STATEMENT OF

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NATIONAL INTELLIGENCE COUNCIL

CENTRAL INTELLIGENCE AGENCY

BEFORE THE JOINT ECONOMIC COMMITTEE

SUBCOMMITTEE ON INTERNATIONAL TRADE,
FINANCE, AND SECURITY ECONOMICS

"CENTRAL INTELLIGENCE AGENCY BRIEFING

ON THE SOVIET ECONOMY"

DECEMBER 1, 1982

PREFACE

BY

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FINANCE, AND SECURITY ECONOMICS

The following report of the Central Intelligence Agency responds to my request for a balanced assessment of the Soviet economy showing both its capabilities and vulnerabilities. The result is a unique contribution to our understanding of Soviet economics. Its uniqueness lies in the fact that it analyzes the strengths as well as the weaknesses in the Soviet economy.

It is worth highlighting the principal findings in the study:

* Soviet economic growth has been steadily slowing down. However, there will be continued positive growth for the foreseeable future.

* Economic performance has been poor and there have been many departures from standards of economic efficiency. But this does not mean the Soviet economy is losing its viability or its dynamism.

* While there has been a gap between Soviet performance and plans, an economic collapse in the USSR is not considered even a remote possibility.

Analysts in the West have typically focused on Soviet economic problems. The attention to the negative aspects of the Soviet

economic system and to the failures of performance is appropriate and necessary. The danger in such an approach is that, by overlooking the positive side, we see an incomplete picture which leads us to form incorrect conclusions.

The Soviet Union is our principal potential adversary. All the more reason to have accurate, balanced assessments of the state of its economy. One of the worst things we can do is to underestimate the economic strength of our principal adversary.

It needs to be understood that, while the Soviet Union has been weakened by such harmful developments as the inefficient performance of the farm sector and the heavy burden of defense, it is the world's second largest economy in terms of GNP, has a large and well trained labor force, is highly industrialized, and possesses enormous reserves of natural resources, including oil and gas and the relatively scarce minerals and precious metals. It is sobering to reflect on the possibility that Soviet economic trends might improve rather than grow worse.

This report should go far to clear up the confusion that exists in Congress and the public as to where the Soviet economy stands. It should also make it obvious that there is at least the same degree of uncertainty in making forecasts about future economic performance in the Soviet Union as there is with respect to our own economy.

JEC BRIEFING

I. INTRODUCTION:

A. Mr. Chairman, in your request that we brief your subcommittee on Soviet economic prospects, you noted the "unusual amount of confusion in Congress and the general public today as to where the Soviet economy stands." You also suggested that our briefing be built around an assessment of "the capabilities and vulnerabilities of the Soviet economy."

1. We agree that confusion regarding the Soviet economy abounds.

2. We believe, however, that this confusion results not so much from disagreement over Soviet economic performance as from uncertainty as to how to interpret that performance.

3. Western observers have tended to describe Soviet economic performance as "poor" or "deteriorating" at a time when Soviet defense spending continues to rise, overall Soviet gross national product in real terms continues to increase, and Soviet GNP is second in size only to that of the US.

B. These characterizations are not wrong.

1. Given past rates of economic growth, the gap between Soviet performance and plans and expectations, and the marked departure from standards of economic

efficiency, the record compiled by the Soviet economy in recent years has indeed been poor.

2. Results that are unsatisfactory when measured by this yardstick, however, do not mean that the Soviet economy is losing its viability as well as its dynamism.

C. In fact, we do not consider an economic "collapse"--a sudden and sustained decline in GNP--even a remote possibility.

1. Our projections indicate that growth in GNP will remain slow but positive.

2. Growth is being retarded by a combination of factors. Some are beyond Soviet control, and some reflect the weaknesses of the Soviet economic system that even the new Andropov regime is not likely to change. Other factors holding down economic growth represent policy choices--for example, the allocation of resources to defense--that could be modified but are unlikely to change much in the near term.

3. Nevertheless, we expect annual growth to average one to two percent for the foreseeable future. Per capita consumption could level off or even fall slightly.

D. Returning to your initial questions, we will try to give as balanced a picture of the Soviet economy as possible. We will summarize and assess its basic capabilities and vulnerabilities.

1. We will, however, first identify the goals that economic activity is designed to serve in the USSR and then describe Soviet success in meeting these goals.

2. As a final piece of stage-setting, we will discuss how the 11th Five-Year Plan is faring, judging by the results of the first two years, 1981 and 1982.

II. Soviet Economic Objectives and Priorities

A. Turning first to Soviet economic objectives and priorities, we believe that Soviet economic activity has always focused on building military power.

1. But the Soviet leadership has also always placed great stress on rapid economic growth.

2. The good life for the Soviet populace, in the form of a rising standard of living, has been of importance to Moscow too for almost 30 years. But improvements in the welfare of Soviet consumers have generally been subordinated to the demands of the military and to the high rate of capital investment necessary to insure fast GNP growth. It appears, though, that consumer interests are now being treated somewhat less cavalierly. Breaking precedent, the 11th Five-Year Plan calls for capital investment to grow more slowly than consumption.

3. In pursuit of these national objectives, successive regimes have given heavy industry priority status

because it is the source of military hardware and investment goods.

4. Meanwhile, despite some experimentation with decentralized forms of economic administration, the Soviet leadership has remained firmly committed to strict central planning and management of most economic activity. The justification has been that rigorous centralization is required for fulfillment of national objectives.

B. Soviet economic performance in terms of the objectives and priorities established by the leadership has been mixed.

1. The Soviet Union has built an exceedingly powerful military force. Under Khrushchev the emphasis was on strategic nuclear programs, but Brezhnev presided over an across-the-board expansion and modernization of all Soviet forces.

a. Since the mid-1960s the USSR has increased its arsenal of intercontinental nuclear delivery vehicles nearly sixfold--overturning US quantitative superiority--and giving itself an assured nuclear retaliation capability.

b. During the same period, Moscow has more than tripled the size of its battlefield nuclear forces, reducing the credibility of NATO's nuclear weapons as a counterweight to the Warsaw Pact's larger conventional forces.

c. Meanwhile the Soviet Union has more than doubled the artillery firepower of its divisions, increased ninefold the weight of ordnance that tactical air forces can deliver deep in NATO territory, and reduced the West's qualitative lead in such key areas as tank armor.

d. At sea, the USSR has introduced new, heavily armed surface ships, nuclear-powered submarines, and naval aircraft and quadrupled the number of missile launchers on ships and submarines.

e. Meanwhile, under Brezhnev the USSR has expanded its military activities in the Third World--ranging from arms sales to Soviet forces in defensive roles and support of Cuban forces in combat to intervention in Afghanistan.

2. While developing its military power, the USSR has until recently been able to maintain a rapid rate of economic growth.

a. Soviet GNP, as measured by CIA, grew at an average annual rate of 4.6 percent from 1950 through 1981. During the same period US GNP increased by 3.4 percent per year.

b. Soviet growth, however, has steadily slowed during this period--especially after 1978. The deceleration can be seen in Figure 1. The average annual rate of increase in GNP was about 6 percent during the 1950s, 5 percent during the

FIGURE 1

1960s, and nearly 4 percent between 1970 and 1978. In 1979-81, yearly growth averaged less than 2 percent. This year we expect GNP growth to be about 1.5 percent.

c. To a remarkable degree, the slowdown in Soviet economic growth has a parallel in OECD countries. During the first three years of the seventies, OECD GNP increased at the rate of 5 percent per year. The crisis induced by OPEC oil prices brought OECD growth to a halt in 1974-75. Then in 1976-79, GNP resumed a respectable rate of growth of 4 percent per year. In 1980-81, however, GNP growth in the OECD collapsed to 1.2 percent per year.

d. The slowdown in the USSR in part reflects four consecutive poor or mediocre harvests. But most sectors of the economy have been sluggish, especially industry.

(1) In large measure, industrial performance has been held back by the emergence of serious bottlenecks unconnected with agriculture. Growth in industrial output, which averaged almost 6 percent a year in 1971-75, fell abruptly in 1976 and in 1976-81 averaged just slightly over 3 percent annually.

(2) The decline in growth has been steady. Industrial production grew by only 2 percent

in 1981 and is expected to rise by 1-1/2 to 2 percent this year.

3. The higher priority accorded to military strength is suggested by the continued rise in defense spending at the average annual rate of 4 percent that has prevailed since the mid-1960s.

   a. Growth in defense spending has continued in spite of competition for resources that might ease strains in the rest of the economy.

   b. Defense spending is now about 13 to 14 percent of GNP.

