a new and stronger international economic order.

B. Economic development in Warsaw Pact countries up to 1970

5. The Warsaw Pact nations have experienced rapid economic growth during the postwar period. Between 1950 and 1960 the yearly rate of economic growth was 6.1% in the Soviet Union and 5.6% in the satellite countries on average. During the last decade the percentages were 5.4% and 4.2% respectively(1). On the whole, the growth performance has been higher during this period than in NATO member countries.

6. Factors independent of the Communist economic planning system have contributed to economic growth in the postwar period. Warsaw Pact countries have been anxious to acquire Western technology and have been increasingly able to do so. Throughout the sixties, the labour force in the USSR continued to expand sufficiently to maintain the rhythm of "extensive" growth, but this was due more to the increased participation of women and a switch of workers from seasonal to regular work than to the absolute increase in the number of people of working age.

7. Economic expansion has, however, been slowing down in the past decade, particularly in the more advanced countries (the USSR, Czechoslovakia, East Germany). For the most part this was due to a decline in the rate of growth of productivity. Deficiencies in the Warsaw Pact R & D (particularly in development) systems have forced them to look to Western techniques to lessen the technological gap, but they have had difficulties in introducing such innovations into the production processes. Furthermore, the demonstrated vulnerability of Soviet agriculture to unfavourable weather (in 1963, 1969 and 1972) has negatively affected economic growth.

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(1) See table 5(a) annexed

8. Much of the responsibility for declining productivity trends, however, rests on centralised systems of control of economic development. Institutional rigidities, lack of market competition and inflexible pricing have caused substantial error and waste.

9. Incentives to efficiency and enterprise in Warsaw Pact countries have also been discouraged by the relatively small share of resources allocated to the consumer. Per capita consumption<sup>(1)</sup> was estimated as only one-third to two-thirds of West European living standards in the 1960s. The slowly rising standard-of-living is in sharp contrast to increases in investment, which accounted for 30-35% of GNP in 1970, considerably higher than the investment share in most NATO countries. Consumer-oriented allocations are also limited by the defence burden. The estimated value of Soviet military outlays (which represent about 85% of the Warsaw Pact total) rose appreciably in the 1960s and, despite a recent levelling-off, is now probably directly comparable in terms of the resources it commands with US defence expenditures.

10. Symptomatic of these basic problems has been the failure of a dynamic, viable "Common Market" to develop out of COMECON, the organizational framework for economic relations among Warsaw Pact countries. The foreign trade of the USSR is small with exports accounting for only 2.5% of GNP. In the case of other Warsaw Pact countries, the export share is considerably greater (10-20%) and 60% of their trade is directed to each other or the Soviet Union; none of the East European nations is self-sufficient and all are dependent to some degree on foreign trade to meet their needs. Nevertheless, the USSR has not been willing to impose, as a basis for COMECON integration its preference for joint planning under tight central control, nor has it been willing to accept currency convertibility along with some decentralization of economic authority as preferred by Hungary and Poland.

11. Underlying the recent deterioration in economic performance has been Soviet reluctance to permit adequate reform of the relatively rigid systems and institutions within which economic development is sought. All Warsaw Pact governments, the USSR included, have experimented in the 1960s with promising economic remedies - increased imports of Western technology via industrial co-operation, a more consumer-oriented allocation of resources, and relaxation of central economic controls. No radical changes have resulted, however. The Soviet invasion of Czechoslovakia and the Brezhnev doctrine of 1963 clearly signalled Moscow's continued insistence on limiting action along these lines.

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(1) See Table 7 annexed for GNP per capita

PART II PROJECTIONS OF ECONOMIC DEVELOPMENTS 1970-1980

A. In NATO countries

- OECD projections

12. The prospects for further rapid economic growth in the countries of the Alliance during the 1970s seem promising. But the very high growth rates of the last decade and a half might perhaps not be matched. The underlying growth forces are strong, however, and might be expected to generate substantial additions to the wealth of member countries. On the other hand, the pressure of demand on available resources can be expected to grow even more strongly and both the rate of growth and the pattern of resources allocation in the future are a matter of conjecture. A starting point for an examination of the prospects and problems likely to arise in this field is provided by the authoritative study of economic growth 1960-80 that has been made by the OECD. These estimates are purely quantitative and do not take account of the consequences which might follow from major changes in world political and economic conditions. Nor do they assess the effect of better internal and external equilibrium or the effects of environmental preservation and increased leisure time on economic growth.

13. The OECD bases its projections upon the assumption that the pressure of demand represents a normal degree of capital utilisation during the period without either inflationary strains or undesirably high unemployment. On these assumptions the combined gross domestic product of the NATO countries taken as a whole might increase at an average annual rate of about 4.7% between 1970 and 1980. The growth rate (annual average) in the United States and Canada is put at 4.5% and 5.4% respectively and in NATO Europe at 4.9%. Part of the growth will, of course, be attributable to the increase in the size of the labour force but in most member NATO Europe countries this is expected to average between 0.5 and 1% yearly over the decade. The main factor contributing to growth must therefore be a sustained rise in productivity.

	<u>1970</u>	<u>1980</u>	<u>Yearly % increase</u>
<u>Population (million)</u>			
- United States	205	227	1.0
- Canada	21	24	1.1
- NATO Europe	307	332	0.8
<u>GNP (milliard US \$)</u>			
- United States	902	1,401	4.5
- Canada	67	113	5.4
- NATO Europe	582	938	4.9
<u>GNP per head (US \$)</u>			
- United States	4,400	6,162	3.4
- Canada	3,131	4,755	4.3
- NATO Europe	1,898	2,828	4.1

As can be seen from the summary figures given above for the NATO countries as a whole, the GNP calculated in constant 1970 prices would increase according to the OECD projections from US \$1,550 milliard in 1970 to nearly \$2,500 in 1980. Out of this total the United States would account for some 57% in 1980, about the same percentage as in 1970. The combined GNP for NATO European member countries would increase by some \$350 milliard over the decade and would approach \$1,000 milliard in 1980. The North American total would increase by some \$500 milliard and would exceed \$1,500 milliard by 1980(1).

14. The effect on the standard of living of such a development would also be considerable in spite of an estimated population increase in the NATO area of perhaps 50 million during the current decade(2). The average per capita GNP for NATO Europe would increase from somewhat less than \$1,900 per head in 1970 to about \$2,800 per head in 1980 or not far from the present average level of total NATO(3). In North America the GNP per head would increase further from the high 1970 level of \$4,400 in 1970 to perhaps \$6,000 in 1980. Such increases in per capita national incomes are bound to have profound effects on the structure of the economies of member countries. Radical changes will take place in the demand pattern influencing the direction of investments and production. Service industries will continue to expand rapidly in response to increased demand for services. The importance of the public sector consumption might

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- (1) See Table 1 annexed for details
  - (2) See Table 2 annexed for details
  - (3) See Table 3 annexed for details

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also increase as a consequence of the higher standard of living. The changing economic balance this will bring about will have repercussions on the pattern of both external trade and internal demand. The further channelling of resources to achieve improved health, education and other social services and an increasing need to cope with environmental problems can be expected to reinforce the centripetal tendencies evident in government and industry as the scope and complexity of their activities increase.

15. The OECD growth projections provide a quantitative basis for examining the probable economic developments in the Alliance in the 1970s. However, to obtain a better appreciation of the problems and pressures that could arise and influence the situation some of the more important non-quantitative assumptions are briefly reviewed below.

- Factors which might retard the growth performance

16. The inflationary problems have worsened considerably since the beginning of this decade and measures taken in major Western countries to dampen price and wage increases have in recent years contributed towards a slowing down of the economic growth in member countries taken as a whole. The problem of inflation has yet to be solved however. This factor might therefore influence the growth performance during the period under review, and, of even greater importance, can be expected to distort resource allocation and in particular add to the difficulties of budgetary management.

17. The lack of internal stability has been the main factor behind the serious external imbalances of major member countries in recent years and of the monetary difficulties of the late 1960s and the monetary crises of 1971. During the postwar period international trade expanded at a rate never experienced in economic history. This achievement was not only the fruit of international co-operation, it was also facilitated by a long period of relative stability of the international monetary system. International trade, which has been an important growth factor during the past two decades, could also be one of the main growth elements during the 1970s. Trade cannot, however, develop satisfactorily in an unstable environment and an improvement in the international monetary situation is therefore of major importance for future satisfactory growth.

18. The necessity to protect the environment might be expected to demand more resources during the current decade. The importance of this task might lead to a change in the present concept of national income formulation whereby investment in environmental protection would become a permanent and essential part of the process of calculating a nation's wealth. Economic growth measured by the domestic product, does not give an adequate indication of the increase in the standard of living in member countries. The safeguarding of the external environment will

require measures which are contrary to the aim of the greatest growth in production, but which nevertheless will improve the people's living conditions and well-being. It is anticipated that gradually choices will be made which will lead to a greater part of the increase in the standard-of-living being taken out in forms other than those which appear in the domestic product. The reduction in working hours during recent years is an example of such a choice. With the increasing standard of living, shortening of working hours and more leisure time, pure production considerations might be expected to be given relatively less weight thus tending to slow the growth of the GNP.

19. The foreseen economic growth will depend upon rapidly increasing supplies of raw materials and energy. On the energy side some supply problems might emerge towards the end of the decade. The effect of this factor is dependent upon the dimensions of the problem. However, even if growth were not handicapped, shortages could be expected to produce substantial price increases, which would feed the inflationary forces and make the efforts of member countries to stabilise their economies more difficult.

- Factors favourable to growth

20. The enlargement of the European Economic Community from 1st January, 1973 should produce economic incentives favourable to growth in the countries concerned. Increasing co-ordination of economic policies within the EEC, and the investment opportunity offered by the wider grouping should help increase productivity, and higher trade turnover within the Community might tend to improve the division of labour between the member countries. Closer economic co-operation and the implementation of a common monetary policy are likely to be key factors in securing monetary stability and in doing away with internal and external economic imbalances. High economic activity within a market of 300 million people is bound to produce effects favourable to the development of international trade and payments in the 1970s.

21. The disappearance of the severe cyclical economic swings characteristic of the prewar period is partly due to the anti-cyclical policy pursued by governments, but also to the fact that the consumption share of GNP, more or less unaffected by the internal economic activity, has steadily increased. This is due to the rising importance of public demand, the increasing influence of the service sector which is less affected by changes in economic activity, and the strength of labour organizations, all of which have had a stabilising effect on the purchasing power of consumers. The modern economies thus possess an important element of built-in purchasing power which guarantees a certain minimum level of economic activity, below which it is unlikely to fall. This is an important economic factor not to be overlooked when evaluating the growth prospects in the current decade. The tendency is for these stabilising forces to increase during the current decade, improving further the growth of the economies of member countries.

