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ECONOMIC COMMITTEE

IMPACT OF ECONOMIC DEVELOPMENTS ON THE DEFENCE  
EFFORT DURING THE PERIOD 1977-1984

(Part II of the Economic Appreciation)

Note by the Chairman

The first part of this document, distributed under reference AC/127-WP/499, was concerned with the analysis and presentation of the general outlook for the economies and public finances of the NATO and Warsaw Pact countries during the period 1977-1984. Consideration can now be given to the impact of these probable developments on the capability of those same countries to release the economic and financial resources to implement the defence effort which they regard as necessary during the period under review.

2. Since the defence effort of the Warsaw Pact countries and in particular of the USSR tends to be greater than the effort of the NATO countries, the economic and financial prerequisites for the implementation of the East's effort will be dealt with first. The potential edge over the NATO countries will thus be brought out more clearly and the magnitude of the effort which needs to be made by those countries will be more easily perceived.

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ECONOMICS AND DEFENCE IN THE  
WARSAW PACT COUNTRIES

(Period 1977-1984)

I. INTRODUCTION

It is no easy matter to assess the impact of economic developments on the defence potential of the Warsaw Pact countries. The production and utilization of resources in those countries are governed by central planning which, particularly in the USSR, gives priority to the achievement of political aims and accordingly to the defence effort.

A. Soviet Union

2. In the Soviet Union, the defence effort continues to weigh very heavily on the economy. For some years now it has accounted for between 11% and 13% of the national product and, more specifically, for one fifth of industrial output and about one third of the output of the engineering industries. One third of budgetary receipts goes on military expenditures. During the past six years, these have increased on average by 4% to 5% per annum in real terms which is about the same as the rate of growth of the economy. This average covers a number of fluctuations which are the consequence of the successive armaments programmes. In the past two years, expenditure has increased by 5% to 6% reflecting both the scale of a new cycle of armaments production and the growth in the cost of these armaments. This is particularly true of the new strategic arms systems which have been extensively deployed since 1975 and of the air force the modernization of which, in recent years, has generated an increase of about 10% per annum in the financial resources allocated to it, a reflection of the high cost of the new type of equipment issued.

3. The rise in costs is due not only to the sophistication of the weaponry and to the growing outlay on the research which the latter entails, but also, to the increased cost of factors of production particularly since, in certain cases, different technologies are used for one and the same type of production. In addition to this armaments effort and to the upkeep of a very considerable military establishment, the Soviet Union has quite clearly put in hand a passive defence programme the cost of which cannot as yet be estimated but which requires considerable material and manpower resources. The overall effort can be estimated, in United States prices, at \$144 milliard in 1975 as compared with \$107 milliard in 1965 (in 1977 dollars).

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4. A special feature of the Soviet defence effort is that despite the growing resources which it is absorbing, it is not affected by the vicissitudes of economic development such as, for example, the failure to meet the Five-Year Plan targets or the episodic signs of stress in the allocation of resources. Enjoying as it does a high, politically motivated, priority, the defence effort absorbs a constant share of the budget as well as of the volume of available resources. The Soviet military-industrial establishment occupies a privileged position and is sufficiently powerful to influence government decisions relating to the military programmes which are regarded as necessary, and even to force the Government's hand.

5. The repercussions of the defence effort on the economy are both quantitative and qualitative. The allocation of large resources to uses which in most cases are unproductive hampers rapid growth. The Soviet forces and paramilitary organizations keep about five million men (i.e. roughly 4% of the total working population and nearly 8% of the male working population) out of productive employment at any given moment, and this at a time when the number of young people coming on to the labour market is tending to drop. In addition, the armament industries swallow up a large proportion of the best technicians and the best qualified manual workers although labour productivity in the economy as a whole is relatively very low. Likewise, the priorities assigned to the armaments programmes mean that in practice a high proportion of research capacity and of the most advanced technology is used for their benefit.

6. The negative impact of these factors on the rate of growth is however difficult to assess. The separation between the military and civil sectors, particularly with respect to research, is detrimental to the modernization of production. The transfer to the civilian economy of a large proportion of military production capacity would inevitably be a slow process. On the other hand, a reduction in the number of serving personnel would benefit civilian production proportionately.

B. East European countries

7. The defence effort of the other Warsaw Pact countries does not weigh so heavily on their economies. Defence expenditures, according to the budget statistics published, account for only 2% to 5% of national resources, depending on the country, making an average of 3.5%. The proportion of the total working population employed by the forces varies from about 1.7% (Poland) to about 4% (Bulgaria) and the average for the six countries would not appear to exceed 2%.

