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LONG-TERM ECONOMIC TRENDS IN NATO COUNTRIES AND IN THE COMMUNIST BLOC AND SOME IMPLICATIONS FOR THE ATLANTIC ALLIANCE (1)

Report by the Committee of Economic Advisers

SUMMARY

The purpose of the present paper is to examine the prospects for future economic growth in NATO countries and in the Communist bloc. The data given in the paper are based on studies made by governments, international organizations and private economists and are considered a fair concensus of expert views on future long-term economic growth. In view of the vital importance to NATO of events in the underdeveloped areas of the world, the Committee found it advisable to supplement the comparative study with a brief section on the implications for the Atlantic Alliance with respect to the underdeveloped countries during the period in question. There are, of course, some other implications which merit further study.

2. The main conclusions of the paper are as follows:

Relative position of NATO countries and the Eastern bloc

(a) The relative position of the Soviet bloc(2) economy as compared with that of NATO countries will further improve in the period ending in 1975.

(b) The Soviet bloc growth will be especially rapid in the industrial sector which will expand substantially faster than that of NATO countries.

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(1) The present report brings up-to-date the previous studies on comparative economic trends in the NATO countries and in the Soviet bloc, (see C-M(54)99, C-M(55)119, C-M(56)131).
(2) The Soviet bloc should be understood to include Russia and the European Satellites. References to Communist China are made separately.

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(c) Communist China will probably emerge as a major industrial power in the world and her heavy industrial output may even reach the third rank among industrial powers, although it will lag far behind in terms of advanced technology and per capita output.

(d) By 1975 the national product of the Soviet bloc will exceed by about 18% that of European NATO countries; it will constitute 45% of the national product of all NATO countries.

(e) The difference in standard of living between North America and most European NATO countries on the one hand and the Soviet bloc on the other will be reduced although the Western advantage will not disappear.

(f) There is not the remotest chance that the USSR will overtake the United States in living standards and per capita industrial output by 1970, as boasted by Khrushchev.

(g) The present margin between the Soviet and United States rates of increase in output per head will probably be reduced; the Soviet rate of expansion will decline somewhat, while that of the United States is expected to rise

Implications with respect to underdeveloped countries

(h) The trends discussed above will have a profound influence on the underdeveloped world. In this area the problem of whether or not a noticeable measure of economic progress can be achieved under conditions of freedom will be a major factor in the global struggle against communism.

(i) The rapid and continuous growth of output, especially in heavy industry, in the Sino-Soviet bloc countries will no doubt continue to impress the peoples of the newly developing countries. The communists will increasingly exploit this by every means of propaganda in an attempt to demonstrate the superiority of communism. At the same time the growing economic potential of the bloc will increase the material and human resources available for the Soviet economic offensive in those countries.

(j) The free world is challenged to demonstrate to the peoples of the underdeveloped countries that it is possible to achieve their legitimate aspirations under conditions of freedom. This will not be possible unless the Western countries adopt policies which ensure the growth and stability of their own economies.

(k) Though the growth expected in NATO countries will probably lead to an increase in their imports of traditional products from under-developed countries, this trade increase by itself will certainly not be sufficient to finance the development needs in most of these countries.

(l) Therefore, the policies adopted by the Western governments, with regard to development assistance and trade will determine to a large extent whether the underdeveloped countries will be able to achieve economic progress in freedom.

INTRODUCTION

4. A great deal of time and thought has been devoted in recent years by governments and international organizations, as well as by private economists, to the examination of the prospects for future economic growth of different countries of the world. In spite of inevitable divergence of views, there is on the whole fair agreement on what these prospects might be, given reasonable assumptions on possible future events.

5. The Committee considers that the estimates presented in this paper are a fair consensus of expert views on future long-term economic growth. In view of the repercussions which changes in the relative position of the economics of NATO countries and of the Sino-Soviet bloc may have on the position of the Alliance, the Committee wishes to draw the attention of the Council to the estimates presented in this paper.

6. The estimates of future economic growth, up to 1975 are based on the following assumptions:

(a) that the present geographical boundaries of the Atlantic Alliance and of the Soviet bloc will remain unchanged;

(b) that there will be no major war;

(c) so far as the NATO countries are concerned, that there will be no deep and widespread economic recession and no disruption of raw material supplies;

(d) that overtaking the West will remain a primary goal of economic policy of the Soviet bloc;

(e) so far as Communist China is concerned, that there will be no general disturbance serious enough to reduce markedly production increases.

7. Any attempt to compare levels of total output in different countries raises special difficulties, especially between countries whose economic structure differ widely, as do those of the NATO and Soviet countries. The composition of output varies between countries, reflecting, for example, differences in the techniques used, or in tastes; the prices paid for specific goods and services vary widely. Different methods of comparison are possible, which will give rise to somewhat different results.

8. Although estimates in this paper have been given as single figures and not as ranges, they should be interpreted allowing for the margin of uncertainty which is inevitable in forecasts of this kind. The Committee, however, feels that the difficulties in comparing countries with different economic structures and the margin of uncertainty in forecasting do not affect the main conclusions of the paper.

9. The table below shows for NATO countries and the communist bloc rates of growth in recent years as well as the rates on which forecasts in this paper have been based.

NATO and communist bloc annual rates of expansion[1]

	1951-1958	1958-1975
United States and Canada	2.3%[2]	4.0%
NATO Europe	5.0%	3.7%
USSR	6.7%	5.8%
Satellites	6.5%	5.0%
Communist China	7.0%[3]	7.9%

Differences in NATO and Soviet bloc rates of expansion

10. The Russian economy has been expanding very fast in recent years. Western students generally estimate this rate of

(1) The rates in this table are average annual compounded rates of change between 1951 and 1958; the base figure is the GNP for 1951. For the projections 1958 has been used as the base year.