22. External factors, such as détente and lower defence expenditures, might also influence economic growth favourably in the 1970s. The development in this field depends upon the outcome of discussions on European security and on mutual force reductions in Europe. The immediate effect of agreements between East and West in these fields is likely to be mainly of a psychological nature. In the longer term, however, increased East/West trade might play a bigger rôle in stimulating growth. This is particularly the case as far as imports of raw materials and fuel from Communist countries are concerned. Additional resources made available to the civilian economy as a consequence of force reductions cannot be regarded as an important factor in the growth picture.

- The economic outlook

23. To sum up the main points from the foregoing, the OECD projections are the most authoritative and up-to-date concerning the Alliance as a whole. They give a relatively favourable view of the economic prospects for the 1970s. Resources (GNP) are likely to rise by 60% or more, most of the increase going into higher living standards. To obtain this rate of growth the industrial and technological base will have to be both deepened and expanded and the defence potential of the Alliance will thus be considerably enhanced. On the other hand, the growth actually achieved could fall short of this projection. The problem of maintaining a balance, whether this is in terms of supply and demand pressures within economies or in terms of adjusting to more general changes taking place in the economic and social scene, could well mean that the growth path is lower than that projected. Even on the assumption that the projections prove correct, the pace of advance - as the OECD points out-- will be such as to pose some major problems in the economic field. The rate of increase projected, although little different from that achieved over the last decade, will, if maintained, not merely make more acute the problems faced in recent years, but will lift the problems on to quite different levels. This is the case with the expansion of urbanisation, housing, road systems and the increasing demand for services provided by the State in such fields as education and health. As the OECD report concludes, the achievement of high rates of economic growth will not in itself provide a satisfactory answer for meeting the changing social demands unless the growth process is properly directed. Member countries will continue to be faced with difficult problems of resource allocation and it would appear desirable that the longer term objectives are clearly identified.

B. In Warsaw Pact countries

- Likely economic developments in the 1970s

24. Conditions seem propitious for relatively rapid economic growth in the 1970s although it will probably be slightly less rapid than in the last decade. For the Warsaw Pact countries as a whole a growth rate of some 4.5% (annual average) seems likely against

a rate close to 5.0% in the 1960s(1): In the main this reflects expectations of a continued slackening of the rate of growth of the Soviet economy, which accounts for over three-quarters of total GNP in the Warsaw Pact.

25. In Eastern Europe as a whole, economic performance is expected to match that of the 1960s even though less emphasis is being placed on growth as a criterion. In fact, these countries now appear willing to sacrifice some growth in order to implement programmes to benefit the consumer. Growth of labour productivity(2) is likely to be supported by (i) expansion of industrial co-operation and imports of Western technology, and (ii) gradual proliferation of labour skills, "technocracy", and especially computer technology and hardware throughout the labour force and capital structure. With such stimuli, the less developed economies of Poland (where labour will probably be in surplus(3)) Bulgaria, and Romania may well match the dynamic pace of average 5 - 7% increases per year achieved in the 1960s. Some abatement of Romania's expansion would not be surprising in view of an expected halving of its rate of growth of employment. Slower growth during the current decade is also expected for Hungary and Czechoslovakia as a result of tighter labour constraints. Development of Czechoslovak productivity has also been set back by political purges and other after-effects of the Soviet invasion. On the other hand, the East German economy may well expand somewhat more rapidly in the 1970s if, as is expected, there is a slight easing of its labour shortages.

26. For the Soviet economy, although the growth rate can be expected to slacken somewhat in the 1970s, it would still be quite respectable by Western standards. The figure of a 4.5% annual average rise for the decade takes into account the agricultural crisis and industrial slowdown of 1971/1972 which may bring down the GNP growth rate to as low as 1.5% in 1972. The longer-term estimate (4.5%)(4) is based in the main on the expected development of employment and investment, the growth of which is slowing down, and on productivity, which is expected to improve slightly.

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- (1) See Table 5(a) annexed
  - (2) See Table 5(c) annexed
  - (3) See Table 6(b) annexed
  - (4) See Table 5(b) annexed

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	1970	1980	Yearly % increase
<u>Population</u> (millions)(1)	346	376	0.9%
- USSR	243	267	0.9%
- other Warsaw Pact	103	109	0.7%
<u>GNP</u> (at established prices) (billion US \$, in 1970 prices, purchasing power parity)(2)	702	1085	4.5%
- USSR	531	823	4.5%
- other Warsaw Pact	171	262	4.3%
<u>GNP per head</u> (US \$, 1970 prices, purchasing power parity)(3)	2030	2900	3.5%
- USSR	2190	3090	3.5%
- other Warsaw Pact	1660	2410	3.6%

- Factors which might retard growth performance

27. The foregoing projections are more likely to be over-optimistic than over-pessimistic. A poor 1972 harvest and a continuing industrial slowdown have held Soviet growth back to about half the 4.5% pace in the first two years of the decade. Should international tensions increase, military spending might accelerate further from the present high level. On the basis of recent performance, resource fungibility, and possibly consumer pressures, such as reallocation would probably be largely at the expense of investment, thus lowering its rate of growth. A further factor likely to add significantly to the demand on available resources, thus also pressing upon the funds available for investment, is the growing necessity to protect the environment.

28. Renewed East/West tensions might also limit productivity gains by curbing Western exports of advances equipment and techniques on relatively favourable terms. Furthermore, the USSR will undoubtedly continue to have problems in introducing Western technology into the production process. In the USSR, productivity growth might thus be held down to its 1% rate of the past decade.

(1) See Table 6(a) annexed.  
 (2) See Tables 5(a) and 5(b) annexed  
 (3) See Table 7 annexed.

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29. Increases in productivity would probably also be impeded if administrative reorganization either in the direction of centralisation or decentralisation were extreme or sudden. A policy of regimentation, with its stifling of incentives, would add to the rigidities and waste already built into centralised planning. At the opposite extreme, as shown by the Czechoslovak and Hungarian experiences, a decentralisation involving increased economic freedom and competition might have a somewhat disruptive effect on economic stability and growth.

30. Labour shortages may become serious in the more advanced countries. Soviet employment, for instance, might rise no more rapidly than the 1.3% rate planned, though this target seems overly pessimistic to many Western observers.

31. Energy constraints might conceivably be felt in the latter part of the decade in those East European countries (all except Romania) that have received the bulk of their oil and natural gas requirements from the USSR. To the extent that world energy supplies become scarcer, demand for Soviet oil and natural gas from non-COMECON users will tend to increase. The USSR would then have the option to increase its hard-currency earnings abroad. Hungarian leaders have already expressed anxiety about Soviet hesitation to make long-term fuel export commitments. Such East European doubts are probably not assuaged by current Soviet negotiations with Western governments and companies regarding future oil exports in exchange for development assistance.

32. Finally, recurrences of extremely unfavourable weather, with corresponding damage to agricultural output and to economic growth, cannot be ruled out. Agriculture remains one of the most acutely sensitive economic sectors, especially in the Soviet Union. It is the potential source of an improved meat and milk diet promised by the régime, but the poor harvest of 1972 confirms that the sector is still highly vulnerable. Years of mechanisation and "chemicalisation" cannot greatly alter the climatic and location disadvantages, the short growing season, and the waste stemming from lack of market incentives. These weaknesses continue to divert considerable resources (gold and foreign exchange as well as domestic production) from industrial modernisation.

33. A coincidence of all these unfavourable possibilities during the 1970s would probably result in a growth rate below 4% per year for the Soviet Union(1), if not for the Warsaw Pact countries as a whole.

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(1) See Table 5(b) (Low Variant) annexed

- Factors favourable to growth

34. If East/West relations improve sufficiently in the 1970s with or without new arms limitation agreements, the Soviet defence share of GNP might decline further. A striking improvement in East/West relations might result in an introduction of Western technology that could contribute to a further narrowing of the "productivity gap". Efficiency and enterprise might also be boosted more than is now expected if the current Soviet policy of disfavour for economic decentralisation is reversed, though there seems little likelihood of such a reversal at present.

35. The rate of increase in productivity might rise to 3.8% or so yearly in the USSR and moderate economic reforms might also speed growth of the capital stock and employment. In such circumstances, a yearly average rate of growth of GNP exceeding 5% might be attained in the USSR(1) with favourable repercussions on the rest of the Warsaw Pact countries.

36. Economic co-operation among Warsaw Pact countries (e.g. in joint investment projects and multilateral monetary experiments) may have some impact on economic growth. Co-operation of COMECON countries with each other, as with the West, is impeded by institutional rigidities and autarchic policies of their state-trading systems. The COMECON programme of 1971 appears non-committal and somewhat contradictory, mentioning voluntary abstention by any member from joint projects (a Romanian position), an approach to currency convertibility (Hungarian/Polish preferences), and evolution of joint planning (favoured by the Soviets). On the other hand, some further increase in the modest scale of economic co-operation presently practised would seem not only normal but even hard to avoid among growing, relatively developed nations in close geographic proximity. Eastern Europe is also becoming more amenable to increased integration as it is realized that imports of Western technology will not solve all economic problems.

37. To sum up the main points from the foregoing, Soviet economic growth during the 1970s is expected to slow down to approximately the East European pace, which may continue past trends. Such expansion (around 4.5% per year average) would still be respectable by Western standards. In the absence of a substantial increase in the labour force, productivity increases are likely to become the principal growth factor. Higher productivity is likely to be sought by the Soviet leadership not in basic reforms, which might jeopardize central party control of the economy, but in increased economic co-operation with the West - i.e. greater imports of Western technology on easier terms.

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(1) See Table 5(b) (High Variant) annexed.

PART III: IMPLICATIONS FOR DEFENCE CAPABILITIES OF ECONOMIC DEVELOPMENTS 1970-1980

A. IN NATO COUNTRIES

- Assumptions

38. The assessments made below are based on the assumption that no radical changes will take place either economically or politically during the period under review. It is recognised that the international political and economic situation will continue to evolve, but for the purpose of this report it is assumed that the basic features, notably East/West relations, and the US/Europe partnership in NATO, will not change sufficiently to radically modify the general economic projections on which any assessment of defence capabilities must rest. In such circumstances the economies of the member states of NATO might be expected to continue to grow at a rate more or less in conformity with the projections made by OECD for the period 1970/1980 described in Part II above. It must be added, however, that the OECD in making such projections drew attention to the difficulties involved, notably the problem of assessing the relative importance of the various factors contributing to growth and the extent and nature of their interrelation. The projections of economic growth are therefore indicative of trends, rather than forecasts.

