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ECONOMIC COMMITTEE

THE TENTH SOVIET FIVE-YEAR PLAN (1976-1980)

Note by the Chairman

This document has been prepared as a background study following the reinforced meeting on recent events in the Soviet economy, which the Economic Committee held on 8th July, 1976.

2. It is intended as a more detailed version of the summary report C-M(76)76 dated 20th August, 1976 and is based primarily on major contributions from the United Kingdom and United States Delegations.

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THE TENTH SOVIET FIVE-YEAR PLAN (1976-1980)

Note by the Economic Directorate

A. OBJECTIVES

1. The major goals of the current Five-Year Plan - similar to those of the last Plan - appear to be as follows, based on the 25th Party Congress pronouncements, subsequent official reports, and the statements of Soviet leaders at the October 1976 sessions of the Supreme Soviet.

- (a) The necessity of a steady growth of the national income. To attain this aim, science-based industries, agriculture and consumer goods production are to be improved. However, this formula is by no means novel and in the consumer goods sector at least, improvements will hardly be radical in view of the increased emphasis on heavy industry;
- (b) higher living standards, with stress on such areas as improved housing and public services as well as increased food production. Real incomes are to rise by some 20 to 22 per cent over the period, about 3.7%-4% annually, compared with more than 30 per cent in the 1971-1975 period or over 5.5% annually;
- (c) increased efficiency and intensity of production, principally by higher labour productivity which is to account for 90 per cent of the increase in output. This productivity increase is to be stimulated by mechanization and automation, which should also help to save materials, particularly rolled steel, cement, timber, power, petrol and diesel oil;
- (d) increased emphasis on scientific and technological progress, with a view to speeding up the technological restructuring of industrial production. Attention will be devoted to the speedy practical application of the results of development work i.e. a shortening of the time-lag between the completion of prototypes of machines, instruments etc. and their practical application on a large-scale. This time-lag has been one of the ongoing weaknesses of Soviet industrial innovation. Standardization will also be treated as a factor of major importance;

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- (e) modernization of economic management. Planning methods will be more sophisticated and planners will closely study requirements and the means to satisfy them. The economic and planning structure will remain centralized, but it will be reorganized and restructured in such manner as to establish close contacts between basic enterprises and central economic authorities. "Effective forms" to involve workers in production management will be developed;
- (f) environmental protection. This will include not only environmentalist policies as understood in the West, but also the most economical exploitation and utilization of raw material resources;
- (g) COMECON integration. The reference to integration is cautious and brief. Quoted in full, it states that it is intended "to develop and to intensify consistently comprehensive co-operation with the socialist countries, to strive for the strengthening of the socialist world system".

2. In 1976-80, however, investment growth will slow dramatically, increasing no faster than NMP, i.e. an average annual 4.7% (1971-1976: 7.2% compared with 5.1% for NMP). The slow boost of investment as well as consumption relative to NMP planned for 1976-80 implies a substantial rebound in growth for "other government expenditures". It is believed that this reflects unannounced plans to increase inventory formation, to accelerate the rate of growth of capital repair and to promote a better balance between imports and exports.

3. The Soviets hope to compensate for the decline in investment growth by concentrating on completing projects long in the pipeline and on expanding existing facilities rather than constructing new ones. In this way they plan a relative large boost in capital stock with only a small injection of new fixed investment. Since this is a one-time gain and the growth of capital stock will fall precariously if this policy is continued, the slowdown in investment growth probably is a temporary phenomenon.

4. The other major difference from past plans is that the Soviets have lowered their sights for economic growth. The goals for 1976-80 are modest compared with past targets. Indeed, the planned average annual NMP and industrial growth rates constitute the lowest goals since World War II, i.e. 4.7% and 6.4% respectively (Group A: 6.7%; Group B: 5.7%).

5. The Soviet leadership ascribes this slowdown to:
(a) the problems of the last five years, mainly agricultural, which continue to reverberate throughout the economy, and
(b) a new concentration on quality and efficiency rather than on quantitative targets. It apparently realizes that the traditional emphasis on crude output has been a major reason for the reluctance of plant managers to introduce new techniques and technology.

6. At present, the Soviets must rely on improved technology and better management to achieve the productivity gains necessary for future growth. Indeed, if overall growth targets are to be met with scheduled inputs in 1976-80, factor productivity must grow by 2% per year - a rate faster than attained in 1971-75. In order to achieve the industrial output goal, an annual productivity boost of 3% is needed, almost triple the 1971-75 rate.

B. ECONOMIC INPUTS

(i) Investment

7. A striking difference between the current Five-Year Plan and its predecessors is the low rate of growth projected for capital investment. The average annual rate of 3.7% is only about half that recorded in the three previous Five-Year Plan periods. Planners hope the reduction will force a more judicious use of investment funds by (1) concentrating on the completion of unfinished projects and expanding old facilities, and (2) raising capital productivity by incorporating the latest technology and employing better managerial techniques.

8. The proliferation of new projects has tied up resources and lengthened construction times, even by Soviet standards. In 1975 the amount of unfinished construction equalled 76% of total state capital investment. The present Five-Year Plan directives pledge that this will fall to 65% by 1980. Toward this end, capital investment will be concentrated on completing and commissioning new capacity and on raising the shares spent on new equipment as opposed to the erection of new buildings. In this way, the USSR apparently hopes to obtain an average annual boost of 5½% in gross additions of new fixed capital in 1976-80 with annual increase of only 3.7% in investment compared with the 6.5% growth in gross additions achieved in 1971-75 backed by a 6.9% rise in investment (Table VII).

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9. The inability to hold down new starts and complete old projects is inextricably linked to the system of planning and management. Overriding concern with growth and high investment rates impels Ministries and enterprises to impose as many projects as possible on the planning agencies. Project completions are frustrated by endemic bottlenecks in the distribution system and a lack of incentives in construction organizations where plan fulfillment is largely based on the value of work completed. Basic construction work is of high value, but finishing work is not.

10. In addition to increasing the capital stock, the emphasis on completing unfinished projects is aimed at raising its technological level. Currently, construction takes so long that the embodied technology is already obsolete when production begins. In 1969, first deputy Chairman of the USSR State Committee on Science and Technology, V.A. Trapeznikov, identified construction delays as largely responsible for the Soviets' technological lag behind the West. He advocated cutting the number of construction projects in half. The new Plan also emphasizes the re-equipping and modernization of existing enterprises with a concomitant increase in the retirement rate of outdated equipment. Accordingly, in 1976, "the share of expenditures on equipment in the total volume of capital investment is to be raised", and 64% of state capital investment(1) in industry will be channelled into existing enterprises.

11. The Plan directives give scant detail on investment by sector or branch of industry. Agriculture will take some 26% of total investment funds: Brezhnev indicated to the recent 25th Party Congress that this is a long-term commitment: "The improvement in the quality of agricultural production requires time, toil and huge investment.... we only recently started to allocate large funds to this sector". Within industry, priority will be placed in those areas that "insure the acceleration of scientific and technical progress". As in the last Plan period, these are identified as machine-building, the chemical and petrochemical industries and electric energy.

(ii) Manpower

12. The new Plan directives fail to reveal the planned growth and allocation of manpower. Nevertheless, sufficient demographic data and secondary information on Soviet labour

(1) Includes investment in state owned enterprises and organizations; excludes investment in collective farms and for construction of private housing

intentions permit estimates believed to be relatively accurate for the major labour force components. Assuming that labour force participation rates remain at their current high level, as is likely, the Soviet labour force will grow by 8% during 1976-80 compared with about 8½ in 1971-75, i.e. 1.5% per annum as against 1.6%.

13. In 1980, the USSR will employ approximately three-fifths more workers than, for example, the US; however, many of these will be engaged in unskilled activities and assisted by little machinery which will result in a lower output per worker compared with the developed West. For example, in 1980, it is estimated that Soviet agriculture will still employ over 30 million workers compared with fewer than 4 million in the US.

14. Despite the slight slowdown in growth projected for the labour force because of fewer youths reaching working age, the USSR will not face an acute manpower shortage during 1976-80. Sufficient workers will be available to man all priority endeavours, including Siberian oil development, construction of the Baikal to Amur Railroad, and industrial expansion. If some shortages occur, they will likely be in the services sector, where employment growth has been the most rapid and which is labour intensive.