4. At the same time, leadership concern about consumer welfare seems to have somewhat diluted the commitment to growth.

   a. The share of Soviet GNP allocated to fixed capital investment--the driving force behind Soviet economic growth--has more or less stabilized in the last few years at about 26 percent (factor cost), compared with about 20 percent in 1960.

   b. Slowing investment growth is explained partly by bottlenecks in sectors providing building materials and machinery. But it probably also stems from a political decision to protect Soviet consumers in a time of tightening economic constraints.

c. Nonetheless, as shown in Figure 2, consumption still accounts for only 55 percent of Soviet GNP, far below the share in most non-communist industrialized countries.

III. The 11th Five-Year Plan So Far

A. Turning to recent developments, the results of the last two years must have been most disappointing to Soviet leaders. It is already clear that most of the important goals of the 11th Five-Year Plan cannot be met.

1. The plan was excessively ambitious from the start. For example, both industrial production and agricultural output were to grow by about 5 percent annually, even though production in both sectors had grown at much slower rates in 1976-80.

2. Performance has been far below plan. The small increase in agricultural output this year will do little more than offset the decline in 1981, while stagnation or falling output in key industrial branches threatens to intensify already serious bottlenecks.

3. Production of steel and steel products continues to sputter, with output this year little changed from two years ago and below the peaks reached in 1978. Cement production, meanwhile, fell below the 1980 level, and freight car production will decline this year. for the sixth consecutive year.

FIGURE 2

4. The slump in steel is particularly damaging to machinery production. Along with shortfalls in the output of building materials, it also threatens to curtail growth in construction. Even the moderate 1981-85 investment targets could be in jeopardy.

5. From the beginning the 11th Five-Year Plan goals depended on large productivity increases. Underfulfillment of the productivity plans has been striking, however. The rise in industrial labor productivity, for instance, averaged only 1.4 percent a year in 1981-82, far below the 4.5 percent-per-year increase called for by the plan.

6. The unrealistic, almost fantasy-like character of the plan can be illustrated by comparing production goals with investment plans. As our next chart (Figure 3) shows, incremental capital output ratios--that is, the amount of additional capital needed to produce an additional unit of output--have been rising steadily and steeply in the USSR for many years, with little prospect that the rise will soon end. Yet, based on little more than admonitions that productivity must rise, capital investment targets in conjunction with output goals imply a decline in these ratios.

B. Bright spots in economic performance in 1981-82 are hard to find. But there have been a few.

1. On the production side, natural gas continues to rise at a rapid rate--7 percent in 1981 and nearly 8

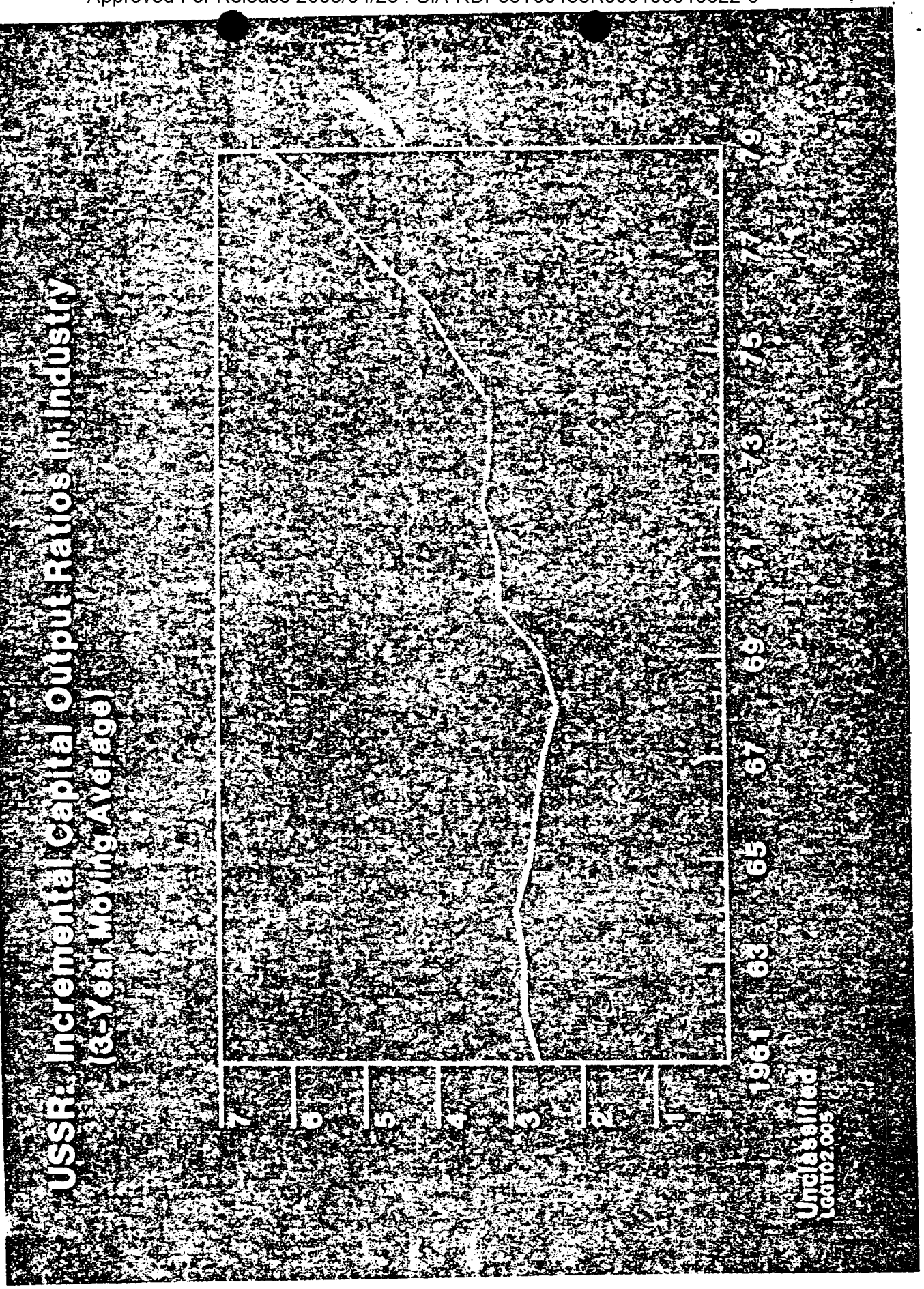

FIGURE 3

percent this year.

2. Overall energy production might be considered a plus. In 1982 at least, output of all major forms of primary energy rose. Oil production continues to inch ahead--by about 0.9 percent this year. And coal output, reversing a three-year decline, evidently will rise by about 2 percent. At best, however, it will barely exceed the 1980 level.

3. The USSR has also substantially improved its hard currency balance of trade this year. Our next chart (Figure 4) illustrates the point.

   a. The hard currency trade deficit last year was about $4 billion, causing some anxiety in Western financial circles. Judging by first half 1982 results, the deficit this year will be reduced to perhaps $2 billion.

      (1) The central authorities, with their total monopoly of control over foreign trade and the allocation of key resources, sharply raised the volume of oil exports to the West, despite softening prices in world markets. At the same time, they held the value of hard currency imports steady.

      (2) The result was a trade deficit in the first half of 1982 that was almost $4 billion lower than in the same six months of 1981. The already relatively small hard currency debt--