(2) For that period the US and Canada rate was influenced by the 1957-58 recession, and it can, therefore, hardly be considered as typical of long-term growth. For the years 1951-56 the annual rate of growth was 3.3%. A more representative longer period for the US would be 1947-57 (in which several recessions occurred) for which the average annual rate of growth was 3.8%.

(3) This rate applies to the first Five Year Plan 1952-57. The growth in GNP during the great leap forward of 1958 is estimated at between 14% and 20%. (See AC/127-D/43).

growth at 6-7% between 1951 and 1958. The Soviet rate of economic growth seems to have exceeded that of all NATO countries, with the single exception of Germany which, at the beginning of the period, was still effecting a very rapid but delayed post-war recovery.

11. The Russian economy's rapid progress has been made possible by the ability of the government in the past to depress and more recently to curb the growth of standards of living, and to devote to investment a large share (about one quarter) of total resources. Investment has been concentrated on sectors most likely to contribute to increases in output, in particular on industry; investment in housing and other social investment have been kept very low. The large natural resources of the Soviet Union have facilitated industrial growth; this growth has also been assisted by a rapid increase in the labour force, and by large transfers of surplus labour from agriculture.

12. The growth of the Russian economy has been particularly rapid in the industrial sector; Western estimates give rates of 8-9% per year, and it is to be expected that industrial production in the USSR will expand by about 7% per year in the future. Although the growth rate is thus declining it will still be substantially above that of NATO countries.

13. It is to be expected, however, that the Soviet rate of economic growth will decline in the future. It is here assumed to be about 6.0% up to the mid-1960s and to give an average increase of 5.8% over the period as a whole. New social forces are exerting themselves, which the present leaders are trying to direct and contain. The government has, however, been led to give more consideration to the needs of the Russian people, notably by paying more attention to housing and agriculture and by reducing working hours. The government is also faced with a sharp reduction in the rate of increase in the population of working age, reflecting the reduction of the birthrate during the war years; this problem is, however, temporary, and the situation will improve again around 1964. All these problems have been affecting the rate of growth of the economy and will continue to do so in future. However, the recently announced intention of demobilising 1.2 million men should help to improve the manpower situation during this period. Another factor to be kept in mind is the existence in the USSR of a large manpower reserve in the agricultural sector of the economy. The shift, however, of workers from agriculture to industry would be dependent on additional investment in both agriculture and industry as well as in housing and other urban facilities. A third factor which is making itself increasingly felt is the exhaustion of easily available raw material resources. Finally, there are growing replacement needs in the composition of Soviet investment.

14. There are, of course, other factors which operate in the opposite direction; recent development suggest that the Soviet

government has been coping fairly successfully with the question of increasing productivity; the educational reform may well pay substantial returns and the introduction of mass production methods of certain key products, such as machine tools, has been very successful according to some Western observers. Efforts have also been made to modernise backward sectors of the Soviet economy (agriculture, chemical industry, construction, distribution, etc.), and the result will be fast growth rate in these areas. It would, therefore, be imprudent to expect a sudden sharp decline in the Soviet rate of economic growth up to 1975.

15. For the satellites it has been assumed that the growth rate up to 1965 will be approximately 5.5%, while the rate for the period as a whole will be about 5.0%. Their economic prospects seem less favourable than Russia's. Eastern Europe is not so rich in raw materials as the Soviet Union. The small satellite economies are vitally dependent on foreign trade, and have been unable so far to achieve the degree of international specialisation which is necessary to the achievement of a high level of productivity. They have, in particular, been unable to develop and to share their natural resources effectively. Unless they can in future develop effective methods of co-operation, including rational pricing methods in foreign trade, it is likely that their future economic growth will only with difficulty match that of Russia.

16. Some decline in the rate of expansion is also likely in the European NATO countries. Some of them will experience like Russia, a decline in the rate of growth of their labour force, resulting from the reduction in the birthrate during the war years. In most NATO countries resources are now fully used; a trend towards a reduction in working hours has begun in many countries. These developments will, however, be offset at least to some extent by the great increase in investment of recent years and probably also by the progress in international specialisation of the European economies which current efforts towards economic integration should make possible. For the Six it has thus been estimated that an additional increase of GNP of 0.5% per annum may result from the creation of the Common Market. These factors have been taken into account in the present report by estimating the future rate of growth at 3.7%, somewhat higher than the estimates published in April, 1959 by the OEEC.

17. For the United States and Canada it is assumed that the rate of economic expansion will be 4% per year. This is higher than the average annual compounded rate of change in the United States since 1950, but the growth rate in some years since 1950 has been in fact considerably higher than 4%. The increase in the labour force in those countries will be considerable and this together with a projected continued increase in output of private gross product per man-hour, it is expected, will more than offset the anticipated decline in average annual hours of work.

18. Any forecast of economic growth in Communist China is particularly difficult; for example, there is some possibility that the extremely harsh policies of the government will eventually lead to a strong popular reaction. There is no sign of this, however, and so far the government has gradually established very complete control over the country. In view of the present underdeveloped status of the Chinese economy, it is extremely difficult to make meaningful forecasts for the growth of the GNP of China. The figure of 7.9% per year has been included in the table in paragraph 9 above in the full knowledge that little weight can be given to it. More meaningful in this context are indications of future industrial developments in China. It would be unrealistic to assume that the communist leaders will not be able to impose on their people the sacrifices required for achievement of their ambitious policy of industrialisation. On this assumption a rate of growth of industrial production as high as 15% might well be sustained over the greater part of the period considered.

