Directorate of
Intelligence

A Comparison of the US and Soviet Industrial Bases

A Reference Aid

SOV 89-10020
May 1989

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Scope Note

Using statistics on production, employment, and investment, this Reference Aid portrays broadly the relative sizes of the Soviet and US industrial bases. It is not designed to measure living standards, overall economic strength, or the progress of Soviet economic reforms. To enhance the usefulness of this paper as a research tool, material on the geographic layout and regional character of Soviet industrial production has been included. The data provided—generally for the year 1986, the latest available—should serve as a basis for illustrative comparisons between the fundamental productive bases of the two countries.

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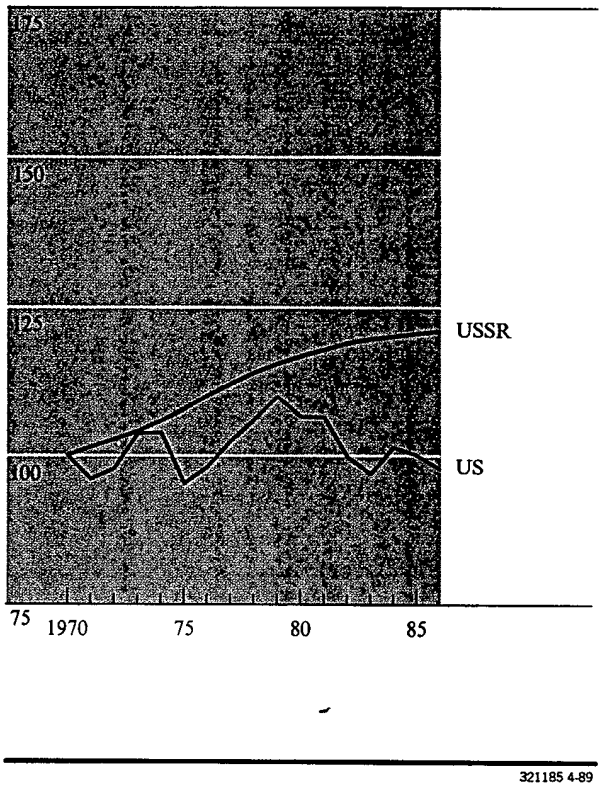
Overview

Introduction

The industrial base of any country is a reflection, among other things, of national priorities, available resources, and the means by which the economy is organized and administered. The basic features of the US and Soviet economic systems—a market economy and a centrally administered economy, respectively—account for many of the quantitative, qualitative, and structural differences between the industrial bases of the two countries. At the same time, the industries of the two countries exhibit similarities. Each country must grapple with weaknesses unique to its economic system. Highly centralized planning of economic activity in the USSR has created massive waste and product shortages. The Soviet economy, however, has been protected from the disruptions of business cycles to which the US market-oriented economy is susceptible.

The current shape of Soviet industry has its roots in the Stalin era. In the 1930s, the Soviet leader imposed an ambitious program to create a capital base strongly oriented toward heavy industry, forsaking the country's traditional reliance on agriculture. His successors continued on this path, pursuing a growth policy based on massive inputs of labor and capital resources. Although inefficient, this policy worked well for many years and propelled the USSR to a major world power. Unlike US industry, which has always operated under the ebb and flow of markets and through the profit motive and the satisfaction of consumer demand, the Soviet industrial base has relied on a system of planners', rather than consumers', sovereignty.

Figure 1
USSR-US: Trends in Industrial Employment, 1970-86



Inputs

Labor. Operating under an economic system that has as one of its philosophical underpinnings the guarantee of full employment, the USSR relies on an industrial labor force twice as large as that of the United States. US industry has made more extensive use of labor-saving technologies, including, in recent years, automation. Engineers and technical specialists make up a larger share of the Soviet work force, but complaints about poor training and lack of comparable skills are legion. At the other end of the spectrum, Soviet industrial enterprises employ a greater share of low-skilled manual workers. The USSR falls behind the United States in terms of labor productivity—output per worker in the Soviet Union is roughly half that in the United States.

Comparing Soviet and US Industry

To ease some of the statistical challenges inherent in any study that attempts to compare two countries with fundamentally different economic bases, the 33 ministries (or their equivalents) responsible for Soviet industry have been equated to their US counterparts using US Standard Industrial Classification (SIC) codes as a guide. Individual sets of Soviet products were paired with their closest SIC equivalents. For example, to facilitate comparison of the US and Soviet chemical industries, the generic Soviet category of "chemicals and petrochemicals" was matched with US industries whose SIC codes correspond to products that would reasonably be expected to fall into the same Soviet category: chemicals and allied products, petroleum and coal products, rubber and plastic products, and chemical and fertilizer mineral mining.

The data presented here are compiled from a variety of sources, including official US statistics, US Government estimates, and official Soviet publications. The USSR, however, does not publish production statistics on some important commodities (nonferrous metals, for example) for which comparable US data are available. Moreover, reports and publications of the USSR State Committee for Statistics—which are used as major sources—occasionally do not report output data for months or years, leaving wide gaps in production series. For these reasons, the comparison of Soviet and US industry is limited to those industrial products where reasonably complete and comparable data are available and deemed reliable.

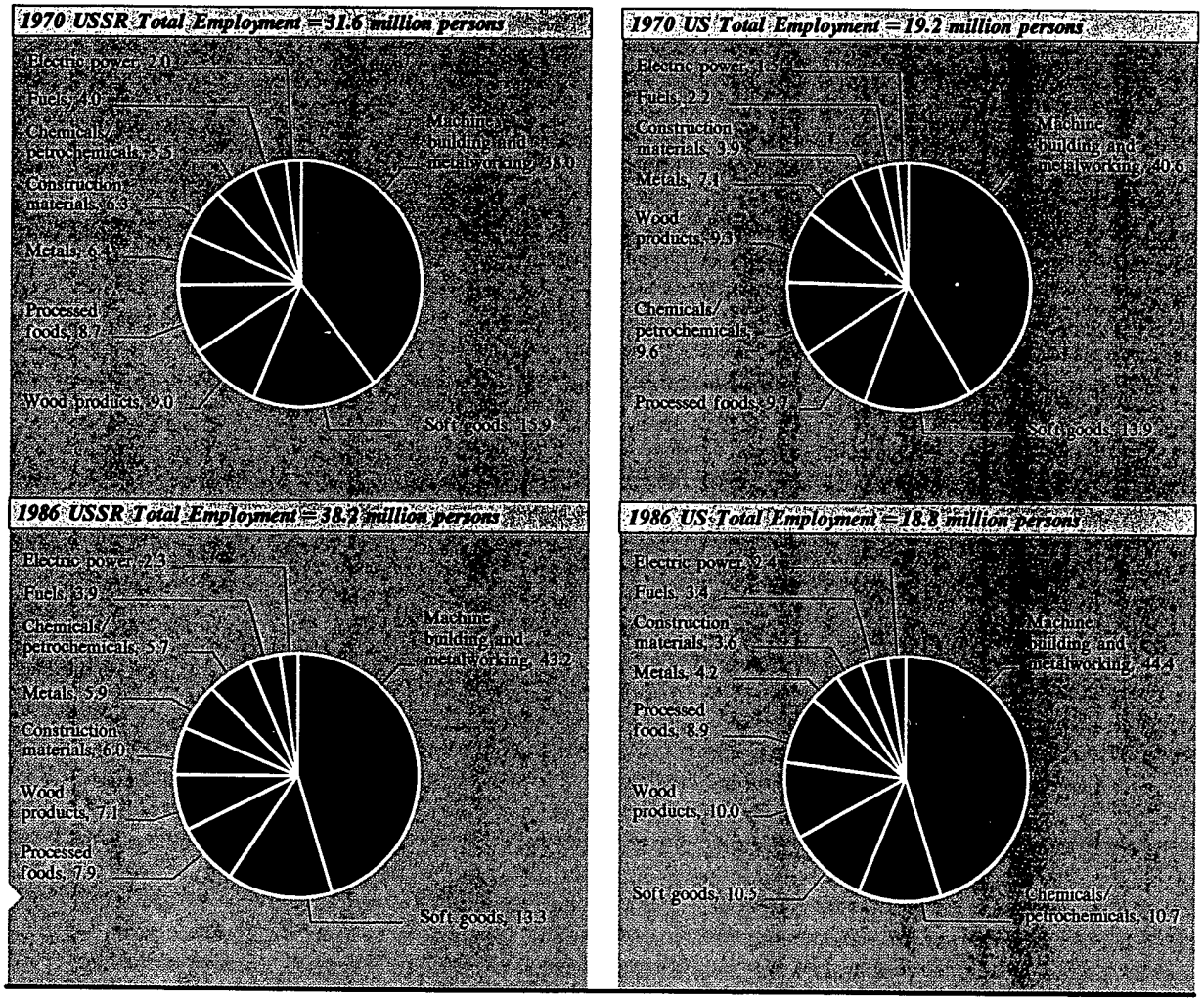
USSR	United States (SIC code)
Electric power	*Electric utilities (491)*
Fuels	*Oil and gas extraction (13)* *Coal mining (11,12)*
Metals	*Metal mining (10)* *Primary metals industries (33)*
Machine building and metalworking	*Fabricated metal products (34)* *Machinery (except electrical) (35)* *Electrical and electronic equipment (36)* *Transportation equipment (37)* *Instruments and related products (38)*
Chemicals/petrochemicals	*Chemicals and allied products (28)* *Petroleum and coal products (29)* *Rubber and plastic products (30)* *Chemical and fertilizer mineral mining (147)*
Wood products	*Lumber and wood products (24)* *Furniture and fixtures (25)* *Paper and allied products (26)*
Construction materials	*Stone, clay, glass, and concrete products (32)* *Nonmetallic minerals mining (14, except 147)*
Soft goods	*Textile mill products (22)* *Apparel and other textile products (23)* *Leather and leather products (31)*
Processed foods	*Food and kindred products (20)* *Tobacco manufactures (21)*

During the period 1971-86, total employment in Soviet industry grew by 6.6 million persons, or 21 percent. In the same time period, the US industrial work force fell by roughly 400,000 (see figure 1). The Soviet labor force in industry continued to grow, but the rate of growth has slowed: employment rose an average of only 0.6 percent annually in 1981-86, compared with growth of 1.6 percent per year in the 1970s, because of an overall slowing of population growth. In contrast, the relative stability of US industrial employment—with the exception of recession-induced downturns in the mid-1970s and early 1980s—is largely the result of structural shifts in the US economy, away from basic industries toward the service sectors, and continued long-term growth of labor productivity.

Although the USSR employs more workers in its industries than does the United States, the share of total employment in many branches of industry is

Figure 2
USSR-US: Distribution of Industrial Employment, 1970 and 1986

Percent



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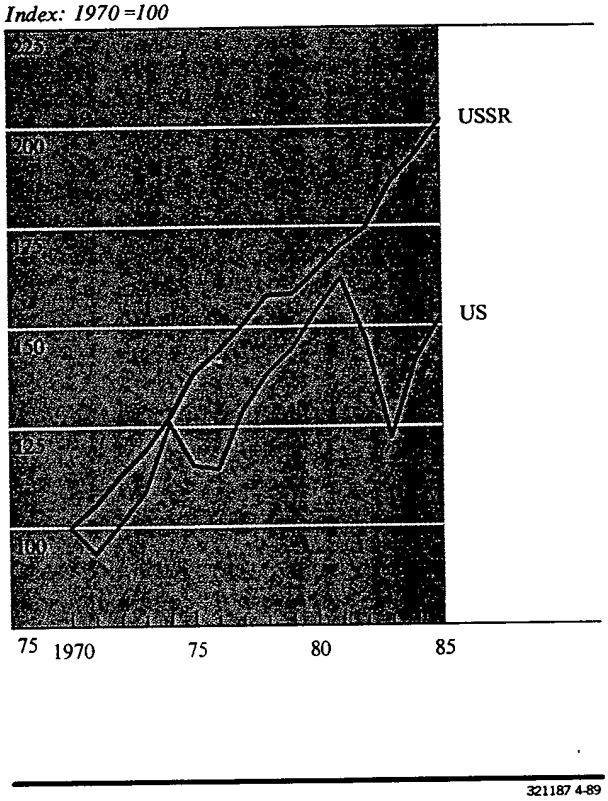
strikingly similar. The percentage of the labor force, for example, in the machine-building and metalworking branch, the largest industrial employer in both the United States and the USSR, is almost 45 percent in both countries (see figure 2). Indeed, the share of the industrial work force engaged in machinery production rose by about the same amount in both countries between 1970 and 1986. The proportion of workers involved in producing processed foods is also roughly similar. The number of workers engaged in the production of basic industrial materials (metals, chemicals, wood products, and construction materials) in the United States and the USSR remained relatively constant during 1971-86. A fall in the share of US employment in both the soft goods and metals industries in the same period reflects a more rapid structural shift than in the Soviet Union. This shift resulted from market factors affecting metals, such as the increased availability of substitute materials, and from the search by textile and clothing manufacturers for cheaper offshore labor.

Capital. The stock of productive capital in both countries is huge. But Moscow's practice of holding equipment retirements to a minimum and prolonging the life of machinery through repeated extensive repairs has saddled the country with a relatively obsolete and technically backward base of plant and equipment, especially when compared with that of the United States. Plagued by frequent equipment breakdowns, the USSR has been unable to keep pace with gains in capital productivity in the United States.

Since 1970, growth of Soviet capital investment has generally outstripped that of the United States in most branches of industry.[1] Annual infusions of new capital to Soviet industry doubled between 1971 and 1985, while those in the United States grew by about 50 percent (see figure 3). Soviet investment also grew steadily throughout this period, whereas US industrial investment fell during periods of recession.

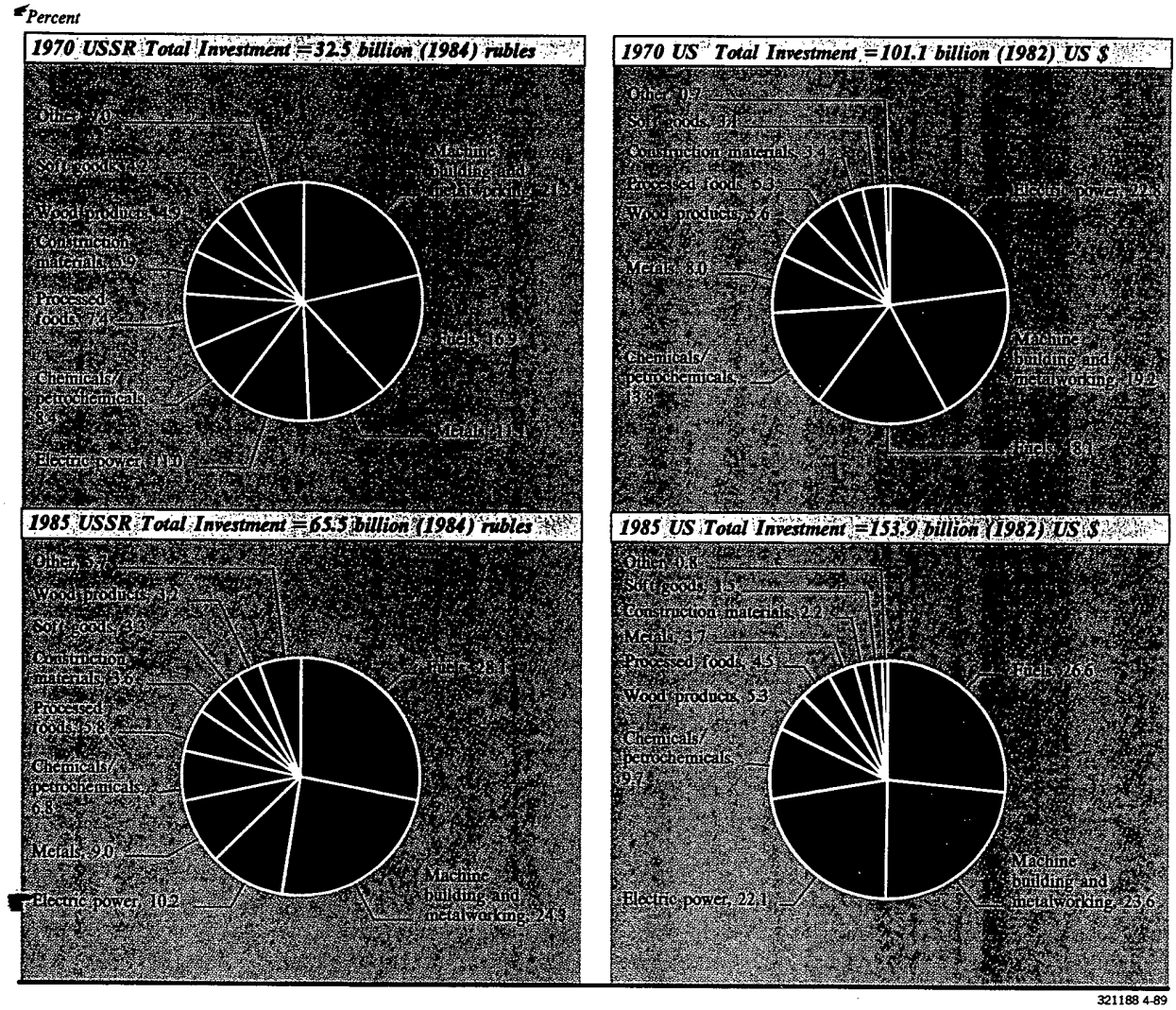
Figure 3
USSR-US: Trends in Industrial Investment, 1970-85



As with employment, the distribution of investment within individual branches of industry shows similarities. Both the USSR and the United States allocated 24 percent of their total industrial investment to machine building in 1985 (see figure 4). The proportion of investment allocated to the production of fuels

[1] Investment is a measure of a nation's yearly expenditure on reproducible fixed assets—machinery and production facilities—as part of the process of undertaking new projects and continuing and completing existing ones. In the USSR, investment includes outlays for construction work, including assembly of structural elements of a building; outlays for installing equipment and for the drilling of exploratory and producing oil and natural gas wells; outlays for equipment whether requiring installation or not; outlays to acquire production tools and equipment for maintenance and upkeep; outlays for survey work in the project planning stage; and other, miscellaneous outlays. In industry, it excludes expenditures for geological exploration and major (capital) repair of buildings and installations, equipment, vehicles, and other fixed assets. In the United States, however, capital repair is included in the definition of investment, so the data shown are not strictly comparable. Moreover, Western observers believe that official Soviet investment data are inflated, despite the fact that they are published in "comparable" prices.