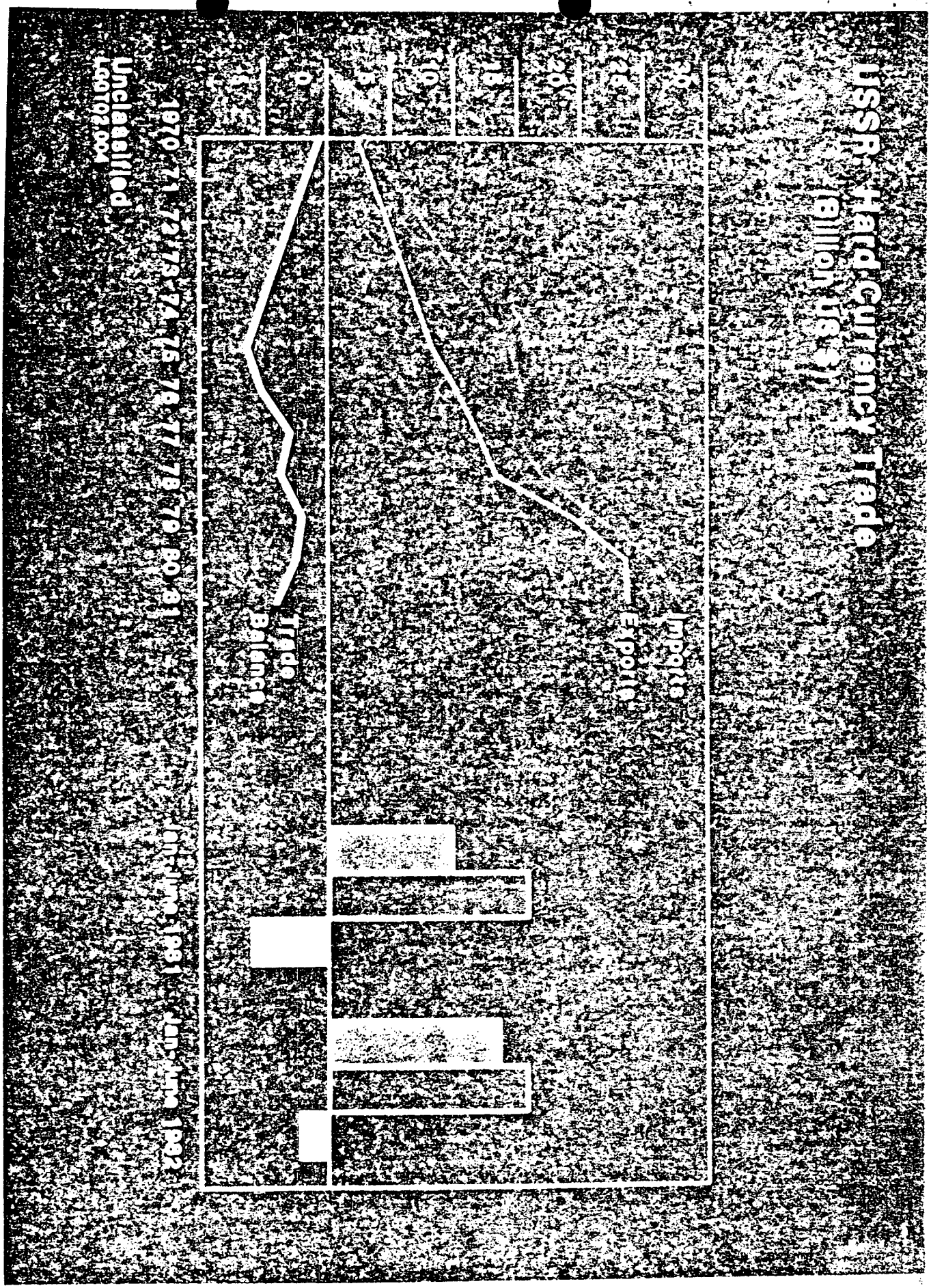

FIGURE 4

$11.5 billion at the end of 1981--will rise little if at all.

b. The Soviets have paid a price for this success, however.

(1) The increase in oil exports to the West came at the expense of deliveries to Eastern Europe and domestic consumption.

(2) In holding the value of imports steady, Moscow also accepted a reduction in the volume of hard currency imports. In particular, it scaled back purchases of Western equipment and consumer goods needed to help modernize Soviet industry and meet consumer needs.

IV. Basic Strengths of the Economy

A. We turn now to our discussion of the strengths and weaknesses of the Soviet economy. We will look first at the USSR's economic strong points, starting with those attributes that shore up the economy as a whole, and then move on to identify specific sectors that are performing in a particularly effective fashion.

B. The sheer size of the economy, reflecting the substantial growth since World War II, is one of its strengths. As the next chart (Figure 5) indicates, Soviet GNP in 1982 will equal about $1.6 trillion, roughly 55 percent of US GNP this year. Per capita GNP is almost $6,000.

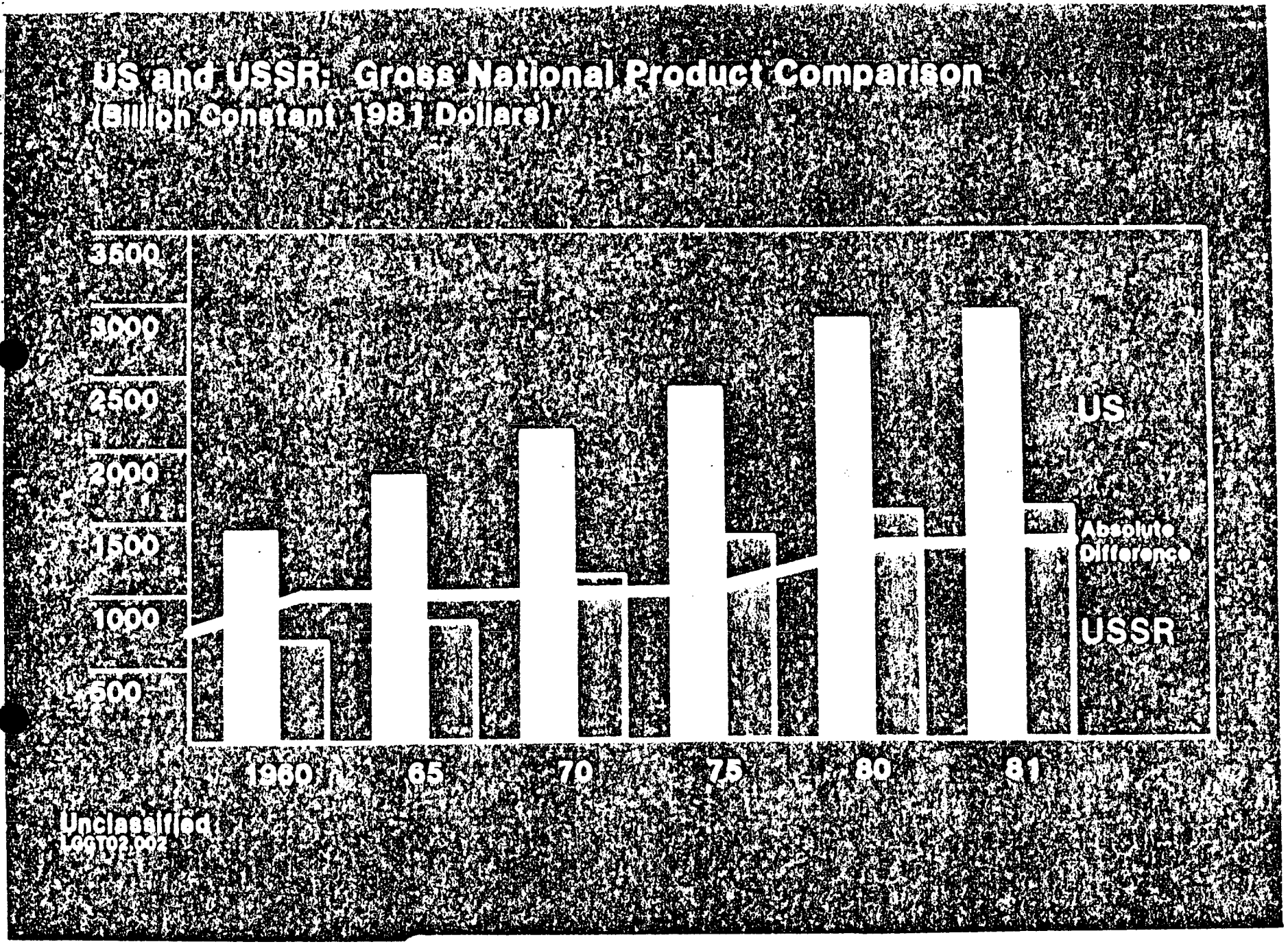

FIGURE 5

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C. The population is also large, currently numbering about 270 million. The labor force totals about 147 million and, by world standards, is well-trained and well-educated.

1. Literacy is by now almost universal in the USSR. The educational level of the population has been rising rapidly. Twenty-three percent of those over 16 in 1979 have completed at least a secondary education (10th grade in the Soviet Union) compared with only 14 percent in 1970. In 1979 an additional 7-1/2 percent also had completed higher education, compared with 5 percent in 1970.

2. A particular effort is being made to expand the education of the indigenous nationality groups in the Central Asian republics. The USSR wants to upgrade the skills of the relatively large pool of labor available there and possibly encourage outmigration by assigning these better educated young people to labor-short areas. Graduates of higher, specialized secondary, and vocational-technical schools receive compulsory work assignments at specific enterprises where, it is hoped, they will continue to work.

3. The emphasis on mathematics, engineering, and science in Soviet schools is also a plus for the technologically oriented Soviet society. About one-third of total instruction time in secondary schools is devoted to mathematics and science. There are

serious flaws, however, in Soviet education, including too much rote learning and, at the university level, narrow specialization early on.