15. The strain on manpower resources will be eased by the anticipated continuing slowdown in the growth of industrial employment. During the entire five-year period, industry is expected to add fewer than 1½ million new workers. A decade ago, Soviet industry was adding more workers than this every year. The reasons for the increased productivity probably are more and better machinery, better educated workers and improved work scheduling. Boosting productivity will become even more important in the mid-1980s when a very sharp slowdown in manpower growth is projected. During the next decade the labour force will grow at an estimated rate of only one per cent per year, largely a result of the sharp decline in birth rates during the 1960s.

(iii) Factor productivity

16. In 1976-80 the growth of combined factor inputs - capital, manhours and land - is estimated at about 3%, i.e. below the average annual growth of 4% achieved since 1960. Given this growth, if NMP is to rise by the planned average annual rate of 4.7% in 1976-80, combined factor productivity must increase by about 2% annually (Table IX) - a faster rate than attained during the past five years. If industry is to grow by the planned annual rate of 6.4%, industrial productivity must grow by 3% almost triple that achieved in 1971-75 and more than triple that of 1966-70 (Table X).

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17. The annual increment planned for Soviet GNP seems large enough to allow for both increases in defence spending and improvement in living levels. Moreover, the present level of Soviet defence programmes is such that modest rates of growth - or indeed even a constant level of defence spending - will allow inventories of military equipment to continue to rise.

C. ECONOMIC OUTPUT

I. Industry: General

18. The average annual industrial growth rate of 6.4% planned for 1976-80 does not differ dramatically from the rates achieved over the last ten years (1966-1970: 8.5%; 1971-1975: 7.4%). An increase of only 4.3 per cent is planned in 1976 (compared with an average of 6.7-7.4 per cent growth in 1977-80), although nine-month figures for 1976 suggest this target may be somewhat exceeded. Growth in food industries, which account for about one-fifth of total industrial output, will be low in 1976 and probably in 1977, since last year's agricultural failures resulted in a shortage of raw materials which will be only partly made good by imports. The relatively slow growth of 4.9 per cent envisaged for heavy industry in 1976 would not be attributable to shortfalls in agriculture, but may be connected with the continuing inability to meet construction deadlines for new plant and equipment.

19. Nevertheless, there will be shifts in emphasis reflecting the two main themes of the new Plan directives - higher quality and improved technology. The emphasis on quality is most evident in industrial branches such as ferrous metals where planners are counting on improvements in quality and assortment to help compensate for a continued and planned slow-down in the rates of growth of the physical volume of output. The high growth rates planned for machinery and chemicals reflect the plan directives calling for concentration on "those sectors which determine technical progress to the greatest extent".

20. The high rate projected for the machinery sector reflects both the emphasis on technology and the larger share of investment going to the installation of equipment and modernization of existing enterprises. The generally slower growth rates have been presented by the USSR as a deliberate policy decision based on the argument that the consumer will ultimately gain rather than lose from a cutback in targets because this will provide a breathing space for technical reconstruction and modernization. However, although the

increasing amount of unsaleable goods stored in warehouses suggests that poor quality is a real problem in the Soviet Union, there is no evidence of substantial changes in the system, and the claim that lowered growth rates will mean better workmanship remains unproven.

(a) Chemicals

21. The traditionally rapid growing chemicals sector is slated for a 10.5% average annual growth in 1976-80, about twice the rate for other industrial materials. Major attention continues on production of fertilizers and synthetic materials (plastics, rubber, and manmade fibres). The industry's quantitative goals seem ambitious as is the task of improving product mix and quality. The output of newer manmade fibres, for example, is scheduled to grow at a much faster rate than the relatively less modern rayons. Output of phosphate fertilizers, in chronically short supply, is planned to increase by 17% in 1976 alone, compared with the 5% growth rate slated for all fertilizers.

22. The nutrient content of the fertilizer will be raised to 40 per cent, compared to the increase of 35-37 per cent in 1971-75 and efforts are to be made to increase production of concentrated and compound fertilizers. The Plan refers to the need to increase the output of phosphate fertilizers in a form suitable for bulk storage and transportation. The production of potassium in the traditional area of Belorussia and the Urals is being increased and the rich potassium deposits of Turkmenia will be exploited. Phosphate production will be increased in Kazakhstan and the Kola Peninsula and the Plan refers to the construction of a major processing complex in Yakutia using deposits of apatite.

23. Production of plastics and synthetic resins is to increase by 90-110 per cent to reach between 5.3 and 5.8 million tonnes in 1980. The relative share of polymer plastics will rise from 36 per cent in 1975 to around 50 per cent of the total. As in the previous Plan thermoplastic polymer materials will be emphasized. One of the present deficiencies is the lack of large-scale production units and reference has been made to plans for a low density polyethylene production line 100,000-150,000 tonnes a year capacity, two or three times the size of the plant currently in production.

24. During the next five years, French, German, Italian, Swedish and United Kingdom firms will supply plant for projects involving the production of polyurethane, polyethylene,

polystyrene and PVC. However, such contracts may well be dependent upon the willingness of firms to consider deals of a buy-back nature. Production of thermoplastics in the USSR is still relatively below that of the West and further purchases of equipment for this purpose may be made.

25. Production of chemical fibres will reach 1.45 to 1.5 million tonnes in 1980, an increase of 52-57 per cent over the Plan figure for 1975. Both the range and the quality of production will be increased and further purchases of plant from the West can be expected.

26. The production of synthetic rubber is to increase by 40-60 per cent, and production to replace imported natural rubber will be accelerated.

27. Successful fulfillment of these output goals depends on meeting construction deadlines. Efforts to reduce the backlog of unfinished construction in 1971-75 failed: the backlog rose by 58% from 1971 to 1974 compared with a 45% increase in investment. Unfinished construction now exceeds annual investment in the whole chemical industry. On-time completion of construction is particularly important in the fertilizer industry where the introduction of new capacity in 1976-80 must average 11.2 million tons annually compared with 7.6 million tons annually in 1971-75.

28. Continued large imports of Western chemical equipment will be essential if the Soviets are to approach either their quantitative or qualitative chemical goals. Such imports set records in 1974 and 1975, exceeding \$1 billion each year, spent mostly for complete installations for the production of ammonia, plastics and manmade fibres. The types of equipment purchased also reflect the priorities of the current Five-Year Plan, and additional orders are imminent.

29. As already indicated, increasingly, such purchases are based on compensation agreements, whereby long-term Western purchases of Soviet chemicals help defray equipment costs. As a result, substantial quantities of Soviet ammonia, plastics and intermediates for the production of polymers will be marketed in the West beginning in the late-1970s.

(b) Metals

30. Over the last decade, the growth rates of metals output in physical units have been falling, partly because the industry has been struggling to satisfy the economy's demand for more specialized and sophisticated products. Also, the

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slow growth in steel-making capacity - only about half of that planned was added during 1971-75 - has retarded development. For example, the steel industry's programme to add new oxygen converters continues to lag behind schedule, forcing reliance on the traditional open hearth furnace, long supplanted in the West.

31. The rise in steel production is to slow down. However, output of finished rolled steel products is to increase more quickly, largely by a more economical use of crude steel by progressive methods such as cold rolling techniques, and the output of steel pipes, hitherto one of the weaknesses of the Soviet steel industry, will increase substantially. Modernization of existing steel complexes rather than expansion will be the guiding principle, although modern steel-making capacities such as oxygen converters and electrical furnaces will be installed. To back up iron and steel production, new iron ore resources will be opened up.

32. To make good Soviet deficiencies specific technologies, especially in rolling and finishing have been imported from the United Kingdom, the United States and the Federal Republic of Germany. Deliveries are still outstanding under existing agreements and some will be made in the 1976-80 Plan period. In 1974 agreement was reached with a group of West German companies to purchase on "buy-back" terms an integrated steel plant at Kursk (Table XX). Soviet imports of Western technology are likely to continue during the next Plan period and beyond.

33. The Soviets apparently plan to compensate for the unfulfilled domestic demand by continuing also to import steel from the West. Soviet purchases of Western steel cost \$2.3 billion in 1975. Unlike the chemical industry, little interest has been shown in massive purchases of Western steel-making equipment to spur growth.

34. Output of aluminium, copper and nickel will increase by 15 to 20 per cent during the 1976-1980 period. Titanium production will go up by 40 per cent. With the exception of titanium this represents a lower growth rate than during the 1971-1975 period. Stress will be on the quality of the metals and on improved and increased ore production especially at the Norilsk copper and nickel mining complex. Advanced processes including new methods of ore enrichment and hydro-metallurgy will be applied widely.

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35. The output of rare precious metals and diamonds will be increased although no amount has been specified. Production of semi-conductor and specially pure materials used in the electronics industry will be increased. Soviet output of titanium sponge is now estimated at about 35,000 tonnes which makes the USSR the world's largest producer. The quantity and the range of products will be increased particularly in the rolling and finishing sectors.