Figure 4
USSR-US: Distribution of Industrial Investment, 1970 and 1985



Soviet Defense Industries: A Second Economy?

The USSR has consistently accorded a high priority to national defense, and this has fueled the development of the world's largest military-industrial base. Soviet defense industries have never operated in isolation. They have always depended on civilian industries for the supply of industrial materials and components and, in turn, have manufactured large quantities of civilian goods. The defense industries, however, have been granted privileges that have enabled them to command a large share of the country's best designers, engineers, skilled workers, raw materials, and machinery. Consequently, they are at the forefront of Soviet technology and industrial prowess.

The defense industries have accumulated these advantages over the course of more than 50 years. In the 1930s, Moscow created the Voyenno-promyshlennaya komissiya *(Military-Industrial Commission or VPK) to oversee and support the defense-industrial ministries, and the organization still operates today. Several dozen designers were given extraordinary powers to acquire whatever was needed to develop and produce weapon systems. Over time the VPK has established what has been described in the Soviet press as "pyramids" of captive laboratories, design bureaus, and plants, which in some cases reach all the way down to raw material producers. Defense-industrial ministers can pay higher wages and salaries than their civilian counterparts, can rely on state budget grants for most of their investment needs, and can use weapon program "decrees" to get first crack at supplies of materials and components. Nevertheless, the defense industries have a poor record of transferring technology among themselves, much less to civilian industry.*

The Soviet leadership is now looking more to the defense sector to improve the lot of the consumer. In early 1988 the principal civilian machine-building ministry responsible for making machinery for the production of consumer goods was disbanded, and its assets were transferred to the defense sector. More recently, defense industrial ministries have been given additional tasks for producing consumer goods and food-processing machinery (including equipment for the dairy industry). The leadership, however, has not disbanded the "pyramids" or the privileges that support them.

It is unclear how quickly the defense industries will be able to adapt to the new regime, to finance their operations from their own sales as required by the new reform measures, and to deal with customers that need simple, reliable, and low-cost equipment and products. It also remains to be seen how frequently the military customer will be content to wait in line behind the milkmaid.

rose from under 20 percent in both countries in 1970 to 28 percent in the Soviet Union and 27 percent in the United States by 1985, reflecting increased exploration, development, and production costs for fossil fuels. These increasing shares came largely at the expense of the basic materials industries. The share of total investment going to the electric power industry in the United States is twice as large as the corresponding share in the Soviet Union, partly because of a more comprehensive regulatory and pollution-control environment.

Output

Industrial production is a major component of aggregate economic output in both countries. Industry's share of gross national product is slightly larger in the USSR—topping 33 percent in 1986. In the same year, industrial facilities accounted for roughly one-fourth of all the goods and services produced in the United States. A commitment to extensively develop basic

Figure 5
USSR-US: Trends in Industrial Production, 1970-86

Index: 1970=100

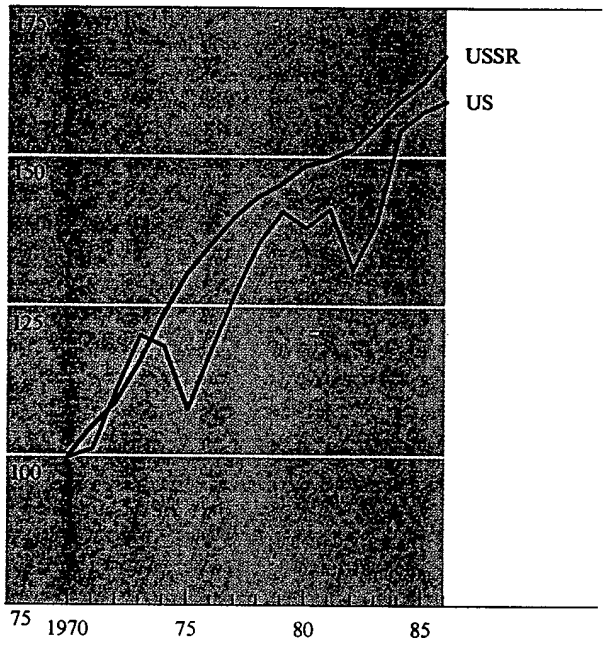


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Table 1
USSR-US: Average Annual Rate of Growth of Output, by Branch of Industry, 1971-86

Percent

	USSR		
	Soviet Measure	CIA Measure [a]	United States
Total industry	**5.2**	**3.3**	**3.1**
Electric power	5.1	4.8	2.6
Fuels	3.4	3.1	0.4
Metals	3.2	2.4	−3.0 [b]
Machine-building and metalworking	8.5	4.0	4.0
Chemicals/petrochemicals	7.0	5.0	4.7
Wood products	3.5	1.5	3.2
Construction materials	4.1	2.7	2.7
Soft goods	3.1	2.1	1.3
Processed foods	3.5	2.0	3.3

[a] Official Soviet measures of aggregate growth are believed by Western observers to contain an upward bias because of increased double counting over time and disguised inflation. Although CIA accepts Soviet data for physical output of various commodities, the aggregate measures shown for industry as a whole and those for individual branches were derived synthetically. The growth rates are formed by combining the value of output of a sample of products for each industrial branch using 1982 value-added weights.

[b] Ferrous metals only.

industry, along with a smaller initial base, has enabled the USSR, through most of the postwar period, to obtain growth rates in industrial production higher than those in the United States (see figure 5). During 1971-86, for example, only the US wood products and processed foods industries posted average annual growth higher than the comparable industries in the USSR (see table 1).

The Soviet Union's traditional emphasis on quantity over quality—a policy that goes back to the earliest days of the Soviet state—and its huge wealth of natural resources have enabled it to outproduce the United States in many basic products, including steel, oil, natural gas, fertilizers, lumber, and cement. US industry produces more of the advanced industrial products such as plastics and chemical fibers, while the USSR has concentrated on basic materials and producer durables, such as machine tools. The United States also has a much more consumer-oriented output structure. For example, it produces nearly six times as many automobiles as the Soviet Union (see table 2). Although the USSR outproduces the United States in such items as footwear and cotton textiles, the quality of Soviet products is usually lower.

Table 2
USSR-US: Production of Major Industrial Products

	1970		1986		Average Annual Rate of Growth, 1971-86 *(percent)*	
	USSR	US	USSR	US	USSR	US
Electricity *(billion gross kilowatt-hours)*	741	1,743	1,599	2,653	4.9	2.7
Oil [a] *(million b/d)*	7.06	11.31	12.30	10.29	3.5	−0.6
Natural gas *(billion cubic meters)*	198	621	639	476	7.6	−1.6
Coal *(million net metric tons)*	577	556	675	808	1.0	2.4
Iron ore *(million metric tons)*	197	91	250	39	1.5	−5.2
Crude steel *(million metric tons)*	116	119	161	74	2.1	−2.9
Aluminum *(thousand metric tons)*	1,640	3,607	2,970	3,036	3.8	−1.1
Automobiles *(thousands)*	344	6,550	1,326	7,829	8.8	1.1
Electric generators *(million kilowatts)*	10.6	27.6	14.9	2.3	2.2	−14.4
Television sets *(millions)*	6.7	NA	9.4	15.0	2.2	NA
Tractors *(thousands)*	459	224	595	93	1.6	−5.3
Mineral fertilizers *(million metric tons)*	13.1	14.9	34.7	20.7	6.3	2.1
Caustic soda *(million metric tons)*	1.8	9.2	3.2	9.7	3.8	0.3
Sulfuric acid *(million metric tons)*	12.1	26.8	27.8	33.4	5.4	1.4
Chemical fibers *(million metric tons)*	0.6	2.2	1.5	3.8	5.6	3.5
Plastics *(million metric tons)*	1.7	9.8	5.3	19.8	7.5	4.5
Lumber *(million cubic meters)*	116.4	80.8	102.1	100.7	−0.8	1.4
Paper *(million metric tons)*	4.2	21.4	6.2	32.2	2.4	2.6
Cement *(million metric tons)*	95.2	69.0	135.1	71.6	2.2	0.2
Footwear *(million pairs)*	884	562	1,057	241	1.1	−5.2
Cotton textiles *(billion square meters)*	6.2	5.2	7.8	3.6	1.5	−2.3
Meat *(million metric tons)*	7.1	16.2	11.7	17.7	3.1	0.6
Vegetable oil *(million metric tons)*	2.8	3.8	2.9	6.3	0.2	3.2
Beer *(million dekaliters)*	419	1,562	489	2,306	1.0	2.5

[a] Including natural gas liquids.

Both countries rank high on the list of major world producers of industrial products. Either the United States or the Soviet Union ranks first in output of electricity, oil, natural gas, aluminum, mineral fertilizers, sulfuric acid, synthetic rubber, and lumber (see table 3). Between 1970 and 1986, both countries experienced shifts in their respective world positions in production of a number of industrial commodities. The USSR improved its position in output of oil and gas, whereas the United States dropped in world rank. During the same period, the Soviet Union held on to first place in production of tractors, iron ore, and lumber while US industry lost ground in production of machine tools, tractors, and automobiles.

Industrial Product Quality

We have issued a mass of seals of quality, but we still have no quality. . . . We make more tractors than all the leading capitalist countries, but still do not have enough. . . . We manufacture more footwear than they do, even when calculated on a per capita basis, but we cannot meet the the demand [for quality products].

Nikolay Ryzhkov
July 1988

Table 3
USSR-US: World Rank in Output of Major Industrial Products [a]

	USSR		United States	
	1970	1986	1970	1986
Electricity	2	2	1	1
Oil	2	1	1	2
Natural gas	2	1	1	2
Coal	1	3	2	1
Iron ore	1	1	2	6
Steel	2	1	1	3
Aluminum	2	2	1	1
Gold	2	2	4	3
Metal-cutting machine tools	1	2	3	6
Tractors	1	1	2	6
Automobiles	9	6	1	2
Television sets	3	4	2	3
Mineral fertilizers	2	1	1	2
Plastics	4	4	1	1
Sulfuric acid	2	2	1	1
Chemical fibers	3	3	1	1
Synthetic rubber	2	1	1	2
Lumber	1	1	2	2
Paper	3	4	1	1
Cement	1	2	2	3
Meat	2	3	1	1
Granulated sugar	1	1	3	5

[a] Rankings are based on volume of output.

Although the USSR holds the lead in physical output of many key industrial commodities, its goods have been judged by both Western and Soviet observers to be inferior to those produced in the United States. The absence of direct product testing and side-by-side comparisons make it difficult to measure this "quality gap" with any precision. Proxy data, however, illustrate that differences in reliability and durability of goods from the two countries are large. The metals industries, for example, cannot produce enough high-quality drill pipe and large-diameter pipe for the oil and gas industries. As a result, the USSR must import better materials from the West. Soviet leader

Table 4
USSR-US: Composition of Merchandise Exports, 1986

Percent

	USSR	US
Total	**100.0**	**100.0**
Manufactured goods [a]	33.6	75.5
Machinery and equipment	14.6	47.8
Military equipment	7.9	1.1
Chemicals	4.0	11.4
Other	7.1	15.2
Agricultural and food products	5.8	16.0
Mineral raw materials	9.6	4.4
Energy	51.0	4.1

[a] Excluding processed foods.

Gorbachev has admitted that only 29 percent of Soviet machinery meets world (including US) standards.

Deficiencies in the design and usefulness of Soviet industrial products, when compared with those produced in the United States and elsewhere in the West, stem from a number of factors:

- Poor worker training and lax labor discipline.
- Low-quality raw materials and manufacturing equipment.
- Emphasis on quantitative plans.
- Lack of competition among industrial enterprises.
- Reliance on standardization as a surrogate for quality.
- Ineffective quality oversight.

Moreover, a continuing lag in production technology has hurt productivity and product quality in the USSR—a fact that has kept Soviet commercial goods from gaining much of an edge in Western markets. While manufactured products make up more than three-fourths of US exports, only about one-third of the USSR's sales abroad (including those to other Communist countries) are manufactured goods, and energy makes up more than 50 percent of Moscow's exports (see table 4).

As the USSR attempts to become increasingly involved in the international marketplace and strives to increase exports of manufactured goods, the importance of high-quality production will grow. Whereas the consumer is the final arbiter of quality in the United States, quality judges in Soviet civilian industry are not normally the end users of the products they inspect. In an effort to raise the quality of Soviet products, Moscow instituted a high-profile campaign in January 1987. Known as state acceptance or *gospriyemka*, the new system put a staff of inspectors, independent of industrial enterprises, at individual plants to ensure that products meet stringent quality guidelines.[2] State acceptance initially caused an upheaval in Soviet industry and has brought only minor improvements in product quality.

The Gap in Technology

Our industry, which should be the basis of socialism and Soviet power, is extremely backward technically.

Iosif Stalin
November 1928

Rather than preserve our technological backwardness for many years, we would do better to pass through the pains of developing new equipment now.

Mikhail Gorbachev
in Perestroyka: New Thinking for Our Country and the World, 1987.

Soviet industry remains behind that of the United States both in the use of advanced manufacturing technologies and in the application of more basic techniques routinely used in the West to save money, time, labor, and energy. Since its formation, the USSR has been trying to overcome its technological backwardness, but it has, for the most part, failed to catch up with achievements in the West. Even ordinary electronic devices that US and other Western consumers have taken for granted for many years—calculators, portable stereos, and personal computers, for example—are available only in extremely limited quantities in the Soviet Union.

[2] In the defense industries, military representatives bridge the gap between producer and consumer. Under *gospriyemka*, however, the national State Committee for Standards, not consumers, establishes the standards by which inspectors judge quality.

The technological gap relative to the United States and the rest of the developed West is large and in some industries is growing:

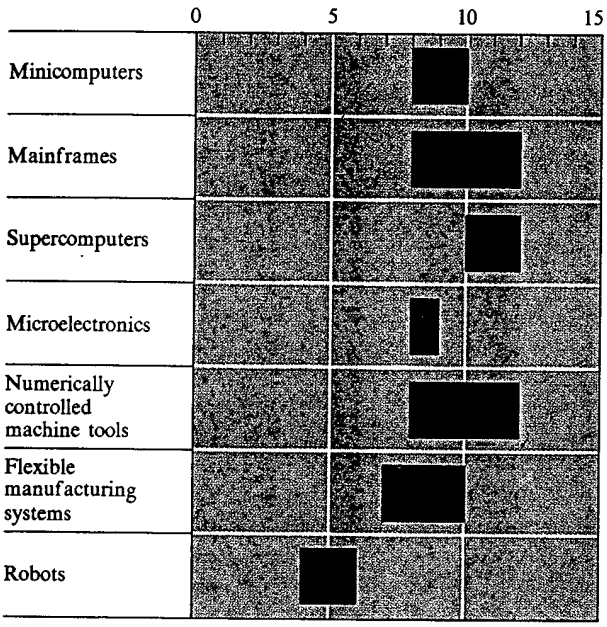
- Although the USSR pioneered the process of continuous casting of steel, only a small share of Soviet steel is continuously cast.
- The USSR is the world's second-largest producer of machine tools, but the Soviet mix of machine tool output is heavily skewed toward simpler, less modern tools.
- The Soviet cement industry is trying to increase use of the more efficient "dry process" for making cement, but for 15 years (1971-85) the share of total cement produced using this process remained constant.

The Soviet lag in advanced industrial technologies—such as microprocessors, computer numerically controlled machine tools, and flexible manufacturing systems—stems from organizational barriers to scientific research, the low priority afforded industrial innovation, bureaucratic misallocation of resources, and a cumbersome decisionmaking process (see figure 6). According to Oleg Baklanov, party secretary responsible for the defense industries, "insufficient attention to the assimilation of capital investments and lack of the requisite economic enterprise and scientific boldness are slowing down work to eliminate the lag behind the world technical level." This lag is reflected in the Soviets' own statistics, which show a higher use of labor- and material-intensive production processes than in the United States, and in the very low rates of Soviet capital renewal.

Other elements of the USSR's lag with respect to the United States have far-reaching consequences for the performance of Soviet industry over the long term. For example, computers and microelectronics are critical to advances in productivity and product quality. In the United States they are widely applied in automotive, machine tool, and weapons production and have led to substantial savings in labor and

Figure 6
Soviet Lag in Key Technologies, 1985

Approximate length of US lead in years



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material inputs as well as inventory costs. The lack of progress in these areas in the USSR has retarded similar savings and, moreover, prevented advances in related fields. Progress in microelectronics, for example, feeds the development of advanced machine tools, robotics, industrial process control, telecommunications, and computers.

Challenges Ahead

Growing competition from newly industrialized countries and the economic giants of Japan and Western Europe and even more rapid technological advances promise to radically alter the shape and focus of industrial production in the United States and the USSR. Gorbachev, in particular, recognized the coming threat to the USSR's status as an economic power. He has announced a bold economic restructuring and industrial modernization program aimed at improvements in economic management, technology development, and qualitative performance. The reform effort includes an evolving market-like approach to dealing with the country's traditional barriers to increased efficiency and productivity as well as innovation.

The Soviet leader hopes to revamp the entire industrial production chain through the massive introduction of new machinery, the rapid retirement of old equipment, and the transfer of high-quality resources from the defense industries. He is depending heavily on major improvements in the machine-building industries—including those in the defense-industrial sector—to increase production of consumer goods and has directed labor resources and increased funding to machine building. Conversely, US industrial advances have depended much less on leadership initiatives and more on a market-driven competitive environment that guides manufacturing decisions and encourages innovation and technological change.