- The resources base behind defence capabilities

39. As reported in Part II above the additional resources likely to become available to member countries over this decade could represent by 1980 an increase of 60% in real terms over the 1970 level of GNP of member countries taken as a whole. The rates of growth will vary from country to country and the OECD projections are reported in Table 1 of the Annex to this paper. Such quantitative projections greatly over-simplify the problems inherent in examining future resource availability and use. Nevertheless they provide a useful first view of possible future situations regarding defence efforts. With such a rate of growth the potential capacity of member countries for defence obviously increases but the experience of the past decade has been that demands on resources increase even more rapidly in such circumstances making resource allocations even more difficult. Indeed, circumstances of rapid growth can be less favourable for defence than a more hardly won - and lower - growth rate which impells a more strict and rigorous examination and acceptance of the priorities adopted for allocating resources.

- Possible future trends in defence expenditure

40. In response to the directive given in the terms of reference(1) for this paper that possible trends in defence expenditure be included, three hypotheses have been selected for illustrative purposes.

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(1) DPC/D(71)10, (19th May, 1971) Annex I paragraph 8

- (i) That the defence expenditure share in GNP is maintained (i.e. defence expenditure would rise in real terms at the same rate as GNP)
- (ii) that the level of defence expenditure - in real terms - is maintained throughout the period
- (iii) that defence expenditures are maintained but only in money terms and that inflation, at a rate similar to that of the 1960s (i.e. 4% per year), continues to erode the real purchasing power of such outlays.

41. On the first hypothesis (i.e. that the defence share of GNP is maintained) which is the current resource guidance adopted by the DPC for force planning purposes, the growth rate of defence expenditure would be the same as projected for GNP and consequently the yearly real increase would average close to 5% for NATO as a whole(1). In terms of additional resources the average level of expenditure (in constant prices) would be 60% higher in 1980 than in 1970(2). For NATO Europe(1) the increase (in 1970 constant prices) would be of the order of \$12 billion over the present level of some \$20 billion. Such an increase could be presumed sufficient to meet all present major deficiencies. On the other hand, it might be noted that this additional sum, even if attained is below the present level of the costs incurred by the United States for maintaining their forces in Europe.

42. On the second hypothesis (i.e. that defence expenditure is held constant in real terms) and assuming economic growth rates as indicated by the OECD, the defence share of GNP would fall to 4.4% by 1980 for NATO members(1) as a whole, compared with the 1970 share of 6.9(3). In NATO Europe(1) the decline would be from 4.1% in 1970 to 2.6% by 1980, and within this aggregate figure the percentage shares would have fallen below 2% in three countries (Denmark, Italy and Luxembourg), and to between 2% and 3% in the remainder, excepting Portugal and the United Kingdom where the share would still be of the order of 4% of GNP. Across the Atlantic the share in Canada would be down to below 2% and in the United States to some 5.6%.

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- (1) DPC member countries
  - (2) See Table 9(a) annexed
  - (3) See Table 9(b) annexed

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43. On the third hypothesis (i.e. that defence expenditures are maintained but only in money terms and the inflation (averaging 4% per year) erodes its purchasing power), the real value of defence would have diminished by 1980 by some 32% compared with the 1970 position. Assuming economic growth at the rates projected by the OECD, the defence share of GNP would fall by 1980 to 3.3% for NATO members(1) as a whole, and to 2.4% for NATO Europe. Within these aggregates for no less than 5 countries the share would be below 2% by 1980.

- Trends in specific economic areas and their implication for defence capabilities

(a) Population and manpower developments

44. The population of NATO member countries is expected to rise from some 533 million in 1970 to very nearly 583 million by 1980, roughly the same rate of increase as in the preceding decade(2). Theoretically therefore the maintenance of the present personnel strength of the armed forces should present no difficulties(3). A number of factors however can be expected to exert a considerable influence on the ability of member countries to respond to military manpower requirements:

- The number of men reaching military age in the years up to 1980 are set out in table 11(c). For most countries there should be no quantitative problem but changes in conscript/regular content of the armed forces(4) and the length of conscript service can be expected to continue to greatly influence the problems faced by individual countries.

- The educational level of the population is likely to improve considerably during the 1970s increasing the number of specialists and the total supply of skilled personnel. Given the economic growth outlook, however, the labour situation can be expected to remain relatively tight in most countries. For the armed forces this implies no easing of the existing difficulties of maintaining recruitment and particularly the enlistment of skilled personnel. It also implies that wages and salaries generally, and consequently pay and allowances in the forces will continue to rise sharply.

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- (1) DPC member countries
  - (2) See Table 2 annexed
  - (3) See Tables 11(a) and 11(b) annexed showing probable trend of military manpower share of total labour force if the former is maintained at a fixed strength.
  - (4) See Table 11(d) annexed for further details.

(b) Raw materials and energy supplies

45. The consumption of raw materials and energy by the armed forces and defence industries is minimal compared with the total yearly supply of such products. Changes in the military consumption of raw materials and energy have very restricted effects on the total supply and demand picture and on the price building process. The military demand for raw materials can therefore be expected to be easily satisfied within the framework of rapidly increasing production during the 1970s. On the basis of the growth assumptions used, the total demand for raw materials and energy can be expected to grow rapidly. Even the development of minor shortages might affect the prices and thus indirectly the defence capabilities through the budgetary impact of rising costs.

(c) Public expenditure trends

46. One of the more marked characteristics of public expenditure trends over the last decade has been the very rapid growth of total public expenditures and the declining share of the total allocated to defence. The defence budgets of most member countries are now seldom the major single elements of state budget expenditure, education and health spending in most countries having greatly increased over recent years. In fact, between 1965 and 1970 the budgets of member countries increased at a yearly average of some 9 to 10% (in money terms) taken as a whole. This increase was higher than the simultaneous growth of GNP and consequently the share of public consumption in GNP increased during the second half of the last decade. During the same period defence budgets rose (in money terms) by some 4% in NATO Europe. For the 1970s two factors that are likely to influence most strongly the size of the defence budgets will be the continuing pressure to step up civil expenditures while at the same time economic policy is likely to continue to require that the rate of (real) increase in total public expenditures is held to the rate of GNP growth.

47. A recent study by the OECD(1), following their earlier report on the growth of output 1960-1980, examines the changing pattern of expenditure which emerges from the figures for the past and the projections for the period up to 1980. It shows that the two main factors contributing to rising public expenditures have been the sharply rising demands for services traditionally provided by the public sector (health and education) and the rising share of other private expenditures financed by governments as a result of social security and other welfare programmes. The question this raises is how fast and how far this shift can go without aggravating the inflationary tensions. If these trends continue during the 1970s the budgetary constraints may be expected to remain or even become more serious than in recent years. The allocation of budgetary resources between the

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(1) Expenditure Trends in OECD countries 1960-1980 (July 1972)

different sectors of the economy will be determined by the new set of priorities. The trend of recent years of a falling share of defence expenditures of total budget expenditures can be expected to continue. The problems will be aggravated if the forecasts reported by member countries to the OECD concerning the development of the future public consumption materialise. The majority of countries foresee that public consumption in constant prices will grow more slowly than the GNP during the 1970s, a factor which can be expected to intensify further the competition for budgetary resources.

(d) Cost and price inflation

48. During the first few years of the 1970s inflation has been much more serious than during the last decade. It is a possibility that prices might continue to increase steeply in the next few years. To forecast changes in the absolute price level five or ten years ahead is however impossible. To attempt to do so would involve a forecast of the extent to which policies to contain and control inflation in expanding economies are likely to succeed. But there are strong forces affecting trends in relative prices making trend extrapolation valid to some extent. As in the 1960s, it can thus be assumed that the deflator for government consumption in all countries will rise faster in the 1970s than the GNP deflator. Thus in current prices, public consumption will continue to take a larger share of GNP than in constant prices. In most countries the defence expenditure deflator increased as fast, and in some cases faster than, the deflator for government consumption in the 1960s. To maintain defence expenditures in real terms(1) in the 1970s necessitates yearly increases in expenditures corresponding to the rise of the deflator of government expenditures or more(2).

(e) Changes in relative costs in the field of defence spending

49. Closely associated with the problem of rising prices and costs are the effects of inflation on relative costs in the defence sector i.e. the deterioration in the relation between operating expenditures and investments. The share of pay and allowances and operational expenditures in total defence expenditures has increased from 78% in NATO European countries 1965 to 84% in 1971. As a consequence the share of resources for investment purposes has declined from 22% in 1965 to some 16% in 1971. The effect on major equipment has been particularly significant, the percentage declining from 17% in 1965 to only 12% in 1971. The main factor behind this development has been the steeply rising wage level throughout this period, pushing up the share of defence expenditures devoted to pay and allowances.

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(1) i.e. to maintain the same purchasing power (for defence goods and services) as that recorded in the reference year (e.g. 1970 when constant 1970 prices are adopted).

(2) See Table 13 annexed.

The squeeze of investment resources led to postponement of investment expenditure, which also increased. This contributed to the continued narrowing of the investment margin, whereas in fact it ought to have increased to keep pace with technological progress and the resulting changes in military needs. These factors are likely to continue to make themselves strongly felt in the 1970s. To maintain the present level of defence capability requires allocation of additional real resources to the defence sector during the defence planning period. Merely to maintain the actual level of real purchasing power of the defence budgets implies a certain reduction of the defence capability of the Alliance. The above considerations point to continued budgetary constraints during the 1970s, both within the defence budget itself and within the total budget.

(f) Other economic factors affecting the defence capabilities

50. The growing external imbalances and the consequent huge surpluses and deficits of major member countries of the Alliance during recent years have had repercussions on the defence capabilities of NATO. In two respects in particular - the stationing of forces where they are needed in central Europe, and the purchase and standardization of equipment - these repercussions have been and are likely to remain important. The offset agreements concerning stationing costs concluded between deficit and surplus countries have contributed towards easing the problem but not solving it. They have in fact been an additional factor making more difficult the particular problem of achieving joint NATO wide action to improve procurement and standardization of equipment. Improvement of the international monetary system should reduce the relative importance of balance of payments considerations in the defence field. The measures to correct the balance of payments position of the United States should ease the problem of US stationing costs in Europe but the movement back into balance seems likely to take time. On the other hand, the enlargement of the European Community increases the responsibility of European governments for the security of their own countries.

B. IN WARSAW PACT COUNTRIES

- Assumptions

51. Any assumptions of the implications for defence capabilities of likely economic developments in the 1970s in the Warsaw Pact countries is subject to far greater uncertainty than the parallel assessment made above for the NATO countries. In the Warsaw Pact countries economic developments are not subject to market forces as in Western countries, they reflect a more or less strict programming which generally does not take account of supply and demand as understood in the West. In other words, production and the final use of resources are the result of central planning reflecting policy decisions of an arbitrary nature. The assumptions adopted for examining likely developments can thus differ considerably. In

preparing this section it has been assumed that the Soviet leaders will aim at as high a rate of economic growth as is consonant with economic stability and the achievement of their prime objectives. It is assumed that no radical changes in world power relationships will take place, and that their main objectives will be to strengthen their position and influence in the world, for which purpose both economic and military power are relevant.