Changes in the relative position of NATO countries, and of the Soviet bloc

19. A further improvement is expected in the relative position of the Soviet bloc as compared with NATO countries, although in absolute terms the difference between the GNPs of the two blocs will continue to increase.

Projected Gross National Products

Total NATO = 100		1958	1975
1.	Total NATO	100	100
	United States and Canada	61	62
	NATO Europe	39	38
2.	Soviet Bloc	34	45
	USSR	24	33
	Eastern European Satellites	10	12
3.	Communist China	7	13

The total output of the Soviet bloc, which now represents about 34% of that of NATO countries, is likely to increase to about 45% of their output in 1975. The most striking change will be in the economic balance in Europe; it appears likely that by 1975 the national product of the Soviet bloc will exceed by 18% that of European NATO countries; at present the output of these countries still exceeds that of the Soviet bloc by about 15%.

20. Although the USSR may achieve significant increases in the production of selected commodities, there is no chance, however, that she will fulfil the 'basic economic task' proclaimed by Mr. Khrushchev of overtaking US levels of productivity and living standards by 1970 at the latest. The following table gives a comparison of GNP per head in NATO countries and in the Soviet bloc.

Gross National Product per Head
(1958 dollars)

	1958	1975
Total NATO	1,698	2,797
United States and Canada	2,502	3,876
NATO Europe	1,131	1,922
Soviet Bloc	869	1,708
USSR	908	1,792
Eastern European Satellites	786	1,510
	Total NATO = 100	
Total NATO	100	100
United States and Canada	147	139
NATO Europe	67	69
Soviet Bloc	51	61
USSR	53	64
Eastern European Satellites	46	54

Output per head in the USSR in 1958 was little more than one third of the United States level, although 1958 was a recession year for that country. Over the long term, output per head in the United States has grown very regularly by about 2% per annum, and there is no apparent reason why this trend should change. To achieve her proclaimed "basic economic task", the rate of increase of productivity in the Soviet Union - now about 4-5% per annum - would nearly have to double - a quite impossible goal.

21. The Soviet Union is unlikely to match the United States, even in the output of industry, the sector to which she is likely to continue to give the highest priority. Her relative position will improve; Russian industry, which is at present a poor second to United States industry, will by 1975 have closed much of the gap.

22. Expected changes in standards of living merit special attention, since it is in terms of standards of living that many people, including those living in underdeveloped countries, will

tend to compare the accomplishments of the Soviet and Western economic systems. A reduction in the advantage in standards of living now enjoyed by North America and most European members of NATO is indeed likely to take place, although this advantage will not disappear. It is possible that consumption per head in some of the more prosperous cities of the Soviet Union, and in such East European countries as East Germany and Czechoslovakia, will approach the level reached in the richer parts of Western Europe. Even now, the average income per capita in several less-developed regions of Western Europe is lower than that of the Soviet bloc as a whole which nevertheless includes extensive impoverished areas which lag far behind the average. The difference in living standards in the West and in the Soviet bloc is, however, not only quantitative, but also in the range of choice offered to consumers; and it remains to be seen whether planning methods in the Soviet bloc will become sufficiently flexible to provide goods and services as varied as those sold in the West.

The position of Communist China(1)

23. It has already been mentioned that in this connection figures for Communist Chinese GNP have little meaning since they can hardly be compared with similar figures for developed countries. Still the fact remains that a most striking change on the world economic scene is likely to be the enhanced world position of the Chinese economy, and, in particular, of her industry. As a result of the policies of forced industrialisation followed by the communist leaders, China might by 1975 emerge as a major industrial power. Her heavy industry might by then be third in the world, although it will lag far behind in terms of advanced technology and per capita output. Her total industrial output might approach the present industrial output of the USSR - though by 1975 Russia's industrial output will, of course, have risen considerably.

24. China's industry is at present not only rather small, but also technically weak. China produces little heavy equipment, precision machinery and complex electronics apparatus. She has few engineers, and these engineers often lack experience. China, therefore, remains even today closely dependent on Russia and the East European satellites for the technical aid and vital supplies of equipment which are required for her development programme. The vigorous efforts which she is making to remedy these weaknesses are, however, reducing this dependence rapidly; China's reliance on the Soviet bloc for technical aid and supplies of machinery will not disappear for a long time, but there is a good chance that by 1965 at the latest it will have become of secondary importance for the development of the economy.

(1) For a detailed description of recent economic trends in Communist China and of future prospects, see document AC/127-D/43, dated 8th March, 1960.

25. Such achievements will require the accumulation of formidable quantities of capital; they will also require extreme concentration of investment resources on production capital, to the neglect of investment in housing and other social construction. Industry will have to continue to enjoy priority; agriculture will probably receive only the resources absolutely essential to provide for minimum food requirements and necessary exports. The estimates made in this paper of the possible future growth of the Chinese economy, therefore, seem consistent only with maintenance of standards of living at, or only slightly above, their present very low level.

Implications with respect to the underdeveloped countries of the Free World

26. No study of the comparative economic trends up to 1975 would be complete if it did not deal with the implications with respect to the underdeveloped countries, since NATO governments have to an increasing extent expressed the importance to NATO of developments in these countries. The very wide gap in living standards between developed and underdeveloped countries is one of the most serious problems facing Western countries. Since the war, the rate of economic growth in the underdeveloped areas as a whole has increased above the pre-war level. Population growth in these areas, however, has risen sharply and the gap in income per head between developed and underdeveloped countries has continued to widen. Economic growth and industrialisation are increasingly being regarded by the peoples of the less-developed countries as among the chief tests of successful government. It is decisive for the political stability of these areas that noticeable progress be made in this direction in the next 15 to 20 years.