8. In recent years, the rate of increase of military expenditure in the East European countries, although high, has been lower than the rate of growth of the economy. Significant progress has been made with the modernization of military equipment without however involving excessive mobilization of research and production capacity. This is because part of the defence equipment is purchased in the Soviet Union and part is manufactured under licence by those countries with sufficient industrial capacity, both for their own use, and for their Warsaw Pact allies. Expenditure arising from the maintenance of Soviet occupation forces is partly offset by deliveries of military equipment.

II. OUTLOOK FOR THE PERIOD 1977-1980

9. There is no evidence of any kind in Soviet budgetary data or in the information available on the targets and resource allocation in the 1976-1980 Five-Year Plan that there will be any reduction in the resources committed to defence. The official budget figures on military expenditure are in any case only of political significance and the slight downward trend in the defence budgets since 1974 obviously does not tally with the Soviet Union's visible build-up in the number and quality of its armaments which inevitably lead to an increase in budget commitments. This very high level of expenditure should continue until the end of the decade since the current military programmes presuppose long and increasingly costly manufacturing cycles.

10. This effort seems feasible and unlikely to create any special stress in the allocation of resources up to the year 1980. The number of young people of call-up age will remain sufficiently high to permit continuation of the present manning levels and implementation of the Tenth Plan without any likely change in the system of channelling the best engineers and technicians into the military and space sectors. In addition there seems no prospect of any bottleneck in the provision of basic resources for the defence industries. It should also be noted that the construction of the planned pipeline network towards Eastern Europe, particularly starting from the Friendship pipeline, should go ahead in accordance with the Plan. This network, which is of undeniable strategic importance, will make it considerably easier, in the event of tension, to ensure supplies for mechanised equipment and for forward air forces. There is likewise a strategic content in the announced intention to expand road building and to improve under the Plan the Warsaw Pact countries' road network. This is equally true of the continuing construction, under the Tenth Plan, of the BAM railway line which should be finished by 1981 and which

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will partly duplicate the present Trans-Siberian, thus providing new transport facilities for troops on the Sino-Soviet frontier. The increase in the civilian air fleet will provide a potentially large capability for troop transports. Many Aeroflot units are currently being used for the twice yearly relief of military personnel stationed in Eastern Europe.

11. The channelling of an even greater share of production than under previous Plans into Group A civilian manufactures which can be used for strategic or military purposes, either directly or subject to quick and easy adaptation, further increases Soviet potential in the field of conventional warfare. Perhaps more important still, however, is the extension and modernization of its air transport capability and of pipeline throughput which will increase the flexibility and capacity of the logistic system and the speed with which it can respond to military requirements, particularly in the West. The stockpiling of food, which cannot unfortunately be assessed with any degree of accuracy, strengthens the impression of an increasing shift in civilian production towards areas which would be essential in times of crisis.

12. By comparison with Soviet military might, the strength of the East European forces is, as already stated, fairly limited. In addition the economic difficulties stemming from a lack of basic resources, a certain shortage of qualified manpower and balance of payments difficulties which these countries now face and will probably continue to face until at least the end of the decade, would seem to indicate that resources allocated to defence will not increase as fast as in earlier years. Nonetheless, since the overall military strength of those countries is disproportionate to the strength of the Soviet forces, this possible, and even probable, downward trend in the growth of military expenditure will have little effect on the balance of forces between the NATO and the Warsaw Pact countries.

13. On the other hand, the extension in Eastern Europe of natural gas and oil pipelines from the Soviet Union will increase the effectiveness of Soviet logistics. Current co-operation, which should increase, between East European and Soviet technicians in connection with certain industrial development programmes, in most cases on Soviet territory, may also make it possible in the medium-term to switch between various equipments in certain COMECON country industries, a development which would give a logistic advantage in the event of a political or military crisis.

14. This brief assessment of the economic aspects of the Soviet defence effort up to the end of the decade shows not only that military expenditure could continue to rise at an average yearly rate of 4-5% without jeopardising the implementation of the relatively moderate Tenth Plan targets, but also that the expected growth of the civilian economy should make it possible, if need be, to build up quickly and effectively the capabilities of the military machine, particularly in the field of logistics.