- The resources base

52. In Part II B. of this appreciation the most likely development of the Soviet Union's economy was considered to be a moderate slowing down of the rate of growth to perhaps some 4.5% yearly on average through the 1970s; the average growth rate in the other Warsaw Pact countries being of roughly the same magnitude. Examination of why such a slackening is likely to occur throws some light on the economic considerations that could influence the Soviet military effort. In other words, to what extent is the future growth of investment and consumption likely to entail constraints on resources available for defence, or conversely, to what extent is the increasing cost of the latter likely to entail a squeezing of resources for investment and particularly consumption. With this in view the Soviet leaders have determined, or will have to determine, their choices and priorities in accordance with the needs of economic developments.

53. A review of the various factors which were considered in assessing the growth of the Soviet economy up to 1980, provide a basis for considering possible allocations of resources in the future. The slackening of economic growth is mainly attributable to the declining rate of increase of production factors, i.e. capital and manpower, which began to make themselves felt towards the end of the last decade. The allocation of resources to defence and to defence-related R & D, as well as the vicissitudes of agriculture, are among the more important factors behind this development. Current Soviet plans indicate a continuing slowdown of the rate of growth of investment up to 1975. This factor, coupled with the continuing lag in the technological modernization programme, raises doubts about the possibilities of achieving the accelerated growth rates in the latter half of the five year period as envisaged in the plan. In such circumstances the scope for allocating more resources to military use might be somewhat reduced, but in assessing the significance of such an economic constraint a number of other considerations have to be taken into account.

54. In the first place the increase in total resources will be very substantial even if the rate of increase slackens somewhat. This will ensure a considerable degree of flexibility in resource allocation, particularly as the Soviet Authorities do not have to give the same consideration to consumer demand as in the Western type of open market economy. Furthermore, the absolute level of the resources directed to military use increased appreciably in the 1950s and 1960s and is now comparable in the end results

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achieved to the United States effort(1), although the economic base is roughly only half the size of the latter's. This implies that further very effective increases in military capability could be made without the additional resources absorbed having as great a marginal significance as in the past (i.e. they would not need to take the lion's share of the additional resources becoming available). There are also, compared to the West, very considerable differences in the method by which resources are shared out, which makes simple quantitative assessments such as trying to measure changes in the total rouble value of the military effort or its share of GNP, less meaningful than equivalent estimates made for Western countries.

Specific economic factors affecting military capabilities

(a) Manpower and skilled personnel

55. Population growth has been slowing in most Warsaw Pact countries since the mid-1950s, largely as a result of reduced birth rates and, except in Poland, the labour supply can be expected to be tight in the 1970s(2). In the USSR the slowdown in the natural increase, coupled with the drying up of the supply of surplus labour from the countryside, poses a serious problem, as industrial expansion must accordingly depend increasingly on higher productivity. From the military point of view the position is somewhat different. Difficulties were experienced in the 1960s in many Warsaw Pact countries in finding sufficient manpower for the armed forces, as the smaller numbers born in the war years reached military age. However, the male population of military age will increase in the early 1970s in most Warsaw Pact countries and during the whole of the decade in the USSR. In such circumstances military manpower constraints will not be quantitative(2) but some economic pressure to respond to civil manpower needs is likely to be felt. However, as mentioned earlier, resources allocation is dependent on planning decisions rather than market forces, and consequently in the Warsaw Pact countries a relative scarcity of manpower is unlikely to be felt through rising personnel costs.

(b) Raw materials and energy supplies

56. The impact of military requirements on available energy and mineral supplies is somewhat greater in the Warsaw Pact countries than in the Alliance. In the USSR this feature also has a qualitative aspect: the military effort is probably allotted a somewhat greater share of high quality manpower, equipment and material than are civilian activities. The USSR is rich in fuel resources and in nearly all raw materials except natural rubber and aluminium. The implications for Warsaw Pact military capabilities in the 1970s are consequently favourable in most respects. The exploitation of these resources will require improved transportation and consequently substantial investment and this could be a limiting factor.

(1) It is estimated that in 1970 (in current prices at purchasing-power parity) defence expenditures amounted to \$67.5 billion for the USSR and \$75 billion for the Warsaw Pact as a whole

(2) See Table 6 annexed

(c) State expenditures

57. The very different method of resources allocation and measurement followed in Communist countries, makes it impossible to describe developments in a manner comparable to normal usage in the West. The published defence budget covers a far narrower range of goods and services than in the West, with, notably, the major part of defence production, and R & D located in the Science Budget. Over the last four years the official defence budget has stood still at 17.9 milliard roubles, science expenditures on the other hand have increased from 10.0 milliard roubles in 1969 to a planned 15.5 milliard roubles for 1973. Other estimates of expenditures of a military nature are included under other budget items, but the information available is insufficient for an accurate assessment of military spending in Western terms. The problem not only concerns the items to be included but also how they are priced. Prices in the USSR are administratively fixed and it is easily possible to put a low price tag on military equipment. Consequently attempts to assess possible future trends in terms of total expenditures are of limited value.

(d) Inflation and changes in relative costs

58. The Warsaw Pact countries are not fully immune to inflation in the sense that the total mass of money and of purchasing power may increase faster than the mass of goods and services produced. In such circumstances however it is not normal for prices to rise in consequence; the authorities can aim to adjust prices to suit their policies. The effect of inflationary pressure is therefore a shortage of goods rather than rising prices. Some experts believe that major price changes of wholesale goods in the USSR have on occasion been allowed to have an effect on the reported level of the defence budget, that is, that the Soviet authorities have been willing even in the military sphere to allow prices to reflect rising costs. This is a possibility, but the evidence would seem to suggest that the prices of military goods are closer to costs than the prices of civilian goods.

59. The real cost of military equipment must have risen considerably in recent years, both in R & D and in production because of the greater sophistication of weapon system. On the personnel side, too, the trend must have been upward since wages in the Warsaw Pact countries have risen slightly along with living standards. In the 1970s, both these trends are likely to become more marked. The consequences are likely to be greater discrimination in selecting priorities, but, compared with the situation in Alliance countries, it is much easier to hold down the rise in operating expenditure and, over the same time span, the pressure for capital expenditures in the military field to rise will possibly weaken as the USSR draws level with the West in advanced weapon capabilities.

(e) Trade and payments

60. The USSR is almost self-sufficient economically, and has little incentive to link up with other states for purposes of specialization. The other six Warsaw Pact countries, on the other hand, are small and dependent on trade which over the two decades has been subject to pressure from the USSR to direct the bulk of this trade to other socialist states(1). Within the framework of COMECON the USSR insists on priority for co-ordination of planning (i.e. integration on the basis of administrative/political choice) while paying lip service to the concept advanced by Hungary and Poland of trade and integration on the basis of comparative costs. The USSR is the main producer of arms in the Warsaw Pact and the main exporter both to Warsaw Pact partners and to less developed countries. Even though much of this material is delivered on credit terms such exports are an important source of income. The stationing of forces in Eastern Europe on the other hand probably has to be set off against this revenue. It would seem unlikely that this pattern of trade and payments will change radically in the period under review. Arms sales and stationing costs are likely to continue to be managed under a continuation of the present system. The opening up of East/West trade, on the other hand, has a long way to go before it brings about the need for a radical change in the present monetary and trading arrangements.

The factors most likely to influence military capabilities

61. The considerations expressed above indicate the difficulties of assessing possible future developments as these can and probably will be largely determined by political considerations. There are certain basic economic factors however that will influence in a general sense military capabilities that might be summarized at this point. There is some evidence that in the future investment and consumption will not grow at a much higher rate than national product, and that these two end uses of resources are not likely to exert increasing pressure on remaining resources available for defence. The latter increased at about 3% annually over the years 1966-70 and it seems that in the future there is room for further increases. It seems unlikely that the Soviet leaders, despite their growing awareness of the burden which defence represents for the economy, are prepared to achieve a shift of resources at the expense of defence needs with a view to meeting deficiencies incurred in the implementation of consumption programming. Moreover, the sluggishness of the Soviet administrative bodies is not suited to rapid transfer of important resources from one sector to another. It is nevertheless possible that the general slackening of the rate of growth of the resources available, as well as problems arising from now onwards in the implementation of economic plans which are, however, less ambitious than formerly, entail constraints on military programmes. Soviet interest in an agreement on armaments limitation is then highlighted by the fact that, in addition to the heavy burden of the Soviet Union's armament programmes, she is facing further military outlays resulting from the deterioration of her relations with China.

(1) See Table 8 (a, b) annexed

PART IV SUMMARY APPRAISAL- Changes in the relative economic capabilities  
NATO/Warsaw Pact(a) The balance in 1970

62. Compared with Warsaw Pact countries the economic strength of NATO members - in 1970 - shows to considerable advantage in terms of total population (533 million compared with 346 million) and total output (\$1730 milliard<sup>(1)</sup> compared with \$702 milliard). There are, however, marked differences in the two groups of countries in their inter-relationship and economic systems that favour the Warsaw Pact when the use of economic potential for military purposes is considered. The USSR has exerted a dominant influence on the direction of economic development in Eastern Europe. The defence sector of the economy has been given top priority and with the concentration of all major (economic) decision-taking at the top, military capabilities have been radically expanded over recent years at the same time that economic growth has been relatively rapid. The USSR has now probably caught up with the US in terms of the resources devoted to military use although this is on an economic base of roughly half the size.

(b) The balance in 1980

63. By the end of this decade the defence potential of the economies of both the Warsaw Pact and NATO member countries will have increased considerably. Projections of economic growth have a value that is limited by the assumptions upon which they are made. However, assuming no major economic upheavals occur, growth rates of GNP on both sides will be similar (between 4 and 5% yearly on average). This would amount to an increase in GNP from 1970 to 1980 of the order of 50 to 60% in real terms. It implies that the NATO member countries will continue to stay well ahead of the Warsaw Pact in terms of magnitude of GNP (e.g. in 1980; total NATO GNP will amount to some \$2,500 milliard and total Warsaw Pact GNP to some \$1,100 milliard). In terms of population NATO will also remain well ahead of the Warsaw Pact (583 million and 376 million respectively). However, in the use to be made of the increased wealth, notably for maintaining or improving military capabilities, both groups will face new problems and difficulties.

64. In the Warsaw Pact countries and notably the USSR, economic development must increasingly switch from an "extensive" to an "intensive" use of resources, due mainly to a growing scarcity of labour and capital. It will become increasingly necessary to look to improved technology and rising productivity for growth. This will require a continued high level of investment over a period when demand pressures for consumer goods, even if contained, become greater. Such a development is likely to lead to a continuing re-appraisal of priorities in resource allocation. The recently

(1) All data pertaining to NATO country GNP are at market prices in this section for purposes of comparison. Such data in other sections, including the annex, are at factor cost

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announced Soviet 1973 Plan is an example of how such a re-appraisal can be made at relatively short notice.