(c) Fuels

36. General: The Plan directives indicate that production of primary energy will grow at an average annual rate of 5%, about the same rate as the last ten years, and generally consonant with the rate of growth of NMP. The targets for oil and natural gas, however, are optimistic and, unless met, could cause a shortfall of 2-5% in the target for primary energy output. By 1980 the share of oil and gas in the overall fuel balance should be about two-thirds compared with about one-half in 1965. Coal's share should decline to slightly more than one-fourth by 1980 compared with about two-fifths in 1965.

37. Oil: In the oil extraction industry, development over the next five years is to continue the trends established in the latter years of the last Plan. Production of crude oil and condensate will continue to grow, but at reduced rate with a greater percentage of total output coming from the Western Siberian fields. There will be continued reliance on the use of secondary recovery techniques (water, steam and gas injection) and the newer thermal drive to boost recovery ratios. Re-equipment will continue throughout the industry and there is to be a great increase in the use of automated control systems which by 1980 will account for 80% of all oil produced.

38. In 1980, the production of oil (crude and gas condensate) is to total 640 million tons. This represents an increase of 31% over the anticipated figure for 1975, rather less than the 38% growth achieved during the last Plan. Production from West Siberia (currently 28-30% of Soviet production), is to increase rapidly to reach 300-320 m tonnes in 1980 or 47-50% of total yield. Output from the traditional fields of European Russia is being maintained largely by the intensive use of secondary recovery methods and in many cases production will drop towards the end of the Plan period.

39. During the current five year period, the USSR is to expand its efforts to locate new oil reserves. Specifically, mention is made of further geological prospecting on the continental shelf, in inland seas, in Eastern Siberia, in the

Komi ASSR and in the Archangel oblast, in the Caspian depression and in the Central Ob basin and Tyumen oblast of West Siberia. Many of these areas will require special techniques to cope with the needs of their various environments - desert, arctic, or offshore - and much of this will have to be purchased from abroad. The USSR is already negotiating for offshore rigs and for drill ships with a number of Western companies and agreements are expected in the near future. However, whatever finds are made they are unlikely to affect the 1976-80 Plan targets although they would be of vital importance for the 1980-2000 period.

40. Gas: Output of natural gas in 1980 is planned at 435 thousand million cubic metres, of which up to one-third (145 thousand million cubic metres) will come from the important Siberian fields, a further 75-80 thousand million cubic metres from the Shatlik area of Turkmenia and some 22 thousand million cubic metres from the developing area in the Komi ASSR.

41. Due to the remote nature of the major producing areas, the large-scale development of the Soviet natural gas industry has been primarily dependent on the provision of an efficient transport and handling system. During the current Plan period, the USSR is to lay a further 35,000 km of gas pipeline of all types, including a large quantity of large diameter trunkline. The development of the Orenburg gas field will continue during the new Plan period; the construction of the Orenburg pipeline is due to be commissioned in 1979 with an initial throughput capacity in 1980 of 15.5 thousand million cubic metres.

42. The USSR is importing large quantities of equipment for the gas industry from the West. In particular, it has signed agreements with a number of Western companies for the necessary large diameter pipes, compressors and valves for the pipelines, receiving much of this in return for natural gas shipments. It has also turned to the West for specialised treatment facilities, such as the sulphur extraction units needed for the development of the Orenburg field and for gas hydration units. The present Plan is likely to see further purchases of this type as development of the Siberian and Central Asian fields continue. In addition, if the Soviet does opt for gas liquefaction it will undoubtedly seek both expertise and equipment in the West.

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43. Coal: In 1971-75 the Soviet coal industry had a remarkable record of overfulfilment of plans, although the level of Soviet mining technology is generally considered to be lower than that in most West European coal producing countries. The new Plan calls for output to rise from the 701 million tons of 1975 to 805 million tons in 1980. This represents an annual average increase of 2.7% compared with the 2.3 per cent average of 1971-75. During 1976-80 the Soviet Union is to continue to stress the importance of modernizing mines, and improving general levels of equipment and technology. Special attention will be given to large modern mines already using advanced methods of coal mining in order to obtain the maximum return on investments.

44. The USSR is also taking steps to expand the coal equipment industry. Special mention is made in the Plan of the need to speed up the design and serial production of mechanized sets of equipment particularly for use in fine seams with a shallow pitch, and in steeply falling seams. Output of shaft-driving combines, mechanized loading machines and other equipment is to be expanded to meet the needs of the industry.

45. No specific mention is made of any plans for coal gasification and coal liquefaction, but it is known that the USSR is interested in these processes with a view to using its rich coal deposits more intensively. Research and development in the whole area of coal processing is likely to be increased in 1976-80.

46. Electric power: In 1975 the electric power industry reached a generating capacity of 220 million KW and the annual plan of generating 1,035 thousand million KW/hours was fulfilled. (This was slightly lower than the original target for 1975 specified in the Five-Year Plan.) In 1976-80 generating capacity is to be increased by 67-70 million KW, including an increase of 13-15 million KW in the capacity of atomic power stations (AES); this will raise the contribution of atomic power to total capacity from under 3 to between 5-6 per cent, substantially less than the figure of 10-20% predicted in earlier announcements.

47. Work will continue on the expansion of atomic power stations at Chernobyl, Smolensk, Kursk and Novovorensk and stations will also be built with reactors of 1,000-1,500 MW size. Construction of the first station to have a 1,500 MW reactor, the Druksiay AES in Lithuania will begin during the Plan. Thermal power stations will also be constructed, with a renewed interest in the use of coal as fuel; here again the tendency will be to build large stations, especially in the

4,000-6,000 MW size such as those planned for the Ekibastuz and Kansk-Achinsk coal fields. Larger power units will be installed, of 500 and 800 MW capacity, and even of 1,200 MW such as that planned for the Kostroma thermal power station.

48. Hydroelectric power stations (GES) will also tend to increase in size and emphasis will be given to the construction of hydrocomplexes which will combine power generation with flood prevention, irrigation, fish rearing and water supply projects. Hydropower stations will be built in many areas but especially mentioned in the Plan directives were those planned for the Yenisey, Angara, Syr Darya and Amu Darya rivers.

49. The achievement of all these targets will depend on the ability of the respective branches of the engineering industries to keep pace with demand: the Soviet Minister of Power recently severely criticised them for failing to meet targets and thus handicapping power development, particularly in the atomic sector.

(d) Machinery

50. Plans for the machinery and engineering industry cover a very wide span, which are only outlined in this paper. Altogether the volume of machinery production is to increase by 50 to 60 per cent under the 1976-1980 Plan as against over 100 per cent in the 1971-1975 period. The reduced growth rate may not necessarily mean a curtailed potential but, as explained in the Plan draft, more importance will be attached in the 1976-1980 period to specialization, co-ordination and standardization of machinery production.

51. In the heavy machinery sector, priorities will include continuous steel casting plant, pipe rolling lines, a wide-range of converters up to 100 tonnes capacity for the processing of cupro-nickel concentrates, large coal excavators, heavy drilling equipment, heavy road building plant and diesel railway engines ranging between 6,000 hp and 8,000 hp.

52. Policy intentions for the electrical engineering industry partly overlap with the power generating sector. Important items are larger types of electrical machines, generators utilizing the principles of superconductivity, 1,000 to 1,200 megawatt turbine generators for thermal and nuclear power stations, 640 megawatt turbine generators for hydroelectric power stations, high voltage installations for the transmission of direct current (DC) up to 1,500 kilovolts and for alternative

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current (AC) up to 1,150 kilovolts, electrical locomotives, new ranges of cables, electrical equipment for agriculture and electrical engines for numerically controlled metal working machine tools. It is also intended to increase the output of metal working instruments fitted with natural or synthetic diamonds and to organize the manufacture of metallo-ceramic instruments.

53. The dramatic slowdown in growth in the motor vehicle industry - 2.3% annually in 1976-80 compared with 16.5% annually in 1971-75 - suggests that near capacity production has been reached, particularly at Tol'yatti, and points to stress on quality and design. For example, trucks and trailers are to be tailored to the needs of agriculture, construction, mining and commercial transportation. Tractors and agricultural machinery are scheduled to grow in the current Plan period at about half the rates achieved in 1971-75. Here, as in the automobile industry, production capacity limits growth in the next five years. The reasons for this slowdown may be greater concentration on quality.