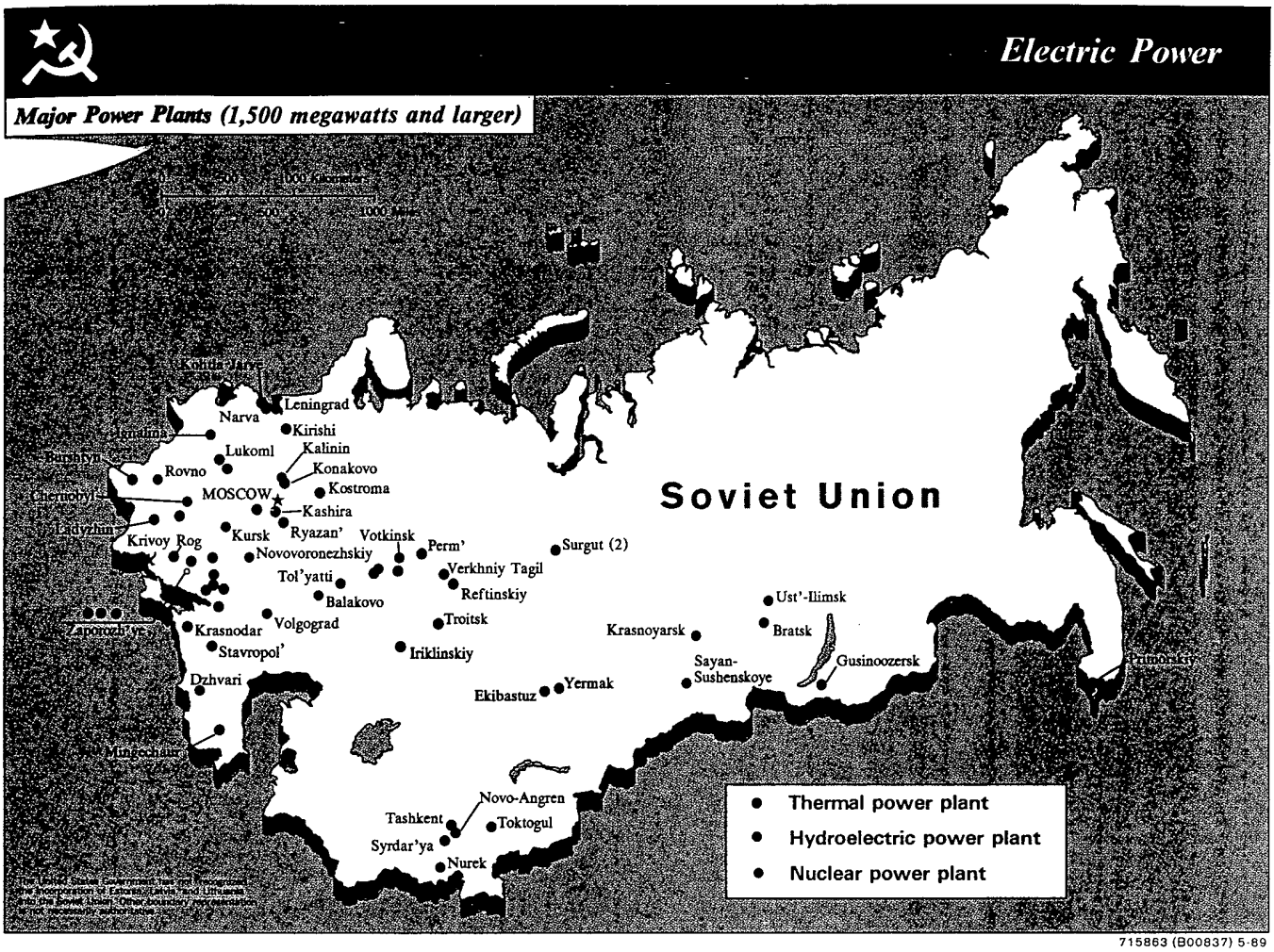
Several years into its program, the Soviet leadership has seen little progress. Ill-defined legislation, interference by ministries, and piecemeal implementation of reform measures are creating disruptions. The pace of modernization has fallen short of planned guidelines. Efforts to raise the quality and technological level of Soviet industrial products have remained stalled, and Moscow's export portfolio continues to tilt toward raw materials.

The USSR is likely to face more daunting obstacles before the end of the century:

- Even more rapid retirement rates will still leave the country with a large core of aged equipment. In the industrial heartland of the Urals and the Ukraine—which accounts for 75 percent of total industrial production—much of the industrial machinery dates from World War II.
- Incentives to promote real quality and technological changes remain weak, setting up roadblocks to the efforts of innovative managers.

- Burdensome systemic bottlenecks—such as the slow application of research and development and the waste and inefficiency inherent in a centrally planned economy—have yet to be fully addressed in Soviet reform efforts.

How much improvement the USSR can generate in its industrial base and how long it can sustain the gains is very much an open question. It also remains problematic whether Gorbachev and his team—who are often chasing moving targets—can close the technological and quality gap with the United States by the year 2000.



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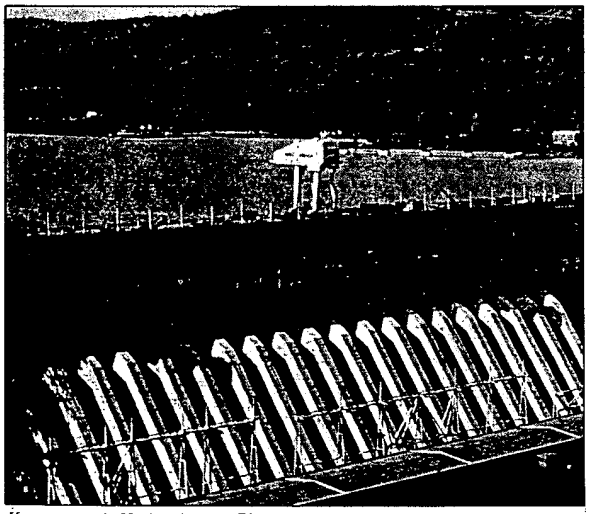


Krasnoyarsk Hydroelectric Plant.

Control room at nuclear power plant.

321623 4-89

Electric Power

Key Officials

No photo available

Anatoliy Mayorets
Minister (since March 1985)

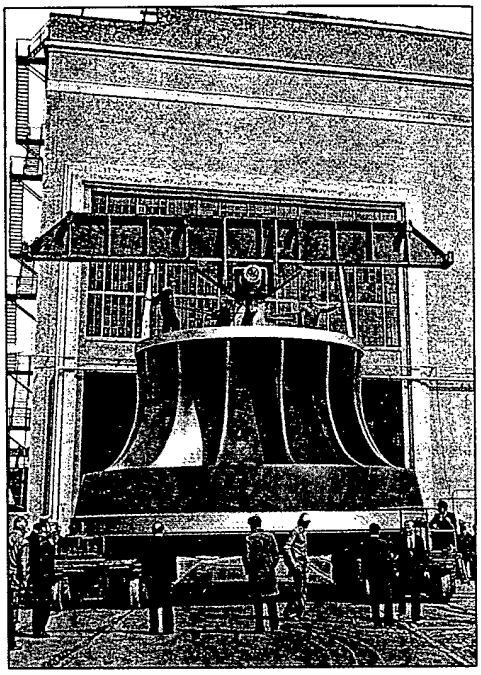
■ ***Ministry of Power and Electrification***

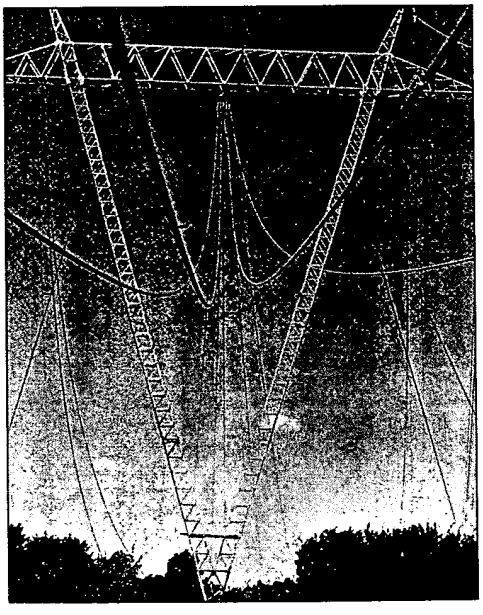
The State Committee for Power and Electrification was upgraded to ministerial status in 1965. Responsible for the design, construction, and operation of hydroelectric and fossil-fuel-fired electric power plants. It also constructs, installs, and maintains the electricity transmission and distribution network and roughly 50 percent of the centralized heating system.

Nikolay Lukonin
Minister (since July 1986)

■ ***Ministry of Atomic Energy***

Created in July 1986. Responsible for design, construction, and operation of civilian nuclear power plants, as well as training of nuclear power station operators.

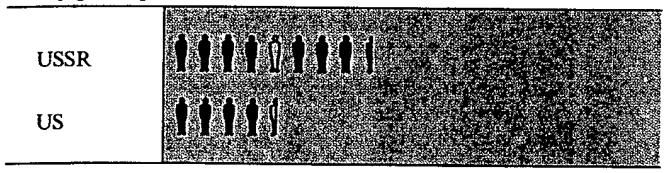




Rotor for hydroturbine (top). High-voltage power lines (bottom).

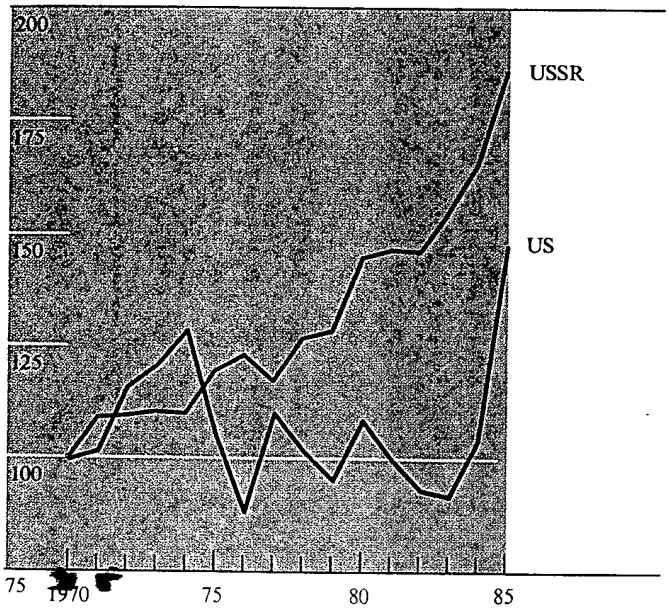
USSR-US: Employment, 1986

Each figure represents 100,000 workers



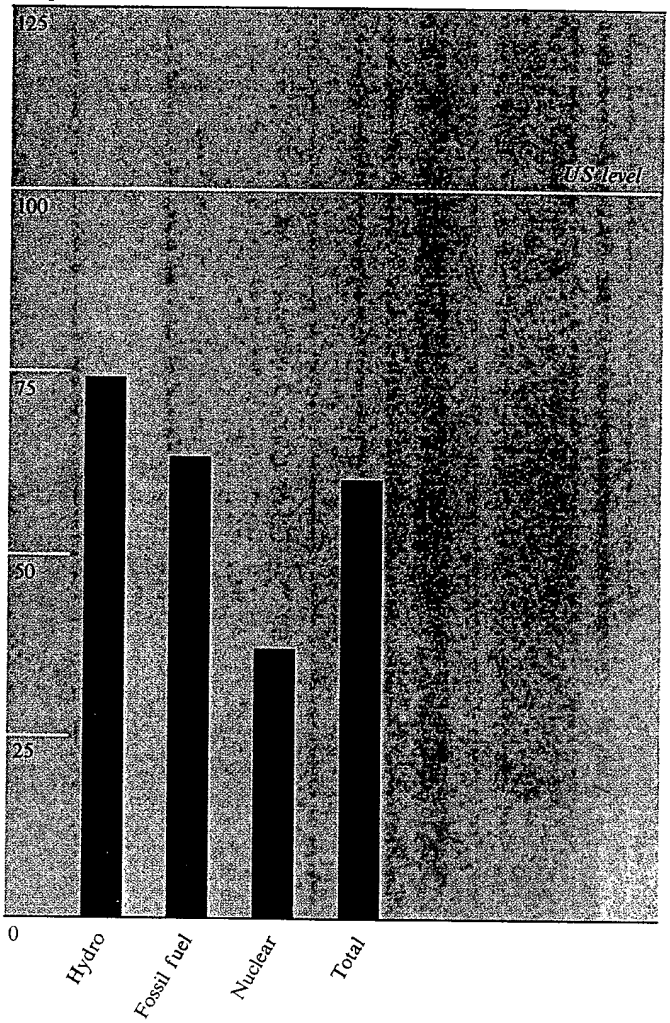
USSR-US: Investment, 1970-85

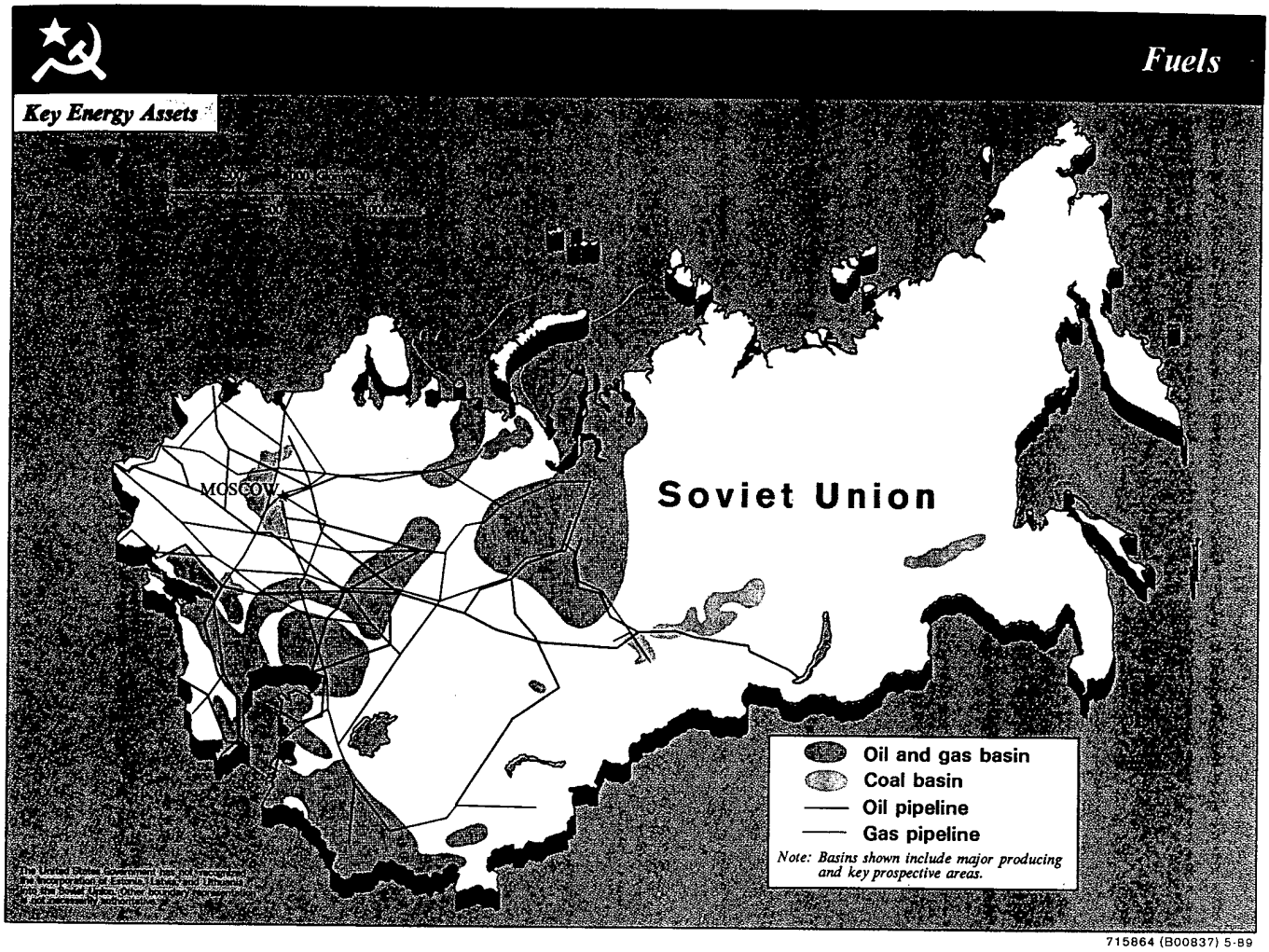
Index: 1970 100



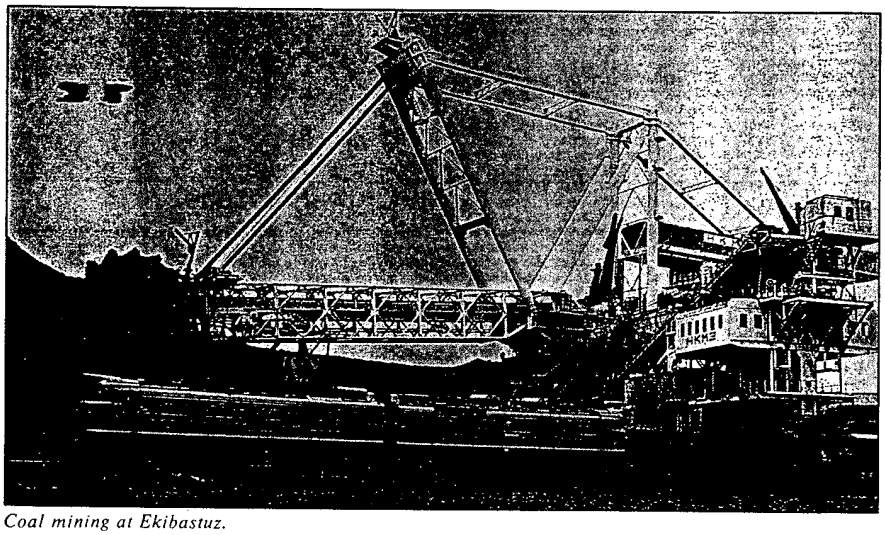
USSR: Electricty Production, 1986

US production =100

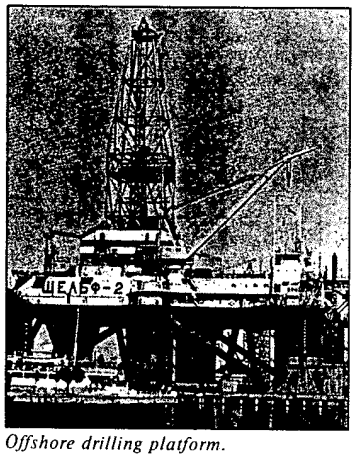




715864 (B00837) 5-89



Coal mining at Ekibastuz.