- The main implications of the above for the defence/military capabilities of NATO and the Warsaw Pact countries

65. Barring unexpected developments that would lead to a major economic slowdown, the strength of the economies and the potential military capabilities of both NATO and Warsaw Pact countries can be expected to increase substantially over the period under review. It goes without saying that the uncertainties attaching to economic projections and the importance of the assumptions chosen, call for caution in drawing conclusions. It should be noted that failure to achieve the necessary changes in international trade and monetary relations could significantly change the economic outlook and in particular have unforeseeable effects on resource allocations. In the immediate future the current difficulties for agriculture in the USSR and the inflation in the West could result, for example, in a less favourable economic outturn in the first half of the 1970s, and even have repercussions extending over the whole decade. However, the probability of such developments significantly affecting the relative economic strengths of the two groups of countries is small. The combined GNP of NATO member countries may rise - in constant price terms - by \$1000 milliard to reach \$2,500 milliard in 1980. In the Warsaw Pact countries the increase in GNP in comparative dollar terms is unlikely to exceed \$400 milliard, which would raise the total to over \$1,000 by 1980. On these hypotheses there will thus be considerably larger additional resources available to NATO member countries than to the Warsaw Pact. On the other hand in relation to each other the GNPs of the two areas will maintain roughly the same ratios (100 to 40).

66. While in terms of economic growth the advantage would seem to lie with the West, in terms of the military use made of the resources a largely counter-balancing advantage would seem to lie with the Warsaw Pact. In NATO countries it has proved very difficult in recent years to maintain the share of resources (GNP) allocated to defence. As a result of détente and the subsequent improvement in international relations, consumer demands and other social needs such as protection of the environment and urbanization, will become an increasing drain on resources. In the Warsaw Pact countries similar pressures will be felt but in a very attenuated form as the centralization of the political and economic system make the authorities less responsive to public opinion. Consequently it is likely to remain considerably easier for defence to retain a higher priority in these countries compared with NATO. Furthermore, as the USSR has little chance of matching the United States in economic power the improvement of her military strength for exerting international influence is likely to be a first consideration.

67. To illustrate the implications of possible economic developments on relative force capabilities, one might start from the assumption - a rather optimistic one in fact - that NATO

throughout the period will do no more than maintain its defence expenditures in real terms at the 1970 level. This would imply a defence share of GNP for NATO as a whole declining from 6.7% in 1970 to some 4% in 1980. Turning to the Warsaw Pact countries two possibilities seem relevant: maintaining the relatively high share of total resources currently allocated to military use or allowing this share to decline slowly. In the first case the Warsaw Pact countries would largely overtake NATO by 1980 in regard to military expenditures (\$116 milliard against \$104 milliard). In the second case, a moderate decline in the share of GNP going to defence in the Warsaw Pact countries (down to some 10.4% for the group as a whole) would still allow them to match in real terms the resources made available to defence in NATO member countries. It indicates that even on assumptions that are relatively favourable to NATO, the Warsaw Pact would be able to allocate at least as much or more resources to defence.

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ANNEX to  
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TABLE I

NATO COUNTRIES GROSS NATIONAL PRODUCTS AT FACTOR COST  
(AT 1970 CONSTANT PRICES AND 1970 EXCHANGE RATES)  
FROM 1970 - 1980

Country	Unit	1970	1971	1972	1975	1980	1974 - 1978	1970 - 1980	
		Actual	Provisional		Projected		Force Planning Period	Total Period	
		Cumulative Yearly Average							
<u>BELGIUM</u>	million B.P. million US \$ % increase	1,145,746 22,915	1,190,091 23,802 + 3.9	1,235,368 24,707 + 3.8	1,413,855 28,277 + 4.8	1,804,478 36,090 + 5.0	148,860 + 4.95	316,491 + 4.65	
<u>DENMARK</u>	million D.K. million US \$ % increase	97,977 13,064	101,507 13,534 + 3.6	105,058 14,008 + 3.5	118,503 15,800 + 3.8	142,110 18,948 + 3.7	82,018 + 3.74	174,551 + 3.79	
<u>FEDERAL REPUBLIC OF GERMANY</u>	million D.M. million US \$ % increase	603,970 165,019	620,535 169,545 + 2.7	640,675 175,048 + 3.3	740,615 202,354 + 5.0	945,233 258,260 + 5.0	1,064,889 + 5.01	2,262,966 + 4.98	
<u>GREECE</u>	million Dr. million US \$ % increase	244,875 8,162	266,184 8,873 + 8.7	298,005 9,733 + 9.7	366,138 12,205 + 8.0	515,932 17,198 + 7.1	65,569 + 7.33	136,056 + 7.74	
<u>ICELAND</u>	million I.K. million US \$ % increase	35,120 399	38,455 437 + 9.5	41,147 468 + 7.0	47,091 535 + 4.6	58,403 664 + 4.4	2,798 + 4.44	5,891 + 5.22	
<u>ITALY</u>	million L. million US \$ % increase	52,367 83,781	53,100 84,960 + 1.4	54,959 87,934 + 3.5	65,393 104,629 + 6.1	87,511 140,018 + 6.0	556,327 + 6.03	1,178,063 + 5.27	
<u>LUXEMBOURG</u>	million L.P. million US \$ % increase	45,100 902	45,415 908 + 0.7	46,097 922 + 1.5	49,206 984 + 2.2	56,767 1,135 + 2.9	5,074 + 2.74	10,986 + 2.33	
<u>NETHERLANDS</u>	million G. million US \$ % increase	104,130 28,765	109,029 30,118 + 4.7	112,839 31,171 + 3.5	127,540 35,232 + 4.0	157,423 43,487 + 4.3	184,158 + 4.24	391,967 + 4.22	
<u>NORWAY</u>	million N.K. million US \$ % increase	70,027 9,804	73,391 10,275 + 4.8	76,832 10,756 + 4.7	87,510 12,251 + 4.4	109,053 15,267 + 4.5	64,149 + 4.47	136,101 + 4.53	
<u>PORTUGAL</u>	million Esc. million US \$ % increase	163,101 5,673	171,200 5,955 + 5.0	183,192 6,372 + 7.0	224,423 7,806 + 7.0	314,765 10,948 + 7.0	41,953 + 7.00	87,951 + 6.80	
<u>TURKEY</u>	million T.L. million US \$ % increase	119,855 11,098	130,888 12,119 + 9.2	140,045 12,967 + 7.0	170,920 15,826 + 6.8	237,492 21,990 + 6.8	84,876 + 6.80	177,515 + 7.07	
<u>UNITED KINGDOM</u>	million £ million US \$ % increase	43,250 103,800	44,470 106,728 + 2.8	45,978 110,347 + 3.4	51,094 122,626 + 5.0	60,977 146,345 + 3.6	636,684 + 3.44	1,360,749 + 3.49	
<u>DPC European Countries</u>	million US \$ % increase	453,388	467,254 + 3.06	484,433 + 3.68	558,525 + 4.77	710,350 + 4.94	2,937,355 + 4.88	6,239,287 + 4.59	
<u>CANADA</u>	million £ \$ million US \$ % increase	72,184 66,770	76,370 70,642 + 5.8	80,565 74,523 + 5.5	94,782 87,673 + 5.6	122,126 112,967 + 5.2	462,034 + 5.29	972,939 + 5.40	
<u>UNITED STATES</u>	million US \$ % increase	901,521	925,728 + 2.7	979,448 + 6.0	1,129,381 + 4.4	1,400,693 + 4.4	5,907,343 + 4.38	12,494,571 + 4.51	
<u>TOTAL DPC Countries</u>	million US \$ % increase	1,421,679	1,463,624 + 2.95	1,538,404 + 5.11	1,775,579 + 4.51	2,824,010 + 4.61	9,306,732 + 4.58	19,706,797 + 4.57	
<u>FRANCE</u>	million FF. million US \$ % increase	715,426 128,808	751,491 135,301 + 5.0	792,845 142,747 + 5.5	938,994 169,060 + 5.7	1,189,939 227,310 + 6.1	1,262,525 900,681 + 5.99	1,900,406 + 5.85	
<u>NATO Europe</u>	million US \$ % increase	582,196	602,555 3.50	627,180 + 4.09	727,585 + 4.99	937,660 + 5.22	3,858,036 + 5.14	8,139,693 + 4.88	
<u>TOTAL NATO</u>	million US \$ % increase	1,550,487	1,598,925 + 3.12	1,681,151 + 5.14	1,944,639 + 4.61	2,451,320 + 4.75	10,207,413 + 4.71	21,607,203 + 4.69	

SOURCE: OECD. The rates of growth 1973 to 1980 from the OECD Report on "Expenditures Trends in OECD Countries 1960-1980" published in July 1972

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NATO RESTRICTED

TABLE 2

N A T O R E S T R I C T E D

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## NATO COUNTRIES POPULATION AND LABOUR FORCE FROM 1970 TO 1980

(Thousands)

Countries		1970	1975	1980	1970-1980 % cumulative yearly average
BELGIUM	Population	9,676	9,749	9,805	0.11
	Labour force	3,918	3,955	4,080	0.41
	- as % of population	40.49	40.57	41.61	
DENMARK	Population	4,929	5,010	5,107	0.36
	Labour force	2,389	2,487	2,550	0.66
	- as % of population	48.47	49.64	49.93	
FED. REP. OF GERMANY	Population	60,651	61,720	62,743	0.34
	Labour force	27,353	26,284	26,787	-0.21
	- as % of population	45.10	42.59	42.69	
GREECE	Population	8,793	8,963	9,212	0.47
	Labour force	3,830	3,907	3,987	0.45
	- as % of population	43.56	43.59	43.28	
ITALY	Population	54,459	56,375	58,093	0.65
	Labour force	19,777	20,357	20,997	0.60
	- as % of population	36.32	36.11	36.14	
LUXEMBOURG	Population	340	350	360	0.57
	Labour force	144	152	158	0.93
	- as % of population	42.35	43.43	43.89	
NETHERLANDS	Population	13,032	13,655	14,395	1.00
	Labour force	4,734	4,819	4,947	0.44
	- as % of population	36.33	35.29	34.37	
NORWAY	Population	3,877	4,043	4,228	0.87
	Labour force	1,557	1,621	1,686	0.80
	- as % of population	40.16	40.09	39.88	
PORTUGAL	Population	8,949	..	..	..
	Labour force	3,222	..	..	..
	- as % of population	36.00	..	..	
TURKEY	Population	35,230	40,320	45,767	2.65
	Labour force	14,144	15,113	16,141	1.33
	- as % of pop.	40.15	30.45	35.27	
UNITED KINGDOM	Population	55,812	57,167	58,607	0.49
	Labour force	25,637	25,747	26,521	0.34
	- as % of population	45.93	45.04	45.25	
DPC EUROPEAN COUNTRIES	Population	255,953	266,300	277,107	0.80
	Labour force	106,785	107,685	111,039	0.39
	- as % of population	41.72	40.44	40.07	
CANADA	Population	21,324	22,351	23,760	1.09
	Labour force	8,466	9,851	11,476	3.09
	- as % of population	39.70	44.07	48.30	
UNITED STATES	Population	204,879	214,944	227,318	1.04
	Labour force	85,903	92,793	100,727	1.60
	- as % of population	41.93	43.17	44.31	
TOTAL DPC COUNTRIES	Population	482,156	503,595	528,185	0.92
	Labour force	201,154	210,329	223,242	1.05
	- as % of population	41.72	41.77	42.27	
TOTAL NATO (France and Iceland included)	Population	532,924	555,852	582,598	0.90
	Labour force	222,491	232,269	246,152	1.02
	- as % of population	41.75	41.79	42.25	

.. Not available

Source: For 1970 : OECD

For 1975 : Provisional estimates  
and 1980

Note : These figures do not include migration.