II. Agriculture

54. The 1976-80 Plan calls for annual average agricultural output to grow by 16% over the average for 1971-75 or 3% per year. This compares with a growth of 13 per cent claimed for the average output in 1971-75 over that in 1966-70. In addition to increasing production, the Plan requires the quality of the output to be improved.

55. Grain production is as usual greatly emphasized and the Plan refers to an intention to expand the area sown to the protein rich crops consumed by livestock. The grain harvest in 1976-80 is to average 215-220 million tons, which implies an increase of 19-22 per cent over the annual average of about 180 million tons reported for 1971-75: however, in the four years 1971-74 the annual average was 190 million tons and, in relation to this achievement, an average figure of about 215 million tons for 1976-80 seemed realistic. In his speech to the Supreme Soviet on 25th October, 1976, Brezhnev stated that the grain harvest this year will "closely approach" the record figures of 1973 (223 million tons) or even "surpass" it and that the 1980 grain output target remains 235 million tons. He added that a good harvest of sugar beets and cotton is expected and that while 1976 was a "difficult" year for cattle raising, the situation is now "changing for the better". The 1976 grain target has now been confirmed at 223.8 million tons.

56. Output of the livestock sector in 1976-80 is to grow more slowly than in the previous five years. The target for meat production is an average of 15-15.6 million tons a year, which compares with an average of 14 million tons in 1971-75. The low targets set for 1976-80 reflect the substantial adjustments the livestock sector is having to make because of the low availability of fodder since the middle of 1975 which has caused above normal slaughter rates.

57. Throughout the last five years the USSR experienced great difficulty in increasing fodder production, and while grain was imported to offset shortfalls in the harvests, the availability of other types of feed remained well below the planned levels. Output of hay actually fell, although the Plan envisaged a very substantial increase of over 60 per cent. Indeed, throughout the period, grains were partly substituted for roughage (grass, root vegetables, hay and straw). The necessity to improve the fodder base has been mentioned in the Plan for 1976-80, but since grain will continue to hold "pride of place", it is unlikely that sufficient resources will be transferred to other fodder crops to stimulate their production, i.e. these crops will remain a weak link in the development programme for livestock.

58. Investment in agriculture in 1976-80 (over 170 billion rubles) is to be some 31 per cent higher than in 1971-75 and to account for some 26 per cent of the total investment in the economy. Agriculture is to maintain its favoured position for investment, but will receive a lower proportion of the extra investment available for the whole economy than in the two previous five year periods.

59. Already some 50 billion rubles has been allocated for development of the non-black soil zone of European Russia and some 35 thousand million rubles from this total will be used for agricultural development. In addition, the state has allocated 3.5 billion rubles for construction of extra storage facilities for a total of 40 million tons of grain. Large schemes for land improvements which is a costly activity, have also been announced. Among inputs from industry, special emphasis is placed on increased output of phosphate fertilizers of which there is an acute shortage in the USSR, and on buildings and equipment for livestock complexes. In addition to an increase in the number of machines supplied, there is also to be an upturn in their average capacity.

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60. A major Central Committee decree on agricultural reorganization, published 2nd June 1976, concedes that the "standard, economic indicators and growth rates for the production of the main products still do not satisfy our growing needs and do not accord with existing possibilities". It says that past adjustments to the system, such as the enlargement of farms by amalgamation, had not eliminated the basic inefficiencies of mixed farming. Massive state investments in farm machinery and equipment and fertilizers, have brought only a slow reduction in labour inputs, while basis costs of the main agricultural products have remained static.

61. The proposed reorganization, which would lead to "radical changes in the structure and character of production" is presented as a "new stage in the implementation of the ideas of Lenin's co-operative plan in the condition of developed socialism". Experiments in inter-farm specialization and concentration which have been conducted on large-scale live-stocks breeding farms, complexes and other inter-farm enterprises in Moldavia, the Ukraine, Belorussia, parts of the Russian Federation and elsewhere (there are 6,000 inter-farm co-operatives) have shown, the decree claims, that labour inputs per unit of production are 2.5-3 times lower, and production costs 1.5-2 times lower, than on non-specialised farms. The decree, therefore, recommends the formation of major inter-kolkhoz, inter-state farm and mixed state farm-kolkhoz enterprises to produce meat, milk, eggs, wool, fodder concentrates, etc., to pool resources for the scientific study of aspects of farming and horticulture, and to share technological resources.

62. While intensification and specialization of farm production may reduce unit costs and improve productivity (releasing farm workers to ease the anticipated industrial labour shortage), experience with livestock complexes suggests that the full potential of specialization is unlikely to be realized for many years. Cost seems to provide a major constraint on the growth of livestock complexes. A member of the USSR Academy of Agricultural Science, I. Lukinov, has calculated that the cost of major complexes is 5-10 million rubles, and in some cases 20-30 million rubles - sometimes more if housing and other facilities are included (Voprosy Ekonomiki, No. 10, 1975).

63. Indications that the planned farm reorganization may be delayed late into the current Plan period can be derived from Brezhnev's October 1976 speech to the Supreme Soviet. While boosting his programme of specialization and concentration of agricultural production on the basis of inter-farm co-operation and agro-industrial integration, Brezhnev warned against the premature breaking-up of old units before the new ones are in place.

III. Living Standards

64. The slowdown in wage growth during the 1970s would appear to be another symptom of economic trouble. The two Plan periods in the 1960s each achieved real per capita income growth of over 30 per cent compared with 24 per cent in the last Five-Year Plan and 20-22 per cent planned in the new one. Kosygin's claim at the Party Congress that 75 million people had received wage rises in the 1971-1976 period omitted the fact that there are over 100 m wage earners in the Soviet Union and that a quarter of the active population, therefore, received no pay rises at all. In the current Plan period, industrial and office workers, who make up the majority of the work force, will receive wage rises of less than 20 per cent, the lowest rise since the first years of the post-Stalin era. Concurrently, planners aim to link wages more closely to individual effort and eliminate the attitude among workers that bonuses come as a right.

65. But severe as the Five-Year Plan's wage policy looks, if the economy improves, the targets are certain to be surpassed; tax levels are being reduced making take-home pay that much higher; and pay is supplemented by the so-called consumption fund (which provides social services on a non-contributory basis), whose outlays are due to rise faster than wages, and whose value to the wage earner will therefore increase. Fastest wage rises (24-27 per cent) will go to farm workers under the long standing policy of narrowing the gap between rural and urban living standards. Some progress has been made in this direction, but the big leap forward planned for the last Plan cycle failed because of the agricultural disasters, and the 1975 target ratio between farm and industrial wages of 0.7: will probably not now be reached until 1980. Farm workers, though have better food supplies than urban workers.

66. Other categories due for above average rises include the service industries, the low paid and night-shift workers. Wages also play an important part in regional policy. The use of differentials to attract people to thinly populated areas or compensate for hardship will be extended in the Urals, the Far East and parts of Kazakhstan. In 1975 typical monthly wage rates were quoted as miners 250 rubles (face-workers getting 300-350 rubles) workers in petrochemicals 160 rubles, ferrous metallurgy 170 rubles (in West Siberia 194 rubles) non-ferrous metallurgy 210 rubles. The zonal differentials ranged from 15-70 per cent extra, though in many cases they were partly offset by reported zonal differentials in consumer prices.

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67. Wage rises should be slightly deflated to take price rises into account. Basic foodstuffs, rent and transport are fixed. In 1975 the State Budget allocated 16 billion rubles to subsidise consumer goods, mainly meat, dairy products, children's clothes, books and medicines. Transport subsidies amounted to 1 billion rubles and the state paid 60 per cent of housing maintenance costs. But the faster introduction of new consumer goods gives more scope to raise prices under the guise of "improvements". This applies particularly to clothes, consumer durables and processed food, and is openly admitted to be making life costlier. On the other hand, the population is plainly not short of money. Savings rose nearly 100 per cent from 46.6 billion rubles in 1970 (190 rubles a head) to 91 billion rubles in 1975 (360 rubles), showing that the problem is not wages so much as how to use them.

68. The average working week in the last Five-Year Plan was five days/39.4 hours with the legal maximum 41 hours. But this overlooks obligatory unpaid work like subbotniki (voluntary Saturday working) and the heavy demands of "storming" to meet a Plan deadline. The aim in the Five-Year Plan is to "lay the basis" for a 30-35 hour week, but no deadline is set. Face workers in mining have gone over to a 30 hour week.

