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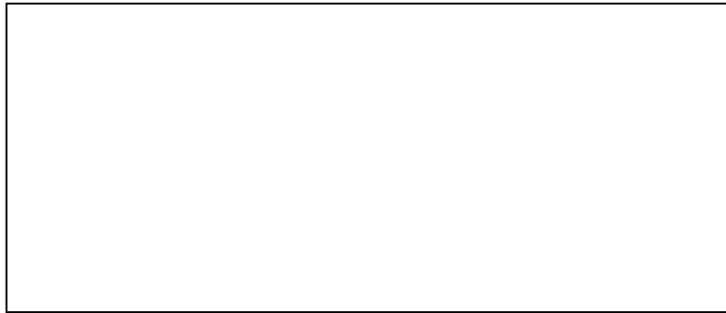
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Economic Development in the Soviet Republics, 1970-89

A Research Paper



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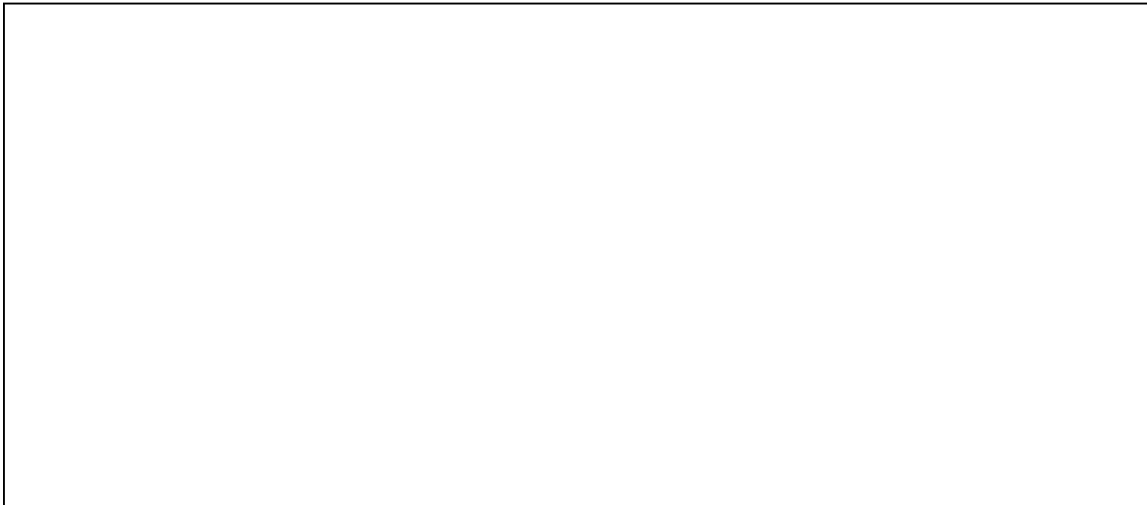
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Economic Development in the Soviet Republics, 1970-89

A Research Paper

This paper was prepared by [redacted]
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and queries are welcome and may be directed to
the Chief, [redacted] SOVA,
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Economic Development in the Soviet Republics, 1970-89

Summary

Information available as of 1 July 1990 was used in this report.

When Mikhail Gorbachev came to power in 1985, the Soviet republics differed greatly from each other in levels of economic development. During Gorbachev's more than five years in office, the gap between the richer and poorer republics increased as decentralizing economic reforms apparently favored the economies of better developed regions.

The gap in economic development between Soviet republics resulted from regional differences in natural resource endowments, uneven development, and sharp differences in population growth. Despite an avowed goal of diminishing regional economic disparities, Moscow's development policies in practice also played a role in increasing the gap. A review of investment, consumption, and government expenditures data by republic during the period 1970-85 demonstrates that Moscow chose to pursue national economic goals over regional parity, allocating resources where it believed they could be most productively utilized and not in order to systematically diminish economic disparities and deal with emerging regional economic problems. Since 1985, the USSR's continuing economic slowdown, growing energy requirements, and Gorbachev's economic policies have played an increasingly important role in regional economic development:

- *Demographic trends.* Although population growth in much of the industrial north has hovered at replacement levels, extremely rapid population growth in the southern Muslim republics has made it more difficult to improve levels of education and the quality and availability of jobs, housing, and medical care.
- *Economic slowdown.* The decline in the rate of economic growth, which began in the early 1970s, and the more recent burden of the budget deficit have made Moscow reluctant to allocate resources to the less productive, less developed regions.
- *Energy needs.* Increasing domestic energy requirements, the rising cost of energy extraction, and the need for hard currency from fuel exports have led Moscow to channel a growing share of investment into Siberia and the Far East, to the detriment of economic development in other regions.
- *Gorbachev's economic strategy.* Many of Gorbachev's programs, such as modernization, economic reform, and regional autonomy, have amounted to a "wager on the strong," which has meant a continuing flow of resources to the more developed republics.