27. The rapid growth of output, especially in heavy industry of the Sino-Soviet bloc will no doubt continue to impress the peoples of the newly developing countries. Although the USSR started from an economic base substantially higher than that of the underdeveloped countries, the spectacular scientific and technological achievements of the Soviet Union will have a considerable impact on the underdeveloped countries. These achievements, if not counterbalanced by Western progress, will be increasingly exploited by communist propaganda in an attempt to convince the peoples of these countries that the communist model is the one to follow for their industrialisation. Such propaganda will be particularly effective during periods of recession in the West, when the communists will try to give the impression that Western free economies are rapidly losing ground as compared with those of the Communist bloc. The growing economic strength of the Soviet bloc will also make it easier for them to expand their economic offensive in the underdeveloped world (1).

(1) About the Soviet Economic Offensive, see documents C-M(59)103 and C-M(60)4.

28. The steady growth of the NATO countries' economies with the resulting increasing demand for primary commodities has often been stated to be an important contribution to economic progress in the under-developed areas. However, on the basis of past trends it seems that this demand will increase only by some 2-3% (maximum 4%) per annum, i.e. only slightly above the increase in population in the areas concerned. Prospects for countries producing different commodities vary widely. Oil producers, for example, will fare much better than producers of tropical foods. On the whole, however, it must be recognised that although increased trade in primary commodities resulting from a steady growth in the West will make development of underdeveloped countries easier to achieve, it would be wrong to expect that this increased trade would be sufficient to solve the basic problem of underdevelopment.

29. It has been suggested that the underdeveloped countries should try to increase their foreign exchange earnings by exporting light industrial goods to the West. If this solution is adopted its consequences for certain industries in the West must be faced in a realistic manner. Increased competition from newly established industries in underdeveloped countries will cause hardships to some industries in the West. The ability of the communists to exploit weaknesses in the trade relations between industrialised and underdeveloped countries will underline the increasing importance for the West of solving these problems.

30. It seems unlikely, however, that the Sino-Soviet bloc will become a really large market for the underdeveloped countries as a whole, unless present policy changes drastically. Communist countries now account for less than 3% of the trade of these countries. Their economic policies as reflected in current long-term plans, remain basically autarkic. The imports of the bloc from underdeveloped countries will probably continue to increase, perhaps quite rapidly, but it seems very unlikely that they will account for more than a small part of the trade of these countries by 1975. Communist bloc trade with these countries may, however, continue to be concentrated on a fairly small number of countries for whom the bloc would, therefore, be a major trading partner.

31. The overall trade increase to be expected from economic growth both in NATO countries and the bloc will not be sufficient to finance the development needs of the underdeveloped countries, which will continue to depend on external assistance. NATO countries are contributing to the economic development of under-developed countries by providing large amounts of capital. Their total aid and loans to, and private investments in, underdeveloped countries have risen rapidly and now represent around $5 to $6 billion per annum. This capital flow accounts for about 20% of the foreign exchange receipts of underdeveloped countries, financing possibly as much as 30-40% of net investment in these countries.

32. The Sino-Soviet economic and military assistance commitments to the underdeveloped countries now total about $3.8 billion. Expenditures until recently have been relatively small but are rising rapidly. The Sino-Soviet bloc will almost certainly remain a much smaller source of capital for the underdeveloped countries than the West, although in individual countries Soviet aid may well exceed that of the West and the manner in which it is given is carefully designed to advance communist political objectives.

33. These supplies of capital from the West to the underdeveloped countries, while playing a very large rôle in helping them to increase the rate of expansion of their economies, are clearly not enough, and it is in the interest of NATO countries to increase their efforts in this respect. It is difficult to foresee how the flow of capital from NATO countries into the underdeveloped areas will develop in future. Close to half of the total represents private capital, and does not represent a burden for the public finances of NATO countries; the flow of private capital is likely to prove very sensitive to the state of political relations between NATO and underdeveloped countries and to the investment climate in these countries. This flow will also slow down if a widespread recession affects the ability of underdeveloped countries to repay their debts and the profitability of those primary producing industries into which much of the private capital is invested.

34. The $5 to $6 billion of Western capital flow absorbed only a small fraction of the resources available to NATO countries - less than 1% at present, although the proportion varies substantially from country to country. For many years to come, NATO countries will be required to supplement the efforts of the underdeveloped countries themselves by providing a large proportion of the resources needed to speed up their development.

(Signed) F. D. GREGH
Chairman.

OTAN/NATO,
Paris, XVIe.

METHODS AND SOURCES

I. PREPARATION OF FIGURES ON GROSS NATIONAL PRODUCT AT MARKET PRICES FOR 1958 IN DOLLARS

(a) Concepts

1. The definition of gross national product or expenditure (at market prices) used in the report conforms in essentials with that give in "A Standardised System of National Accounts" (1). For the purpose of real product comparison certain modifications are necessary (2) which affect mainly the expenditure classification. These may best be described by giving the expenditure components:

Consumption covers personal expenditures on goods and services, and government expenditures on health and education.

Gross Investment covers private as well as public gross fixed asset formation, change in inventories and the surplus or deficit on the current account of the balance of payments.

Military outlay comprises all defence expenditures covered by the NATO definition. The official Russian budget figures have been adjusted as far as is known to include the cost of military police, military instruction and research, military installations and special weapons.

Administration includes all government purchases of non-military goods and services except those for health and education.