69. According to official Soviet statistics there has been no inflation in the Soviet Union during the last five years and continuing retail price stability is promised for 1976-80. Although this claim is probably not altogether correct, available evidence suggests that the real rate of inflation is indeed low and best Western estimates suggest that it is currently running at about 1-2 per cent annually. For the future, there will probably be at least some further upward trend in retail prices but it is unlikely to be either rapid or large. The leadership has repeatedly pledged itself to maintain price stability and no far-reaching relaxation of the rigid central control is expected before 1980.

70. According to official data the consumer goods sector still accounts for little more than 25 per cent of industrial output; even this figure overstates the true position owing to the high profit rates in the light and food sectors and the arbitrary nature of the price system. At the 25th Party Congress in February 1976 Brezhnev berated the planners for their failure to ensure that the targets set for the consumer goods industries were reached and insisted that the authorities regarded an improvement in the standard of living as being of fundamental importance. The figures posited in the 1976-80 Plan, however, show that consumer goods production is intended

to rise by only 32 per cent, which means that the growth rate will lag further behind that for heavy industry than in any period since the early 1960s.

71. Because automobile production is planned to increase only slightly - about 1% per year - annual sales to the population are expected to remain at roughly the 1975 level. Nevertheless, at these rates, the stock of privately-owned cars will more than double, from an estimated 2½ million in 1975 to 5 million in 1980, or nearly 2 cars per 100 people. Such sales could (1) absorb about one-third of the 91 billion rubles currently held in savings accounts and thus ease inflationary pressure, (2) boost consumer morale, and (3) reduce the waiting period for a car to several months instead of several years. Recent proposals to initiate installment purchase of cars would facilitate purchases by lower income families.

72. Retail trade growth will slow down in line with incomes, but consumption patterns will shift towards the expensive end of the market as better goods become available. The fastest selling items at the end of the last Five-Year Plan were meat, clothing, shoes, fancy goods, household chemicals, watches, cameras, radios and gramophones, cars and furniture. The Five-Year Plan singles out high calorific foods, electrical household goods and building materials (private house building being on the increase) for fastest growth, and call for closer collaboration between the retail trade and industry to meet consumer demands. Market research remains virtually non-existent.

73. Expansion of self-service stores will go on, and large imports of refrigerated displays, shelving and streamlined pricing and packaging equipment are likely. Supermarkets had a mixed reception in the last Five-Year Plan because the gains were often cancelled by inadequate check-out points and a typically Russian array of unnecessary regulations. Services are in even greater demand than retail goods, and have been growing quite fast. But availability is still poor, and it will be easier for many years to obtain services via the parallel market, particularly building work and car repairs, though there is a plan to expand the car servicing network.

74. Housing plans are modest compared to previous rates. New construction will barely exceed the level reached in the last Five-Year Plan, which means it will not even keep up with average population growth (0.9% per annum). Output fell a long way behind target in the last Five-Year Plan, and the 1980 target will still be below what was originally planned for

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1975. Soviet officials explain this by saying housing will be bigger and better built. But the Five-Year Plan target of 11.3-11.4 million flats works out at 50 sq.m a unit, exactly the same as the last Five-Year Plan, and a dramatic rise in the quality of construction seems unlikely. Most of the new dwellings will be in tall blocks, though there has been discussion of the merits of low rise housing. Co-operative or semi-private house building is on the increase. Some 32 per cent of housing investment will take this form in the Five-Year Plan, a shade more than in the last.

IV. Foreign Trade

75. Although the 1976-80 draft Plan includes a section on foreign trade, it is in general terms. The increase in turnover is specified as 33.5 per cent, virtually the same as the target for the previous Plan period and this is presumably a minimum objective. Over the next five years trade with the Communist countries will take up an increasing share of total trade and will grow at 7.1% on an annual average basis compared with +5.5% with the industrial West. The new COMECON pricing policy introduced at the beginning of 1975 means that by 1978 Eastern Europe could well be paying prices close to those presently existing on world markets for their raw materials from the Soviet Union. These countries are already committed to delivering large amounts of machinery and infrastructure equipment for joint COMECON raw material development projects, mainly in the USSR.

76. Indeed, much of the continued rapid growth in trade with Eastern Europe projected for 1976-80 will come from higher COMECON prices which took effect in 1976. Since raw material prices will rise faster than prices of manufactured goods at least through 1977, the USSR should experience a continuing favourable shift in its terms of trade with Eastern Europe. Despite the higher prices, the Soviets remain reluctant to raise the quantities of increasingly scarce raw materials traditionally supplied to Eastern Europe. Oil exports, for example, are expected to increase only slightly by 1980, i.e. 1%-2%.

77. Moreover, Moscow has insisted on East European participation in the development of raw material deposits used for exports to Eastern Europe. A gas pipeline from Orenburg to Eastern Europe is the largest such project under way. Other joint development projects include a pulp complex, an asbestos complex, an oil pipeline, and a fertilizer production facility.

78. Equipment and technology should continue to account for a major share of Soviet imports from the West in 1976-1980. Orders placed with Western firms have been largely for chemical plants, oil and gas field equipment, wood processing equipment, motor vehicle manufacturing equipment, and mining and construction equipment. Ongoing negotiations indicate that Western inputs will continue to be important in the development of these sectors. Western equipment and consumer goods will be particularly important for developing Siberian raw material deposits and the associated infrastructure.

79. The Soviets should continue to rely on the West for imports of industrial materials. Signed contracts and continuing negotiations indicate that steel products will remain a large component of Soviet imports from the West. Beginning in 1974 such imports rose sharply as increased Soviet demands for specialty and shaped steels could no longer be met from domestic production and/or imports from Eastern Europe. Soviet preparation for the 1980 Olympics will also require sizable imports from the West. To date the Soviets have contracted for the construction of about \$400 million in hotels, bringing total contracts associated with the Olympics to over \$1 billion.

80. The extent to which the Soviets can increase their imports of technology and equipment will depend on the need to import grain and other agricultural products from the West. In an average weather year, the Soviets probably will import 10-15 million tons of grain; a poor harvest could double this amount. Poor crop years also boost purchases of Western meat.

81. Despite the recent rapid rise in Soviet indebtedness, the USSR can be expected to continue extensive use of Western credits during 1975-1980. Debt service was probably on the order of 20% of export earnings in 1975; however, the structure of the estimated \$11-13 billion medium and long-term Soviet debt with its long repayment periods and grace periods should facilitate its management while export earnings are recovering. Moscow apparently regards such credits as a relatively low cost means of importing Western technology and equipment. Moreover, the growing rôle of compensation agreements provides the USSR with greater certainty regarding its future ability to generate sufficient export earnings to cover the growing debt service.

82. Western governments probably will remain willing to extend large amounts of credits to the USSR, recognizing that credit is a key to the placement of new orders. Western competition for Soviet business becomes particularly keen during

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recessions when large Soviet orders provide a welcome stimulus to lagging domestic economies and resultant unemployment. Since mid-1974, the USSR has received over \$11 billion in credit lines from Western Europe, Japan, and Canada.

83. Heavy borrowing in 1975 from Western commercial banks, however, may have limited Moscow's ability to borrow from this source in the near future. By the end of 1975, many Western bankers had reached their self-imposed credit limits for loans to the USSR or were beginning to insist on higher interest rates. The Soviet decision to control spending more stringently in 1976 rather than to continue borrowing from commercial banks could derive from a reluctance to increase their short and medium-term indebtedness.

V. The Defence Burden

84. In contrast to major Western countries, the USSR is extremely secretive concerning its military expenditure. The only published information is a single line entry for "defence" in the annual State Budget. No analysis is ever published; certain large items such as military research and development are excluded; and since 1963 planned and actual expenditures are stated to have virtually coincided, which is most unlikely. More important, the trend of the defence vote in the 1970s has not reflected known developments in Soviet military programmes. Claims of declining expenditure in 1974 and 1975 and the static budget for 1976 are simply not credible in the light of known improvements in Soviet military capabilities.

85. Defence demands on the Soviet economy are unquestionably enormous in terms of resources, skill and manpower. In 1976, the defence sector was estimated to be producing 3,000 tanks, 1,000 combat aircraft, 4,000 armoured cars, ten nuclear submarines, a 40,000 tonne aircraft carrier, dozens of smaller ships, several hundred missiles, and over 1,000 pieces of artillery. But apart from the sheer volume of its production, the defence industry is organizationally burdensome. All but the very best production is rejected (a waste ratio as high as 90 per cent is reportedly common), and production capacity is designed to meet the maximum contingency irrespective of the cost of leaving it idle in the meantime. However long production runs and the high level of standardization within the Warsaw Pact lead to economies of scale impossible to achieve in the West.