N A T O R E S T R I C T E D

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N A T O R E S T R I C T E D

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TABLE 3

NATO COUNTRIES' GNP (fc) PER HEAD  
FROM 1970 TO 1980  
1970 Constant prices - 1970 Exchange rates  
(US dollars)

Country	1970	1972	1974	1975	1980	% cumulative yearly average 1970-80
(0)	(1)	(2)	(3)	(4)	(5)	(6)
BELGIUM	2,368	2,546	2,771	2,901	3,681	4.51
DENMARK	2,650	2,835	3,052	3,154	3,710	3.42
GERMANY	2,721	2,866	3,133	3,279	4,116	4.23
GREECE	928	1,104	1,268	1,362	1,867	7.24
ICELAND	1,946	2,239	2,381	2,454	2,850	3.89
ITALY	1,539	1,593	1,761	1,856	2,410	4.59
LUXEMBOURG	2,653	2,680	2,767	1,995	3,153	1.74
NETHERLANDS	2,207	2,352	2,508	2,580	3,021	3.19
NORWAY	2,529	2,733	2,928	3,030	3,611	3.69
PORTUGAL	634	721	882	894	1,279	7.27
TURKEY	315	347	376	393	480	4.30
UNITED KINGDOM	1,860	1,959	2,093	2,145	2,497	2.99
DPC EUROPEAN countries	1,771	1,863	2,017	2,097	2,563	3.76
CANADA	3,131	3,449	3,758	3,923	4,755	4.27
UNITED STATES	4,400	4,694	5,089	5,254	6,162	3.42
TOTAL DPC Countries	2,949	3,138	3,404	3,526	4,211	3.63
FRANCE	2,537	2,790	3,084	3,235	4,177	5.11
NATO Europe	1,898	2,015	2,192	2,284	2,828	4.07
TOTAL NATO	2,909	3,105	3,374	3,498	4,208	3.76

Source : Table 1 and Table 2

N A T O R E S T R I C T E D

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N A T O U N C L A S S I F I E D

TABLE 4

NATO Countries Total Commodity Exports  
Million US \$ (Annual Totals f.o.b.)

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Country	1960	1970	1960 to 1970 increase	NATO Countries Exports as % of GNP	
				1960	1970
Belgium/Luxembourg	3,744	11,595	+ 210%	35%	49%
Denmark	1,464	3,290	+ 125%	28%	25%
France	6,864	17,940	+ 161%	13%	14%
Fed. Rep. of Germany	11,424	34,849	+ 205%	19%	21%
Greece	204	643	+ 215%	7%	8%
Iceland	72	147	+ 104%	36%	37%
Italy	3,672	13,188	+ 259%	12%	16%
Netherlands	4,032	11,767	+ 192%	39%	41%
Norway	876	2,455	+ 180%	22%	25%
Portugal	324	946	+ 192%	15%	17%
Turkey	324	589	+ 82%	7%	5%
United Kingdom	10,296	19,351	+ 88%	16%	19%
<b>TOTAL NATO EUROPE</b>	<b>43,296</b>	<b>116,757</b>	<b>+ 170%</b>	<b>18%</b>	<b>20%</b>
Canada	5,568	16,134	+ 190%	18%	24%
U.S.A.	20,304	43,226	+ 113%	4%	5%
<b>TOTAL NATO</b>	<b>69,168</b>	<b>176,118</b>	<b>+ 155%</b>	<b>9%</b>	<b>11%</b>

SOURCE: OECD, Overall Trade by Countries

N A T O U N C L A S S I F I E D

TABLE 5(a)

GROSS NATIONAL PRODUCT OF WARSAW PACT  
COUNTRIES AT ESTABLISHED PRICES 1960-1980

(1970 constant prices, milliard US dollars at  
purchasing power parity)

Country	Average Annual Growth Rate 1960-1970(a)	1970 (milliard US \$ (b))	Average Annual Growth Rate 1970-1980(c)	1980 (milliard US \$)
Bulgaria	6.9%	11	6.9%	21
Czechoslovakia	3.1%	35	2.5%	45
East Germany	3.0%	38	3.5%	53
Hungary	4.5%	16	3.9%	24
Poland	4.8%	45	5.0%	73
Romania	6.3%	26	6.0%	46
Eastern Europe	4.3%	171	4.3%	262
USSR	5.4%	531(d)	4.5%	823
Total Warsaw Pact	5.1%	702	4.5%	1,085

- (a) For the USSR during 1960-1969 based on estimates by S. Cohn, "Economic Performance and Military Burden in the Soviet Union"; for Eastern Europe during 1960-1968, derived from estimates by Messrs. Crawford and Wigg, Columbia University Research Project, "Economic Developments in the Countries of Eastern Europe". Both volumes published by the Joint Economic Committee, US Congress, 1970. For Eastern Europe during 1969-1970 and the USSR in 1970, estimates by NATO, Economic Directorate.
- (b) East European figures are based on estimates by the same sources as in (a) above regarding the level of GNP in 1967 and its growth during 1968-1970.
- (c) Estimates by Economic Directorate, NATO, on the basis of projections of employment and productivity during 1970-1980 (see Table 5(c)).
- (d) The level of Soviet GNP in 1970 was derived in the following way. According to separate estimates by NATO countries and by the ECE in Geneva, the ratio between the level of Soviet GNP and US GNP in 1965 was approximately 48/100. This ratio was changed by applying to the numerator and denominator their respective real growth during 1966-1970: 17.5% for the US. (ISM(71)10; 31.6% for the USSR (5.6% per year - US estimate). This modified ratio was then multiplied by US GNP at factor cost in 1970 - \$906 billion (ISM(71)10). The result was a Soviet GNP of \$531 billion.

TABLE 5(b)

PROJECTIONS OF POSSIBLE PATTERNS OF ECONOMIC GROWTH  
OF THE USSR IN THE 1970s

	Low Variant (a)	Mean	High Variant (b)
<u>GNP growth rate</u> (yearly average)	3.8%	4.6%(c)	5.6%
<u>Assumptions:</u>			
Defence share of GNP	10.0%	8.0%	6.0%
Yearly growth rate for:			
- employment	1.3%	1.4%	1.6%
- capital stocks	5.0%	6.0%	7.0%
- residual(d)	1.0%	1.4%	1.8%
<u>Shares of GNP in 1980</u>			
Defence	10.0	8.0	6.0
Government services	3.1	2.9	2.5
Gross investment	30.8	34.4	38.2
Consumption	56.1	54.7	53.3
GNP	100.0	100.0	100.0

- (a) Relatively high allocation of resources for defence, slow investment growth and agricultural difficulties will negatively affect productivity and economic growth.
- (b) Relatively low allocation of resources for defence and improved investment and agricultural performance might positively affect productivity and the GNP growth rate.
- (c) This estimate marginally exceeds the rounded 4.5% rate used in the text.
- (d) This index is usually assumed to relate to efficiency or productivity of all resources.

NOTE: The methodology and most 1970 data are based on the report (pages 21-33) on the Symposium on "Soviet Economic Growth 1970-1980" edited by the Director of Economic Affairs, NATO.

TABLE 5(c)

GROWTH OF EMPLOYMENT, LABOUR PRODUCTIVITY(a) AND GNP  
IN WARSAW PACT COUNTRIES 1960 to 1980  
(average annual % growth)

Country	1960-1970			1970-1980		
	Employment	Labour( ) productivity	GNP	Employment	Labour productivity	GNP (c)
Bulgaria	0.5	6.4	6.9	0.4	6.5	6.9
Czechoslovakia	1.1	2.0	3.1	0.6	1.9	2.5
East Germany	-0.1	3.1	3.0	0.1	3.4	3.5
Hungary	0.6	3.9	4.5	0	3.9	3.9
Poland	1.6	3.2	4.8	1.5	3.5	5.0
Romania	1.2	5.1	6.3	0.5	5.5	3.5
Total Eastern Europe	0.9	3.4	4.3	0.7	3.6	4.3
USSR	2.2	3.2	5.4	1.2-1.7	2.8-3.3	4.5
Total Warsaw Pact	1.9	3.2	5.1	1.1-1.3	3.2-3.4	4.5

- (a) Output per person employed
- (b) Derived from rates of growth of output and employment. (residual element)
- (c) Derived from rates of growth of employment and labour productivity.

TABLE 6(a)

TOTAL POPULATION OF WARSAW PACT COUNTRIES

(millions)

Country	1960	1970	1975	1980
Bulgaria	7.9	8.5	8.8	9.1
Czechoslovakia	13.7	14.3	14.8	15.1
East Germany	17.1	17.1	17.1	17.2
Hungary	10.0	10.3	10.5	10.6
Poland	29.6	32.6	33.7	35.2
Romania	18.4	20.4	21.2	21.8
Total Eastern Europe	96.5	103.1	106.1	109.0
USSR	214.3	242.8	254.2	266.6
Total Warsaw Pact	310.8	345.7	360.3	375.6

TABLE 6(b)

ECONOMICALLY ACTIVE POPULATION OF WARSAW PACT COUNTRIES

1960 to 1980

(millions)

Country	1960	1970	1975	1980
Bulgaria	4.2	4.4	4.5	4.6
Czechoslovakia	6.4	7.1	7.4	7.5
East Germany	8.5	8.4	8.4	8.5
Hungary	4.9	5.2	5.3	5.2
Poland	14.1	16.5	18.1	19.0
Romaina	10.9	12.3	12.8	12.9
Total Eastern Europe	49.0	53.9	56.5	57.7
USSR	110.6	123.9	134.9	146.9
Total Warsaw Pact	159.6	177.8	191.4	204.6

Sources: For Table 6(a): Projections based on AC/127-D/358 and AC/127-D/359. For USSR - Joint Economic Committee of US Congress studies by Elies, 1979.  
For Table 6(b): Economically Active as defined by Elies.