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To gauge the growing development gap, we used a synthetic aggregate measure developed by a leading US Sovietologist. This indicator, called proxy GNP, combines data on investment, government expenditures, and consumption of food, housing, education, and other social needs, covering approximately four-fifths of what is included in national GNP accounts. Although proxy GNP is incomplete, it is probably a good indicator of changes in the relative economic standing of Soviet republics. According to this measure, since 1970 the development gap between the northern and southern republics has persisted and widened, and significant changes have occurred in the positions of individual republics:

- The *Baltic republics* lost their clear lead in some major economic indicators over the RSFSR during the pre-Gorbachev era because of the increasing priority given to energy resources and their own energy-poor status. Nevertheless, Estonia, Latvia, and Lithuania maintained their favored position among the peripheral republics, in part, because of their relatively high labor productivity.
- The *RSFSR* benefited from the Soviet leadership's increased investment in the energy and machine-building sectors and from the campaign to modernize and expand existing facilities. Increased investment did not always translate into higher living standards, however, and substantial inequalities persisted within the republic, which includes some of the richest and some of the poorest regions in the Soviet Union.
- *Belorussia's* and *Moldavia's* economies did well in the pre-Gorbachev era, but, after 1985, while Belorussia continued to be favored in terms of investment because of its well-diversified industrial base and faster growing labor productivity, Moldavia, with an economy dominated by agriculture and food processing, did not fare as well. Indeed, Moldavia's vineyards and wineries were hard hit by Gorbachev's antialcohol campaign, which seriously damaged the republic's economic growth.
- The *Ukraine*, once the country's key coal-producing region, suffered as Moscow shifted investment toward other energy sources. Moreover, fewer resources were spent on the social sector, resulting in growing public discontent over pollution and the quality of life.

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- The three *Caucasian republics*, although following quite different patterns of development, remained well below the national average in terms of per capita investment and consumption during the pre-Gorbachev era; after 1985 their economies lost further ground because of the antialcohol campaign, the Armenian earthquake, and ethnic unrest.
- *Central Asia's* slow investment growth, low labor productivity, water shortages, and rapid population growth conspired to keep it dead last in economic development during the period 1970-89. The consequent unemployment and poverty have been major catalysts for ethnic unrest.

These differences in the economic development of the republics are fueling ethnic tensions and strengthening the centrifugal forces that threaten the Soviet Union's continued existence as a multinational state. Gorbachev has few promising options for narrowing the developmental gap. At a time when increasing supplies of consumer goods and reducing the massive budget deficit are the leadership's top economic priorities, expensive regional development projects are beyond Moscow's means. Instead, Gorbachev can look only to greater regional autonomy and increased reliance on market forces as ways of encouraging and enabling the republics to meet their own development needs. Such options, however, also run the risk of strengthening the separatist tendencies Gorbachev is trying to counter.

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Contents

	<i>Page</i>
Summary	iii
Scope Note	ix
Republic Economic Development, 1970-85: Gorbachev's Inheritance	1
Investment	2
Consumption	5
Proxy GNP	7
Republic Economic Development, 1986-89: Gorbachev's Responsibility	7
Gorbachev's Policies	7
Development Trends	10
Republic Economic Development in the 1990s: Gorbachev's Options	13
Greater Regional Autonomy	15
Greater Reliance on Market Forces	15
Implications of Gorbachev's Options	16
Appendix	
Methodology for Calculating Proxy GNP	17

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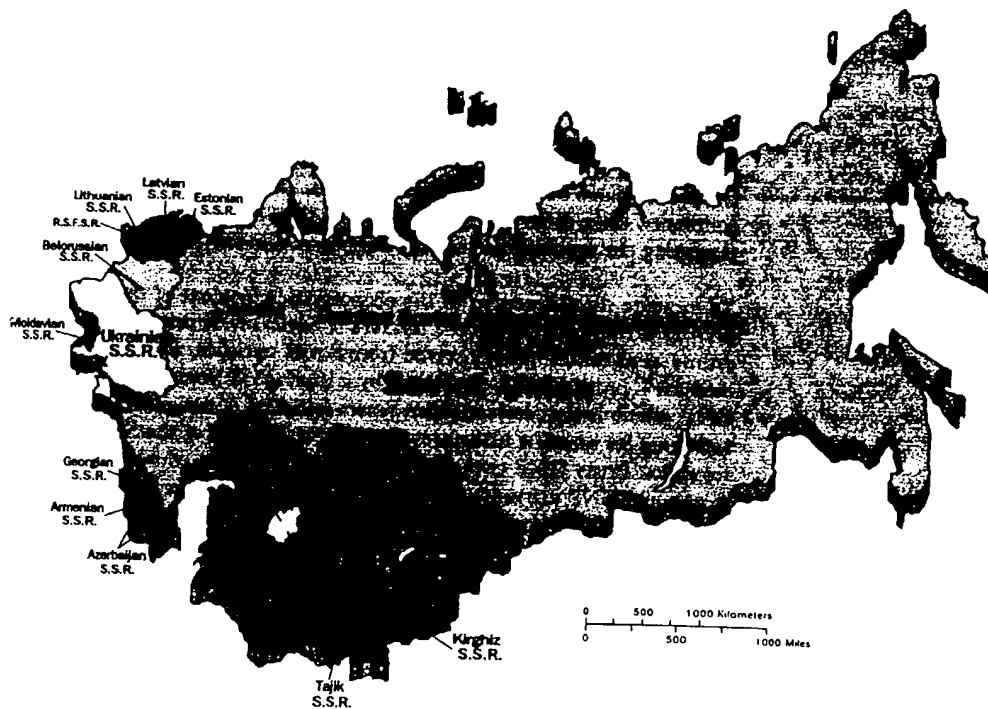
The ethnic animosities and nationality unrest that currently confront the Soviet leadership are rooted in political, economic, and social tensions of long historical standing and great complexity and are best understood by examining all their major causes. This Research Paper is intended to contribute to such an understanding by examining one of the principal sources of tension between nationalities: the uneven economic development of the Soviet Union's republics. It reviews the major differences among the republics with respect to the level and distribution of investment and the consumption of goods and services in the years leading up to 1985, when Gorbachev came to power. It then examines the impact of Gorbachev's policies on these differences and the options the Soviet leadership has for managing the republics' economic development in the 1990s.