Offshore drilling platform.

Fuels

Key Officials

No photo available

Mikhail Shchadov
Minister (since December 1985)

■ ***Ministry of the Coal Industry***

Created as the State Committee for the Fuel Industry in 1962. Renamed Ministry of the Coal Industry in 1965. Responsible for extraction and processing of coal and oil shale and production of coal briquettes.

Viktor Chernomyrdin
Minister (since February 1985)

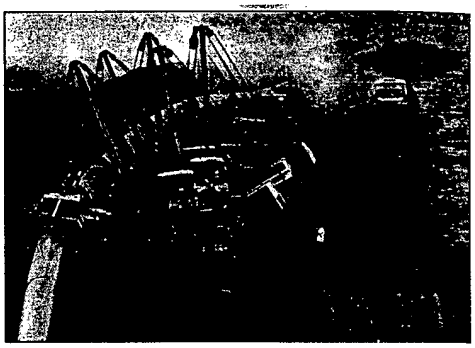
■ ***Ministry of the Gas Industry***

Created in 1957 as the Main Administration for the Gas Industry. Renamed the State Production Committee for the Gas Industry in 1962. Received its current title in 1965. Responsible for extraction of natural gas and operation of main gas transmission pipelines. The ministry also produces limited volumes of crude oil and gas condensate, primarily as ancillary operations of gasfield development.

Vasiliy Dinkov
Minister (since February 1985)

■ ***Ministry of the Petroleum Industry***

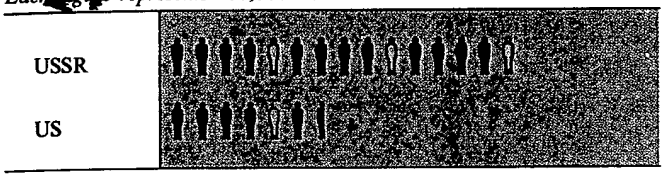
Established as the State Committee for Petroleum Extraction in 1964 and elevated to ministerial status in 1965. Renamed the Ministry of the Petroleum Industry in 1970. Responsible for extraction of crude oil (onshore and offshore) and for operating crude oil pipelines. The ministry currently accounts for about 95 percent of Soviet oil production and about 5 percent of Soviet natural gas production.



Laying natural gas pipeline (top). Positioning turbodrill (bottom).

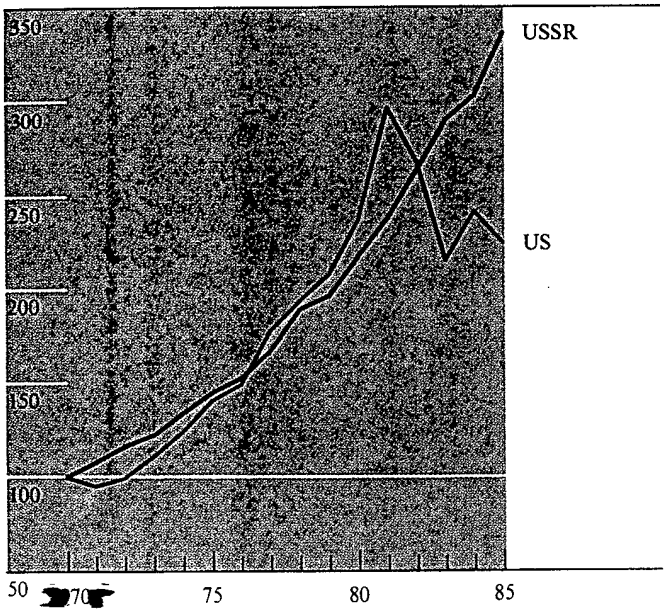
USSR-US: Employment, 1986

Each figure represents 100,000 workers



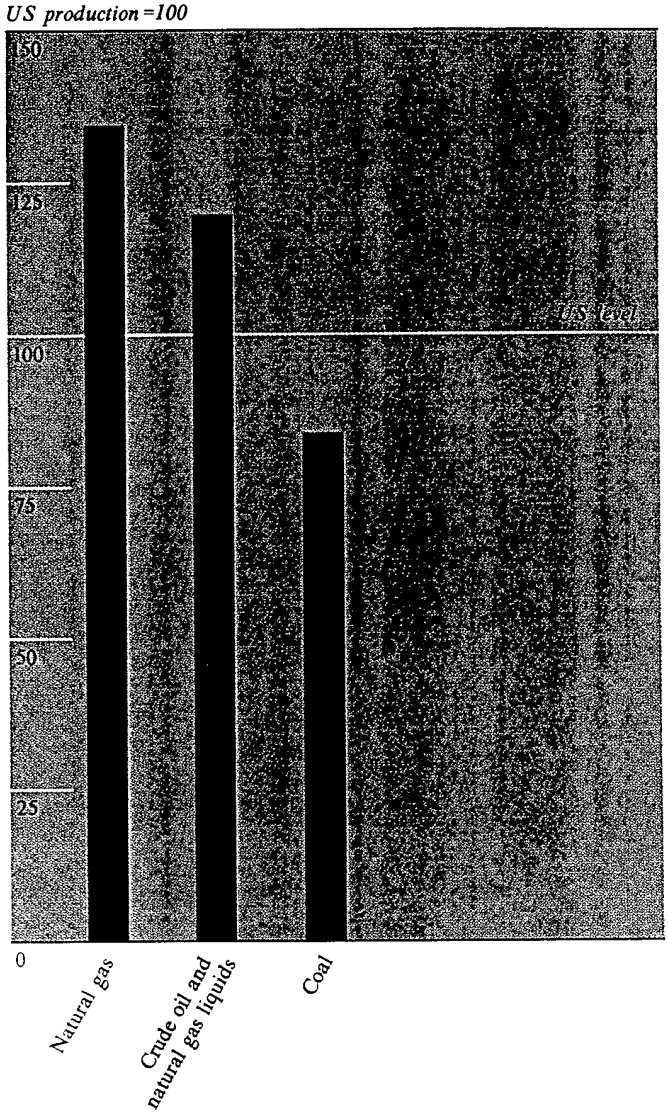
USSR-US: Investment, 1970-85

Index: 1970 =100

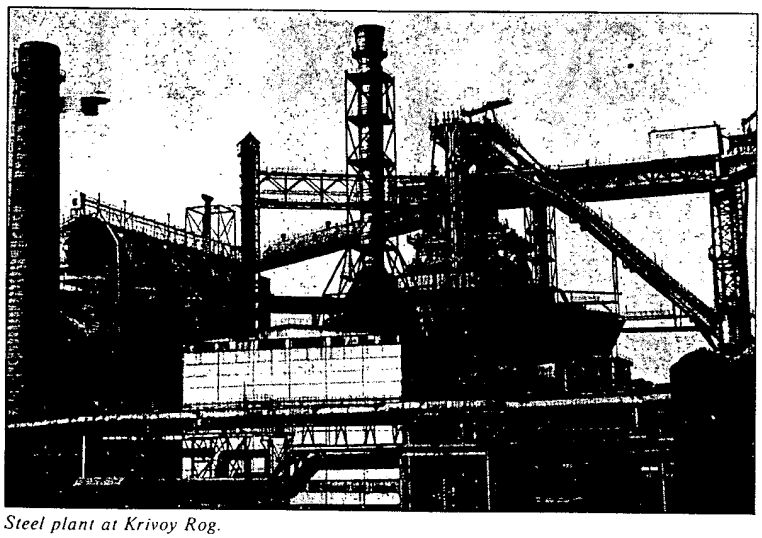


USSR: Production, 1986

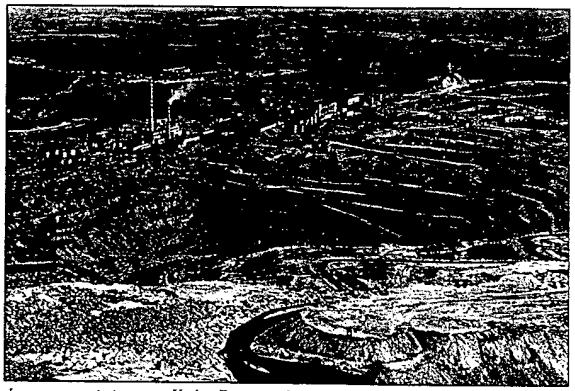
US production =100



715865 (B00837) 5-89



Steel plant at Krivoy Rog.



Iron ore mining on Kola Peninsula.

Metals

Key Officials

Serafim Kolpakov
Minister (since July 1985)

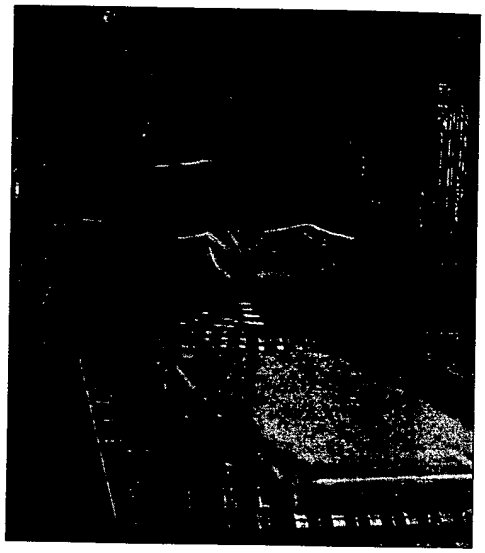
Vladimir Durasov
Minister (since October 1986)

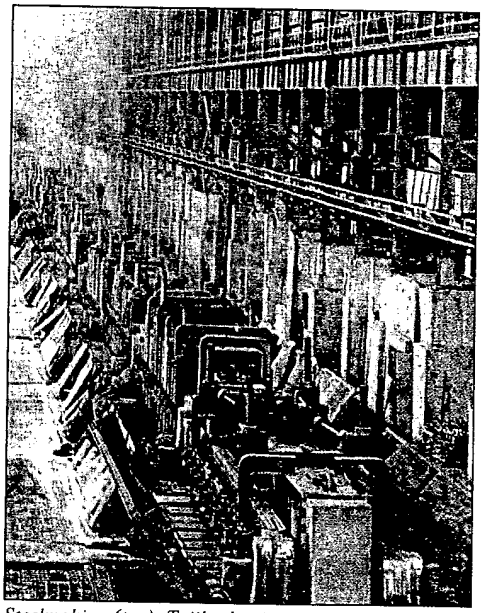
Ministry of Ferrous Metallurgy

Originally established in 1939. Intermittently merged with Ministry of Nonferrous Metallurgy from 1948 to 1957, when it was disestablished. Reestablished in 1963 as the State Committee for Ferrous and Nonferrous Metallurgy, which was split into the Ministry of Ferrous Metallurgy and the Ministry of Nonferrous Metallurgy in 1965. Responsible for extraction and concentration of iron and manganese ores and manufacture of refractory materials, coke byproducts, cast iron, ferroalloys, steels, and most steel products.

Ministry of Nonferrous Metallurgy

Originally established in 1939. Intermittently merged with Ministry of Ferrous Metallurgy from 1948 to 1957, when it was disestablished. Reestablished in 1963 as the State Committee for Ferrous and Nonferrous Metallurgy, which was split into the Ministry of Nonferrous Metallurgy and the Ministry of Ferrous Metallurgy in 1965. Responsible for mining and processing of nonferrous metal ores, including copper, aluminum, zinc, lead, tin, nickel, mercury, gold, platinum, and other metals, as well as diamonds and rare earths.





Steelmaking (top). Tajik aluminum plant (bottom).

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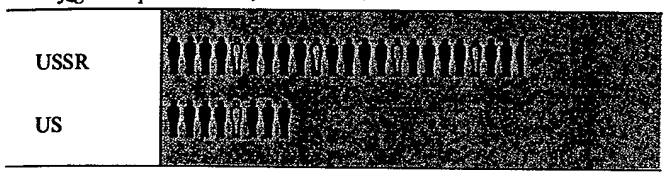
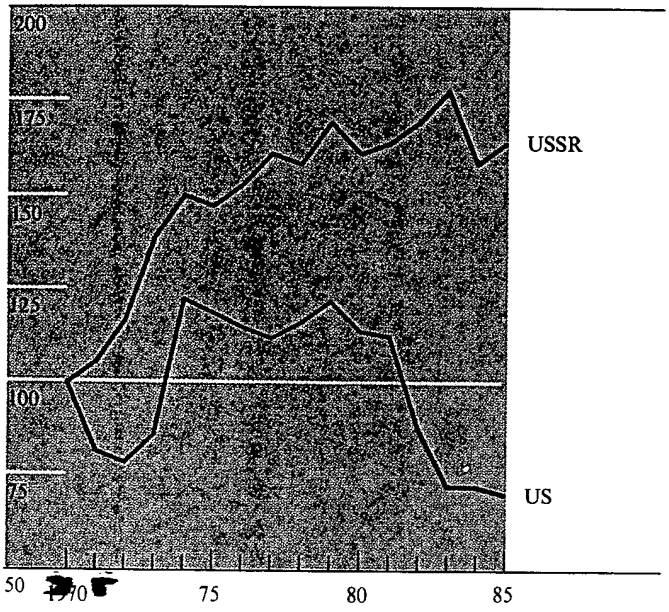
USSR-US: Employment, 1986

Each figure represents 100,000 workers



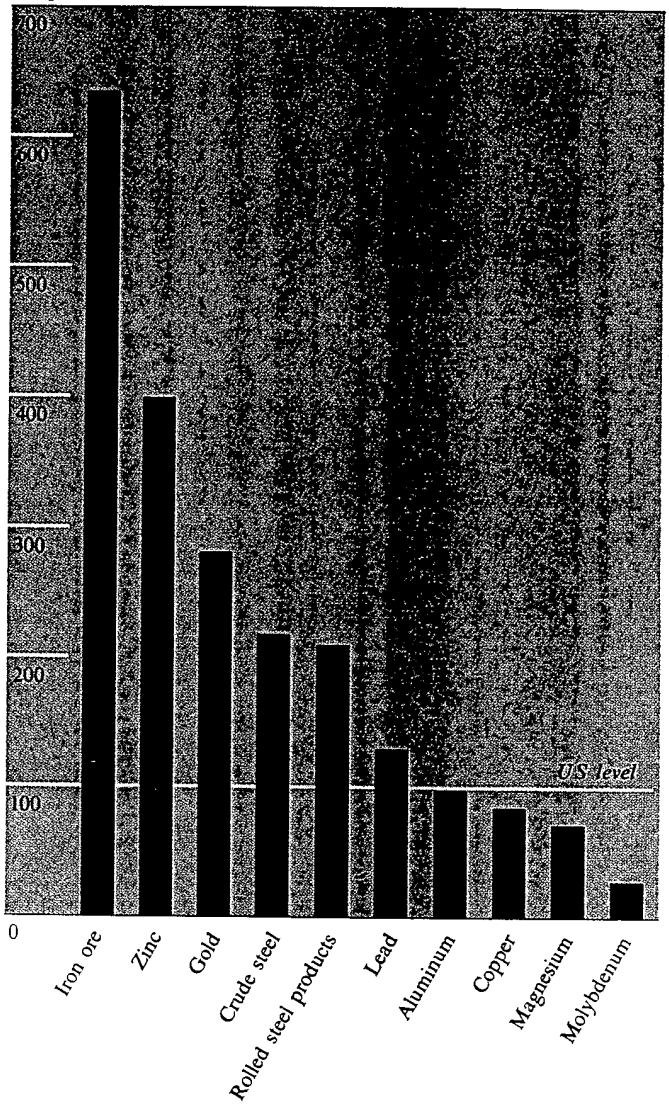
USSR-US: Investment, 1970-85

Index: 1970=100



USSR: Production, 1986

US production=100



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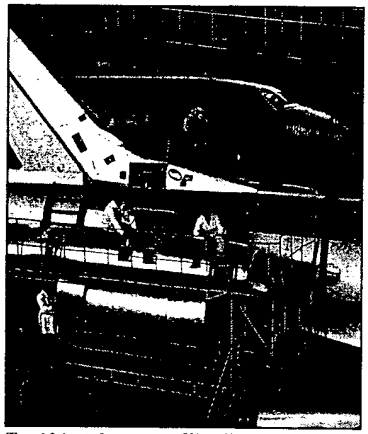
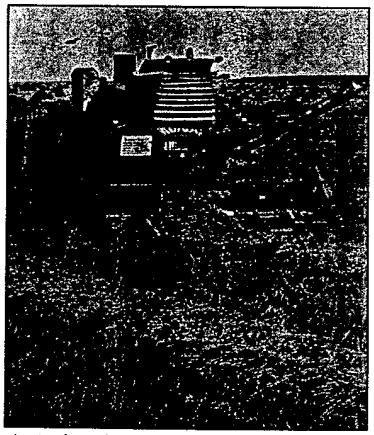
Gor'kiy Machine Factory.



Tu-134 airframes at Khar'kov.



Agricultural machinery.

Machine Building and Metalworking

Key Officials ■ *Civil* ■ *Defense*

Nikolay Pugin
Minister (since December 1988)

■ ***Ministry of Automotive and Agricultural Machine Building***

Established in 1965 as the Ministry of the Automotive Industry. Merged with the former Ministry of Agricultural and Tractor Machine Building in 1988, which was created in July 1987 from the former Ministry of Machine Building for Animal Husbandry and Fodder Production (established in 1973) and the Ministry of Tractor and Agricultural Machine Building (upgraded to ministerial status in 1965). Responsible for production of automobiles, trucks, bearings, industrial sewing machines, armored personnel carriers, agricultural machinery, tractors, combines, and machinery for livestock raising and poultry farms. Also makes tracked vehicles.