D. Another of the strengths of the Soviet economy is the tremendous accumulation of capital assets that has occurred since World War II.

1. The value of gross fixed capital assets--buildings, machinery, equipment, and the like--amounted to over 1.74 trillion rubles in 1980 according to Soviet published data. The value of Soviet capital assets expressed in constant prices increased almost 11-fold between 1950 and 1980 and about 4.4-fold from 1960 through 1980--long after the USSR had recovered from wartime devastation.

2. This phenomenal expansion reflects the allocation of a large and, until recently, rising share of Soviet resources to capital investment. The rapid growth of capital assets has resulted in a more than three-fold increase in the amount of capital per worker. The rise was almost 3-1/2 fold in industry and over five-fold on state and collective farms.

3. Two-thirds of the stock of capital assets is concentrated in industry, agriculture, transportation and communications, and construction. Only about 15 percent of total gross fixed capital consists of housing or is used to provide services to the population such as health care and education.

4. Although the rapid accumulation of capital assets is one of the Soviet Union's strengths, the capital stock includes a disproportionately large share of worn out and technologically obsolete equipment. Soviet policies have kept retirement rates of existing assets artificially low and have prolonged their service lives through repeated capital repairs.

E. The USSR is exceptionally well endowed with natural resources, as the reserve estimates in Table 1 indicate.

1. Beginning with energy, the Soviet Union has about 40 percent of the world's proved reserves of natural gas--the 30 trillion cubic meters under Soviet control exceed the reserves of all industrialized nations combined.

   a. Soviet reserves of coal account for 30 percent of the world's total recoverable reserves and are sufficient to insure over 200 years of output at current rates of production.

   b. The Soviets do not publish figures for oil reserves, as they do for gas and coal. Our estimate is that oil reserves, at least in West Siberia, are substantial, though increasingly difficult to exploit.

2. The USSR is abundantly stocked with other important raw materials.

TABLE 1

USSR: Estimated Reserves of Selected Fuels and Nonfuel Minerals *

	Size of Reserves	Share of World Reserves (Percent)	Years to Exhaustion (At 1980 Production)
Gas	30 Trillion m^3	40	65
Coal	165.5 billion tons	27	230
Iron ore	63.3 billion tons	40	250
Manganese	2.5 billion tons	40	250
Chromite	271.2 million tons	10	80
Copper	40.0 million tons	7	28
Nickel	11.3 million tons	18	48
Cobalt	100 million tons	NA	17
Lead	17 million tons	11	28
Zinc	22 million tons	10	24
Gold	200 million troy ounces	35	20
Platinum-group metals	90 million troy ounces	25	25
Tungsten	215 thousand tons	11	24

* Corresponding to Western concepts of proven and probable reserves, exploitable at current prices with existing technology.

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a. According to Soviet studies, iron ore reserves amount to about 60 billion tons--some 40 percent of the world's total.

b. With as much as one-fifth of the world's forest resources, the USSR has a virtually inexhaustible source for producing wood and wood products.

c. In addition, the Soviets claim--and may well have--the world's largest reserves of manganese, nickel, lead, molybdenum, mercury, and antimony. They also say that reserves of chromite, gold, platinum-group metals, zinc, nd copper are among the largest in the world and sufficient to support Soviet mine production for many decades.

d. The Soviets also have substantial reserves of potash and phosphate rock--raw materials for the production of chemical fertilizers--although a large portion of the newer phosphate deposits consist of poor quality ore.

F. With its wealth in human, capital, and material resources, the USSR is highly self-sufficient--another of the economy's major strengths. Our next chart (Figure 6) illustrates this.

1. The high degree of Soviet self-sufficiency in vital raw materials is shown by its position as a net exporter of a large number of these materials. Net exports of energy--mostly of oil and natural gas--now

FIGURE 6

total about 4 million barrels a day equivalent or about 15 percent of total energy production.

2. The Soviets are major exporters of precious metals, ferrous and non-ferrous ores and metal products, chemicals, and timber. Because of expected gains in output the Soviets will be able to expand sales of key minerals such as platinum group metals, nickel, cobalt, manganese, chromite, and gold during the 1980s. We also anticipate major increases in the Soviet exports of ammonia, nitrogen, and potash fertilizer and methanol.

3. Though highly self-sufficient, the USSR is not autarkic. Indeed, for at least the last decade, trade with the West has been an important element in the USSR's efforts to modernize the Soviet economy and render it more efficient.

   a. I will develop this point in detail later, but let me mention here that the Soviets now must rely on Western imports of capital and technology to increase or maintain production of some of the raw materials in which they are abundantly endowed and self-sufficient.

   b. I would also like to note that imports from the West have become critical to Soviet efforts to improve, or simply maintain, the quality of the Soviet diet. In 1981, imports of grain and other agricultural products reached almost $12 billion,

or about 40 percent of the USSR's total hard currency purchases.

c. But despite the large-scale expansion in agricultural imports, the Soviet Union remains basically self-sufficient with respect to food.

(1) These imports are intended mainly to prevent a decline in meat consumption and are not essential to maintaining an adequate quantity of food consumption.

(2) At 3,300 calories--see our next chart (Figure 7), which compares the composition of the US and Soviet diets--average daily food intake is equivalent to that in developed Western countries. Grain production is more than sufficient to meet consumer demand for bread and other cereal products.

4. To summarize, when we say the USSR is self-sufficient, we do not mean that the Soviets neither need nor benefit from trade.

a. Imports, particularly from the West, can play an important role in relieving critical shortages, spurring technological progress, and generally improving Soviet economic performance.

b. What we do mean is that the ability of the Soviet economy to remain viable in the absence of imports is much greater than that of most, possibly all, other industrialized economies.

FIGURE 7

Consequently, the susceptibility of the Soviet Union to economic leverage tends to be limited.

G. In considering fundamental strengths, the highly centralized, rigid system of administering the economy--while perhaps the Soviet Union's major economic millstone--has had its advantages in enabling the leadership to mobilize resources in crash programs to achieve priority objectives.

1. The prime example of this capability has been Moscow's success in building up its military might. This has been achieved through centrally-directed mobilization and allocation of the USSR's highest quality human and material resources and a rigorous system of quality control in military production that prevents the shoddiness so characteristic of Soviet civilian output.

2. Centrally directed concentration of resources does not of course work everywhere. Agriculture, which we will discuss in more detail later, is an example.

a. Even though over a quarter of total investment has been allocated to the farm sector for many years, agricultural output continues to be a disappointment to Soviet leaders. There are many reasons for this, but one overriding reason is that effective central supervision over an activity conducted over so vast a geographical area is virtually impossible.

b. Another is that economic administration by fiat is singularly ill-suited to a sector where incentives to individual producers are so crucial a determinant of output.

H. We turn now to specific areas where Soviet economic performance has been especially strong.

1. As we mentioned, natural gas has been a major Soviet success story. It will play a pivotal role in meeting the energy needs of the economy in the 1980s, particularly as a substitute for crude oil in industry and in home use but also as a potential hard currency earner.

2. The nuclear power industry, although it has not met the full expectations of the leadership, has also done quite well. We estimate that the annual increase in nuclear-generated electricity will increase by about 17 percent a year during 1981-85 and supply about 11 percent of the country's electricity by the end of the period.

3. Development and production of some Soviet natural resources are proceeding at respectable rates despite the obstacles of remote location and conditions that make extraction exceedingly difficult.

a. The USSR is second only to South Africa in the production of gold. Production in 1981 was about 325 tons. Its stock of gold is about 1900 tons, worth over $25 billion at current prices.

b. Soviet production of platinum-group metals, nickel, and cobalt will jump sharply during the 1980s. Output of these resources will be adequate to meet domestic needs and also to provide increasing quantities for export.

c. Prospects for production of those resources located in more easily accessible regions look even better. Rich new deposits coming on stream in Kazakhstan and Georgia should generate sizable increases in production of both chromite and manganese.

V. Basic Weaknesses of the Economy

A. We will now look at the weaknesses or vulnerabilities represented on the Soviet economic ledger. We will focus first on problems stemming from circumstances beyond Soviet control and then turn to the shortcomings and vulnerabilities of the economy that are inherent in the USSR's system of economic planning and administration. Then we will consider specific weaknesses.

B. Soviet economic performance has been hurt in recent years by declining increments to the labor force and by the increasing difficulty of extracting and transporting vital energy and other raw material inputs.