86. The defence industry is concentrated in European Russia, with some important factories strung out along the trans-Siberian railway, particularly around the Urals and Krasnoyarsk.

Major naval construction centres include Leningrad, Nikolayvsk (Black Sea), Severodvinsk (submarine building), near Archangel, and Komsomolsk (Pacific). Most defence production is controlled by eight Ministries (though they do not only produce defence equipment) directly responsible to the Council of Ministers. Nominally they are equal, though in practice subordinate to the Ministry of Defence. Ultimately, the whole defence complex is controlled by Dimitri Ustinov, who became Defence Minister in May 1976.

87. The Ministries and their functions are:

Ministry of Defence Industry: production of armaments and ammunition, including tanks, artillery, armoured vehicles, small arms, explosives, and possibly small missiles.

Ministry of Aviation Industry: aircraft and parts for both the air force and Aeroflot whose enormous transport capacity has obvious military uses. It may also contribute to the missile programme.

Ministry of Shipbuilding Industry: all naval vessels, and maintenance of shipyards. Possibly storage tanks, bridges and other large assemblies.

Ministry of Electronics Industry: components and parts for assembly by other Ministries.

Ministry of Radio Industry: 70 per cent of its production, and, therefore, of all radio-electronic production goes to defence. Responsible for all communications equipment, radar, navigation aids, and computers for military and space uses.

Ministry of General Machine Building: ballistic missiles, space vehicles.

Ministry of Medium Machine Building: atomic energy, nuclear devices, warheads.

Ministry of Machine Building: aspects of the space programme not covered by General Machine Building.

88. Since 1970 it is estimated that defence requirements have been absorbing some 11-13% of Soviet gross national product (GNP), depending on the definition of defence that is employed. This represents a large share of national production, especially for the Soviet Union which is aiming at rapid economic

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development. More specifically, the economic experts have estimated that around 20% of industrial output and $\frac{1}{3}$ of that of the mechanical engineering industries goes on defence; this comprises a very high proportion of technologically advanced products, such as integrated circuits.

89. In addition, the 5 million or so men who are permanently in non-productive employment in the armed forces or the para-military formations deprive the economy of more than 4% of the available working population (8% of the male working population) at a time when the influx of young manpower on the market is limited.

90. The extent to which the better quality resources have been channelled into military programmes is also certainly a contributory factor both to the low living standards of the Soviet population, which is still below that in most of the East European countries, and to the decline in the overall rate of real economic growth, which has fallen from over 7.1 per cent a year on average in the 1960s to 5.1 per cent a year on average in 1971-75. Also, it is by no means certain that the Soviet Plan to maintain economic growth at an annual average of 4.7% in 1976-80 can be fulfilled. While manpower resources will continue to increase by about 2 per cent a year in the current plan period, the growth of investment is reported to be less than half that recorded in 1971-75, i.e. +26% against +42%.

91. Unless a substantial improvement in productivity can be achieved (and on past performance this is unlikely) it is probable that the Soviet economy will experience a further significant decline in its rate of economic expansion in the late 1970s. Nevertheless, there is no evidence so far available to suggest that the Soviet leadership has sought to improve the economic situation by a curtailment of military programmes.

VI. The Longer-Term Prospects

92. At the 25th Party Congress national and local officials agreed that new initiatives need to be taken in the management and planning of "inter-sectoral" and "territorial" areas, that is, where economic activity crosses either branch of industry or republic lines.

93. Brezhnev cited three cross-sectoral areas that need co-operative effort - fuels and power, transportation, and the production and processing of agricultural products. He claimed, for example, that "considerable losses" in agriculture stem

from this "lack of co-ordination among departments and miscalculations in planning". He suggested a "dovetailing" of the farm sector "with the industries which supply the village with equipment and fertilizers, linked as well as the construction industry, and with those industries which are responsible for procurement, receiving, storage and processing of agricultural produce".

94. In typical Soviet fashion, the exact form and timing of such reforms remain unclear. One regional leader, Belorussian Party Chief Masherov, went so far as to suggest that a new structural sub-division under the Council of Ministers might be necessary. Brezhnev, however, demurred on the specifics and threw the responsibility for drafting solutions to the Council of Ministers and Gosplan. Kosygin, the chief spokesman for these components, directed Gosplan to take intersectoral and territorial matters into consideration when "elaborating comprehensive programmes". He also promised that "in the immediate future" new organizational forms must be developed.

95. To be effective, these reforms should be accompanied by more rational and flexible prices, less central control over the allocation of materials, and relief from excessive demand for most materials. The current emphasis on improving quality and assortment will be particularly hard to achieve without a change in managerial incentives. Without such incentives, plant managers will be loath to accept the reduction in quantity of output that generally accompanies production of better items. The leadership has given no indication that the radical changes necessary to improve matters in these areas will be introduced.

96. Although the 10th Five-Year Plan represents a step toward more realistic planning, it is doubtful that major targets can be met: agriculture: despite excellent harvest results for 1976, two unfavourable weather years could well put the grain target and consequently the goal for agricultural output out of reach; consumption: meat output - probably the most important consumer goal - is unlikely to increase at the unprecedented rates projected for 1977-80. This shortfall and others likely again in the consumer sector will open a gap between money incomes and supplies, adding to inflationary pressures; investment: based on past experience, it is likely that the investment strategy will not pay off as planned, and that returns per ruble invested will be disappointing. The basic Soviet incentive system moreover will conspire against the project completions which are necessary to yield the planned boost in capital stock.

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97. Achieving the higher rate of productivity growth projected will require the adoption of bold new strategies for the introduction of new technology and for raising the efficiency of investment in industry and agriculture. None seem forthcoming. If productivity fails to rise above the average annual rate achieved in 1966-75, NMP growth may well be closer to 4%-4.3% compared with the planned rate of 4.7% for the current cycle. Achievement of the upper end of the range depends on fulfilling planned rates of growth in inputs. The lower end is likely if the Soviets are unable to meet the target for expanding the total stock of plant and equipment through reductions in unfinished construction.

Sources: Pravda
Izvestiya
Ekonomicheskaya Gazeta
Vneshnyaya Torgovlya
Vestnik Statistiki
COMECON: Lascelles, London 1976

TABLE I

SOVIET BASIC INDICATORS (% GROWTH)

	<u>1966-70</u>	<u>1971-75</u>		<u>1976-80</u>
	<u>Actual</u>	<u>Plan</u>	<u>Actual</u>	<u>Plan</u>
National Income	41	39	28	26
Industry	50	42-46	43	36
Agriculture	21	22	13	16
Investment	44	41	42	26
Wages (real per capita)	33	31	24	22
Foreign Trade	51	34	50	33.5

TABLE II

USSR: AVERAGE ANNUAL RATES OF GROWTH IN OUTPUT
OF IMPORTANT INDUSTRIAL PRODUCTS

	<u>Per Cent</u>		
	<u>1966-70</u>	<u>1971-75</u>	<u>1976-80</u> <u>Plan(1)</u>
Total primary energy(2)	4.9	5.3	5.2
Coal	1.2	2.5	2.7
Crude oil	7.8	6.9	5.1
Gas	9.1	8.1	7.7
Electric power	7.9	7.0	5.6
Metals			
Aluminum	11.2	5.7	4.6
Copper	7.7	5.9	4.6
Crude steel	6.9	4.1	3.0
Finished steel	5.5	4.4	3.2
Other materials			
Cement	5.6	5.1	3.4
Mineral fertilizer	12.1	10.2	9.6
Chemical fibres	8.9	8.9	9.0
Plastics	15.8	11.2	14.8

(1) Mid-point of range

(2) Based on standard fuel equivalents

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TABLE III

USSR: AVERAGE ANNUAL OUTPUT OF IMPORTANT
AGRICULTURAL PRODUCTS (1)

	million metric tons(2)		
	<u>1966-70</u>	<u>1971-75</u>	<u>1976-80 Plan</u>
Grain	167.6	181.5	217.5
Sugar beets	81.1	75.9	96.5
Cotton	6.1	7.7	8.5
Meat (carcass weight)	11.6	14.0	15.3
Milk	80.6	87.4	95.0
Eggs (billion units)	35.8	51.5	59.5

- (1) Mid-point of range
(2) Unless otherwise indicated

TABLE IV

USSR: AVERAGE ANNUAL RATES OF GROWTH OF
SELECTED INPUTS IN AGRICULTURE

	per cent		
	<u>1966-70</u>	<u>1971-75</u>	<u>1976-80 Plan</u>
Investment	9.1	9.7	3.4
Tractors	5.2	3.7	0.9
Trucks	10.7	11.5	0.1
Agricultural machinery	7.2	12.2	6.6
Deliveries of mineral fertilizer	11.0	10.6	9.7
Gross additions of irrigated and drained land	1.7	13.6	-5.5