To measure the differences in the economic development of the republics over time, the paper relies on a mixture of Soviet investment statistics, CIA estimates of consumption derived from Soviet statistics, and a synthetic measure—proxy GNP—developed by a leading US Sovietologist. Proxy GNP, which is also derived from Soviet statistics, is designed to serve as a surrogate for separate estimates of the GNP for each of the Soviet republics. Proxy GNP covers approximately four-fifths of what is included in national GNP accounts, omitting items such as outlays for municipal services, inventory changes, and net exports, which we are currently unable to allocate among the republics. Total defense expenditures for each of the republics are also excluded from the measure, except to the extent that these outlays are included in other categories such as investment for research and development.

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The United States Government has not recognized the incorporation of Estonia, Latvia and Lithuania into the Soviet Union. Other boundary representation is not necessarily authoritative.

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Economic Development in the Soviet Republics, 1970-89

Republic Economic Development, 1970-85: Gorbachev's Inheritance

When Mikhail Gorbachev came to power in 1985, he assumed command of a nation composed of 15 member republics that shared a common economic system but had vastly differing levels of economic development:

- The *RSFSR* was the largest and most powerful, but not the most prosperous, of the republics. Its highly industrialized European region had an old—and, in some cases, antiquated—manufacturing base. The Far East and its northern regions were the Soviet Union's primary source of new deposits of energy and raw materials, but living conditions there were spartan, and development was hindered by high transportation costs and the difficulty of attracting and maintaining a labor force.
- The *Ukraine*, a key agricultural region and a declining center of heavy industry and coal production, had suffered from Moscow's shift in investment away from coal and toward new sources of energy in other republics. The dominance of energy-intensive industries such as iron, steel, heavy engineering, and chemicals had caused power shortages and severe pollution in the densely populated region. The republic's manufacturing centers, like those of the *RSFSR*, were badly in need of modernization.
- *Belorussia's* economy performed well, improving its position significantly in relation to the rest of the country given rapid growth in labor productivity and investment and a diversified manufacturing base. Nevertheless, living standards in the republic did not catch up to those in the *RSFSR* and the neighboring Baltic region.
- Improvement in *Moldavia's* economy was slower. The republic remained a heavily agricultural economy, similar to the rural areas of the *Ukraine*. Most of its industry was devoted to the processing of farm products and the production of wine.
- The *Baltic region* (Estonia, Latvia, and Lithuania) was the most productive and prosperous area of the Soviet Union, but living conditions had begun to deteriorate amid concerns about overdevelopment, pollution, and the influx of Russian workers.
- The republics of the *Caucasus* (Georgia, Armenia, and Azerbaijan) fell between Central Asia and the European regions of the north in terms of economic development. Population growth in the *Caucasus* was slower and industry more advanced than in Central Asia, but the region was developing a sizable unemployment problem.
- *Central Asia* (the Uzbek, Turkmen, Kirghiz, and Tajik republics and the southern Kazakh republic) had an economy dominated by cotton. Its rapidly growing population shared many of the problems of Third World countries—low levels of education, poor public health standards, and unemployment—which were perpetuated by relatively low rates of investment. The northern Kazakh republic, a grain-producing region with a largely Slavic population, more closely resembled parts of the *RSFSR* than Central Asia.

The primary reasons for these economic disparities were unequal resource endowments and sharp regional variations in population growth rates. Soviet regional development policy reinforced these differences, even though its stated goal was to channel resources from the more to the less developed regions. While

¹ 1970 was chosen as the starting point because the last major CIA study on this topic focused on regional development in the 1960s.

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substantial progress was made toward equalization in the early Soviet period, in the postwar era this goal was superseded by other national priorities, including reconstruction of war-devastated industries, modernization of existing plant and equipment, the rapid buildup of the defense sector, and increased energy production. The marked slowdown in Soviet economic growth in the 10 years before Gorbachev came to power made resource allocation decisions even more difficult.

The rigid, highly centralized Soviet system of economic management also generally neglected regional considerations in planning and resource decision making. Central ministries directed most manufacturing industries, while national and republic officials shared responsibility for agriculture, light and food industries, and social infrastructure. Only enterprises that produced goods for the local economy from local resources were completely under republic authority. As a result, factories were often built without regard for the availability of local labor, without adequate housing or social services for the work force they attracted from other regions, and with little concern for the environment.