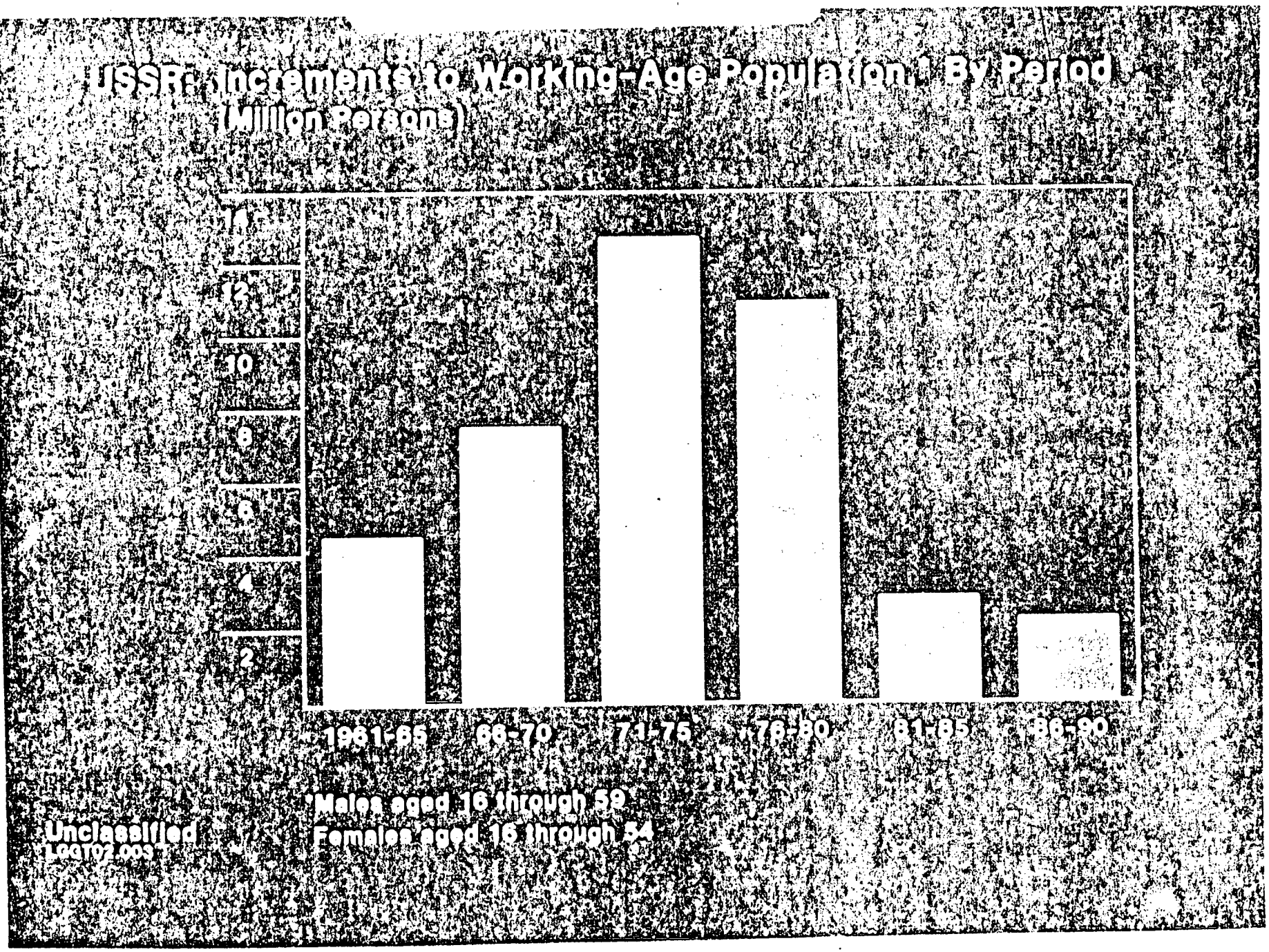
1. Because of lower birth rates in the 1960s, an increase in the number of workers reaching retirement age and a rising mortality rate among males in the 25 to 44 age range, increments to the working-age

population have been declining since the mid-1970s. The falloff became particularly sharp starting in 1980, and--as our next chart (Figure 8) shows--increments will remain very low throughout this decade.

a. From 1971 to 1981, the working-age population grew by about 23 million. In 1981-91, it will increase by only about 4 million people. The decline in growth of the labor force--that is, of people actually employed--will be less, largely because of a rise in the share of the population in the 20 to 39 age group, where labor force participation rates are highest. But the decline in growth will still be substantial. The increment to the labor force in 1981-91 is expected to be only 9 million, compared with 19 million in 1971-81. With participation rates in the labor force already very high, there are few unemployed people to draw on to offset adverse demographic conditions.

b. Other factors will aggravate the labor shortage. Large-scale migration from the countryside to urban areas, formerly a rich source of labor supply to the rest of the economy, has slowed considerably in the past decade. The agricultural sector itself faces shortages of qualified manpower in most areas.

FIGURE 8



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This problem is compounded by the fact that rural residents in the Central Asian republics, where increments to the working age population will be highest and where there still is substantial redundant labor, are reluctant to migrate.

2. As we noted earlier, the Soviet Union is blessed with enormous quantities of a large array of raw materials. But in many instances these materials are increasingly inaccessible, and thus the cost of exploiting them has been rising sharply. This has been strikingly true of Soviet energy resources.

   a. With the decline in production in the Volga-Urals oil fields in the mid-1970s, growth in Soviet oil production has come from West Siberia, much of it from the giant Samotlor field. However, production in this field probably has peaked, compelling the Soviets to seek oil in even more remote and forbidding regions. In 1981-85, just to achieve the slowest growth rate planned in oil output since World War II will require greatly expanded drilling and pumping operations.

   b. Decades of mining have depleted the underground coal mines of the European USSR. The Soviets must tunnel deeper shafts and mine thinner seams just to maintain coal output at current levels.

During 1978-80, for example, more than 80 percent of new mine output was needed to offset depletion at older underground operations.

c. Even the extraction and distribution of natural gas has grown considerably more expensive.

(1) Natural gas deposits in the old producing areas--North Caucasus, Transcaucasus, Ukraine, Volga-Urals, and western Turkmenistan--are severely depleted. More and more gas must be piped from central Asia and especially Tyumen oblast to replace exhausted local supplies.

(2) Such long-distance transmission of natural gas requires construction of lengthy pipelines and a great many compressor stations, a very expensive operation.

d. Easily accessible supplies of many non-energy raw materials have also been exhausted.

(1) The Soviets have largely depleted reserves of copper, nickel, and bauxite in the Ural Mountains and are beginning to tap deposits in northern Siberia or, in the case of bauxite, are exploiting non-bauxite ores and boosting imports. Similarly, the richest deposits of phosphate rock in the Kola peninsula have been depleted, forcing the Soviets to move to lower-quality deposits in

Siberia.