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TABLE V

OUTPUT OF SELECTED MAJOR COMMODITIES

	1973	1974	1975	1975	1975	1980
	Actual	Actual	5-Year Plan	Revised Plan	Actual	Plan
Electric power (thousand million KWH)	915.0	975.0	1,065.0	1,035.0	1,038.0	1,340-1,380
Crude oil (million tonnes)	421.0	459.0(1)	496.0	489.4(1)	491.0(1)	620-640(1)
Gas (thousand million cubic metres)	236.0	261.0	320.0	285.0	289.0	400-435
Coal (million tonnes)	668.0	684.0	695.0	700.0	701.0	790-810
Steel (million tonnes)	131.4	136.0	146.4	142.0	141.0	160-170
Steel pipe (million tonnes)	14.4	15.0	17.5	15.9	16.0	
Finished rolled steel (million tonnes)	91.4	94.2	103.5	98.9	98.6	115-120
Mineral fertilizer (million tonnes)	72.3	80.3	90.0	90.0	90.2	143(2)
Plastics and synthetic resins (million tonnes)	2.3	2.5	3.5	+2.8	2.8	5.4-6.0
Chemical fibres (thousand tonnes)	830.0	887.0	1,065.0		955.0	1,450-1,500
Tyres (millions)	42.3	47.1	51.2		51.5	69.5-72.1
Turbines (million KW)	15.2	17.3	24.2		19.1	
Generators (million KW)	16.5	16.0	20.2		17.1	
Metal cutting machine tools (thousands)	211.0	225.0	250.0		232.0	245
Oil equipment (thousand tonnes)	159.0	172.0	256.0		170.0	

(1) Figures given for the actual output of crude oil in 1974 and 1975, the revised planned target for 1975 and the plan target for 1980 include gas condensate, the production of which is approximately 8-9 million tonnes per annum.

(2) Includes 5 million tonnes of chemical fodder additives.

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TABLE V (Contd)

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OUTPUT OF SELECTED MAJOR COMMODITIES

	1973		1974		1975		1975		1980	
	Actual	Actual	Actual	5-Year Plan	Revised Plan	Actual	Plan	Actual	Plan	
Lorries (thousands)	629.0	666.0	765.0			696.0	800-825	696.0	800-825	
Passenger cars (thousands)	917.0	1,119.0	1,260.0			1,201.0	1,300-1,375	1,201.0	1,300-1,375	
Tractors (thousands)	500.0	531.0	576.0			550.0	580-600	550.0	580-600	
Agricultural machinery (million rubles)	2,971.0	3,465.0	3,702.0			3,800.0	5,000	3,800.0	5,000	
Cement (million tonnes)	109.5	115.0	125.0		122.0	122.0	143-146	122.0	143-146	
Commercial timber (million cubic metres)	297.0	296.0	310.0			305.0		305.0		
Textiles (thousand million sq.m)	9.7	9.8	11.1		10.2	10.0		10.0	12.5-13.1	
Leather footwear (million pairs)	667.0	684.0	830.0			698.0		698.0		
Meat (million tonnes)	13.5	14.5	16.0			15.2		15.2		
Cheese (thousand tonnes)	537.0	572.0	616.0			566.0	about 792	566.0	about 792	
Granulated sugar (million tonnes)	10.7	9.4	10.9			10.4		10.4		
Television sets (millions)	6.3	6.6	6.6			7.0		7.0		
Refrigerators (millions)	5.4	5.4	6.9			5.6		5.6		
Washing machines (millions)	3.0	3.1	3.5			3.3		3.3		
Furniture (thousand million rubles)	3.7	4.0	4.6			4.3		4.3	6.0	

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

TABLE VI

AGRICULTURE

	1971-75		1976-80
	Plan	Actual	Plan
<u>Annual Average Output</u>			
Grain (million tonnes)	195	181	215-220
Sugar beet (million tonnes)	n.a	76	95-98
Sunflowers (million tonnes)	u.a	6	7.6
Cotton (million tonnes)	6.75	7.7	at least 9(1)
Meat (million tonnes) dead weight	14.3	14.0	15-15.6
Milk (million tonnes)	92.3	85	94-96
Eggs (thousand million)	46.7	51.1	58-61
<u>Inputs Total</u>			
Capital investment (thousand million rubles)	128.6	131	171.7
Tractors (million)	1.7	1.7	1.9
Lorries (million)	1.1	over 1.1	1.35
Agricultural machinery (thousand million rubles)	15.5	15.8	23
Mineral fertilizers and chemical fodder additives (million tons)	303.2	206.6	120(1)
New irrigated land (million hectares)	3.2	4.5	4
Drained land (million hectares)	5	4.4	4.7
Grazing provided with water (million hectares)	n.a	n.a	37.6

(1) in 1980

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TABLE VII
USSR: INDICATORS OF CAPITAL FORMATION

	Average Annual Percentage Rate of Growth		
	1966-70	1971-75	1976-80 Plan
Total new fixed investment(1)	7.6	6.9	3.7
Gross additions of new fixed capital(2)	8.3	6.5	5.5
Backlog of unfinished construction(3)	12.1	8.2	0.3

- (1) Excludes net additions to livestock, capital repair, and changes in inventories
 (2) This term differs from "gross fixed investment" in that it counts only those investment projects which were completed
 (3) Some equipment installed in unfinished plants is included in this category

TABLE VIII
USSR: AVERAGE ANNUAL RATES OF GROWTH OF THE LABOUR FORCE

	Per cent		
	1966-70	1971-75	1976-80 Plan
Total civilian labour force	1.5	1.6	1.5
Agriculture	-1.3	-1.4	-1.5
Non-agriculture	3.0	2.7	2.6
Industry(1)	2.9	1.5	0.8

- (1) Industrial employment

TABLE IX

USSR: AVERAGE ANNUAL RATES OF GROWTH OF INPUTS,
OUTPUT, AND FACTOR PRODUCTIVITY IN NATIONAL PRODUCT

	1961-65	1966-70	1971-75	Per cent	
				Plan	
				1971-75	1976-80
Total inputs(1)	4.1	3.9	4.1	3.5	3.0
Man-hours worked	1.6	2.0	1.9	1.6	0.5
Capital	8.7	7.5	7.9	7.1	6.5
Land	0.6	-0.3	0.9	0.0	0.5
Output	5.0	5.4	3.7	5.8	5.0
Factor productivity	0.8	1.5	-0.3	2.2	2.0

(1) Inputs of man-hours, capital, and land are combined using weights of 60.18%, 36.69%, and 3.13%, respectively, in a Cobb-Douglas (linear homogeneous) production function. These weights represent the distribution of labour costs, capital costs (depreciation and a 12% charge on gross fixed capital, including livestock), and land rent in 1970, the base year for all indexes underlying the growth rate calculations.

TABLE X

USSR: AVERAGE ANNUAL RATES OF GROWTH IN INPUTS,
OUTPUT, AND FACTOR PRODUCTIVITY IN INDUSTRY

	1961-65	1966-70	1971-75	Per cent	
				Plan	
				1971-75	1976-80
Total inputs(1)	6.4	5.5	4.5	4.3	3.5
Man-hours worked	2.9	3.1	1.5	1.3	0.5
Capital	11.2	8.7	8.7	8.4	7.0
Output	6.7	6.7	5.7	8.0	6.5
Factor productivity	0.2	1.2	1.1	3.5	3.0

(1) Inputs of man-hours and capital are combined using weights of 57.02% and 42.98%, respectively, in a Cobb-Douglas (linear homogeneous) production function. These weights represent the distribution of labour costs (wages, other income, and social insurance deductions) and capital costs (depreciation and a 12% charge on gross fixed capital) in 1970, the base year for all indexes underlying the growth rate calculations.