TABLE 7

GNP PER CAPITA: WARSAW PACT COUNTRIES,  
1970 & 1980

(US dollars at purchasing power parity: 1970 prices)

Country	1970	1980
Bulgaria	1,294	2,420
Czechoslovakia	2,448	3,046
East Germany	2,225	3,080
Hungary	1,550	2,260
Poland	1,410	2,100
Romania	1,275	2,110
Eastern Europe	1,660	2,410
USSR	2,190	3,090
Total Warsaw Pact	2,030	2,900

Source: Derived from estimates of GNP (Table 5(a) and population (Table 6)

TABLE 8(a)

WARSAW PACT COUNTRIES' TOTAL COMMODITY EXPORTS

Country	1960 (million US \$)	1970	1960 - 1970 Increases (%)	Warsaw Pact Countries Exports as % of GNP	
				1960	1970
Bulgaria	..	2,000	..	..	20%
Czechoslovakia	..	3,800	..	..	12%
East Germany	..	4,600	..	..	14%
Hungary	..	2,300	..	..	15%
Poland	..	3,500	..	..	9%
Romania	..	1,900	..	..	8%
Total Eastern Europe	..	18,100	..	..	12%
USSR	5,600	12,800	130%	2.0%	3%
Total Warsaw Pact	..	30,900	..	..	5%

TABLE 8(b)

WARSAW PACT COUNTRIES' EXPORTS TO NATO COUNTRIES

(\$ Thousand million)

Country	Volume		% growth 1960 - 70	% share of total exports	
	1960	1970		1960	1970
Bulgaria	..	0.19	..	..	10.0%
Czechoslovakia	..	0.54	..	..	14.0%
East Germany	..	0.80	..	..	17.0%
Hungary	..	0.40	..	..	17.0%
Poland	..	0.81	..	..	23.0%
Rumania	..	0.43	..	..	25.0%
Total Eastern Europe	1.2	3.2	166%	..	18.0%
USSR	0.8	1.7	120%	13.9%	13.0%
Total Warsaw Pact	2.0	4.90	148%	..	16.0%

SOURCE: NATO Countries' Trade with Communist Countries, 1967-71, AC/127-D/406, 8th August, 1972

TABLE 9 (a)

POSSIBLE TRENDS OF DEFENCE EXPENDITURES OF NATO COUNTRIES 1970 to 1980

Assumption : The 1970 defence share of GNP is maintained

COUNTRY	% of GNP (f.c.) devoted to Defence in 1970	% Rates of Increase 1970 - 1980 (annual averages for GNP & for defence)	Total Defence Expenditures (5 yrs) 1974-1978 (million US \$ - 1970 exchange rates)
(0)	(1)	(2)	(3)
<u>Belgium</u>	3.27	4.65	4.872
<u>Denmark</u>	2.81	3.79	2.311
<u>Fed. Rep. of Germany (1)</u>	3.74	4.58	39.795
<u>Greece</u>	5.80	7.74	3.808
<u>Italy</u>	2.98	5.27	16.595
<u>Luxembourg</u>	0.92	2.33	.47
<u>Netherlands</u>	3.81	4.22	7.016
<u>Norway</u>	3.96	4.54	2.546
<u>Portugal</u>	7.69	6.79	3.225
<u>Turkey</u>	5.20	7.07	4.412
<u>United Kingdom</u>	5.65	3.50	35.973
<u>DPC European Countries</u>	4.11	4.55	120.600
<u>Canada</u>	2.86	5.40	13.190
<u>United States</u>	8.64	4.51	510.146
<u>Total DPC Countries</u>	6.92	4.54	643.936
<u>France</u>	4.64	5.85	41.801
<u>NATO Europe</u>	4.23	4.88	162.401
<u>Total NATO</u>	6.73	4.61	685.737

(1) If the Berlin expenditures incurred by the Federal Republic of Germany are taken into consideration the figure for 1970 is 4.27%

TABLE 9(b)

## POSSIBLE TRENDS OF DEFENCE EXPENDITURES OF NATO COUNTRIES 1970 to 1980

ANNEX to  
AC/127-D/436Assumption: The 1970 level of defence expenditures (in constant prices) is maintained through 1980

Country	Def. Expend. in 1970 Million US \$	DEFENCE EXPENDITURES OF NATO COUNTRIES AS A % OF THEIR GNP (f.c.)					1974 - 1978 Force Planning Period	
		1970	1971	1972	1975	1980	Average % of GNP	Total Def. Exp. million US \$
<u>Belgium</u>	750	3.27	3.15	3.04	2.65	2.08	2.52	3,750
<u>Denmark</u>	368	2.81	2.72	2.62	2.33	1.94	2.24	1,840
<u>Fed. Rep. of Germany (1)</u>	6,167	3.74	3.64	3.52	3.05	2.39	2.90	30,835
<u>Greece</u>	474	5.80	5.34	4.87	3.88	2.75	3.61	2,370
<u>Italy</u>	2,499	2.98	2.94	2.84	2.39	1.78	2.25	12,495
<u>Luxembourg</u>	8	0.92	0.92	0.90	0.85	0.73	0.82	40
<u>Netherlands</u>	1,096	3.81	3.64	3.52	3.11	2.52	2.98	5,480
<u>Norway</u>	389	3.96	3.78	3.61	3.17	2.54	3.03	1,945
<u>Portugal</u>	436	7.69	7.32	6.84	5.59	3.98	5.20	2,180
<u>Turkey</u>	577	5.20	4.77	4.45	3.65	2.63	3.40	2,885
<u>United Kingdom</u>	5,865	5.65	5.50	5.32	4.78	4.01	4.61	29,325
<u>DPC European Countries</u>	18,629	4.11	3.99	3.85	3.34	2.62	3.17	93,145
<u>Canada</u>	1,906	2.86	2.70	2.56	2.17	1.69	2.06	9,530
<u>United States</u>	77,854	8.64	8.41	7.95	6.89	5.56	6.59	389,270
<u>Total DPC Countries</u>	98,389	6.92	6.72	6.40	5.54	4.43	5.29	491,945
<u>France</u>	5,978	4.64	4.42	4.19	3.54	2.63	3.32	29,890
<u>NATO Europe</u>	24,607	4.23	4.09	3.93	3.38	2.62	3.21	123,035
<u>TOTAL NATO</u>	104,367	6.73	6.53	6.21	5.37	4.26	5.11	521,835

(1) If the Berlin expenditures incurred by the Federal Republic of Germany are taken into consideration the figures for 1970 are \$7,064 million or 4.27%. This percentage rose to 4.5 in 1971 and 4.7 in 1972.

TABLE 10(a)

POSSIBLE  
TRENDS IN DEFENCE EXPENDITURES OF WARSAW PACT COUNTRIES  
1970 to 1980

Assumption: The 1970 defence share of GNP  
is maintained through 1980

	1970 US \$ million (*)	1970-80 Average annual % growth	1980 US \$ million (*)
Eastern Europe: Share of GNP (%)	7,500 4.4%	4.3%	11,660 4.4%
USSR: Share of GNP (%)	67,500 12.8%	4.5%	105,300 12.8%
Total Warsaw Pact: Share of GNP (%)	75,000 10.7%	4.5%	116,400 10.7%

TABLE 10(b)

POSSIBLE  
TRENDS IN DEFENCE EXPENDITURES OF WARSAW PACT  
COUNTRIES 1970-1980

Assumption: The 1970 level (in constant prices)  
of defence expenditures is maintained  
through 1980

	1970 US \$ million (*)	1970-80 average annual % growth	1980 US \$ million (*)
Eastern Europe: Share of GNP (%)	7,500 4.4%	0	7,500 2.8%
USSR: Share of GNP (%)	67,500 12.8%	0	67,500 8.2%
Total Warsaw Pact Share of GNP (%)	75,000 10.7%	0	75,000 6.9%

(\*) US dollars million, at 1970 constant prices, and  
purchasing power parities.

TOTAL NATO COUNTRIES MILITARY PERSONNEL  
(Thousands)

Country (0)	1970 (1)	1972 (2)	1974 (3)	1975 (4)	1980 (5)
<u>BELGIUM</u>	105 e	106	..	..	..
<u>DENMARK</u>	42	43	41	40	..
<u>GERMANY</u>	455	..	..	..	..
<u>GREECE</u>	178	184	189	190	..
<u>ITALY</u>	522	541	..	..	..
<u>LUXEMBOURG</u>	1,060	1,150	..	..	..
<u>NETHERLANDS</u>	112	117	..	..	..
<u>NORWAY</u>	37	36	36	36	..
<u>PORTUGAL</u>	229	260	279	282	..
<u>TURKEY</u>	625	573	578	580	..
<u>UNITED KINGDOM</u>	384	381	359	352	..
<u>DPC EUROPEAN COUNTRIES</u>	2,690	..	..	..	..
<u>CANADA</u>	91	87	..	..	..
<u>UNITED STATES</u>	2,714	2,358	..	..	..
<u>TOTAL DPC COUNTRIES</u>	5,495	..	..	..	..
<u>FRANCE</u>	571	574	..	..	..
<u>NATO EUROPE</u>	3,261	..	..	..	..
<u>TOTAL NATO</u>	6,066	..	..	..	..