A review of investment, consumption, and government expenditure data by republics during 1970-85 demonstrates that the regime chose to pursue national economic goals over regional parity. Moscow allocated resources to where it believed they could be most productively utilized and not in order to systematically diminish economic disparities and deal with emerging regional economic problems.

Investment

During 1970-85, for example, Moscow focused investment resources primarily on industrial modernization and energy extraction and on those regions that could best fulfill these national goals (see figure 1). Instead of seeking to reduce economic differences among the republics, central planners emphasized regional specialization and economic interdependence. As a result, many parts of the country developed lopsided economies focused on one or two sectors. Moreover, peripheral republics became increasingly dependent on economic ties to the rest of the country.

The RSFSR. The RSFSR was the chief beneficiary of this investment strategy, absorbing a somewhat larger share of annual Soviet investment by 1985 than it had in 1970 and taking the lead in per capita investment away from the Baltic republics. The RSFSR's increasing claim on investment resources resulted largely from the Soviet Government's commitment to exploiting energy and mineral resources in the Far East and Siberia and from the rising cost of energy extraction. The RSFSR also benefited from the campaign to shift investment from new construction to the modernization and expansion of existing facilities because much of the Soviet Union's manufacturing base was located on its territory.

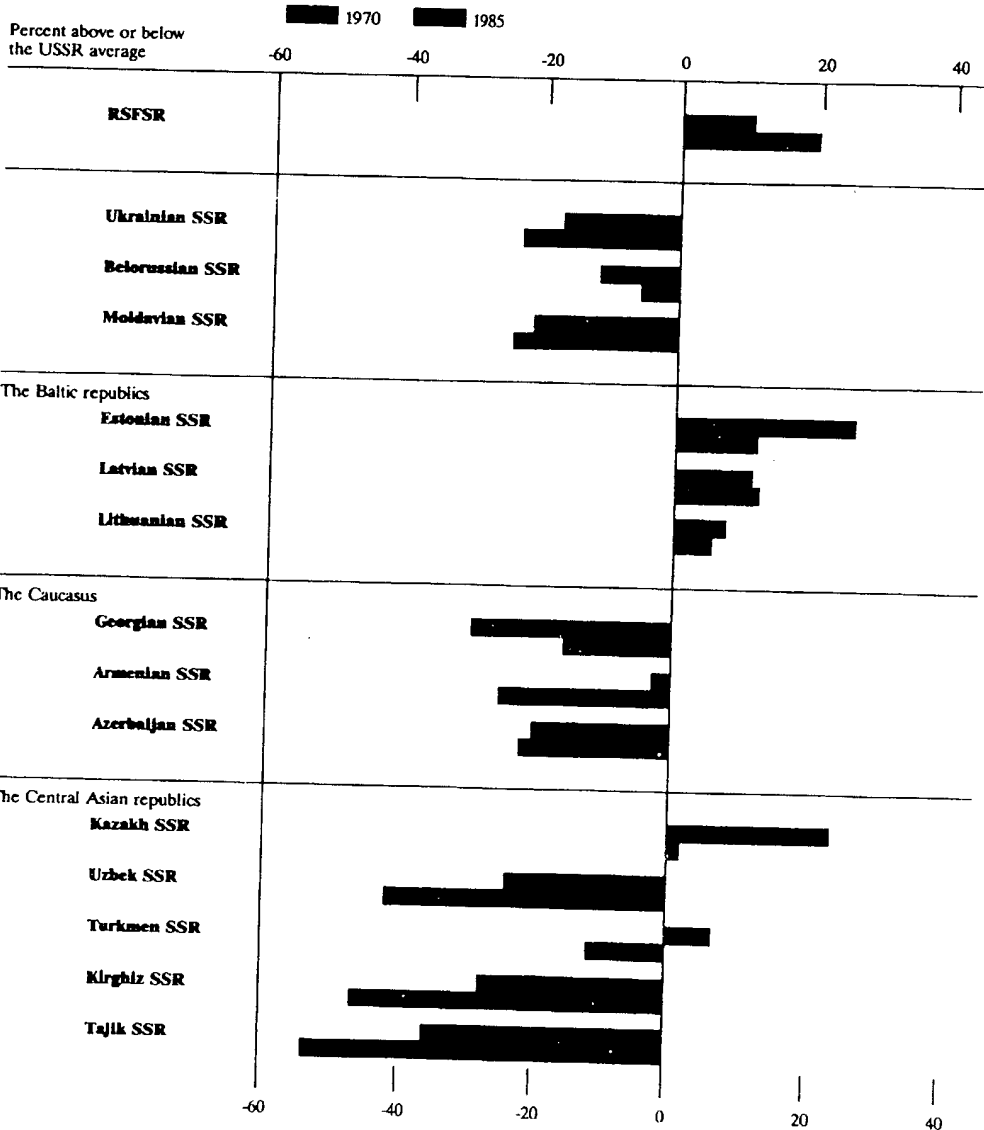
The Ukraine. Between 1976 and 1985 the Ukraine, an aging manufacturing region with a diminishing resource base, experienced a larger decline in its share of Soviet investment—from 16.1 percent to 14.0 percent—than any other Soviet republic. This decrease was due largely to the decline of coal, one of the Ukraine's most important products, as a source of Soviet energy. Coal accounted for 35.4 percent of total Soviet energy production in 1970 and for only 22.8 percent in 1985. During the same period, the shares of total Soviet investment going to Ukrainian energy, chemicals, and petrochemicals, light and food industries, and ferrous metallurgy declined as well. The republic, however, retained a diversified industrial base with a growing emphasis on machine building. Investment in the machinery sector increased as a share of total investment in the Ukraine between 1970 and 1985.