(b) Conversion into a common currency

2. For conversion of estimates of national expenditure into a common currency, official exchange rates are unsuitable, and some method such as that used in the OEEC study - "An International Comparison of National Products" - must be followed. This involves securing appropriate quantities, prices and values for as detailed a breakdown of the gross national product as is possible for any two countries to be compared, and then weighing the quantity data. of each country with the prices of first the one and then the other. This produces two indices of the real product relationship which will diverge the greater the dissimilarity of the national outputs and the price structures of the two countries (3). When more than

(1) Published by the OEEC, 1952

(2) Comparative national products and price levels, Milton Gilbert and Associates.

(3) E.g., the GNP of Italy expressed as a percentage of the GNP of the United States is 10.3% when valuation is made at United States prices, and 6.9% when valuation is made at average European prices.

two countries are compared, the number of indices obtained incfeases increases and in fact rapidly becomes quite large.

3. It is difficult, therefore, to use this method of revaluation of gross national expenditures in a common currency to obtain straightforward, unambiguous results. The most attractive method - although it is not free from theoretical objections - is to use some method of averaging. This has been tried by the OEEC, which has for example used "average European prices" in comparing the economies of different European countries and of the United States. The OEEC has also proposed to use as the best index of the relative level of two countries' gross national products the geometric average of the ratios between these products, measured first at the first country's prices, and then at the second country's prices.

4. In the present paper, the figures for gross national products of the satellites, Western Europe and the USSR are based on methods of averaging which to some extent make it possible to avoid over-weighting of output of particular countries. These methods have the disadvantage, however, that the comparisons, which are not made in a single set of prices, are to some extent ambiguous.

(c) The NATO Countries

5. The data on gross national product and its sectors are based for most of NATO countries on a study prepared for OEEC by Milton Gilbert and Associates: "Comparative National Products and Price Levels" (countries included in that study are: Denmark, United Kingdom, Norway, Belgium, France, Netherlands, Germany, Italy and the United States). For countries not included, account has been taken of the similarities between their economies and those of countries included in the study and having similar economic structure. The ratio between the gross national product of North American and Western European NATO countries is equal to the geometric average of the ratios obtained by weighting output of the two groups of countries first in United States prices, and then in West European prices. Data in the OEEC study are expressed in United States \$ 1955; they have been converted to United States \$ 1958 by using appropriate price indices.

(d) The USSR

6. For the USSR, country contributions to this report were used which expressed output in 1957 prices. The ratio between the gross national products of the United States and of the USSR is equal to the geometric average of the ratios obtained by valuing the outputs of the two countries first at United States, and then at Soviet prices; to convert them into 1958 United States dollars, Soviet expenditures' figures were multiplied by a price index for United States national expenditures in 1958, 1957 = 100.

(e) The Satellites

7. The estimate of the satellite gross national products are based on country submissions. The ratio between satellite and United States gross national products were obtained by using Western European quantity weights for valuing satellite output. This gives an estimate intermediate between the estimates which would result from use of satellite and United States quantity weights. The figure thus obtained has been adjusted to make it, as far as possible, comparable to figures given for NATO Europe.

(f) Communist China

8. Revaluation of Communist China's output in United States prices or of the United States output in Chinese prices, can have no real meaning, for the difference in levels of development between the two countries is too great. For this reason, China's gross national product has been converted into dollars by using the exchange rate of 2.46 Yuan per dollar.

II. ASSUMPTIONS AND METHODS USED IN THE NATIONAL PRODUCT PROJECTIONS

(a) NATO countries

9. The assumptions underlying the projections are that there will be no major war and that there will be no severe and general economic depression.

10. Projections rest on assumptions about the character of the economic and political situation in the future. It is expected that development in future will generally be in line with growth since the end of the war.

11. For European NATO countries, it is expected that the current high rate of growth, which is much in excess of the long-term trend, will be more or less maintained; allowance has been made, however, for a slowdown in expansion of Germany, whose rate of growth in the recent past was exceptionally high. The present trend toward a reduction of working hours is expected to continue, and this will also reduce somewhat the increase in the gross national product.

12. The OEEC study: "Gross National Product and its composition in 1965 and 1975" Paris, 30th April, 1959 (DT/E/EN/58.107) prepared by the "Working Party of Energy Advisory Commission" proposes two rates of growth; one more optimistic and one less optimistic. It has been felt that even the optimiatic projection for European countries (an average increase in gross national

product of 3.2% per year) is too low. In the present paper it has been assumed that European gross national products will increase by 3.7% per year on the average; this estimate takes into account the beneficial results which are likely to accrue from the present efforts towards European economic integration.

13. For the United States and Canada the projections are based on recent studies made in the United States, including a report by the Joint Economic Committee of the United States Congress: "Comparisons of the United States and Soviet economies", studies of the National Planning Association, especially "Long-Range Projections for Economic Growth - the American Economy in 1970", and a Department of Labour study "Manpower - Challenge of the 1960s". These studies assume that the total gross national product of the United States will increase in future by 4% or more per year. The International Staff has used the minimum rate of 4%. For the purpose of this paper it is assumed that the Canadian growth rate will be at least as high as that of the United States. The Canadian authorities project Canada's growth at 4.25% per annum up to 1975.

(b) The USSR

14. The projection of Soviet economic growth was based on an assessment of future prospects of the Soviet economy, contained in a recent National Planning Association study (1). This assessment is based on the following reasoning:

(1) it is difficult to find in Soviet history any sustained period of "normal economic growth," on which projection of future trends might be based. The most relevant "normal period" seems to be the years 1951-58;

(2) over this period, industrial production has risen swiftly, although at a declining rate, amounting to about 10.5% per annum over the years 1951-55, and 9.5% per annum for 1951-58 as a whole. Agricultural output at first stagnated, but began to rise quite rapidly about 1953-54. Estimates of the rate of growth of the national income vary, according to the weight given to agriculture and services; while most observers agree to a rate of 6 to 7%, some go as high as 8 to 8.5% per annum; and others remain far below 6 to 7%.