### III. POST-1980 UNCERTAINTY

15. The current Soviet and East European Five-Year Plans will be completed in 1980; in the case of the Soviet Union it is known that the results of the Ninth Plan (1971-1975) were below target, with the possible exception of agricultural investments. The current planning targets are less ambitious, with an economic growth rate in the region of 4.7% a year. For 1976 a growth rate of 5% was, in fact, achieved but it was below the 5.4% projected for that year. The trend is therefore towards a slackening of growth, which can be attributed both to the fact that the planners are aware that the economy has reached a higher degree of maturity and to the factor productivity difficulties encountered both in agriculture and in industry.

16. This downward trend in economic growth can be expected to extend beyond 1980; at the same time, the increase in defence planning may, at least initially, be more rapid than that of the national product and complicate resource allocation. There are other factors, too, which may aggravate these strains. On the labour front, the population growth since 1960 points to a drop in the number of young people arriving on the labour market and an increase in the proportion of non-Russians in the working population. Where resource allocation is concerned, the volume of resources devoted to exports may increase if only to obtain a better foreign trade balance. It is also possible that if the economic situation in some of the Warsaw Pact member countries continues to deteriorate the Russians may be obliged to step up their aid, firstly to maintain political stability and secondly to prevent these countries from seeking aid in the West.

17. Several constraints have already come to the fore in connection with a budget, one third of which, according to the government itself, is devoted to military spending. Since 1973 there has been a gradual drop in the surplus of receipts over expenditure; Western experts believe that the shrinkage of receipts resulting from the drop in national income may have

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led to a fairly large budget deficit in 1976 and that this deficit may well increase if budget expenditure continues to rise at the present rate of between 6% and 7% a year. To wipe out this deficit it would be necessary either to increase taxes, perhaps combined with a reform of the price structure, as was done in the past, or more simply reduce expenditure; however this would set up strains, make it even more difficult to allocate financial resources and possibly lead to a slackening of the defence effort.

18. According to the long-term projections made by some Western experts, in order to maintain the national product and private consumption growth rate at the comparatively modest level - if there is no increase in public demand - of 4% a year in real terms for the period up to 1984, defence expenditure must not rise by more than 2% to 3% a year in real terms. This estimate would be upset only if labour and capital productivity were to go up after 1980. But for this to happen a number of conditions would have to be satisfied, such as growing inputs of Western technology and their extensive dissemination throughout the economy, a high degree of innovation, better agricultural performance and certain reforms. Economic considerations are not, however, the only or main criteria governing the assessment of the volume of resources to be directed towards defence; other factors must also be taken into consideration, for example the leadership's conception of the external threat or the political rôle of military power. It may be assumed that the future growth of national product will be sufficient to allow defence spending to continue to rise, although more slowly than at present, and at the same time leave enough resources available for a progressive improvement in living standards.

19. Although in most of the other Warsaw Pact countries, except Bulgaria, the defence effort still takes up only a fairly small proportion of resources, it is likely that if the present economic difficulties are not overcome during the next few years, mainly through large-scale Soviet aid, the modernization of the armed forces which, since the beginning of this decade, has entailed an average increase in defence spending of almost 10% a year, will not be able to proceed as rapidly as at present. Much will depend on the Soviet Union, which will contribute to a varying degree to the modernization of the forces of the Eastern European countries. Be that as it may, the growth rate of expenditure will probably remain high, certainly higher than the present level in the NATO countries.

20. It follows, therefore, that if the present trend continues the volume of armaments produced by the Warsaw Pact countries as a whole, which is already greater than that of the NATO countries, will increase at a much higher annual rate than the volume produced by the Alliance. On the other hand, under the expenditure assumptions considered, the strength levels of the Warsaw Pact forces will remain stable, with perhaps a drop after 1980; their ratio to the levels of the NATO armed forces will therefore not vary much.

ECONOMIC TRENDS FROM 1977 TO 1984 AND THEIR IMPLICATIONS  
FOR THE DEFENCE OF ALLIED COUNTRIES

21. Compared with present defence effort of the Warsaw Pact countries and especially that of the USSR which has just been recalled, that of the NATO countries appears to be substantially lower, both in absolute terms and especially as far as the trend is concerned. The experts believe that the present armament production in the Warsaw Pact countries is higher than that in Allied countries. With regard to the trend, whereas the increase in the Eastern effort, in real terms and since 1970, has reached an annual rate of 4-5% which should continue in the medium term, in the Allied countries growth rates are, with a few exceptions, smaller and indicate a regular trend towards a decline. There is a disproportion between the defence effort of the various Allied countries, especially between the United States, which allocates almost 6% of its Gross Domestic Product to defence, and Europe, where the average rate is 3.6% of GDP. Finally, the supply lines of Europe as regards petroleum and raw materials are a source of weakness in the event of tension or conflict. Even the dependence of the United States on external sources of energy is growing. It is difficult to see this position changing over the next few years. By contrast, the Warsaw Pact is much more at ease as regards its supplies, since its degree of self-sufficiency remains very high. This is a further area of imbalance in favour of the East.