Belorussia. In Belorussia, growth of per capita investment was rapid during 1971-85. Belorussia lacked its own sources of energy and key raw materials for industry, but its proximity to population centers in the European USSR and Eastern Europe, well-developed rail system, and relatively well-educated, productive work force made it an attractive site for industrial development, including enterprises producing small-scale consumer goods, computers, and electronics.

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Figure 1
USSR Republics: Levels of Per Capita Investment,
1970 and 1985



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Annual industrial output grew faster in Belorussia than in any other republic due to rapid urbanization as well as rapid growth in labor productivity and investment, and the republic became a net exporter of industrial products. Despite urbanization, Belorussia's agricultural sector remained strong—the republic continued to be a net exporter of key food products, including meat, milk, eggs, flour, and potatoes. []

Moldavia. In Moldavia, a densely populated region where agriculture dominated the economy, per capita investment was slightly lower than the national average. Investment funds were concentrated in the processing of agricultural products, allowing the export of significant amounts of sugar, vegetable oil, canned fruits and vegetables, and wine to other republics. Slow development in the industrial sector, however, left the republic with too few jobs for its growing population. []

The Baltic Republics. The Baltic region, which had the highest levels of per capita investment in the Soviet Union in 1970, fell behind the RSFSR during 1971-85 due to the increasing priority given to energy by Soviet planners and the regions' lack of significant energy reserves. Nevertheless, with its ports, well-educated work force, and strong work ethic, the Baltic region continued to attract higher per capita investment than the other peripheral republics. Moreover, rather than being concentrated in one or two sectors, investment was targeted at a range of industries, giving the region a manufacturing base that was diversified by Soviet standards, with well-developed consumer goods and electronics industries. The period 1970-85 also saw the development in the region of oil shale mining and chemical plants based on local deposits of potash, phosphates, and salt—industries blamed by the local populace for high levels of pollution. []

The Caucasus. Per capita investment in the Caucasus as a whole remained well below the national average during 1970-85. Investment growth in the region's republics, however, varied greatly. Growth in investment was rapid in Georgia as the republic—which had been a largely agricultural economy—experi-

enced impressive development of its industrial base. In contrast, investment growth was low in Armenia, where industry was already well established. Here, funds were channeled into the expansion of more advanced sectors of industry, particularly machine building. Investment growth was also above average in Azerbaijan, where the rising cost of extracting Caspian oil soaked up funds. The republic's economy remained relatively underdeveloped, however, and investment focused overwhelmingly on agriculture and energy. []

Central Asia. Investment in Central Asia during 1970-85 did little to develop the region's manufacturing base. Indeed, Central Asia fell further behind the other republics in investment allocations during 1970-85 in terms of per capita investment and its share of total Soviet investment. These trends reflected a rate of population growth roughly three times the national average as well as Moscow's reluctance to commit more resources to an area that offered poor returns on investment—labor productivity in Central Asia was the lowest in the country, and rampant corruption among local officials regularly siphoned off funds. Moscow-based ministries were also reluctant to build new enterprises in the region because of the lack of skilled labor, poor labor discipline, and low quality of local production. As a result, these republics remained largely colonial economies based on raw materials² and agriculture, primarily cotton in the south and grain in northern Kazakh SSR. The dominance of cotton in Uzbek, Turkmen, Kirghiz, and Tajik agriculture contributed to declining productivity and growing environmental problems. Despite high levels of investment in agriculture, increasing soil salinity from poor irrigation methods, failure to improve fertilizer and pesticide quality, and repeated plantings of cotton on the same land reduced productivity. []

² Industrial development has focused on capital-intensive extractive industries, including oil, gas, and nonferrous metals such as lead and zinc ores, tungsten, and gold. []

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Consumption

The gap in living standards among Soviet republics widened during the period 1970-85 (see figure 2). Republics with lower-than-average rates of population growth and higher-than-average growth in investment—Georgia, the RSFSR, and Belorussia—were able to spend more on social needs and made more progress in improving living standards. Most of the Muslim republics, in contrast, fell further behind the national average because of population pressures, growing problems in agriculture, and the small amounts of spending allocated to social programs.

Despite these differences, living standards in most of the country rose at a slow but steady rate during the 1970s. During the 1980s, however, most regions suffered a slowdown in consumption growth, and bitterness over economic inequalities magnified ethnic tensions as people grew increasingly angry over worsening shortages and lengthening queues. In the Baltic republics, for example, the indigenous population complained that Russian-dominated factories were providing migrant workers from the RSFSR and other regions with preferential access to housing and other goods and services. In Armenia, Azerbaijan, and Central Asia, a rapid rise in the number of young people generated sharp competition among ethnic groups for jobs, housing, and social services. Ethnic rivalries also intensified as access to higher education narrowed, unemployment grew, and housing shortages led to the emergence of shantytowns outside a number of major cities.