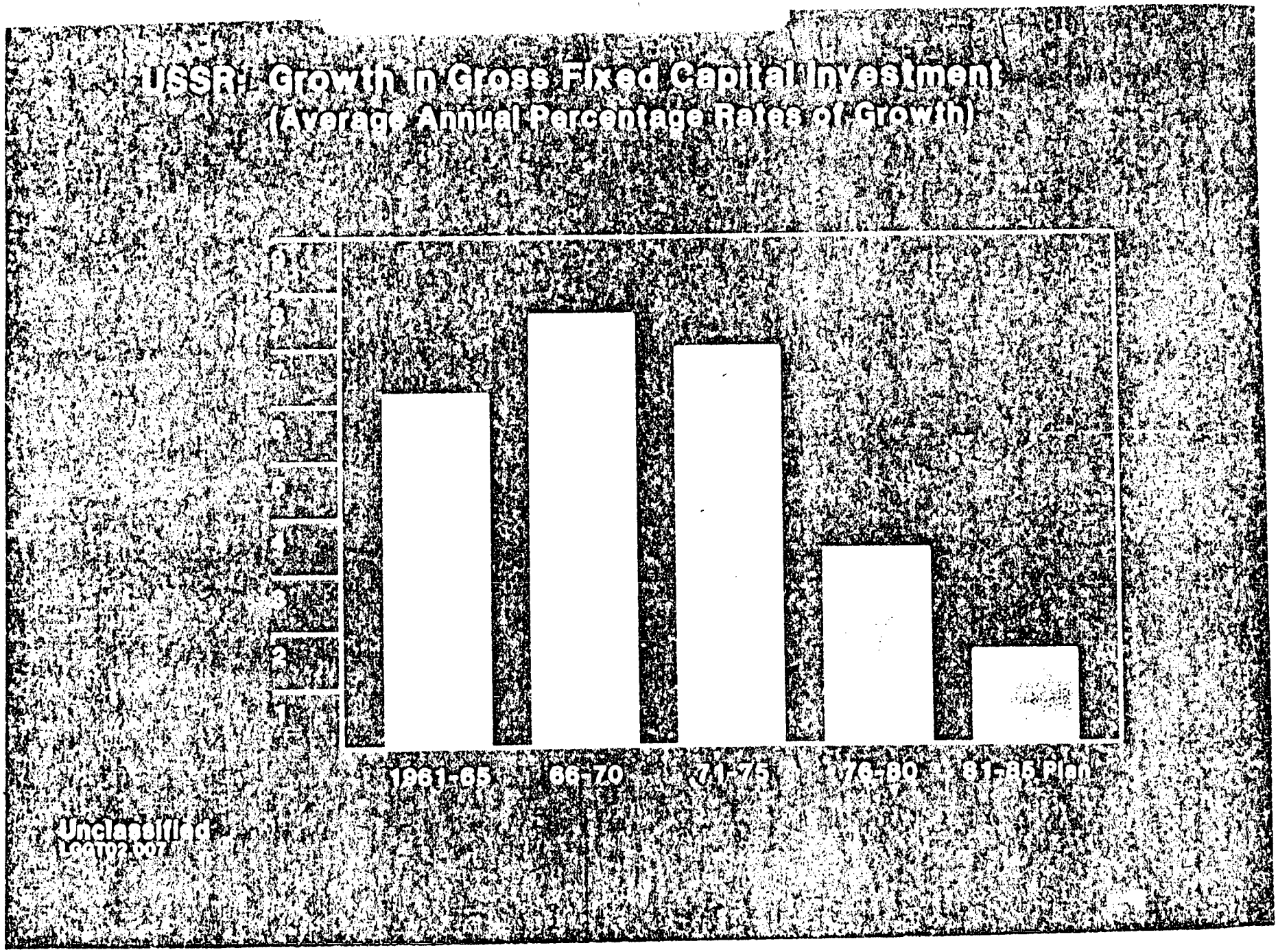
(2) In the case of iron ore, the Soviets have depleted their richest deposits in the Western USSR. To compensate for declining ore grades, increasing amounts of investment must be devoted to ore-enriching facilities, raising both production costs and manpower requirements.

(3) The Soviets are also faced with the depletion of forests in the traditional logging areas of the north-western USSR. Government planners have chosen to overcut these forest tracts beyond the point of natural regeneration so that, at least temporarily, the scale of operations in Siberia could be held down. But when loggers are forced to expand operations in Siberia--and the Far East--recovery costs will be high because of the distances involved, the harsh climate, and the lack of infrastructure.

3. As our next chart (Figure 9) shows, the increase in fixed capital investment has also slowed markedly in recent years. This deceleration can be seen as both forced upon the leadership by shortages of key inputs and--as I noted earlier--as a conscious policy choice.

a. Growth was 7 percent a year in 1971-75, slowed to

FIGURE 9



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about 5 percent a year in 1976-78, and fell sharply to an average annual rate of only about 1.5 percent in 1979-80.

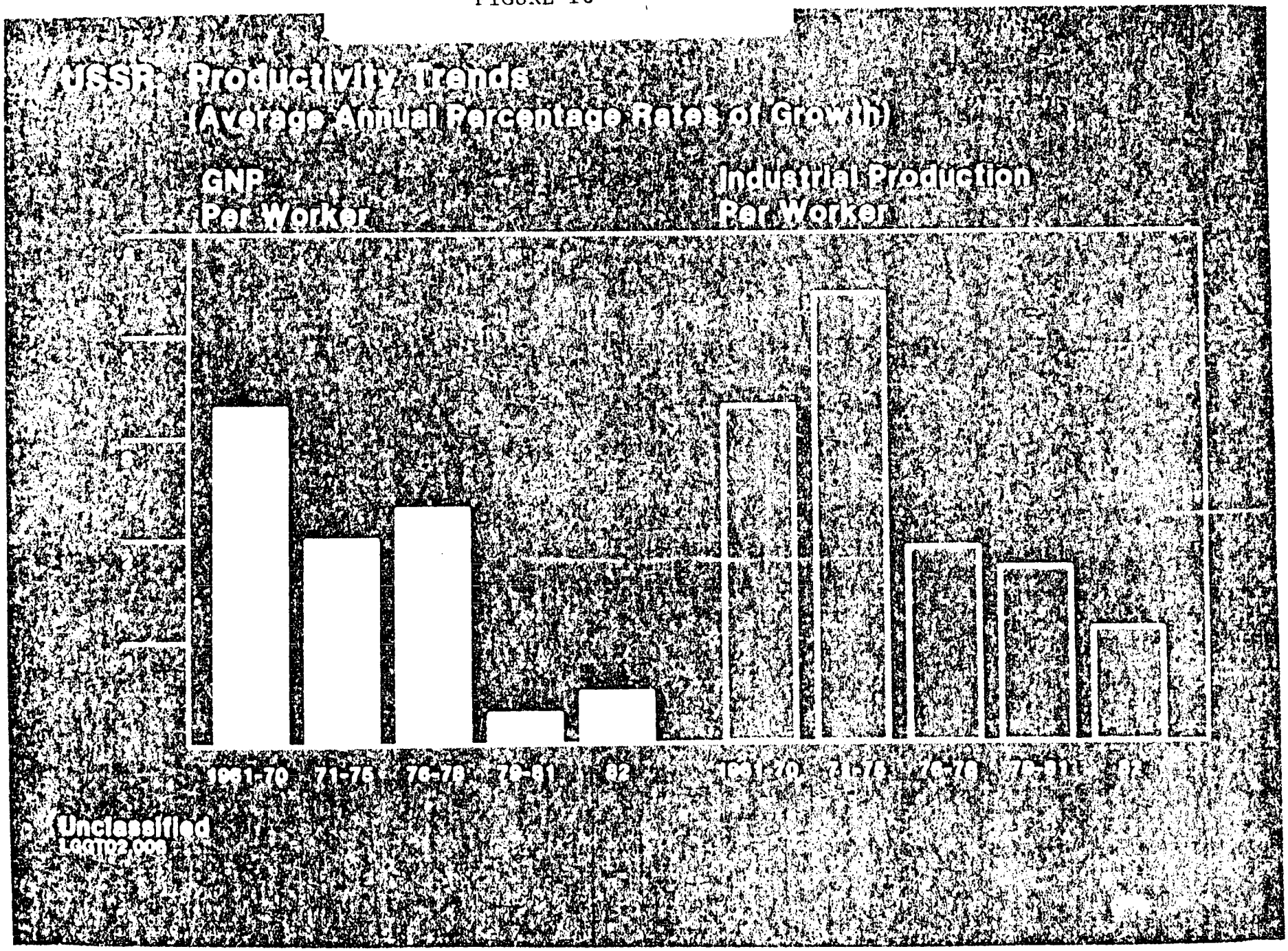
b. Growth picked up in 1981--fixed investment rising by 3 percent--but the 11th Five-Year Plan calls for investment in 1981-85 to rise by less than 2 percent a year. This is by far the lowest planned rate of increase in the post World War II period. The rise from 1971-75 to 1976-80 was nearly 30 percent.

C. Because of tightening demographic, investment, and resource constraints, the traditional Soviet economic growth formula of relying on lavish use of labor, capital, and material inputs is no longer applicable.

1. The Soviets themselves have long recognized the need for a new approach. For at least a decade they have been stressing the necessity of switching from an extensive to an intensive pattern of growth. This means essentially that growth must largely spring from productivity gains--from more efficient use of resources for any given level of technology and from faster technological progress.

2. But the productivity of capital has actually been falling for several years, and labor productivity--see our next chart (Figure 10)--has been rising at steadily declining rates. For this, shortcomings in the Soviet system seem largely to blame, a matter to

FIGURE 10



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which I will now turn.

D. The Soviet economic system is peculiarly ill suited to promote efficiency and technological progress. Four features of the system help to explain why.

1. First, economic planning and management are highly centralized, with resources allocated mainly by administrative fiat. Reforms aimed at increasing the degree of enterprise autonomy have generally come to naught.

   a. Indeed, central control over economic activity has been on the increase for the last several years, as indicated by an increase in the number of commodities that are allocated in physical terms according to central planning decisions.

   b. The arbitrary nature of central decisions on allocating inputs and assigning outputs, which is aggravated by the absence of prices that accurately reflect relative scarcities, precludes efficient planning.