(3) in future, official Soviet plans seem to imply a

(1) Communist Economic Strategy, prepared by A. Nove

further decline in the rate of growth of industrial output. For agriculture, faster growth seems called for;

(4) the expectation of a further decline in the rate of industrial growth seems in fact justified by a number of factors which are likely to retard Soviet economic development:

(i) reduction in the emphasis on the "growth inducing" heavy industry;

(ii) the impact of the low birthrate of the war years on the rate of increase of the labour force. This factor will affect the Soviet rate of growth for a few years only, however: after 1964 the population of working age will once again rise rapidly;

(iii) development of additional natural resources is becoming more difficult. There are practically no virgin lands left to be opened up for agricultural production without substantial investments; exploitation of the large natural resources of the East will require costly investment to create the necessary infrastructure;

(iv) there is less scope than previously for borrowing Western techniques, now that Soviet industrial efficiency has reached a fairly high level;

(5) the study also lists a number of favourable factors:

(i) the educational effort will pay dividends, both in improving the quality of the labour force and in facilitating technical development;

(ii) Soviet planning, with its great opportunities for standardisation and assured long runs, may prove very suitable for the development of automation. Automation will also be facilitated by the lack of strong workers' organizations;

(iii) the development of Siberian resources, although initially very costly, may eventually pay off handsomely;

(iv) there remains much surplus labour in agriculture; this represents a manpower reserve on which it should prove possible to draw in future, provided appropriate policies are adopted;

(6) it would be absurd to pretend that these and other factors can be systematically weighted to obtain scientific predictions of growth rates. The assumptions underlying the study may not be completely fulfilled; unforeseen events may occur. An element of personal judgement must enter into any assessment;

(7) on the whole, however, it seems warranted to expect that the Soviets will be able to sustain a rate of industrial growth approximately 8% per annum. For agricultural production, the growth rate is unlike[ly] to exceed 4% per annum. The overall rate of increase of output may be around 6% per annum, at least until mid-1960's. (In the study, a rate of 5.8% has been used for the period up to 1975).

(c) The Satellites

15. It was felt that the most realistic way of projecting the growth of the satellite economies would be to start from the rate of growth projected for the Soviet Union, and to assume that the rate for the satellites would be somewhat lower;

(1) the satellites have been following, and are likely to continue to follow, policies closely following the Soviet pattern. Even Poland, which has departed from the Soviet models in some ways, continues to give priority to heavy industry, and followed the Soviet example when Russia decided to speed up the growth of her chemical industry;

(2) these policies, however, cannot be expected to result in a rate of economic growth matching that achieved by Russia;

(i) methods of foreign trade in the satellites are inefficient. Progress made in furthering a rational divison of labour between various satellite economics has been insufficient, and continues to encounter difficulties. This will slow down the introduction of automation, techniques of mass production, etc.;

(ii) natural resources in the satellites are limited; they are not shared as they should be between the different countries, because of the inefficiency of foreign trade mechanisms. This will distort the pattern of development of these natural resources, by forcing some satellites to produce goods which might be produced more cheaply elsewhere;

(iii) there is almost no movement of capital and labour between the satellites. Thus East Germany, with a highly-developed industry, will suffer from a labour shortage at the same time as Bulgaria suffers from scarcity of capital. In Russia, on the other hand, large transfers of labour and capital across the country can be made freely if necessary to speed up economic growth;

(3) it has been assumed that the gross national product of the satellites would grow by 5% per year in the period until 1975 i.e. less than the 5.8% rate projected for Russia. The rate until 1965 is projected at 5.5%.

(d) Communist China

In appraising Communist China's future economic strength, the main emphasis has been placed on an assessment of the possible growth in industrial production. It is considered that comparisons of gross national product between countries where levels of development are so different as are those of China and the developed countries of the West are not very meaningful.

The basis of the projections has been set out in the document: Communist China's Great Forward Leap(1), which describes the current development policies of the Chinese authorities. This paper suggests that the Chinese Communists have found an effective way of using the vast man-power resources of the country, while conserving scarce resources of capital and skilled labour to the greatest possible extent. In favourable circumstances - and in particular if the pressure imposed on the people does not lead to a revolt - these policies seem capable of giving rise to very high rates of industrial growth.

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(1) AC/127-D/43

It is, of course, difficult to predict what that rate of growth might be; but a guess has been made that the rate might amount to about 15% until 1970, and about 10% in the five following years. This rate of growth is less than that achieved between 1952 and the first half of 1958 - and, of course, far less than that achieved in the second half of 1959 and in 1960, at the height of the forward leap. It is, however, higher than that rate achieved by Russia in the initial period of her five-year plans, until her growth was checked by the purges and by the rearmament effort. But, it can be argued, that China's leaders have far better control over the population than Stalin ever did, and that their present policies in overcoming the two main obstacles to rapid industrial growth: the capital and skilled labour shortages.

Assuming such a rate of growth, it seems that by 1975 China's industrial output will be of the same order of magnitude as those of the United Kingdom, West Germany and Japan (1), and might well exceed them in heavy industry.