The RSFSR. The Russian Republic as a whole improved its living standard relative to other republics during 1970-85, but substantial inequalities among its regions persisted. Moscow and Leningrad had by far the best access to housing, consumer goods, child care, transportation, and cultural facilities because of their political and economic clout and their status as showcases of Soviet life for Western tourists. On the other hand, high investment in energy and raw materials extraction in Siberia and the Far East failed to significantly improve living standards in those harsh regions, where severe shortages of housing and amenities forced many to live in primitive conditions. The non-Russian autonomous regions also had a standard of living well below the RSFSR average.

Belorussia. Belorussia improved its overall economic position during 1970-85 and was able to translate its relatively good economic performance into higher living standards. By 1985 rapid urbanization and investment growth had helped push per capita consumption in Belorussia above the national average.

Moldavia. In Moldavia, where economic growth was much slower, per capita consumption remained slightly below the national average, although it improved somewhat in relation to other republics.

The Ukraine. The slowdown of investment in the Ukraine during 1970-85 left fewer resources to devote to the social sector. Over time, this development took its toll on Ukrainian living standards. During 1970-85, the Ukraine allotted only 27 to 28 percent of total investment to housing, health, education, and other social uses, as compared with 30 to 32 percent in the RSFSR. By 1985, per capita consumption in the republic was about 4 percent below the national average.

The Baltic Republics. By 1985, living standards in the Baltic republics were still well above the Soviet average, particularly in Estonia, but the size of the Baltic advantage had diminished. Nevertheless, relatively large investments in social infrastructure during 1970-85, allowed the Baltic republics to retain the USSR's highest per capita levels of housing and other services.

The Caucasus. Trends in consumption varied greatly among the Caucasian republics. During 1970-85, Georgia enjoyed the greatest increase in its standard of living of any of the Soviet republics due, in part, to rapid urbanization. In Armenia, on the other hand, higher population growth and low growth in investment for social uses resulted in below-average growth in consumption.³ Although per capita consumption grew somewhat faster in Azerbaijan, the republic remained near the bottom of the rankings among

³ See appendix, table 11.

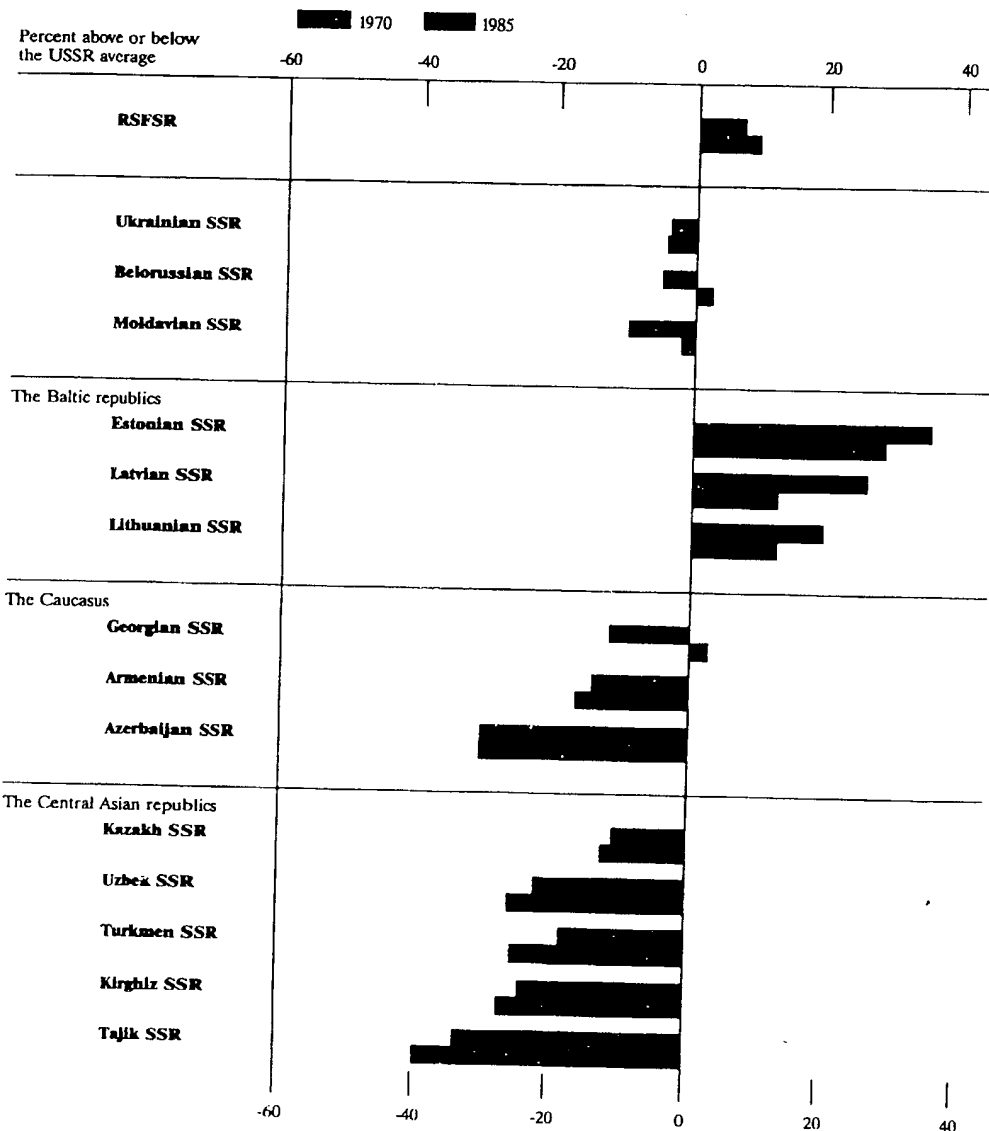
⁴ See appendix, table 9.