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TABLE XI
USSR: AVERAGE ANNUAL RATES OF GROWTH
IN PER CAPITA CONSUMPTION

	Per Cent		
	1966-70	1971-75	1976-80 Plan
Total per capita consumption	4.7	3.2	3.2
Food	3.5	2.1	2.1
Soft goods	6.6	2.7	2.8
Durable goods	9.7	9.7	8.7
Personal services	5.4	4.3	4.1

TABLE XII
CONSUMPTION OF STAPLE FOODSTUFFS, TEXTILES AND CLOTHING
(per capita)

	1965	1970	1975	Norm
Meat and lard (kg)	41	48	58	81.8
Milk and milk products (kg)	251	307	315	433.6
Eggs (units)	124	159	215	292
Fish and fish products (kg)	12.6	15.4	16.8	18.2
Sugar (kg)	34.2	38.8	40.8	36.5
Vegetable oil (kg)	7.1	6.8	7.9	7.3
Vegetables and melons (kg)	72	82	87	146
Fruits and berries (kg)	28	35	37	112.9
Potatoes (kg)	142	130	120	96.7
Grain products (kg)	156	149	142	120.4
Textiles (sq.m)	26.5	30.4	32.4(1)	59.6
Knitted outer garments (units)	0.9	1.8	2.0(1)	1.65
Knitted under garments (units)	3.3	3.5	3.8(1)	6.6
Hosiery (pairs)	5.8	6.0	6.2(1)	9.0
Leather footwear (pairs)	2.4	3.0	3.2(1)	3.3

(1) Data for 1974

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TABLE XIII

USSR: PERSONAL MONEY INCOMES

	1965	1970	1975	1980 Plan
	Billion Current Rubles			
Total money income of which:	123.43	182.98	247.89	312.04
Earnings of wage and salary workers	89.05	132.05	179.30	209.88
Wage payments to collective farm workers	9.13	14.04	16.24	20.38
Transfer payments(1)	15.01	24.04	35.88	45.17
State deductions from income(2)	9.62	16.63	25.99	32.72
Disposable money income	113.81	166.35	221.90	279.32
Per capita disposable money income	490.45	658.13	868.09	1,045.75
	Per cent			
Average annual increase in per capita disposable income(3)	5.9	6.9	4.8	3.8

- (1) Transfer payments include pensions and welfare payments, stipends to students, loan service, and insurance indemnities
- (2) Total state deductions include direct taxes on the population, local taxes, state loans, trade union and party membership dues and insurance premiums
- (3) Average annual rate of growth during each five year period with the terminal year as indicated

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TABLE XIV
DISTRIBUTION OF SOVIET TRADE (%)

	1970	1975	1980(1)
COMECON	60(2)	52	48-50
Developed West	21	31	} 50-52
Other	19	17	
Total	100	100	100

- (1) Calculated on the basis of FYP target and COMECON long-term trade agreements
 (2) Includes Cuba which did not join COMECON until 1972

TABLE XV
SOVIET FOREIGN TRADE BALANCE (bn R)

	1970	1971	1972	1973	1974	1975	Balance 1971-75	Growth over FYP %
Total								
Exports	11.5	12.4	12.7	15.8	20.8	24		109
Imports	10.6	11.2	13.3	15.5	18.8	26.7		152
Balance	0.9	1.2	-0.6	0.3	2	-2.7	0.2	
With COMECON								
Exports	6.3	6.7	7.5	8.3	9.9	13.4		113
Imports	6.0	6.6	8.0	8.6	9.5	12.9		115
Balance	0.3	0.1	-0.5	-0.3	0.4	0.5	0.2	
With developed West								
Exports	2.2	2.5	2.4	3.7	6.3	6.1		177
Imports	2.5	2.6	3.5	4.6	6.1	9.7		288
Balance	-0.3	-0.1	-1.1	-0.9	0.2	-3.6	-5.5	
With other								
Exports	3.0	3.2	2.8	3.8	4.6	4.5		50
Imports	2.1	2.0	1.8	2.3	3.2	4.1		95
Balance	0.9	1.2	1.0	1.5	1.4	0.4	5.5	

TABLE XVI
STRUCTURE OF SOVIET EXPORTS (% VALUE)

	1971	1973	1975
Machinery, plant and means of transport	21.8	21.8	18.7
Fuel and power	17.9	19.2	25.4
Chemicals	3.4	3.0	3.5
Ores, metals and metal products	18.7	17.1	14.3
Wood, paper, cellulose	6.3	6.4	5.7
Textiles	3.3	3.3	2.9
Foodstuffs	9.2	5.6	4.8
Industrial consumer goods	2.9	3.0	3.1
Furs	0.4	0.3	0.2
Other(1)	16.1	20.3	21.4
Total	100	100	100

(1) Is thought to consist mainly of exports of military equipment. By Western estimates such sales run at \$2 billion to \$2.5 billion a year

TABLE XVII
STRUCTURE OF SOVIET IMPORTS(1) (% VALUE)

	1970	1973	1975
Machinery, equipment and means of transport	35.5	34.3	33.9
Fuel and power	2	3.4	4
Ores, concentrates, metals and metal products	9.6	9.9	11.5
Chemicals, fertilizers, rubber	5.7	4.3	4.7
Timber, cellulose, paper	2.1	1.6	2.2
Textiles	4.8	3.7	2.4
Foodstuffs	15.8	20.2	23
Industrial consumer goods	18.3	15.9	13.0
Other	6.2	6.7	5.3
Total	100	100	100

(1) Soviet officials claim that all types of consumer goods and the means for their production accounted for 41 per cent of imports in 1975

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TABLE XVIII

	Selected Soviet Exports		
	1970	1973	1975
Cast iron m tonnes	4.8	5.2	4.7
Rolled steel m tonnes	7	6.5	6.4
Copper '000 tonnes	140(1)	170(1)	206
Lead '000 tonnes	92.4	96.9	99
Aluminium '000 tonnes	405.6	518.3	502
Timber m cu/m	8	8.2	7.8
Cellulose '000 tonnes	448	519	515
Paper '000 tonnes	475	606	617
Watches m	10.7	13.3	16
Machinery and equipment bn R	2.5	3.5	4.5
Oil and oil products m tonnes	91	103	122
Chemical products bn R	403	475	831
Tractors '000	28.3	33.8	39
Lorries '000	33.9	34.3	33
Cars '000	84.8	237.5	296
	Selected Soviet Imports		
Machinery and equipment bn R	3.8	5.3	9
Rolled steel m tonnes	1.5	2.8	3.9
Large diameter tubes m tonnes	0.92	1.27	1.7
Bauxite m tonnes	1.5	1.5	3.5
Rubber '000 tonnes	316	260	234
Paper '000 tonnes	417	335	484
Cotton '000 tonnes	258	131	137
Wool '000 tonnes	83	96	109
Coffee '000 tonnes	41.5	32	60
Tea '000 tonnes	29	37	67
Cocoa '000 tonnes	100	119	156
Fruit '000 tonnes	808	908	868
Cotton textiles m metres	155	148	181
Knitted goods m R	203	252	327

(1) Estimates

TABLE XIX
SOVIET UNION'S MAIN TRADING PARTNERS

	1970		1975		% growth over FYP
	% share	Rating	% share	Rating	
I. COMECON					
GDR	15	1	11	1	71
Poland	10.5	2	9.6	2	107
Bulgaria	8.2	4	7.9	3	120
Czechoslovakia	10	3	7.7	4	78
Hungary	6.7	5	6.5	5	120
Cuba	4.7	6	5	7	147
Romania	4.2	7	3	11	66
Mongolia	1	14	0.9	15	108
COMECON total	60.3		51.6		97
II. Developed West					
West Germany	2.5	10	5.5	6	415
Japan	2.95	9	3.7	8	191
Finland	2.4	11	3.3	9	220
US	0.7	15	3.1	10	900
Italy	2.1	12	2.8	12	197
France	1.9	13	2.4	13	190
UK	3	8	1.9	14	50
Developed West Total	15.55		22.7		240
III. Other	24.15		25.7		144
TOTAL	100		100		
In bn R	22.1		50.7		130

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TABLE XX

USSR: COMPENSATION AGREEMENTS UNDER NEGOTIATION

<u>Project</u>	<u>Western Countries Involved</u>	<u>Description</u>	<u>Hard Currency Cost</u>
Udokan copper	United States, United Kingdom	Complex to process copper	\$1.5 billion
Sakhalin offshore oil	United States, Japan	Offshore oil exploration and development	\$1 billion +
Aluminium complex	United States, France	Alumina and aluminium plants	\$2 billion
Yakutsk LNG	United States, Japan	Natural gas pipeline, LNG plant, LNG ships	\$4 billion +
Pulp/paper plant at Yeniseysk	Japan, France, United States	Pulp factory and facilities to produce newsprint, manila paper, and plywood	\$600-\$800 million
North Star LNG	United States, West Germany, France	Natural gas pipeline, LNG plant, LNG tankers	\$7 billion +
Kursk steel complex	West Germany	Pelletization plant, direct reduction plant	\$1-1.5 billion (Phase I only)