Economic Aspects of Defence Effort

22. Whereas the military posture of the Alliance has weakened over the last few years by comparison with that of the Warsaw Pact, its superiority in production and technology, both in quantitative and qualitative terms, has been maintained. Allied countries might, therefore, if they wished, allocate to defence whatever volume of resources they deemed necessary. In addition, during the period under review, the economic power of the Allied countries should continue to grow and, as a consequence, the potential resources which might be available for defence should also increase.

23. The impact of the Allied countries' defence effort on their economies is light in view of the modest share of the national product allocated to that effort. Moreover, as within the Allied economies there is no clear-cut separation between production for defence purposes and that earmarked for civilian requirements, it is easy to achieve a degree of interpenetration between the two sectors as regards the diffusion of techniques, innovation and research and development. This makes it easier to improve not only productivity, but also the quality of the end product. On the other hand, the inadequate level of

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standardization of equipment manufactured for defence purposes in Allied countries can only be deplored, as the shortcomings in this field result in less efficiency with ever-increasing manufacturing costs.

24. During the last ten years the rate of growth of defence expenditure has been lower than that of GDP. In 1976, for instance, the share of resources available for the civilian economy after the needs of the defence sector had been catered for ranged from 94% of the total for the United States to 99% in the case of Luxembourg. In terms of the defence burden, it is evident that the situation within the Alliance may vary according to the degree of industrialization achieved. The less-industrialised countries which have neither energy resources nor industries manufacturing heavy or sophisticated equipment, must import a substantial part of the equipment required for defence. This puts a particularly heavy strain on their foreign currency resources at a time when there is a large deficit in their balances of payments. Co-operation among the Allied countries in both the economic sphere and that of military aid would seem to be a condition for maintaining such countries' defence effort at an adequate level.

25. During the period 1977-1984, the countries of the Alliance will maintain their superiority with regard to the number of men available for call-up. This superiority is coupled with the fact that the personnel have a level of proficiency higher than that existing generally in the Warsaw Pact countries. The industrialization which is proceeding in the less developed countries of the Alliance should increase their resources in terms of qualified personnel who have become familiar with the handling of complex equipment. The Allied superiority in the area of industrial production stems from the research and development effort made over several decades. This effort must be sustained, as it is a sine qua non for maintaining the Allied lead. The rapid technological progress in the countries of the Alliance has many military applications, but provokes an increase of expenditure and accelerates the rates at which equipment has to be replaced. This is an additional reason for seeking a harmonisation of equipment through standardization or interoperability.

Allied countries' lack of raw materials and energy<sup>(1)</sup>

26. The economies of the Alliance do not have sufficient domestic resources in energy, especially petroleum, or in raw materials. The problem is particularly acute in the case of the European countries, which have a substantial deficit in basic resources. The situation is distinctly more favourable for the North American Allies, although the United States has become more dependent on supplies of hydrocarbons from abroad and this dependence is likely to continue to grow during the next few years. The European members of the Alliance will be in the same situation as the hydrocarbons extracted from the North Sea, although a great help to two countries, will not be enough to modify substantially the imbalance between the Alliance's overall requirements and resources. The vulnerability of Allied countries in this area relates not only to the availability of products - an embargo by producing countries might seriously handicap the Alliance at a time of crisis - but also to the security of supply lines, which are particularly long and far-flung, and this too is a source of concern should there be a crisis. The security of the North Sea oil rigs is also a matter of concern for the Alliance.

Prospects for 1977-1984

27. Even in the case of a moderate growth marked by uncertainties during the period 1977-1984, it should be relatively easy for the Alliance countries to increase the resources allocated to defence. In 1976, defence expenditure per capita for the NATO countries taken together amounted to only \$270, while the GDP per capita was \$5200. If a growth of 4% of GDP per capita is taken as a reasonable assumption, it should total approximately \$7000 in 1984, i.e. an increase of \$1800 per capita. On the other hand, a 50% increase in per capita defence expenditure spread over the whole period would increase such expenditures by only \$135 in 1984 i.e. only 7½% of the growth in per capita output. This seems to be a fairly easy effort to make. However, it is to be expected that, during this period there will be very strong pressures for social changes, environmental protection and the exploration of new basic

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(1) c.f. Document PO/76/147(2nd revise) in which it is recalled that Ministers desire the Council in Permanent Session to give special consideration to the possible constraints which might exist as regards the supply to Allied countries of energy and raw materials.