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Figure 2
USSR Republics: Levels of Per Capita Consumption,
1970 and 1985



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Soviet republics in terms of this and other quality-of-life indicators. Azerbaijan's failure to gain ground on the other republics was largely the result of higher-than-average population growth in the republic combined with extremely low investment for social uses.

Central Asia. During 1970-85, rapid population growth, growing environmental problems, and low investment in housing, schools, and hospitals took their toll on living conditions in Central Asia.⁵ This poor status was reflected in indicators of health and welfare:

- Infant mortality in some Central Asian republics in 1985 was double the USSR average.
- According to the Central Asian press, the incidence of infectious and parasitic disease and the number of congenital birth defects in the region rose during 1978-85.
- Educational levels and the quality of instruction in Central Asia were the lowest in the country; schools worked on two or three shifts and often lacked plumbing and electricity.
- Per capita housing availability remained the lowest in the country, and many homes lacked basic amenities.

Proxy GNP

To obtain an aggregate measure to gauge relative levels of economic development among Soviet republics, a new indicator, proxy GNP, was constructed. Proxy GNP, which includes data on investment, government expenditures, and consumption of food, housing, education, and other social needs, covers approximately four-fifths of what is included in national GNP accounts.⁶ It omits items such as outlays for municipal services, inventories, and net exports, which we are currently unable to allocate among the republics, and it does not include defense outlays—except to the extent that they are covered in other categories. Although the measure is incomplete, it provides a reasonable surrogate for separate estimates of GNP for the Soviet republics.

⁵ See appendix, tables 10 and 11 for data on infant mortality and housing.

⁶ See appendix for methodology used to calculate proxy GNP.

Per capita proxy GNP is probably an adequate indicator of the relative economic development of Soviet republics. During 1970-85, there were dramatic changes in this indicator for the republics, and the gap between winners and losers widened (see figure 3):

- The position of the RSFSR improved in relation to the rest of the USSR.
- Belorussia and Moldavia improved their positions with respect to the national average, while the Ukraine fell further behind.
- The Baltic republics, which had a clear advantage in 1970, had lost their leading position to the RSFSR by the 1980s.
- The position of two of the Caucasian republics, Armenia and Azerbaijan, deteriorated, while the position of Georgia improved.
- All of the Central Asian republics fell further behind the national average.

Republic Economic Development, 1986-89: Gorbachev's Responsibility

Gorbachev's Policies

Initially, Gorbachev did not make the reduction of economic inequalities among the republics a policy goal. Instead, he appeared to agree completely with Premier Ryzhkov's comment in 1987 that republics that "work better" should "live better" as well. In keeping with this view, he urged the republics to take responsibility for their own development rather than wait for handouts from the center. Ethnic violence fueled by unemployment subsequently led Gorbachev to moderate this public stance and call for efforts to narrow regional gaps in economic development. Nevertheless, he has pursued a set of economic policies that have clearly helped some republics more than others and has imposed sacrifices on some while leaving others unscathed.