Vladimir Lukyanenko
Minister (since January 1986)

■ ***Ministry of Chemical and Petroleum Machine Building***

Established as a state committee in 1963. Became a ministry in 1965. Responsible for the manufacture of equipment for the chemical, oil and gas, and pulp and paper industries, including compressors, pumps, and pipeline equipment. Also produces missile propellants.

Yevgeniy Yarnachev
Minister (since August 1985)

■ ***Ministry of Construction, Road, and Municipal Machine Building***

Originally established in 1946. Disestablished in 1957. Reestablished in 1963 as a state committee and renamed the Ministry of Construction, Road, and Municipal Machine Building in 1965. Responsible for the production of civilian and military construction machinery, including excavators, bulldozers, ditchdiggers, and scrapers. Also makes equipment for the construction materials and timber industries.

Oleg Anfimov
Minister (since July 1986)

■ ***Ministry of the Electrical Equipment Industry***

Established in 1954 and disestablished in 1957. Reestablished as a state committee in 1962 and elevated to ministerial status in 1965. Responsible for the development and production of electrical cable and insulation, storage batteries, lighting equipment, electric motors, generators, transformers, radar components, some communications equipment, and BW/CW detectors.

Vladimir Yelichko
Minister (since July 1987)

■ ***Ministry of Heavy, Power, and Transport Machine Building***

Created in July 1987 from the former Ministry of Heavy and Transport Machine Building and the Ministry of Power Machine Building, restoring the organization that existed before May 1975. Responsible for the manufacture of electric power, energy metallurgical, mining, hoist-transport, railway, and printing equipment. Also produces armored vehicles, diesel engines, and generators for the military.

• The bifurcation of the machine-building and metalworking industry into civil and defense sectors does not imply that production is neatly segregated. The civilian machine-building ministries produce such items as military trucks and armored vehicles, and the defense-industrial ministries produce—among other civilian goods—television sets, refrigerators, and computers.

Machine Building and Metalworking

Key Officials ■ Civil ■ Defense

Mikhail Shkabardnya
Minister (since September 1980)

■ ***Ministry of Instrument Making, Automation Equipment, and Control Systems***

Established in 1959 as the State Committee for Automation and Machine Building. Assumed present name and status in 1965. Produces watches, clocks, computers, control systems, instruments, and optical equipment. Oversees development and integration of automated control systems.

Nikolay Panichev
Minister (since July 1986)

■ ***Ministry of the Machine Tool and Tool Building Industry***

Originally established in 1941 as the Ministry of the Machine Tool Industry. Disestablished in 1957 and reestablished in 1965 as the Ministry of the Machine Tool and Tool Building Industry. Responsible for making machine tools, automated production lines, industrial robots, and metal-processing and forge-pressing equipment.

Apollon Systsov
Minister (since November 1985)

■ ***Ministry of the Aviation Industry***

Responsible for the production of aircraft, spacecraft, and aerodynamic defense, ASW, air-to-air, and tactical surface-to-air missiles. Also makes robots, machine tools, rotary lines, knitting machinery, cameras, refrigerators, washing machines, audio and video tape recorders, vacuum cleaners, baby carriages, clocks, utensils, and snowmobiles. In 1988 was given added responsibility for producing equipment for the food-canning and pasta industries.

Erlen Pervyshin
Minister (since April 1974)

■ ***Ministry of the Communications Equipment Industry***

Established in 1974. Has overall responsibility for production of communications equipment (including radio and television; telegraph and telephone; and satellite communications) and for construction of a countrywide unified communications network. Also manufactures tape recorders, intercoms, facsimile equipment, radar components, electronic warfare equipment, and military computers.

Pavel Finogenov
Minister (since January 1979)

■ ***Ministry of the Defense Industry***

Created in 1965 from the State Committee for Defense Technology. Responsible for conventional ground forces weapons, optical systems, lasers, and antitank, tactical surface-to-air, ASW, and mobile solid-propellant ballistic missiles. Also produces tractors, railroad freight cars, automobiles, machine tools, drilling rigs, washing machines, refrigerators, cameras, motorcycles, and light industrial equipment. In 1988 was given added responsibility for the production of equipment for the construction materials, livestock and poultry, and ice cream industries.

Vladislav Kolesnikov
Minister (since November 1985)

■ ***Ministry of the Electronics Industry***

Established in 1961 as the State Committee for Electronics Technology. Became a ministry in 1965. Responsible for research, development, and production of electronic and electrical devices. Also makes telephone equipment, radios, television sets, clocks, and tape recorders (audio and video).

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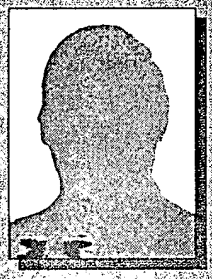
Machine Building and Metalworking

Key Officials ■ Civil ■ Defense

Vitaliy Doguzhiyev
Minister (since March 1988)

■ ***Ministry of General Machine Building***

Established in 1965. Responsible for development and manufacture of liquid- and solid-propellant ballistic and surface-to-surface cruise missiles, submarine fire-control systems, lasers, space launch vehicles, and spacecraft. Also manufactures tractors, railroad cars, machine tools, television sets, and refrigerators. In 1988 was given added responsibility for the production of equipment for the baking and confectionary industries.



Vacant

■ ***Ministry of the Radio Industry***

Established as the Ministry of the Radiotechnical Industry in 1954. Has been under present name since 1965. Involved in research and production of television sets, radios, tape recorders, computers, refrigerators, and telephone equipment. Also produces radars, guidance and control systems, communications and navigation equipment, and lasers for military use.

Boris Belousov
Minister (since June 1987)

■ ***Ministry of Machine Building***

Created in 1968, primarily from resources of the Ministry of the Defense Industry. Responsible for conventional ordnance munitions, fuzing, and solid propellants. Also makes machine tools, textile machinery, bicycles, refrigerators, washing machines, audio and video tape recorders, and small electrical appliances.

Igor' Koksanov
Minister (since February 1988)

■ ***Ministry of the Shipbuilding Industry***

Created in 1965 from the State Committee for Shipbuilding. Responsible for the manufacture of naval vessels, radars, submarine detection systems, mines and torpedoes, and naval fire-control systems. Also makes radios, machine tools, pleasure boats, washing machines, and audio and video tape recorders. In 1988 was given additional responsibility for producing equipment for the milling and feed industries.

Lev Ryabev
Minister (since July 1986)

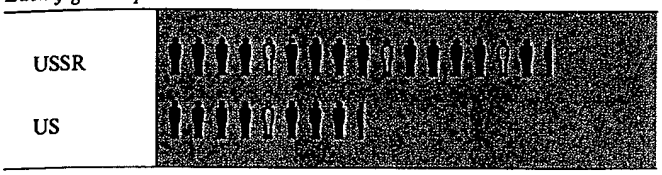
■ ***Ministry of Medium Machine Building***

Established in 1953. Downgraded to state committee status in 1963 and reestablished as a ministry in 1965. Responsible for development and manufacture of nuclear materials, nuclear weapons, X-ray equipment, high-energy lasers, and chemical and biological warfare equipment. In 1988 was given additional responsibility for the production of equipment for the dairy industry.

Machine Building and Metalworking

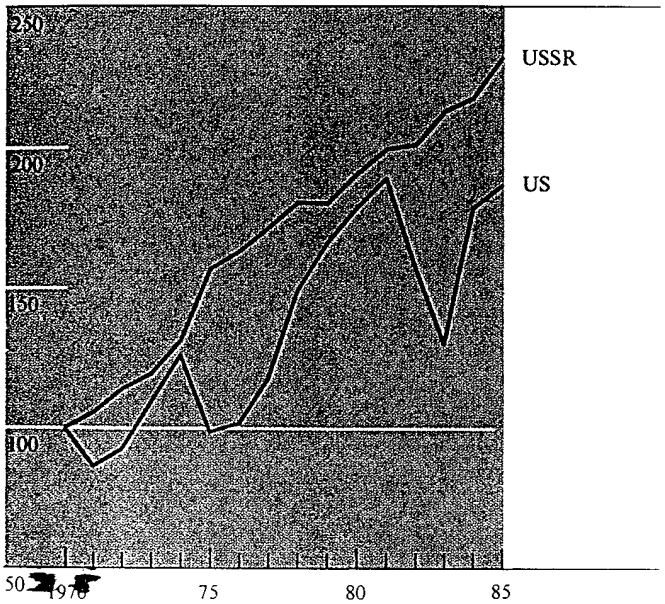
USSR-US: Employment, 1986

Each figure represents 1 million workers



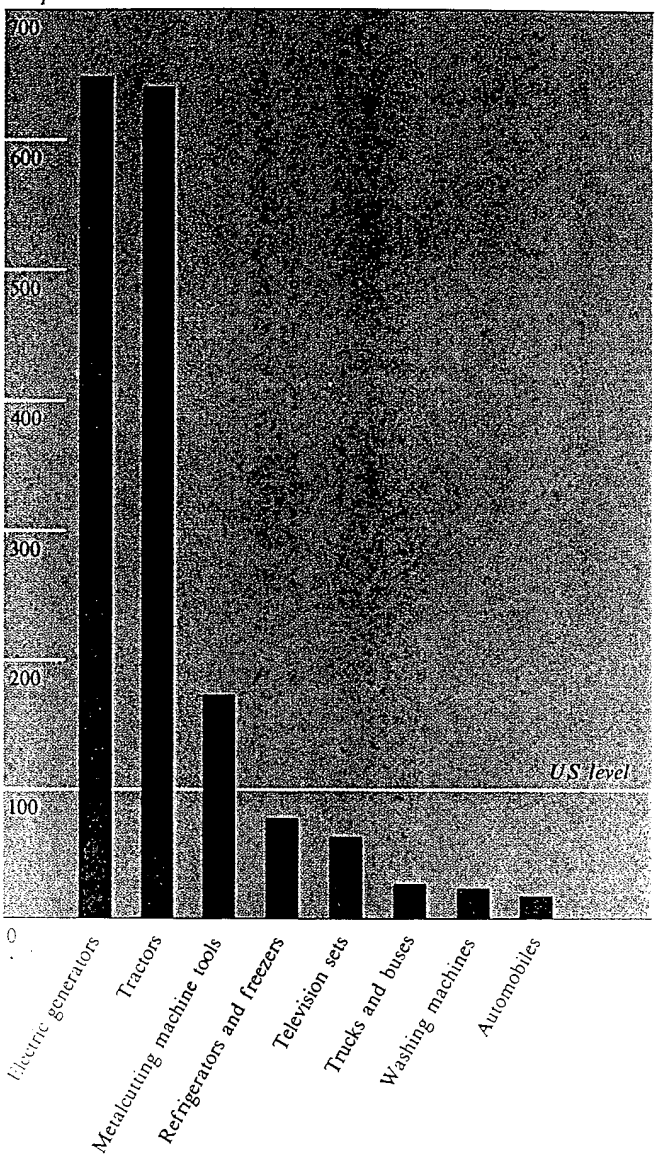
USSR-US: Investment, 1970-85

Index: 1970 =100

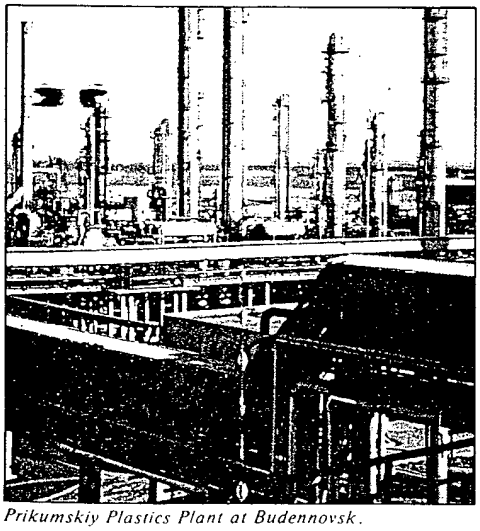


USSR: Production, 1986

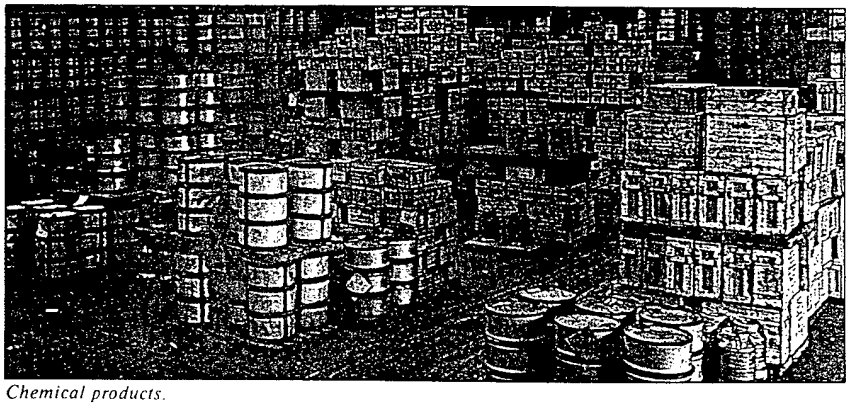
US production=100



715867 (B00837) 5-89



Prikumskiy Plastics Plant at Budennovsk.



Chemical products.

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Chemicals/ Petrochemicals

Key Officials

Yuriy Bespalov
Minister (since August 1986)

■ *Ministry of the Chemical Industry*

Created in 1939 to coordinate chemical production. Responsible for mining of chemical raw materials (except fertilizer materials); production of basic industrial chemicals, chemical fibers (including glass fibers), some fertilizers and pesticides, plastics, dyes, paints, reagents, nonfuel industrial gases, and household and photographic chemicals.

Nikolay Lemayev
Minister (since October 1985)

■ *Ministry of the Petroleum Refining and Petrochemical Industry*

Created in 1964 as the State Committee for Petroleum Refining; upgraded to ministerial status in 1965. Responsible for the production of oil products, products of organic synthesis, synthetic rubber, tires, rubber footwear, and carbon black.

No photo available

Nikolay Ol'shanskiy
Minister (since September 1986)

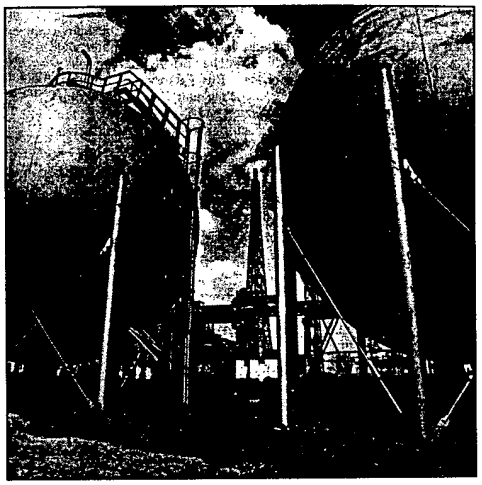
■ *Ministry of Mineral Fertilizer Production*

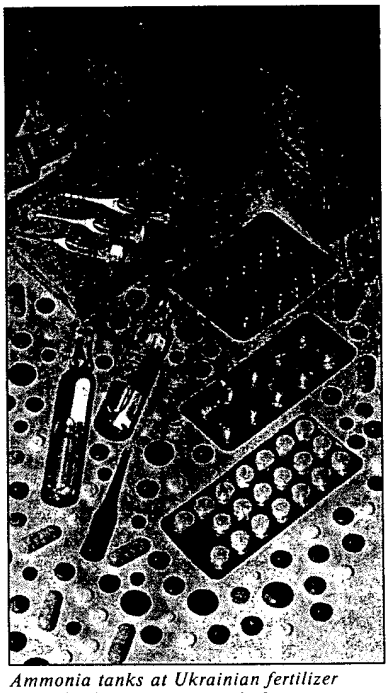
Created in 1980 from part of the Ministry of the Chemical Industry. Responsible for mining of fertilizer raw materials and production of most chemical fertilizers and pesticides.

Valeriy Bykov
Minister (since December 1985)

■ *Ministry of the Medical and Microbiological Industry*

Created in 1985 by combining the former Ministry of the Medical Industry and the Main Administration of the Microbiological Industry. Responsible for production of medicines, pharmaceuticals, medical equipment, and microbiological preparations.

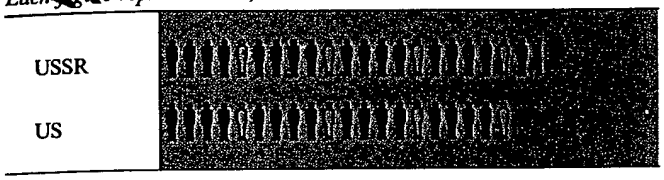




Ammonia tanks at Ukrainian fertilizer plant (top). Pharmaceuticals for export (bottom).