The projections of industrial output can serve as a basis of a rough guess concerning the growth in China's total gross national product. This estimate is based on value added at Chinese prices, which may overweight industry as compared with agriculture and services; and, of course, use of different weights might have led to a lower estimate of the rate of increase of the gross national product (2). However, any conceivable system of weights would be to some extent unsatisfactory, because there is no really meaningful way of measuring output in constant prices when the composition of this output changes as rapidly as in China.

The table below assumes that:

(a) value added in agriculture was roughly equal in 1958 to the value added by industry, transport, handicrafts and construction, and that value added by government and consumer services half the value added by either of those two sectors;

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(1) See AC/89-WP/62, comparison of industrial output in China, Japan, the United Kingdom and West Germany.

(2) For example, the use of value added estimates for the three categories in 1958 of 46, 30 and 24, respectively, would lead to a growth rate of 7.25% per annum.

(b) the output of the industry, transport, handicrafts and construction sector will grow somewhat less than output of industry alone (13% and 8% instead of 15% and 10%);

(c) agricultural output will increase at the same rate of population, or possibly slightly faster;

(d) urbanisation will require output of services to grow substantially faster than population.

	Rough Estimate of value added in 1958	Average Yearly Increase in Output		Estimated 1975 Output
	(weights)	1958-70	1970-5	
Agriculture	40	3%	3%	66
Industry, transport, construction, handicrafts	40	13%	8%	252
Government and consumer services	20	5%	5%	45
	100			363
			(7.9% per year)	

III. POPULATION PROJECTIONS

(a) Total Population

16. The statistics on population for the NATO European countries are from the OEEC report of 30th April, 1959, mentioned earlier. The 1958 figures have been obtained by interpolation.

17. For the United States, Canada, the USSR, the East European satellites and China, use was made of the statistics in the United Nations publication: "Accroissement de la population mondiale dans l'avenir," New York, 1958. The 1958 figures for these countries were also obtained by interpolation.

(b) Population of Working Age (age group 15-64)

18. For NATO European countries, the population of working

age was calculated on the bases of the OEEC report "Demographic Trends in Western Europe," 1956. The ratio between this population and total population for 1951 has been applied to the total population for 1955 (OEEC report of 30th April, 1959) to estimate the population of working age for that year. The 1958 data have been obtained by interpolation. For 1965 and 1975, the changes envisaged by OEEC in its report of 30th April, 1959 have been used in projecting the figures.

19. For Canada and the United States, the statistics on the population of working age are from the OEEC Statistical Bulletin of March, 1959; for Canada, statistics have been extrapolated for 1958, 1965 and 1975, while those for the United States have been extrapolated for 1958 and 1975.

IV. PHYSICAL PRODUCTION

20. The figures for 1957 for NATO countries have been taken from the OEEC General Statistical Bulletin, July 1959. For Russia and its East European satellites, the statistics are from the United Nations Statistical Year Book, 1958 and for certain products from the Soviet Plan Fulfilment Reports.

21. Projections of physical production have been based on the following sources:

(a) Soviet bloc countries, physical output in 1965; estimates are based on available plans;

(b) Soviet bloc countries, physical output in 1975; it has been assumed that the % increase in the 10 year 1965-75 would equal the increase planned for the 8 years 1957-65. This allows for some reduction in the rate of industrial expansion;

(c) for European NATO countries, projections are based on OEEC estimates(1);

(d) for North American NATO countries, the projections are basically identical with those in the previous study, AC/89-D/11, table 7.

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(1) EAC(58)3, Energy Advisory Commission, Provisional projections of fuel demand and imports in 1965 and 1975.

TABLE I

POPULATION

1958 - 1975

Areas	Projections 1958	1965	1975
(1)	(2)	(3)	(4)
	(millions)		
1. Total NATO	460.5	491.5	534.2
United States and Canada	190.4	210.3	239.3
Other NATO countries	270.1	281.2	294.9
2. Soviet bloc	306.1	339.6	391.9
USSR	208.1	234.0	275.0
Eastern European Satellites	98.0	105.6	116.9
3. Communist China	636.0	720.0	894.0
	1958 = 100		
4. Total NATO	100	107	116
United States and Canada	100	110	126
Other NATO countries	100	104	109
5. Soviet bloc	100	111	128
USSR	100	112	132
Eastern European Satellites	100	108	119
6. Communist China	100	113	140
	Total NATO = 100		
7. Total NATO	100	100	100
United States and Canada	41	43	45
Other NATO countries	59	57	55
8. Soviet bloc	66	69	73
USSR	45	47	51
Eastern European Satellites	21	21	22
9. Communist China	138	146	167

TABLE II

POPULATION OF WORKING AGE

1958 - 1975

Areas	Projections		
	1958	1965	1975
(1)	(2)	(3)	(4)
		(millions)	
1. Total NATO	299.1	315.8	340.2
United States and Canada	115.0	126.6	147.0
Other NATO countries	184.0	189.2	193.2
2. Soviet bloc	208.5	232.6	268.4
USSR	142.5	160.3	188.4
Eastern European Satellites	66.1	72.3	80.0
		1958 = 100	
3. Total NATO	100	105	114
United States and Canada	100	110	128
Other NATO countries	100	103	105
4. Soviet bloc	100	111	128
USSR	100	112	132
Eastern European Satellites	100	109	121
		Total NATO = 100	
5. Total NATO	100	100	100
United States and Canada	38	40	43
Other NATO countries	61	60	57
6. Soviet bloc	70	73	79
USSR	47	51	55
Eastern European Satellites	22	23	23

TABLE III

GROSS NATIONAL PRODUCT

A. PROJECTED GROWTH

Areas	Indexes 1958 = 100		
	1958	1965	1975
(1)	(2)	(3)	(4)
1. Total NATO	100	131	191
United States and Canada	100	132	195
NATO Europe	100	129	185
2. Soviet bloc	100	149	252
USSR	100	150	261
Eastern European Satellites	100	145	229
3. Communist China	100	170	364

TABLE III (Contd.)