.. = Not available  
e = Estimate

Source : Replies to DPQ(72)

TABLE 11(b)

MILITARY PERSONNEL AS A % OF TOTAL LABOUR FORCE(a) 1970 to 1980  
ASSUMING THAT THE 1970 LEVEL OF MILITARY  
PERSONNEL IS TO BE MAINTAINED THROUGH 1980

Country	Unit	1970	1972	1974	1975	1980
(0)	(1)	(2)	(3)	(4)	(5)	(6)
<b>BELGIUM</b>						
Labour force	000	3,918	3,930	3,943	3,955	4,080
Military Personnel	000	105 <sup>e</sup>				
- % of labour force	%	2.68	2.67	2.66	2.65	2.57
<b>DENMARK</b>						
Labour force (e)	000	2,389	2,428	2,467	2,487	2,550
Military Personnel	000	42				
- % of labour force	%	1.76	1.73	1.70	1.69	1.65
<b>GERMANY</b>						
Labour force	000	27,353	26,316	26,270	26,284	26,787
Military Personnel	000	455				
- % of labour force	%	1.66	1.73	1.73	1.73	1.70
<b>GREECE</b>						
Labour force (e)	000	3,830	3,860	3,891	3,907	3,987
Military Personnel	000	178				
- % of labour force	%	4.65	4.61	4.57	4.56	4.47
<b>ITALY</b>						
Labour force	000	19,777	20,229	20,301	20,357	20,997
Military Personnel	000	522				
- % of labour force	%	2.64	2.58	2.57	2.56	2.49
<b>LUXEMBOURG</b>						
Labour force (e)	Unit	144,000	149,000	151,000	152,000	158,000
Military Personnel	Unit	1,060				
- % of labour force	%	0.74	0.71	0.70	0.70	0.67
<b>NETHERLANDS</b>						
Labour force	000	4,734	4,748	4,794	4,819	4,947
Military Personnel	000	112				
- % of labour force	%	2.37	2.36	2.34	2.32	2.26
<b>NORWAY</b>						
Labour force (e)	000	1,557	1,582	1,608	1,621	1,686
Military Personnel	000	37				
- % of labour force	%	2.38	2.34	2.30	2.28	2.19

(Continued on next page)

TABLE 11(b) (Cont'd)

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Country	Unit	1970	1972	1974	1975	1980
(0)	(1)	(2)	(3)	(4)	(5)	(6)
<b>PORTUGAL</b>						
Labour force (e)	000	3,222	3,196	3,170	3,157	4,092
Military Personnel	000	229				
- % of labour force	%	7.11	7.17	7.22	7.25	7.41
<b>TURKEY</b>						
Labour force (e)	000	14,144	14,735	14,986	15,113	16,141
Military Personnel	000	625				
- % of labour force	%	4.42	4.24	4.17	4.14	3.87
<b>UNITED KINGDOM</b>						
Labour force	000	25,637	25,777	25,658	25,747	26,521
Military Personnel	000	384				
- % of labour force	%	1.50	1.49	1.50	1.49	1.45
<b>DPC European Countries</b>						
Labour force	000	106,705	106,950	107,239	107,599	110,946
Military Personnel	000	2,690				
- % of labour force	%	2.52	2.52	2.51	2.50	2.42
<b>CANADA</b>						
Labour force (e)	000	8,466	8,989	9,555	9,851	11,476
Military Personnel	000	91				
- % of labour force	%	1.07	1.01	0.95	0.92	0.79
<b>UNITED STATES</b>						
Labour force	000	85,903	88,108	91,207	92,793	100,727
Military Personnel	000	2,714				
- % of labour force	%	3.16	3.08	3.98	3.92	2.69
<b>TOTAL DPC Countries</b>						
Labour force	000	201,074	204,047	208,001	210,243	223,149
Military Personnel	000	5,495				
- % of Labour force	%	2.73	2.69	2.64	2.61	2.46
<b>FRANCE</b>						
Labour force	000	21,337	21,401	21,751	21,940	22,910
Military Personnel	000	571				
- % of Labour force	%	2.68	2.67	2.63	2.60	2.49
<b>NATO Europe</b>						
Labour force	000	128,042	128,351	128,990	129,539	133,856
Military Personnel	000	3,261				
- % of labour force	%	2.55	2.54	2.53	2.52	2.44
<b>TOTAL NATO</b>						
Labour force	000	222,411	225,448	229,752	232,183	246,059
Military Personnel	000	6,066				
- % of labour force	%	2.73	2.69	2.64	2.61	2.47

- (a) Note: Civilians employed directly by the Defence establishments, which for some countries are of considerable economic importance, are not included in these percentages.
- (e) International Staff Estimate.

Source: Labour Force: OECD; Military Personnel: Replies to DPQ(72)

TABLE 11(c)

NATO DPC COUNTRIES NUMBER OF MEN  
REACHING MILITARY AGE FROM 1970 TO 1980

Country	1970	1972	1974	1975	1980
(0)	(1)	(2)	(3)	(4)	(5)
<b>BELGIUM</b>					
18	72	74	76	76	80
19	73	74	75	76	79
20	73	72	74	75	80
21	75	72	74	74	79
Total	293	292	299	301	318
<b>GERMANY</b>					
18	407	411	427	444	516
19	411	408	419	429	504
20	414	406	410	417	488
21	404	407	405	408	470
Total	1,636	1,632	1,661	1,698	1,978
<b>ITALY</b>					
18	398	398	410	411	439
19	421	394	406	410	428
20	423	397	397	406	427
21	447	420	393	396	413
Total	1,689	1,609	1,606	1,623	1,707
<b>NETHERLANDS</b>					
18	112	113	114	116	123
19	113	115	114	113	119
20	116	112	113	114	120
21	121	113	114	113	118
Total	462	453	455	456	480
<b>NORWAY</b>					
18	30	31	32	32	31
19	31	31	31	32	31
20	31	30	31	31	31
21	32	31	31	31	31
Total	124	123	125	126	124
<b>UNITED KINGDOM</b>					
18	388	393	398	411	479
19	396	390	389	398	463
20	413	389	395	390	445
21	431	396	391	394	436
Total	1,628	1,568	1,573	1,593	1,823
<b>UNITED STATES</b>					
18	1,886	1,978	2,041	2,092	2,125
19	1,828	1,939	2,028	2,037	2,171
20	1,808	1,870	1,971	2,025	2,094
21	1,784	1,821	1,932	1,967	2,090
Total	7,306	7,608	7,972	8,121	8,480

Note : Denmark, Greece, Luxembourg, Portugal, Turkey and Canada : data not available.

Source : OECD.

## N A T O C O N F I D E N T I A L

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Table 11(d)

REGULARS AND CONSCRIPTS AS PERCENTAGE OF TOTAL  
MILITARY PERSONNEL

Country	1965		1970		1972		1975		1977	
	Regu- lars (1)	Con- scripts (2)	Regu- lars (3)	Con- scripts (4)	Regu- lars (5)	Con- scripts (6)	Regu- lars (7)	Con- scripts (8)	Regu- lars (9)	Con- scripts (10)
Belgium	56.2	43.8	57.8	42.2	57.5	42.5	58.4	41.6	58.4	41.6
Canada	100.0	-	100.0	-	100.0	-	100.0	-	100.0	-
Denmark	42.4	57.6	42.3	57.7	40.6	59.4	..	..	..	..
GERMANY	50.5	49.5	52.1	47.9	52.8	47.2	53.3	46.7	53.4	46.6
Greece	16.4	83.6	29.8	70.2	33.5	66.5	34.5	65.5	35.3	64.7
Italy	23.3	76.7	24.6	75.4	27.6	72.4	27.7	72.3	28.0	72.0
Luxembourg	44.4	55.6	100.0	-	100.0	-	100.0	-	100.0	-
Netherlands	42.0	58.0	51.2	48.8	49.4	50.6	..	..	..	..
Norway	43.8	56.2	37.2	62.8(a)	34.6	65.4	35.6	64.4	35.8	64.2
Portugal	16.8	83.2	13.9	86.1	12.7	87.3	12.0	88.0	11.8	88.2
Turkey	14.7	85.3	11.7	88.3	13.9	86.1	14.0	86.0	14.1	85.9
United Kingdom	100.0	-	100.0	-	100.0	-	100.0	-	100.0	-
United States	88.7	11.3	80.5	19.5	..	..	..	..	..	..

(a) 1969 figures  
Source: DPC replies

N A T O C O N F I D E N T I A L

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TABLE 12(a)

MILITARY PERSONNEL OF WARSAW PACT COUNTRIES IN 1972

(Total and percentage of economically active population)

Country	Total Military Personnel(a)	
	Thousands(b)	As % of economically active population(c)
Bulgaria	152	3.5
Czechoslovakia	168	2.3
East Germany	119	1.4
Hungary	96	1.8
Poland	236	1.4
Romania	187	1.5
Total Eastern Europe	958	1.7
USSR	3,670	2.9
Total Warsaw Pact	4,628	2.5

- (a) Excluding border and security forces estimated at a total of 514,000.
- (b) Taken from MC-161, 1972
- (c) Estimates of economically active population in 1972 interpolated from Table 6(b)

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TABLE 12(b)

MANPOWER OF MILITARY AGE IN WARSAW PACT AREA

	1970	1975	1980
<u>Military Manpower</u> (male population 18 to 34 years of age)		(millions)	
(a) USSR	30.3	31.2	36.9
(b) Eastern Europe	12.9	14.0	15.0
Armed Forces (1972 level) as % of above			
(a) USSR	12.2	11.7	10.0
(b) Eastern Europe	7.8	7.1	6.6

Sources: Figures of manpower of military age based on AC/127-D/359 and Joint Economic Committee of Congress' (US) Report on "Economic Development in Countries of Eastern Europe", August 1970. Level of forces based on International Staff Estimates.

Table 13

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MOVEMENT OF PRICES  
(A: GNP AND B: GOVERNMENT CONSUMPTION DEFLATORS)  
IN NATO COUNTRIES 1960-1972

		1960-1965 Arithmetical Average	1965-1970 Arithmetical Average	1971	1972
<u>BELGIUM</u>	A	+2.94	+3.76	+5.81	+4.97
	B	+2.21	+4.58	+4.20	+5.66
<u>CANADA</u>	A	+1.92	+4.18	+3.30	+3.50
	B	+3.84	+7.01	+7.29	+3.50
<u>DENMARK</u>	A	+5.45	+5.32	+6.30	+8.50
	B	+9.45	+8.47	+8.41	+7.81
<u>FED. REP. OF GERMANY</u>	A	+3.57	+3.40	+7.74	+6.05
	B	+5.36	+6.07	+11.63	+7.86
<u>FRANCE</u>	A	+4.11	+4.77	+5.01	+5.50
	B	+4.40	+4.46	+5.01	+5.50
<u>GREECE</u>	A	+2.86	+2.62	+3.31	+4.38
	B	+5.51	+7.30	+3.00	+3.70
<u>ICELAND</u>	A	+13.77	+12.37	+13.1	+15.33
	B	..	..	..	..
<u>ITALY</u>	A	+5.73	+3.62	+6.50	+5.70
	B	+8.47	+3.83	+4.49	+4.95
<u>LUXEMBOURG</u>	A	+2.85	+4.17	+1.79	+3.94
	B	+7.10	+4.55	+2.01	+4.41
<u>NETHERLANDS</u>	A	+4.56	+4.54	+6.54	+8.13
	B	+9.45	+8.19	+11.83	+8.13
<u>NORWAY</u>	A	+4.13	+4.50	+7.00	+6.00
	B	+4.21	+4.47	+6.38	+8.70
<u>PORTUGAL</u>	A	+1.68	+4.33	+3.49	+5.00
	B	+1.20	+4.45	+3.10	+6.00
<u>TURKEY</u>	A	+3.99	+5.40	+19.95	+14.89
	B	+4.70	+5.57	+30.90	+7.26
<u>UNITED KINGDOM</u>	A	+3.38	+4.71	+8.77	+6.90
	B	+4.00	+7.41	+8.77	+6.90
<u>UNITED STATES</u>	A	+1.51	+3.87	+4.64	+3.20
	B	+2.10	+5.68	+5.58	+4.20

.. = not available

Source: OECD