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resources. The main problem for Allied countries, therefore, will not relate to available resources, but to the choice to be made as regards their allocation. In the case of defence budgets, the main question will arise in the sphere of public finance, but in the final analysis the answer will depend on political criteria.

Problems of Financing

28. The greater the economic growth, the more governments will be willing marginally to increase their defence expenditure, as expansion - except when it stems from large public investments - is the source of additional funds for the states and will improve the position of public finance at a time when the burden resulting from the payment of unemployment and social benefits will have become lighter. On the basis of scenarios which have been examined in the first part of this document (see Document AC/127-WP/499) it may reasonably be assumed that, as from 1978-1979, national budgets should be able to finance an increase in defence expenditure at least equal to the growth of domestic product (4-5% per year). Incidentally, such an effort would be totally justified by the need to make up for delays over the last few years in the implementation of defence plans and to meet the growing cost of sophisticated materiel.

Impact of defence on the balance of payments

29. For some countries, in particular the less industrialized ones, which in most cases depend on foreign sources of energy and raw material supplies, the purchase of military equipment from Allied countries is an additional drain on their foreign currency reserves and is likely to aggravate their current balance of payment deficits. The modernization of their military equipment during the period under review might heighten the imbalance. The Alliance will have to take this handicap into account and, in order to assist these countries, consider the establishment of procedures for aid and co-operation in the armaments field.

Probable orientation of defence expenditures after 1980

30. From the above, it appears that if the Allied countries so desired, and should the need arise, defence expenditure could easily be increased between now and 1980, and even beyond that year, without any significant reduction in existing or anticipated industrial potential and investment resources and without substantially affecting the improvement in the standard of living of the population. According to the assumptions made, which allowed for the implementation of the Defence Plans,

the people should, on the contrary, continue to benefit considerably from the increase in the national product. However, the projections established in 1976 by the national authorities underestimate such possibilities. The share of the GDP which it is proposed to allocate to defence might drop from 3.6% in 1976 to some 3.4% in 1982 in the case of the European members of the Alliance (and from 5.9% to 5% in that of the United States). Such a trend towards decline does not seem justified from an economic viewpoint. Assuming an average economic growth of some 4.5% a year - based on prudent extrapolations from the OECD scenario for 1980 - a similar rate of growth for defence expenditure would have no effect on the growth prospects of the European countries since the share of GDP allocated to defence would remain constant.

31. The additional question of whether such a growth in defence expenditure by comparison to that of the GDP would lead to the allocation to defence of high-productivity production factors required for the economy at that time cannot be answered in this paper because little is known about the future state of military and civilian technologies. However, it may safely be stated that any adverse effect would be negligible as it would involve only a very modest share of total productive resources, i.e. those required to increase the defence effort from 3.6% to 4-4½%. Even a limited effort to standardize equipment would offset this effect. This obviously cannot be applied, mutatis mutandis, to the USSR, which uses for its defence a share of GDP three times the size of that of NATO Europe.

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32. Two conclusions can be drawn from this brief analysis; the first is that between now and 1984 the allocation to defence of up to 4½% of GDP would not perceptibly affect the economic growth rate or create serious problems as regards the allocation of resources. For average rates of defence expenditure ranging from 4½-6% of GDP, the impact on the economy would be fairly negligible and could be offset by an effort to standardize armaments. However, it must be borne in mind that growth rates will vary somewhat from one country to another and that some countries will experience additional difficulties in achieving a satisfactory balance of payments as a consequence of their need to import military equipment. It is, therefore, very desirable to extend general economic co-operation as well as co-operation in the production of armaments.

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33. The second conclusion is that the problem of public finance raised by the increase of defence expenditure in the general budget can only be solved in two ways, which may be employed either jointly or in alternation:

- (a) a strong non-inflationary growth which, by increasing public resources and limiting welfare expenditure, would make the financing of military budgets easier;
- (b) the re-orientation of an unchanged amount of public expenditure in a direction more favourable to defence.

This last option is, of course, a political one, but would seem to be increasingly justified as, among the various threats that are apparent, the danger represented by the defence effort and the build-up of weaponry in the Warsaw Pact countries, and particularly in the USSR, becomes increasingly clear-cut and menacing.