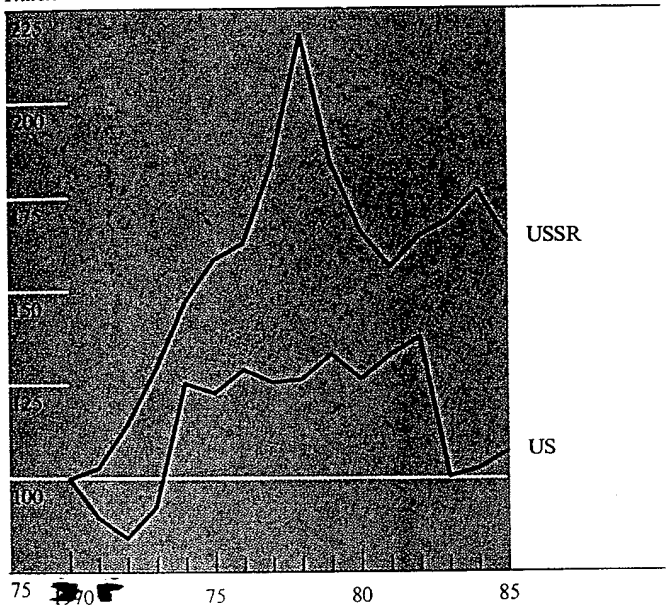
USSR-US: Employment, 1986

Each figure represents 100,000 workers



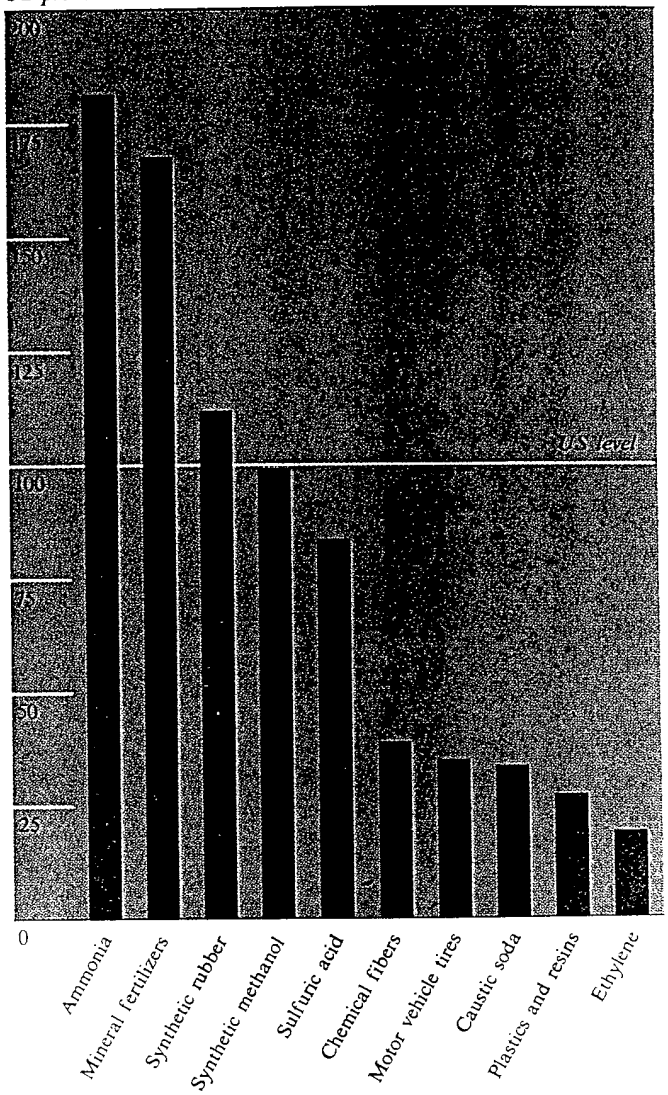
USSR-US: Investment, 1970-85

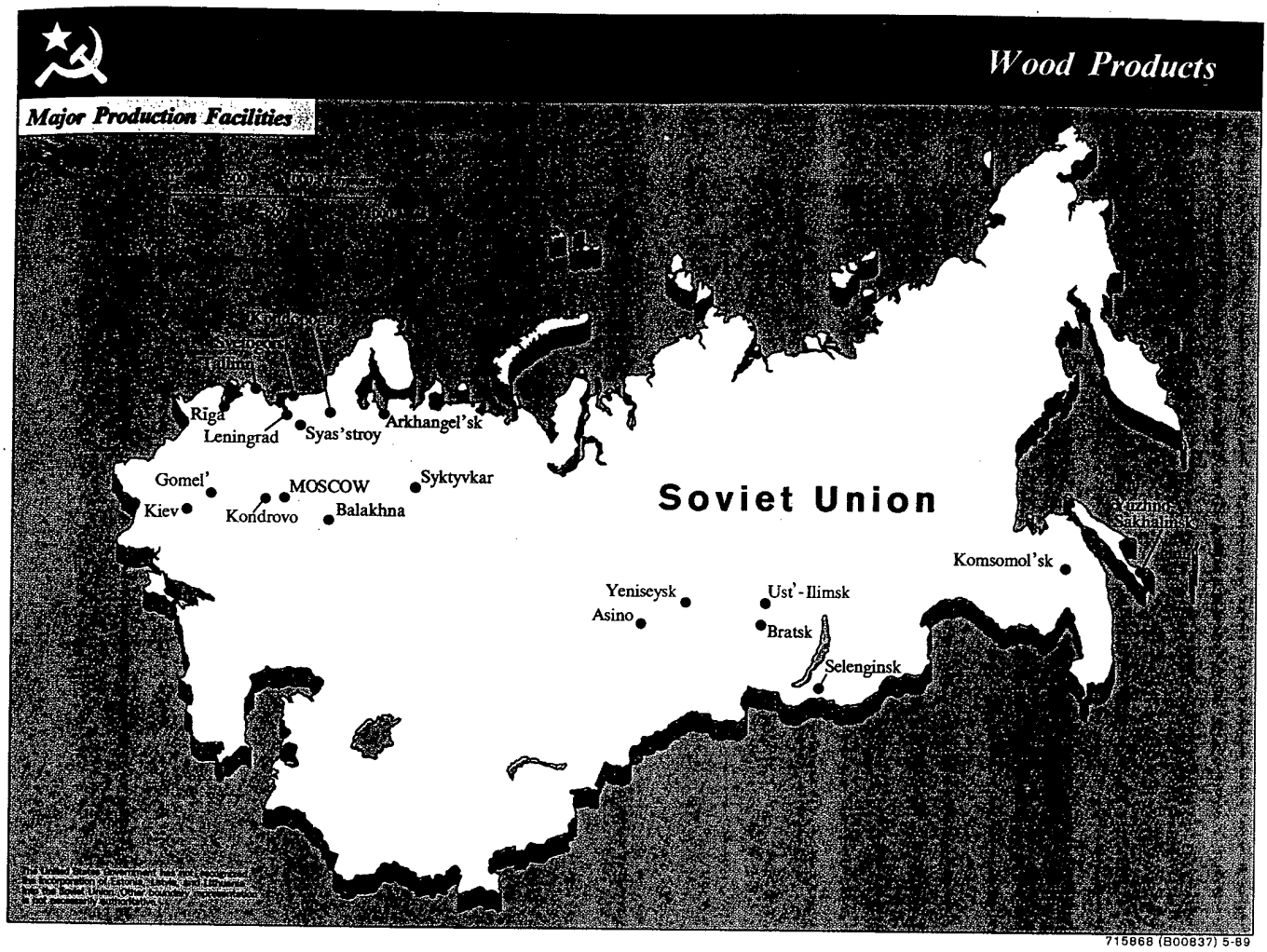
Index: 1970 = 100

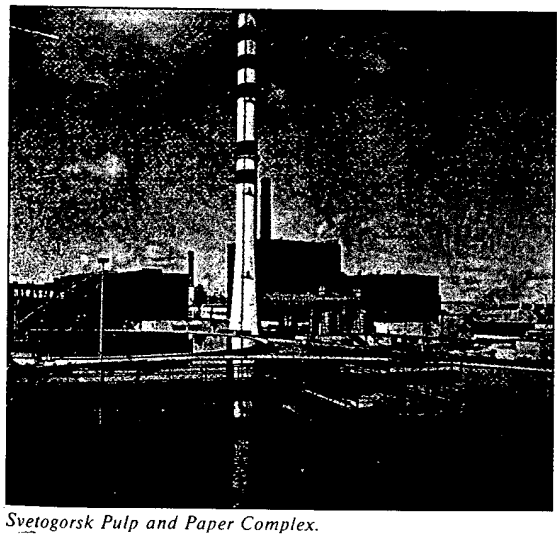


USSR: Production, 1986

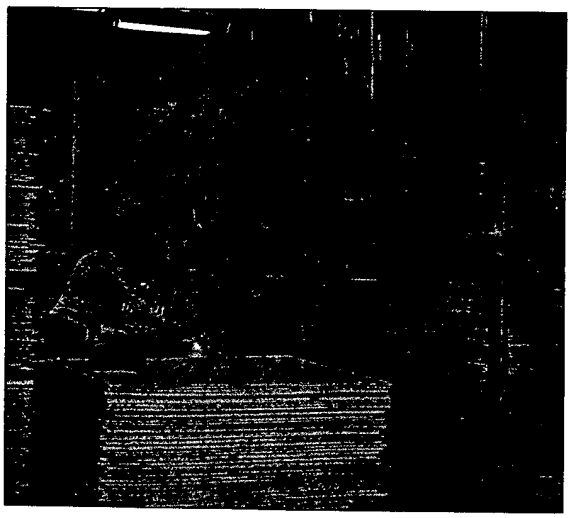
US production = 100







Svetogorsk Pulp and Paper Complex.



Making plywood.

321635 4-89

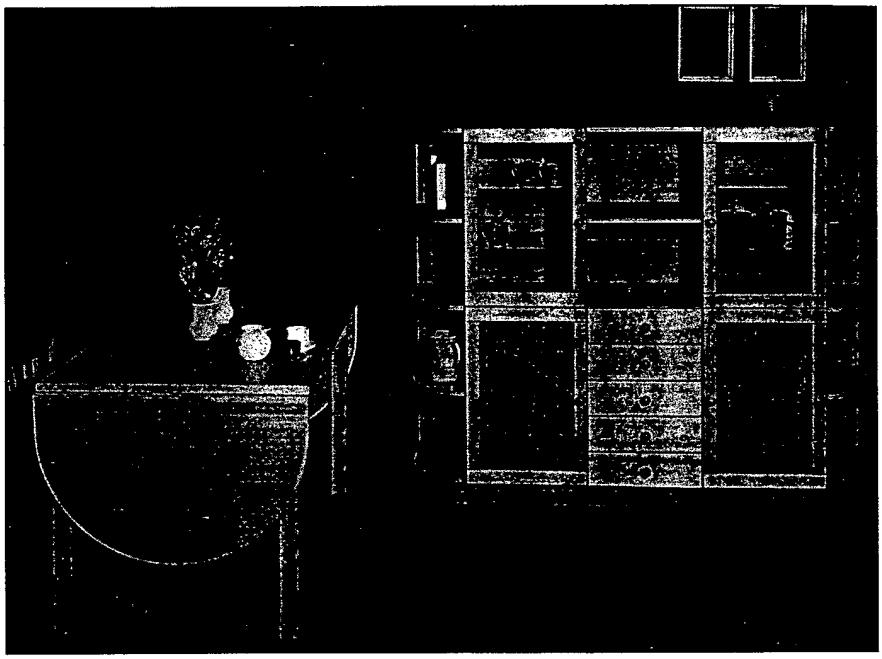
Wood Products

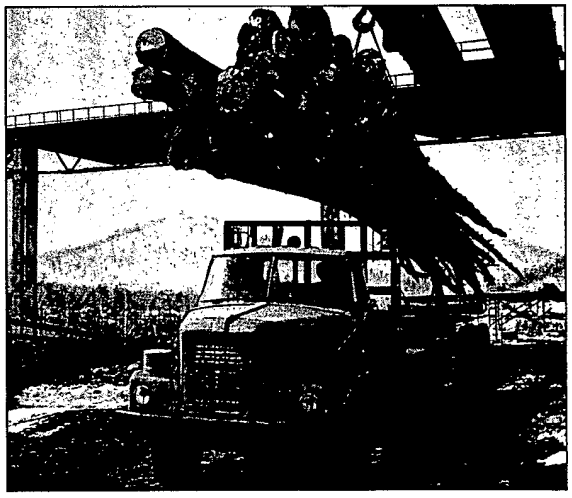
Key Official

Mikhail Busygin
Minister (since March 1989)

Ministry of the Timber Industry

Established as the Ministry of the Timber, Pulp and Paper and Wood Processing Industry in 1980 from the merger of the Ministry of Timber and Wood Processing with the Ministry of the Pulp and Paper Industry. Assumed present name in 1988. Responsible for procurement of commercial timber, manufacture of lumber, plywood, veneers, wood packaging, railroad ties, woodwork for housing construction, furniture, woodenware, matches, wood chemicals, and pulp and paper products (including cardboard).



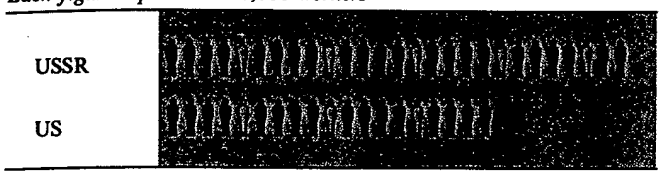


Soviet furniture (top). Loading timber in the Far East (left).