2. Along with overcentralization, the goals the central authorities impose on the economy have generally been unrealistic. Faced with a gap between what they want to do and what is possible, Soviet leaders have tended to call for productivity gains and material savings that are beyond the system's capacity.

   a. The economy thus chronically operates under conditions of strain and shortage. And, as I

indicated earlier, the number and severity of supply bottlenecks have been increasing in recent years.

b. With inputs regularly hard to come by, enterprises have a strong incentive to hoard. This intensifies bottlenecks and leads to more hoarding, in a depressing circle of waste.

3. Overcentralization coupled with unrealistic planning has meant that the behavior of factory directors is largely dictated by the urgency of meeting the plan imposed by higher authorities.

a. Fulfillment, however, is generally measured by multiple and often inconsistent "success indicators" of varying degrees of priority, such as physical volume of output, gross value of output, value added, material savings, and productivity.

b. The principal drawback of this system is that managers often strive to meet the targets even at the expense of what is economically rational from the standpoint of the central authorities and society as a whole.

c. For example, if gross value of output is a prime goal, waste is encouraged, as managers seek to make their production as material-intensive as possible.

d. The Soviet Union is currently elevating value

added in production to the position of the prime success indicator. Though probably less perverse a target than gross value of output, it, too, is subject to abuse. For example, it could induce managers to increase employment at a time of labor stringency.

4. Finally, Soviet economic performance has long been impaired by the separation of research, development, and production into different organizations. Each organization operates according to different planning targets.

   a. Scientific Research Institutes do basic research and are paid for successful completion of research projects whatever their practical benefit to the economy.

   b. Design Bureaus develop the blueprints for new equipment and are largely rewarded for the successful testing of the prototype. Rewards are only loosely linked to successful incorporation of the new product into serial production.

   c. Production plants, meanwhile, are rewarded for increasing both physical output and the value of output.

      (1) The introduction of new products at a plant initially disrupts serial output, jeopardizing plan fulfillment and resulting

rewards.

(2) The Soviets have no competitive marketplace to force both developer and producer to introduce better products and technologies. Indeed, hostility to technological change at the producer level is characteristic of the Soviet economy--as Yuri Andropov told the Central Committee of the Party a week ago.

d. Because of this division of labor and the systems rewards, Soviet products remain in production for an inordinately long time, new products frequently embody only minimal change, and the fruits of truly advanced research impact on serial production only with great delay. Over the last decade and a half, the Soviets have reorganized development and production establishments to deal with this problem. But the problem persists.

E. Moving from generalizations to particulars, we will look now at the areas in which the USSR seems particularly weak or vulnerable.

F. Historically, agriculture has been the economy's leading problem sector. Its performance over the past four years has strengthened its claim to that dubious distinction.

1. After peaking in 1978, farm output fell steadily through 1981, when it stood over 10 percent below the 1978 level. This year production is expected to rise

but by only about two percent.

2. The grain crop which reached a record high of 237 million tons in 1978, has not reached 190 million tons in any subsequent year. Last year the grain harvest was so low that Moscow never announced a figure, although unofficial statements put the crop at 158 million tons.

3. Production of meat--a key commodity in the regime's drive to better the Soviet standard of living--has also fared poorly. It reached 15.5 million tons in 1978 but has been below that level since, ranging from 15 to 15.3 million tons over the last four years.

4. Bad weather has been a major factor in the decline in agricultural production since 1978, but harsh weather and unfavorable geographical conditions constitute a permanent threat and obstacle to agriculture and only partly explain why Soviet efforts over the years to boost farm output have not yielded more dividends.

   a. Mishandling of the sector by the Soviet authorities has also had much to do with its disappointing performance.

   b. Management and planning processes are much too centralized. Farm efficiency is seriously handicapped by constant intervention of unqualified officials regarding what to plant, when to plant, when to harvest, and the like.

c. Prices of both farm inputs and outputs set by the central authorities are encouraging an assortment of output that is inconsistent with the national plan. At a time when Moscow is striving to expand output of meat, milk, and eggs, relative prices are such that farmers find it more profitable to concentrate on growing crops.

d. Though investment in agriculture has been heavy--over a quarter of total investment outlays has gone to the farm sector for many years--much of it has been misdirected.

(1) There has been too much emphasis on construction, not enough on equipment.

(2) Furthermore, the quality of farm machinery is low, with the incidence of breakdowns high.

e. Deliveries to the agricultural sector of needed material inputs, such as fertilizers, have been insufficient while the proportion of aged and unskilled workers in the farm labor force--which accounts for about 20 percent of the total labor force--is high.

f. The regime has also failed to take maximum advantage of the potential of the private sector in agriculture, even in periods, such as the present, when it is encouraging expanded output there.

5. In recognition of the rising popular demand for quality food, Brezhnev told the Central Committee in late 1981 that food was the most important "political and economic problem" of the 11th Five-Year Plan.

   a. The increase in demand reflects rising consumer expectations and incomes. The inability to satisfy that demand is a function of both stagnant output of most livestock products and the regime's unwillingness--reinforced by Poland's experience--to raise prices in state stores.

   b. The leadership has attempted to ease the imbalance between supply and demand by allowing various local rationing schemes under which customers may purchase only limited amounts of certain foods in state stores. But long lines for meat, milk, and milk products remain widespread. To soften the impact of shortages on the work force, the regime has redirected substantial amounts of quality foods from public state retail outlets to special distribution outlets in factories and other economic enterprises.

6. Against this background, Brezhnev last May unveiled his Food Program--in preparation for a year and a half. The objective of the program was to boost Soviet food production and reduce dependence on

ports--quickly. The Food program attacks agriculture's problems from three directions:

a. First, it reorganizes the agricultural administration by creating commissions at all levels of government to coordinate agricultural operations and all related activities, ranging from sectors providing supplies to agriculture to the processing, distribution, and marketing of farm output.

b. Second, without significantly raising previous targets for total expenditures, the program seeks to redirect investment to weak links in the food production chain. Investment in sectors producing machinery for agriculture is to rise sharply. To reduce waste, investment in on-farm food processing and storage facilities has been given top priority. More investment in rural housing and roads is scheduled to improve farm-to-market transportation and stem the flow of younger workers to the cities. Upgrading the plant and equipment in food processing is another major target.

c. Third, financial incentives are to be raised. Prices paid by the state to farms for a large variety of agricultural products will increase on January 1. At the same time, prices paid by the

farms for equipment, fuel and fertilizer will be lowered.

7. For the most part, however, the Food Program represents relatively minor variations of old policies.

   a. One exception is the reorganization of agricultural administration, which--by increasing friction and confusion within the bureaucracy--is likely to cause more problems than it solves.

   b. The basic defect of the Program lies in its omissions. It does nothing to reduce day-to-day bureauratic interference in agriculture, and it does not do enough to restructure prices or to change the incentive system so that rewards are directly keyed to performance.

G. As the recent meetings of the Communist Party Central Committee and the Supreme Soviet made clear, there are very serious problems in other sectors as well.

1. The Soviet steel industry, for example, has become a major bottleneck.

   a. Shortages of steel, especially high-quality products, are holding back the growth of civilian machine building and other priority sectors of the civilian economy.

   b. The appetite of the Soviet economy for steel is probably unparalleled--and a reflection of its relative technological backwardness. Last year

the USSR with little more than half the GNP of the United States used 103 million metric tons of rolled steel products compared with US consumption of 84 million tons.

c. The shortages of steel won't be remedied quickly. Investment requirements to cope with the declining quality of ore are escalating rapidly, and new capacity requires long gestation periods before it can be brought on stream. In addition, supplies of coking coal and iron ore are likely to continue to be tight in the next several years.

2. Transportation is another sector responsible for recent poor economic performance. Snarls on the railroads--the backbone of the system--have disrupted economic activity across the board, but most particularly in the delivery of raw materials such as coal, iron ore, timber, scrap-metal, and chemical fertilizer.

a. The Soviet economy requires a large volume of transport services not only because of its size and complexity but also because the country's resources and people are spread widely over a very large land mass.

b. Compared with North America and Europe, the USSR is poorly served by year-round water transport, and government policy has held back the

development of an adequate highway system. The brunt of the transport burden, therefore, has fallen to the railroads.

c. The railroads, however, appear to have reached their capacity ceiling with present technology and facilities. Consequently, the transport sector will find it difficult to support economic growth through the next several years at least.

3. In the energy field the leadership faces rather different problems in the coal and oil industries.

a. Coal production, which dropped during 1979-81, has been hampered by deteriorating underground mining conditions at larger, established mines, by shortages of labor and declining labor productivity, and by insufficient capital investment.

b. Oil production continues to increase, though slowly. Even the very small growth of the last few years has required an enormous effort.