B. PROJECTED NATIONAL PRODUCTS

Areas	1958	1965	1975
(1)	(2)	(3)	(4)
	billion 1958 dollars		
1. Total NATO	781.9	1,020.8	1,494.4
United States and Canada	476.3	626.7	927.6
NATO Europe	305.6	394.1	566.8
2. Soviet bloc	266.0	396.0	669.4
USSR	189.0	284.0	492.9
Eastern European Satellites	77.0	112.0	176.5
3. Communist China	52.2	88.9	190.1
	Total NATO = 100		
4. Total NATO	100	100	100
United States and Canada	61	61	62
NATO Europe	39	39	38
5. Soviet bloc	34	39	45
USSR	24	28	33
Eastern European Satellites	10	11	12
6. Communist China	7	9	13

The rates of growth used are as follows:

United States and Canada:	4.0%
NATO Europe:	3.7%
USSR:	6.0% for 1958-1965 and 5.8% for 1958-1975
Eastern European Satellites:	5.5% for 1958-1965 and 5.0% for 1958-1975
Communist China:	7.9%

TABLE IV

GROSS NATIONAL PRODUCT PER HEAD, 1958, 1965, 1975
(1958 dollars)

Areas	1958	1965	1975
(1)	(2)	(3)	(4)
1. Total NATO	1,698	2,077	2,797
United States and Canada	2,502	2,980	3,876
NATO Europe	1,131	1,401	1,922
2. Soviet bloc	869	1,166	1,708
USSR	908	1,214	1,792
Eastern European Satellites	786	1,061	1,510
		1958 = 100	
3. Total NATO	100	122	165
United States and Canada	100	119	155
NATO Europe	100	124	170
4. Soviet bloc	100	134	196
USSR	100	134	197
Eastern European Satellites	100	135	192
		Total NATO = 100	
5. Total NATO	100	100	100
United States and Canada	147	143	139
NATO Europe	67	67	69
6. Soviet bloc	51	56	61
USSR	53	58	64
Eastern European Satellites	46	51	54

TABLE V

PHYSICAL PRODUCTION OF SELECTED BASIC PRODUCTS - 1957

Areas	Energy (million tons hard coal equivalent)	Electric Power (billion klh)	Hard Coal (million metric tons)	Crude Petroleum (million metric tons)	Pig-Iron Ferro-Alloy (mill.metric tons)	Crude Steel (mill. metric tons)	Aluminium Primary (thousand metric tons)	Copper refined (thousand metric tons)	Lead refined (thousand metric tons)	Zinc refined (thousand metric tons)	Sulphuric Acid (thousand metric tons)	Cement (million metric tons)
Total NATO	2,204	1,158	956	787	137	190	2,506	2,424	1,203	1,972	26.8	128
USA and Canada	1,544	806	475	378	76	107	2,000	1,760	678	1,184	15.6	59
NATO Europe	587	352	481	9	61	83	506	664	525	788	11.2	69
Soviet bloc	837	295	452	110	48	67	636	545	374	499	6.4	44
USSR	559	210	328	98	37	51	530	500	275	325	4.6	29
East. European Satellites	278	85	124	12	11	16	106	45	99	174	1.8	15
						NATO = 100						
TOTAL NATO	100	100	100	100	100	100	100	100	100	100	100	100
USA and Canada	70	70	50	98	55	56	80	73	56	60	58	46
NATO Europe	27	30	50	2	45	44	20	27	44	40	42	54
Soviet bloc	38	25	47	28	35	35	25	22	31	25	24	34
USSR	25	18	34	25	27	27	21	20	23	16	17	23
East. European Satellites	13	7	13	3	8	8	4	1	8	9	7	12

Note: the data above were taken from various publications: OEEC and United Nations in particular.

TABLE VI

ENERGY AND CRUDE STEEL PRODUCTION
1957, 1965 and 1975

	Areas	ENERGY (1)			CRUDE STEEL		
		1957	1965 (2)	1975	1957	1965 (2)	1975
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				million metric tons			
1.	Total NATO	2,204	2,590	3,590	190	275	390
	United States and Canada	1,544	1,900	2,780	107	160	220
	Other NATO countries	587	690	810	83	115	170
2.	Soviet bloc	837	1,380	2,312	67	122	222
	USSR	559	1,002	1,790	51	93	169
	Eastern European Satellites	278	380	522	16	29	53
				Index 1957 = 100			
3.	Total NATO	100	117	117	100	145	205
	United States and Canada	100	123	118	100	149	205
	Other NATO countries	100	117	138	100	138	205
4.	Soviet bloc	100	165	267	100	182	331
	USSR	100	179	320	100	182	327
	Eastern European Satellites	100	136	188	100	181	331
				Total NATO = 100			
5.	Total NATO	100	100	100	100	100	100
	United States and Canada	70	73	77	56	58	56
	Other NATO countries	27	26	31	44	41	43
6.	Soviet bloc	38	53	54	35	44	56
	USSR	25	39	49	27	34	43
	Eastern European Satellites	13	15	14	8	10	13

(1) Production in terms of hard coal equivalent

(2) Plans

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    (b) The Soviet Seven-Year Plan, note by the French Delegation, AC/89-D/24.

(c) Sino-Soviet economic relations, note by the French Delegation, AC/89-D/23.

(d) Communist China's "Great Forward Leap", AC/127-D/43, dated 8th March, 1960.

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