Wood Products

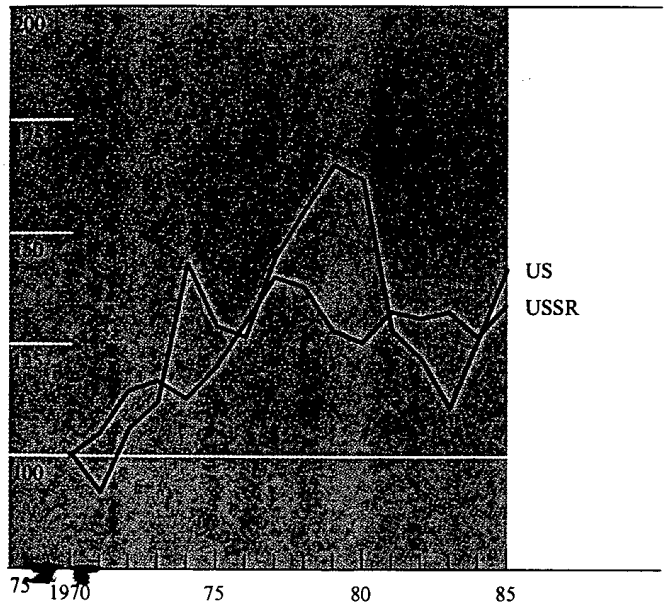
USSR-US: Employment, 1986

Each figure represents 100,000 workers



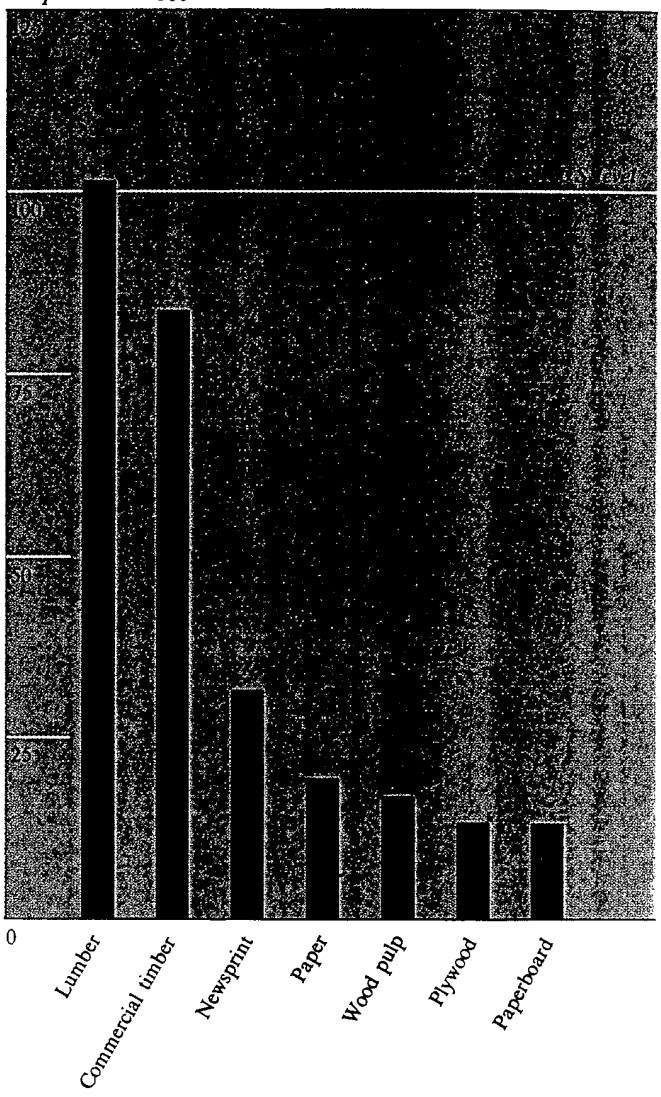
USSR-US: Investment, 1970-85

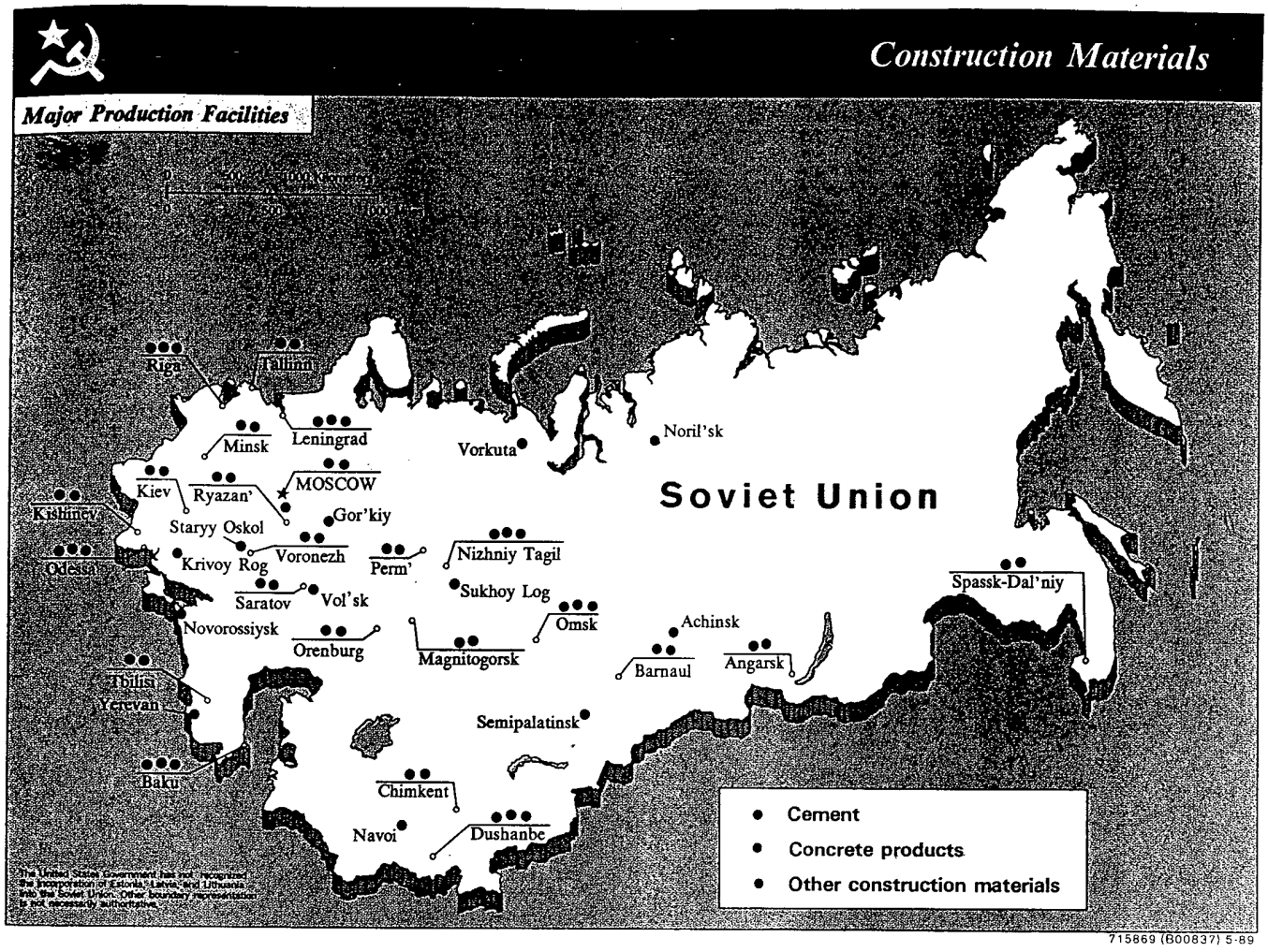
Index: 1970 = 100



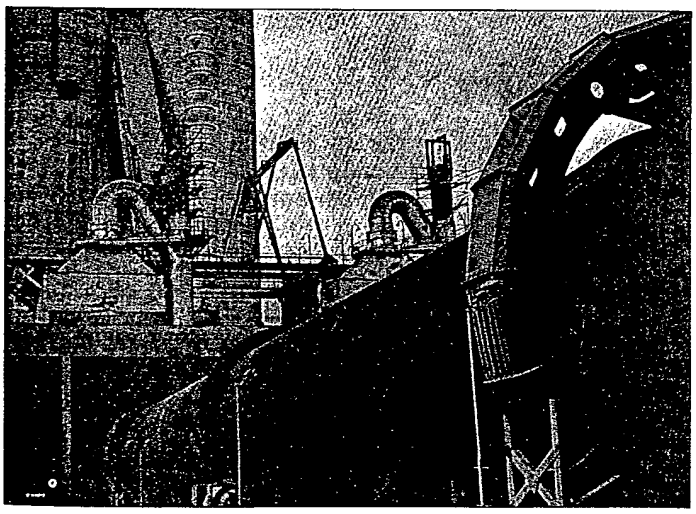
USSR: Production, 1986

US production = 100





715869 (600837) 5-89



Soviet-built cement plant in Hungary.

321637 4-89

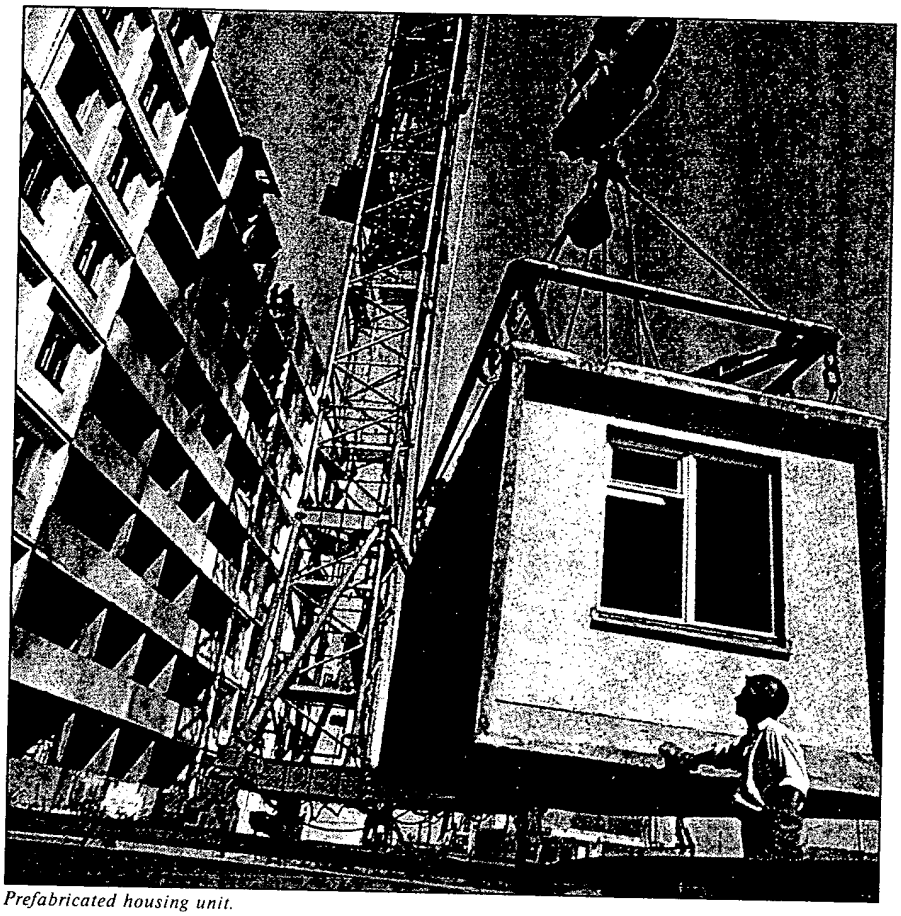
Construction Materials

Key Official

Sergey Voyennushkin
Minister since July 1985

■ *Ministry of the Construction Materials Industry*

Originally established in 1939. Disestablished in 1957 and reestablished in 1963 as a state committee. Renamed in 1965. Responsible for production of cement, precast concrete products, ceramic building materials, gypsum, roofing, insulation, and some glass products and for quarrying of some nonmetallic minerals.

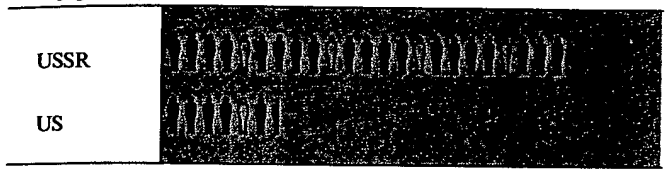


Prefabricated housing unit.

321638 4-89

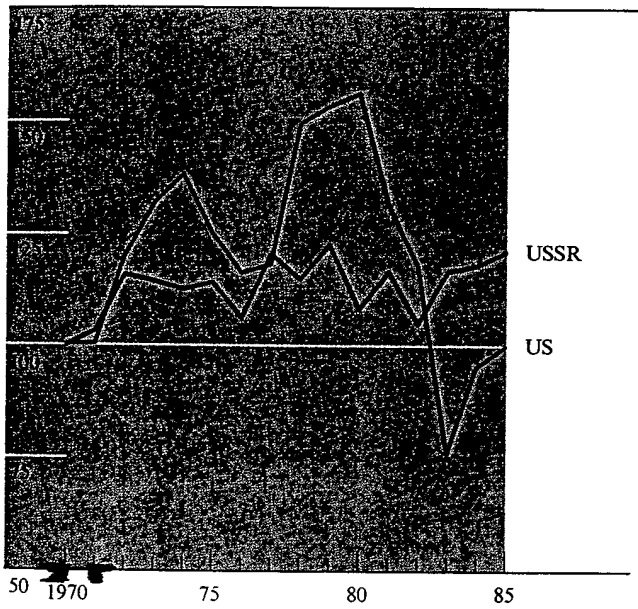
USSR-US: Employment, 1986

Each figure represents 100,000 workers



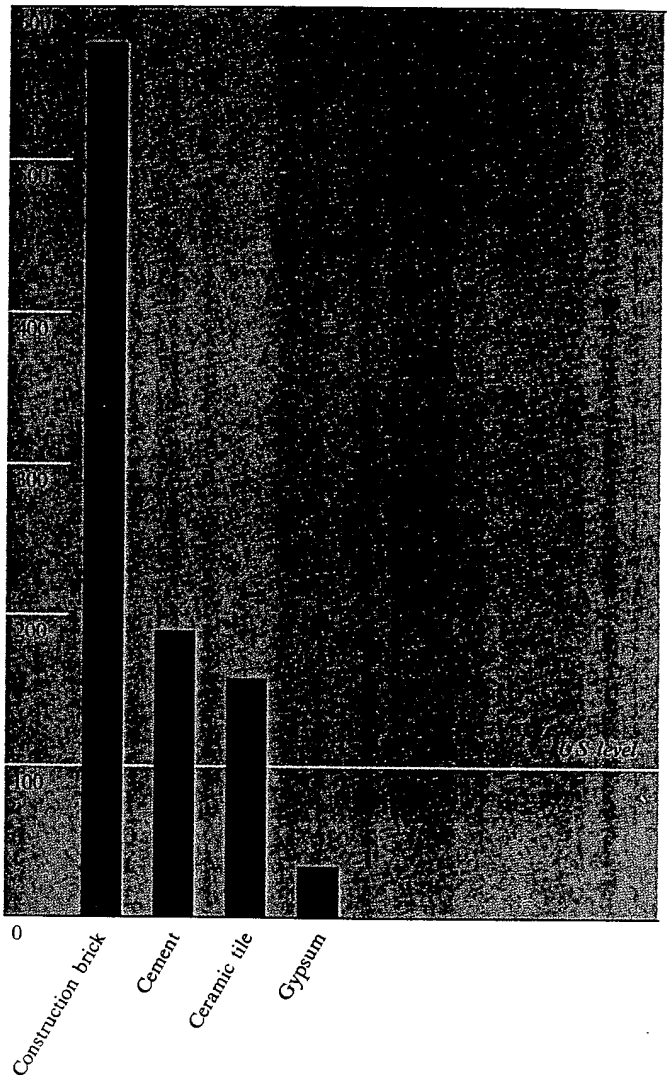
USSR-US: Investment, 1970-85

Index: 1970 = 100



USSR: Production, 1986

US production = 100



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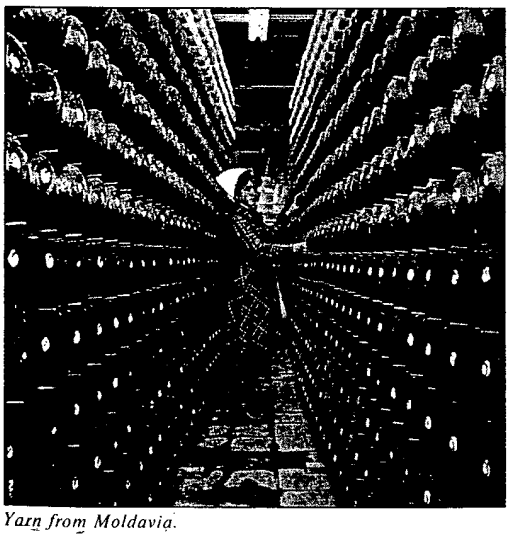
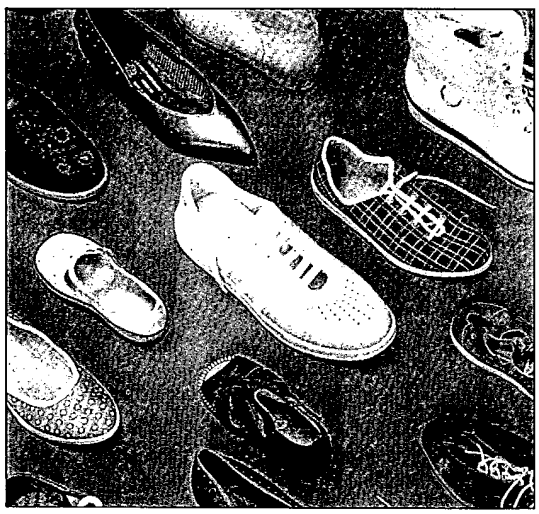


Yarn from Moldavia.



Footwear.

321639 4-89

Soft Goods

Key Official

Vacant

Ministry of Light Industry

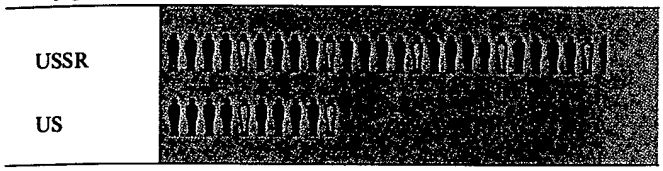
The State Committee for Light Industry was elevated to ministerial status in 1965. Responsible for the production of textiles, sewn goods, knitwear, hosiery, shoes and other footwear, carpeting, porcelain and earthenware, and leather and fur products.

Soviet fashions by Vyacheslav Zaytsev (top). Textiles from Tajikistan (left).

Soft Goods

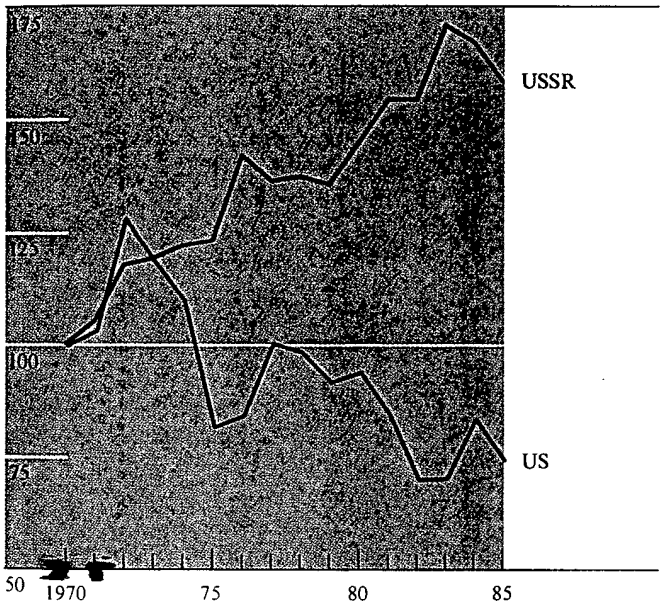
USSR-US: Employment, 1986

Each figure represents 200,000 workers



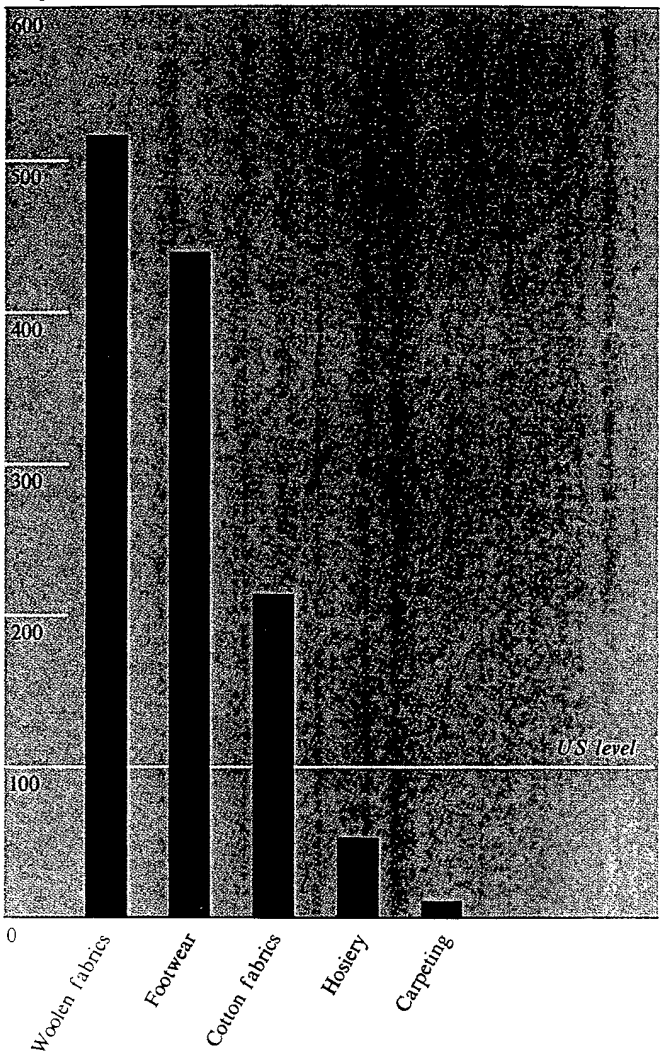
USSR-US: Investment, 1970-85

Index: 1970 = 100

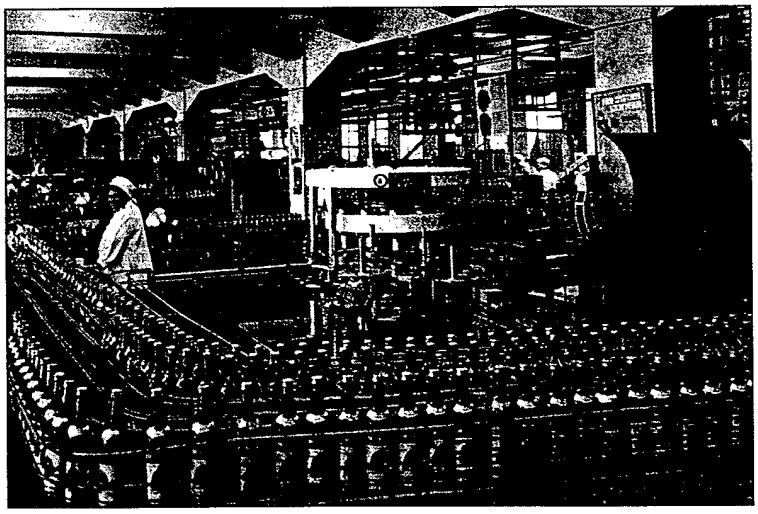


USSR: Production, 1986

US production = 100



Soviet berry jams.