4. Finally, shortages of raw materials and depletion of fuel and power supplies have caused a marked slowdown in the production of construction materials.

a. Current output, for example, increased by less than 2 percent annually during 1976-80 compared with nearly 5-1/2 percent annually in the preceding five year period.

b. Shortfalls in the production of cement, roofing

materials, construction resources, and wall materials have restricted construction activity throughout the economy.

H. As we emphasized earlier, the Soviet economy does not depend on trade for survival. Total imports equal about 12 or 13 percent of GNP, those from the West--only about 5 percent. But, because of the difficulties just enumerated, the elimination or easing of critical bottlenecks and the achievement of key elements in Soviet development plans are closely tied to imports from the West.

1. The USSR will have to import a broad range of Western oil and gas equipment if it is to minimize the fall in production in fields where depletion is at an advanced stage, increase output elsewhere, and help locate and develop reserves.

   a. Pipelaying equipment capable of handling large-diameter pipe is produced only in the West, and we estimate that the Soviets will need to import at 15-20 million tons of steel pipe during the remainder of the 1980s to build the pipelines they have scheduled.

   b. They will also continue to need sophisticated exploration eqipment, high capacity submersible pumps for the oil fields, and probably high-powered turbines for gas compressor stations.

2. Soviet requirements for quality steel should result in annual imports of steel other than pipe of about

$2 billion (current prices) at least until the mid-1980s.

3. Imports of chemical equipment and technology probably will continue to be large, reflecting the still antiquated character of some parts of the chemical industry and the importance of the industry for agricultural production.

4. Imports of grain and other agricultural commodities have soared in recent years and almost certainly will remain high. Grain purchases in 1979-82 averaged more than 30 million tons a year.

I. The USSR's ability to earn the hard currency it needs to pay for its Western imports is, however, already under pressure and may well diminish in the future.

1. The main reason is the leveling off and possible decline in Soviet oil production.

a. Because domestic consumption will continue to rise and because of ongoing demands from Eastern Europe, we expect oil exports to the West--which account for about half of Soviet hard currency merchandise export earnings--to fall.

b. According to our projections the rise in hard currency earnings from stepped up exports of natural gas will only partially offset the anticipated decrease in receipts from oil.

2. Other factors also have restricted Soviet hard currency earning capacity.

a. Primarily because of the softening of energy prices. Soviet terms of trade vis-a-vis the West will be less favorable in the 1980s than they were in the 1970s, when upward spiraling oil and gold prices brought the USSR windfall gains.

b. In addition, demand for Soviet raw materials will be weak if Western economic activity fails to pick up.

c. Soviet manufactured goods, which are generally not competitive in Western markets, are unlikely to take up the slack.

d. Finally, less developed countries, including OPEC countries, probably will be less able to pay cash for Soviet arms.

3. The Soviet capacity to buy from the West is of course backstopped by the USSR's huge stock of gold. But the USSR is reluctant to undertake massive sales of gold in an uncertain market because of the downward pressure that Soviet sales exert on prices.

4. On balance, the unpromising export outlook suggests that the USSR may have to make do with little if any increase in real imports in the 1980s.

J. The USSR's relations with Eastern Europe add another dimension of strain. Because it wishes to maintain political and social stability in Eastern Europe, the Soviet Union has given favorable economic treatment to five of the six Warsaw Pact countries--Czechoslovakia, East Germany, Bulgaria, Poland, and Hungary. The

exception has been Romania.

1. This special treatment, or "assistance", has taken two basic forms: Subsidization and credits.

   a. Subsidies have not been given directly. They have instead been extended through preferential terms of trade. That is, Eastern Europe's terms of trade vis-a-vis the Soviet Union are more advantageous than those that would prevail if Eastern Europe conducted that same trade with the non-communist world.

   b. In essence, the USSR sells energy, mainly oil, and other raw materials to Eastern Europe for less than world market prices and pays more than world prices for the manufactured goods it buys from Eastern Europe.

   c. Estimates of the cost to the Soviet Union of giving preferential terms of trade to Eastern Europe are rough--and controversial. According to the highest Western estimate we know of, these subsidies totaled almost $70 billion in 1960-80, with about 90 percent of this amount accumulating after 1974. The huge jump implicit in subsidies reflects the explosion in world oil prices in 1973-1980 and the large rise in opportunity costs to the USSR of its oil exports to Eastern Europe.

   d. The credits come mainly from the trade surpluses the USSR has consistently run vis-a-vis Eastern

Europe since the mid-1970s, although the Soviet Union has also given some direct hard currency assistance to Poland.

2. Eastern Europe, battling severe economic problems of its own, continues to depend on Soviet assistance. But economic stringencies in the USSR have increased greatly the cost to the Soviets of aiding Eastern Europe.

3. The USSR apparently has decided to give reduced priority to Eastern Europe's economic needs in the future. Soviet oil exports to Eastern Europe were cut this year, and the USSR's trade surplus with the area apparently declined. Soviet subsidies will probably fall too. But a drastic cut in exports of raw materials and in trade credits and subsidies is unlikely.

VI. Uncertainties Attached to the Growth Forecast

A. Before summing up our main points, Mr. Chairman, I would like to note that Andropov's advent to power has not altered our assessment of Soviet economic prospects.

1. The exogenous factors impeding economic growth are not affected by the change in leadership.

2. Moreover, Andropov's comments to the Central Committee last week point to no significant changes in economic policy.

a. He indicated that he will take a cautious approach to economic reform.

b. He further made clear that defense and heavy industry will retain their priority.

3. The smattering of economic targets for 1983 announced at the Supreme Soviet meeting a week ago are overambitious, suggesting that relief of economic strains and bottlenecks from more realistic planning is not to be expected.

B. Andropov is, however, in an extremely early point in his reign. Thus major policy changes could lie ahead. For this reason--and for reasons unrelated to leadership changes--our forecast of average annual growth in real GNP of 1 to 2 percent could be off the mark.

1. Growth could be more rapid, for example:

a. If the USSR enjoyed a run of good luck with the weather, leading to a succession of good harvests.

b. If the new leadership were willing to undertake a substantial reallocation of resources from defense to investment.

c. If the new regime were able somehow, perhaps by diverting resources from defense to consumption, to improve morale and labor productivity.

d. Above all, if efficiency could be boosted by mitigating some of the most damaging features of the existing system. Productivity might be raised, for example, without a drastic overhaul of the system through

(1) more balanced allocation of investment to end the neglect of such vital sectors as transport, and by

(2) stopping the proliferation of success indicators and of overlapping lines of authority that has characterized the so-called "reforms" of past years.

e. If Andropov--his rule securely established--undertook basic changes that significantly reduced centralization and gave substantially greater play to market forces, the prospects would be even better. Such a reform, however, would be constrained by the imperatives of maintaining political control in a large multinational society. Furthermore, attempts to implement reform would encounter stubborn non-compliance by party and economic bureaucrats.

2. Growth could be <u>less</u> rapid, for example:

a. If the bad weather of the last few years continued, causing a permanent depression in agricultural output. In any case, there is a theory, substantiated by evidence, that the generally favorable weather that prevailed between the early 1960s and mid-1970s was an abberation. Although the weather for crops in the past several years was surely worse than any long-run average, a return to the pre-1975

conditions is unlikely.

b. If the new leadership decided to accelerate the growth in defense spending at the expense of investment.

c. If the ripple effect of current bottlenecks intensified.

d. If public cynicism and apathy deepened markedly or active unrest developed.

3. Of these possibilities, serious widespread unrest--as the Polish experience suggests--is the one most likely to hit aggregate output the hardest. However, we consider such an eventuality unlikely. It would probably require a steep and prolonged drop in living standards in the first instance. Large-scale labor disturbances might also occur if Andropov pursued with excessive zeal his promised campaign to impose greater discipline in the work place.

VII. Concluding Comments

To sum up our presentation, then

A. Soviet economic growth has slowed markedly in recent years. The slowdown partly reflects declining increments to the supply of labor and the stock of capital and sharply increased costs in producing and transporting vital energy and raw materials. But it also stems from the inability of the system to offset these constraints by bringing about substantial increases in efficiency and productivity. Indeed, economic growth has sharply decelerated even before the labor and energy shortages have reached their maximum severity.

B. The consequences of the slowdown are:

1. First, much harder choices for the leadership in allocating resources to consumption, investment, and defense.

2. Second, the further invalidation of the USSR's claim that its economy is an appropriate model for the rest of the world, particularly the third world.

C. In spite of its disappointing performance, the Soviet economy, however, is not going to collapse. Indeed, we expect GNP to continue to grow, although slowly. Furthermore, so far, defense spending continues to rise.