Vodka bottling line at L'vov.

321641 4-89

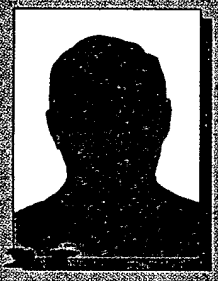
Processed Foods

Key Officials

Nikolay Kotlyar
Minister (since January 1987)

■ ***Ministry of the Fish Industry***

Created as the State Committee for the Fish Industry in 1962 and renamed the State Production Committee for the Fish Industry in 1964. Upgraded to ministerial status in 1965. Responsible for the catching and processing of fish and other marine life in inland waterways, coastal areas, and maritime waters. Also participates in overseas joint ventures, including some with the United States.



Vacant

■ ***State Commission for Food and Procurements***

Created in April 1989 to replace the State Agroindustrial Committee (Gosagroprom). The new commission is tasked with developing broad agroindustrial, land reclamation, and water resource policy, working with other state agencies to manage centralized stocks of important food and other agricultural raw materials and the introduction of new technology into all stages of food production; carrying out social policy in rural areas; and directing

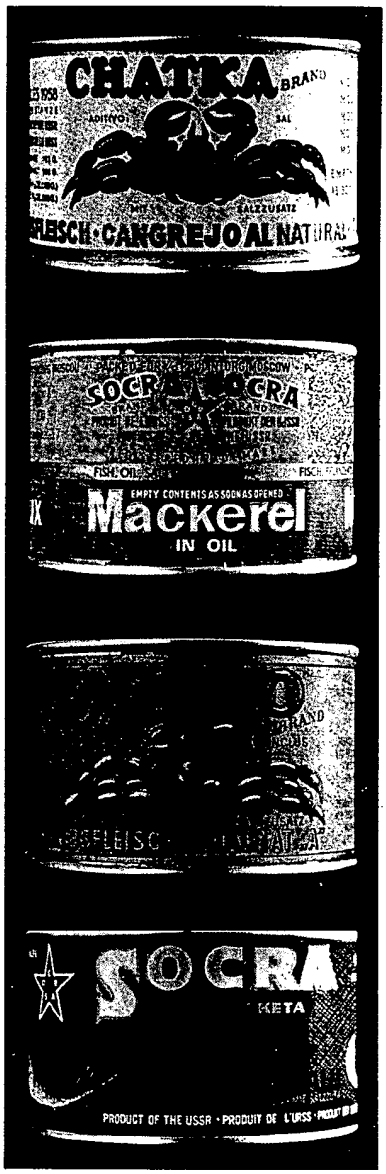
No photo available

Aleksandr Budyka
Minister (since April 1987)

■ ***Ministry of Grain Products***

Originally established from parts of the Ministry of Agriculture in 1953. Renamed the Ministry of Procurement in 1969 and the Ministry of Grain Products in December 1985. Oversees production of nearly all grain and macaroni products.

the agroindustrial sector's foreign relations. Responsibilities of Gosagroprom that dealt with day-to-day farm management, food-processing enterprises, and the trade network have been transferred to the republic level.

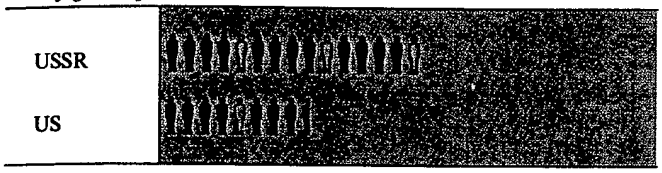


Canned fish.

321642 4-89

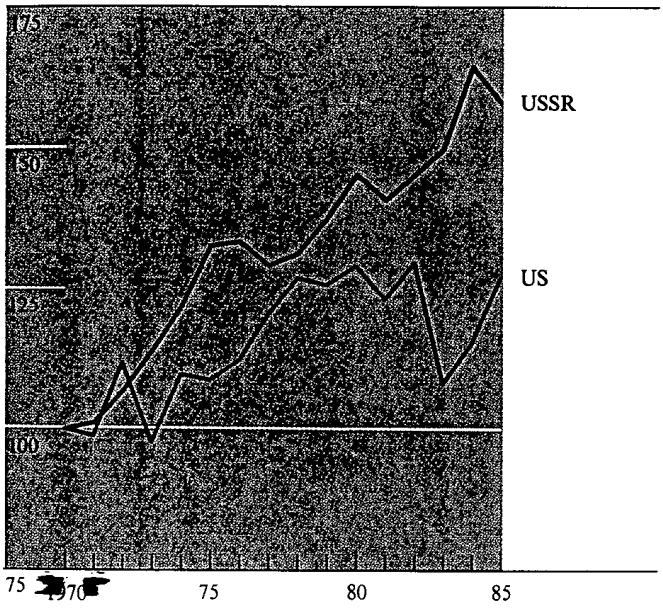
USSR-US: Employment, 1986

Each figure represents 200,000 workers



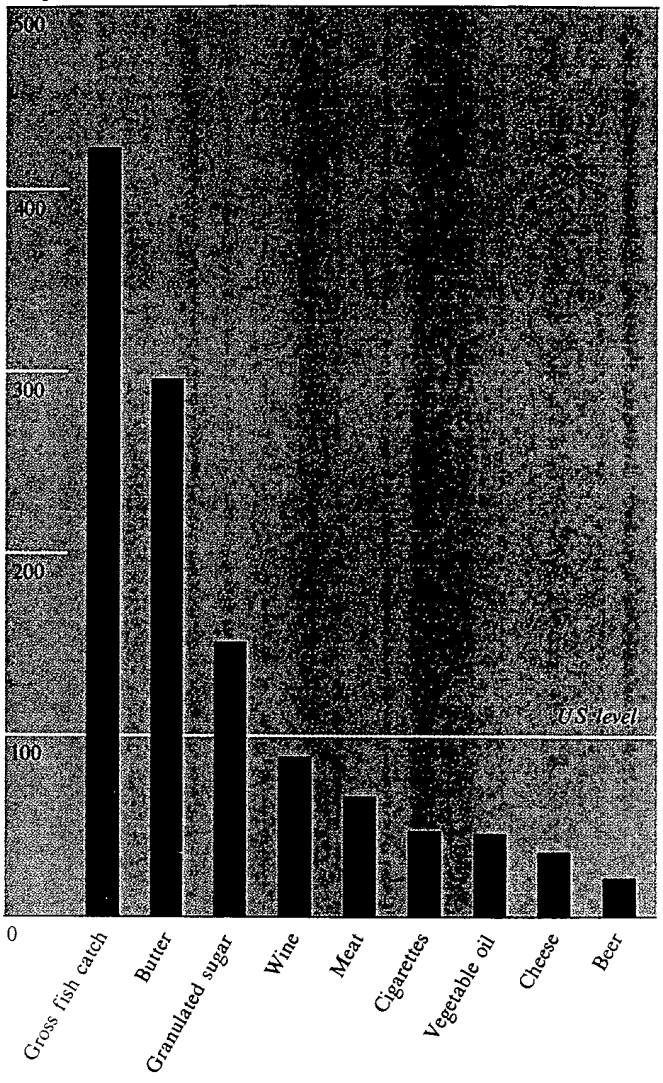
USSR-US: Investment, 1970-85

Index: 1970 = 100



USSR: Production, 1986

US production = 100



Appendix

A Regional Perspective of Soviet Industry

Although most of the USSR's major heavy industrial plants are located in the European part of the Russian Republic (RSFSR) and the Ukraine, other Soviet republics are important centers for particular industries (see table). The Soviet State Committee for Statistics published the following summary of industrial activity in each of the 15 republics in 1987.

The *RSFSR* produces the majority of the products of the machine-building and chemical industries. More than four-fifths of the country's turbines, generators, and petroleum equipment and two-thirds of the forge-pressing machinery and chemical equipment are produced in the republic. The republic's enterprises make half of all Soviet metal-cutting machine tools and are the largest producers of agricultural equipment. All of the grain-harvesting combines and 49 percent of the tractors are manufactured there. The republic's chemical industry produces about 50 percent of the nation's mineral fertilizers and chemical fibers. The fuel and energy complex of the RSFSR provides more than 90 percent of the USSR's crude oil, almost three-fourths of its natural gas, and 63 percent of its electricity.

The *Ukrainian SSR* is the USSR's most important fuel-metallurgical base. A sizable share of the nation's coal and nearly half of the iron ore is mined here. More than one-third of all Soviet rolled steel products are produced in the republic. The Ukraine is also a large center for the machine-building and chemical/petrochemical industries. It produces almost half of the country's metallurgical equipment and electric power transformers, all of the sugar-beet-harvesting machines and corn-harvesting combines, a large amount of metal-cutting machine tools and tractors, as well as other electrical and transport equipment.

Important centers for the machine tool, automotive, tractor, and electronics industries are located in the *Belorussian SSR*. Belorussia produces every eighth tractor made in the USSR, every eighth metal-cutting machine tool, and 64 percent of the silage- and fodder-harvesting combines. Half of all the country's potassium fertilizers are produced there. The output of consumer goods is growing: every fourth motorcycle and every sixth color television set is manufactured in the republic.

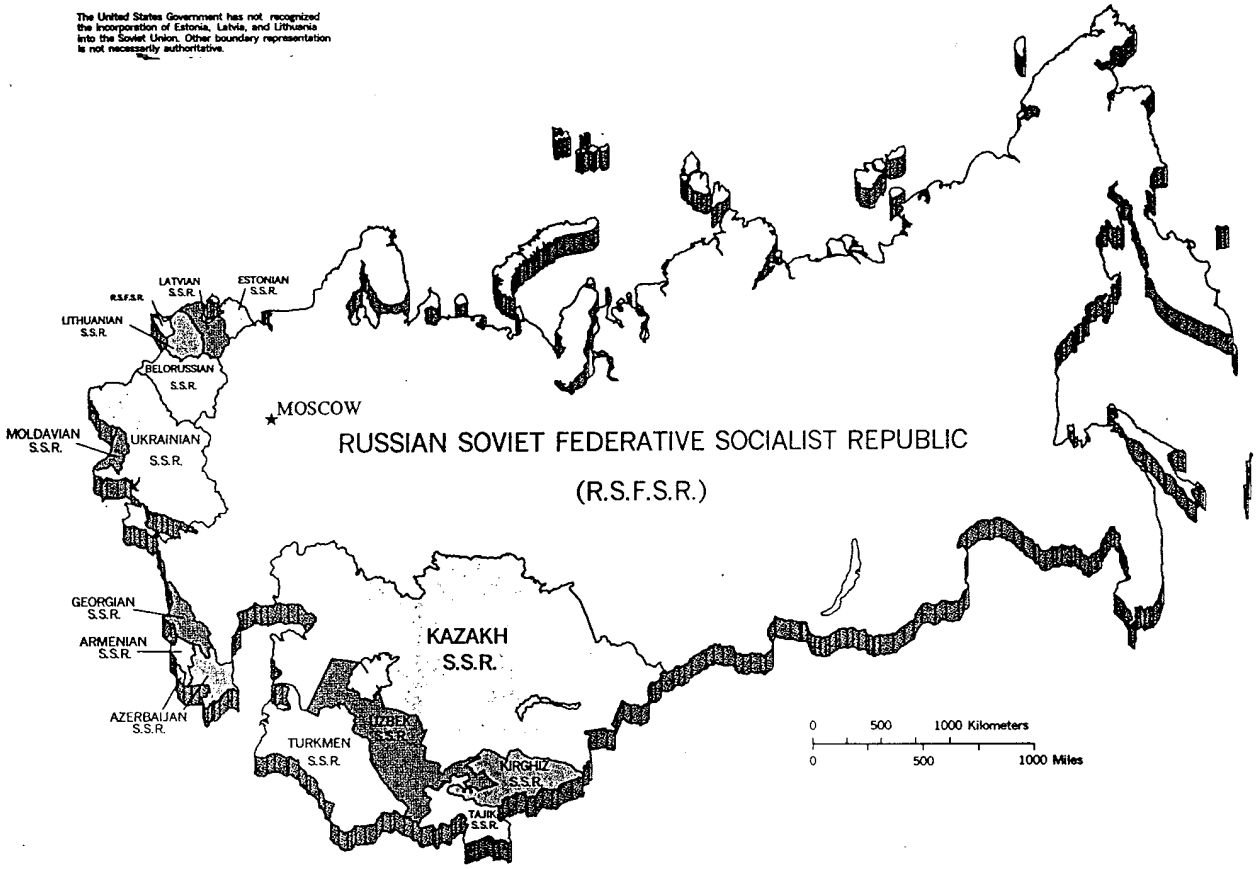
The *Uzbek SSR* is becoming a major center for the ferrous and nonferrous metals, energy, and chemical/petrochemical industries. Machine building and tractor production have begun, and almost all types of machinery for cultivating and harvesting cotton are produced in the republic. Machinery for cotton-cleaning plants and spinning factories as well as excavation, chemical, hoisting, and transport equipment are also made there. The light (soft goods) and food industries have also greatly developed.

The *Kazakh SSR* has rich reserves of natural resources, on which a large industrial base has been created. The republic now produces more products than all of prerevolutionary Russia. Kazakhstan is one of the country's major centers of steel production, and the republic occupies third place in the mining of coal. New oil- and gas-producing regions on the Mangyshlak Peninsula are being developed.

The *Georgian SSR* has a modern multisectoral industrial base, which includes ferrous metallurgy, various machine-building sectors, chemicals and petrochemicals, cement, and textiles. More than 20 percent of the country's manganese ore is produced in Georgia.

Today the *Azerbaijan SSR* has not only oil and gas but also ferrous and nonferrous metallurgy, chemical and petrochemical, petroleum machine building, electrical, instrument-making, and light and food industries.

Figure 7
Soviet Republics



Unclassified

715872 (B00837) 5-89

The highest rates of growth of industrial production have occurred in the *Lithuanian SSR*. In five days, the industries of Lithuania produce as many products as were made in the republic in the entire year of 1940. Machine building has undergone great development, as have the chemical/petrochemical, wood-processing and paper, peat, and light and food industries.

The *Moldavian SSR* is now one of the country's most important centers of the food-processing industry. It occupies third place among all the republics in the production of juices and preserves and fourth place in the manufacture of granulated sugar and vegetable oils.

Electrical and transportation equipment are important products of the *Latvian SSR*. In 1986, every fifth tram car and every second milking machine bore the mark of Latvian plants. The production of consumer goods is also developing rapidly: the republic's enterprises produce every fifth radio receiver, every second moped, and every eighth washing machine.

In the *Kirghiz SSR* oil, natural gas, and coal are extracted, and ferrous metals, instruments, electric motors, and metal-cutting machine tools are produced. The republic also makes machinery for

Table 5
USSR: Largest Producers of Major Industrial Products, 1986

Electricity	RSFSR (63%), Ukraine (17%)
Oil	RSFSR (91%)
Natural gas	RSFSR (73%), Turkmeniya (11%)
Coal	RSFSR (54%), Ukraine (26%)
Iron ore	Ukraine (48%), RSFSR (42%)
Crude steel	RSFSR (57%), Ukraine (35%)
Steel pipe	RSFSR (60%), Ukraine (35%)
Electric generators	RSFSR (87%)
Metalworking machine tools	RSFSR (62%), Ukraine (16%), Belorussia (11%)
Chemical equipment	RSFSR (65%), Ukraine (28%)
Agricultural machinery	RSFSR (56%), Ukraine (25%), Kazakhstan (10%)
Tractors	RSFSR (49%), Ukraine (24%), Belorussia (13%)
Automobiles	RSFSR (87%), Ukraine (13%)
Television sets	RSFSR (49%), Ukraine (34%)
Mineral fertilizers	RSFSR (51%), Belorussia (18%), Ukraine (16%)
Plastics	RSFSR (60%), Ukraine (15%), Belorussia (13%)
Commercial timber	RSFSR (92%)
Paper	RSFSR (85%)
Cement	RSFSR (60%), Ukraine (17%)
Reinforced concrete products	RSFSR (53%), Ukraine (15%), Kazakhstan (5%), Belorussia (4%), Uzbekistan (4%)
Window glass	RSFSR (61%), Ukraine (20%)
Textiles	RSFSR (66%), Ukraine (10%), Uzbekistan (5%)
Footwear	RSFSR (46%), Ukraine (23%), Belorussia (6%), Uzbekistan (4%)
Meat	RSFSR (49%), Ukraine (21%), Kazakhstan (7%), Belorussia (7%)
Granulated sugar	Ukraine (53%), RSFSR (31%)
Vegetable oil	RSFSR (35%), Ukraine (30%), Uzbekistan (18%)

livestock raising and fodder production and manufactures cement and precast ferroconcrete products. The light and food industries have also undergone great development.

The *Tajik SSR* has many sectors of industry, but the most important is electricity generation. The republic is second only to the RSFSR in its reserves of hydroelectric power. Tajikistan now produces as much electricity as was produced by all the country's power plants in 1951.

The *Armenian SSR* is a center for such machine-building industries as electrical, instrument-making, electronics, automotive, and machine tools. The chemical and petrochemical industries are also highly developed. Armenia is also an important area for the light and food industries.

In the *Turkmen SSR* the petroleum refining, chemical/petrochemical, natural gas, cement, glass, and food industries have been recently developed. The republic produces a sizable share of the nation's natural gas, sulfur, and cotton fibers.

Important centers of the electrical equipment and chemical/petrochemical industries are located in the *Estonian SSR*. The republic also produces oil shale, and the pulp and paper, soft goods, and food-processing industries are developing.

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All photographs (with the exception of those of the industrial ministers) are from *Soviet Export*, the Soviet foreign trade bimonthly magazine.