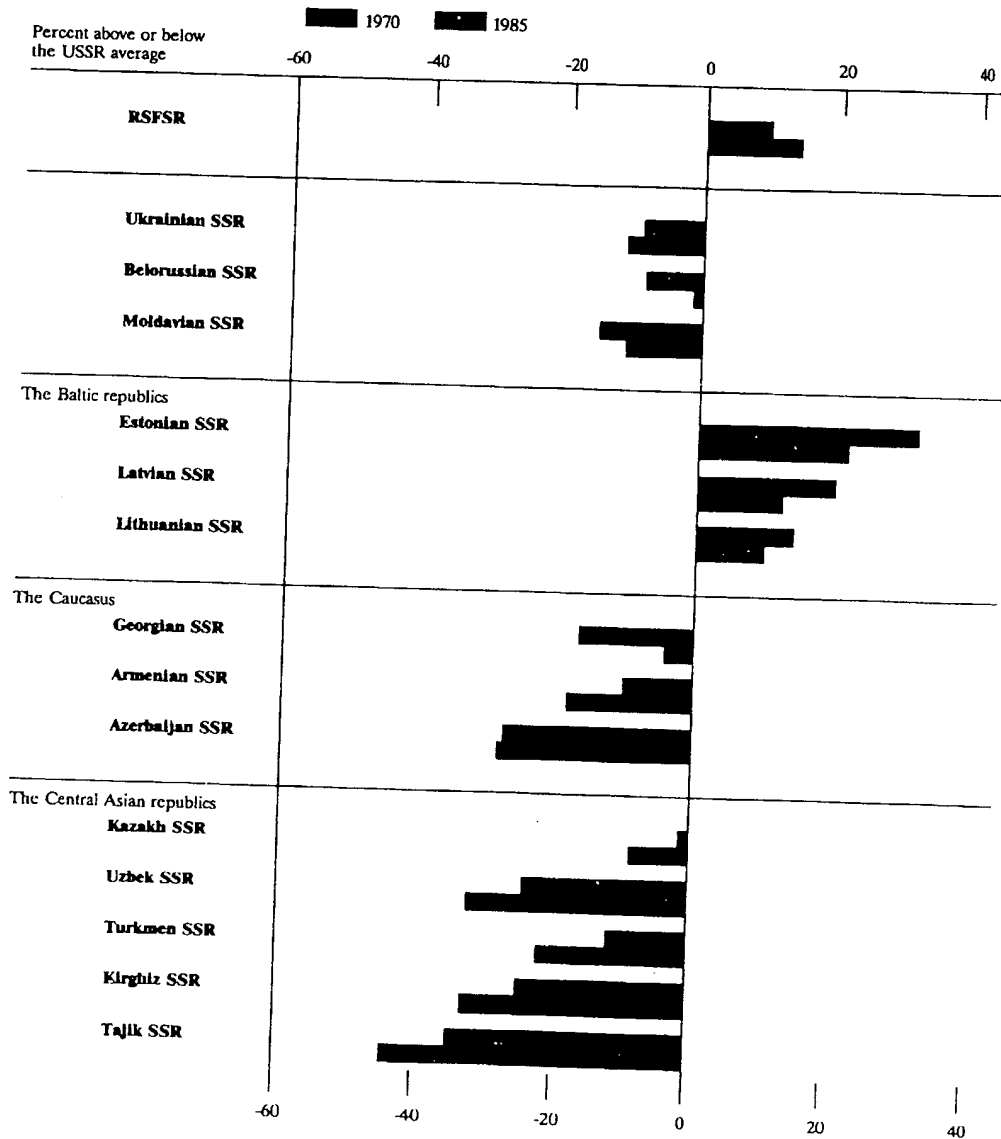
Modernization. Gorbachev's industrial modernization program, for example, has emphasized the renovation and retooling of industrial capacity, particularly in the machine-building sector. The inevitable result has

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Figure 3
USSR Republics: Levels of Per Capita Proxy GNP,
1970 and 1985



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been to direct more resources to the central manufacturing regions and leave a smaller share of investment funds for the development of Central Asia and much of the Caucasus.⁷ Republics such as the RSFSR have received an increasing share of total industrial investment, while—despite rapid growth in its working-age population and a growing need for jobs—Central Asia's share of total industrial investment declined slightly, from 12.2 percent in 1985 to 11.9 percent in 1988. From 1985 to 1987, moreover, investment in machine building declined in all but one of the Central Asian republics, as well as in Georgia and Armenia—a reversal of the earlier trend. []

The Antialcohol Campaign. The antialcohol campaign of 1985-88 was another example of a Gorbachev policy that had a differing impact on the various republics. Although doing little damage to production activities in other regions, it disrupted trade, agriculture, and industry in the wine-producing republics of Azerbaijan, Moldavia, and Georgia. These three republics, which account for half of Soviet grape production, had experienced a "wine boom" in the 1970s, when many wineries took advantage of high profits and abundant raw materials to step up production of cheap, low-grade wine. The sudden cutback in retail trade orders in 1985 drastically reduced revenues for many wineries, forcing them to borrow from the state bank to meet wage bills and cover other costs. Republic tax revenues also fell as wineries turned unprofitable. Such revenue losses were especially costly to Azerbaijan, which had funded half of its 3-billion-ruble budget from winemaking profits before the antialcohol campaign. The regime's recognition of these and other unintended effects of the antialcohol drive caused it to back away from the campaign in 1988. Still, much of the damage will take years to correct, and some regions may never regain the competitive advantage they once enjoyed in wine production. In Azerbaijan alone, for example, 35 percent of vineyards covering 70,000 hectares were uprooted during the height of the campaign. Recovery has been complicated by continuing unrest. []

⁷ See appendix, table 3. []

Economic Reforms. The decentralizing economic reforms introduced under Gorbachev also seem to have favored the economies of better developed regions. Established industrial regions, for example, have enjoyed a definite advantage under self-financing—a system that requires enterprises to pay for their own operations but allows them to keep a larger share of their profits for worker bonuses and investment. Industries in the more backward regions, on the other hand, are generally at a disadvantage under the self-financing system—largely because the existing pricing system favors manufacturing and processing industries over mining and fuel extraction. According to local officials, for example, there are almost no industries with high profit margins in Central Asia. Profitability also depends on the existing infrastructure of the region, access to supplies, and quality of equipment, labor, and management—all of which are better in the northern and western regions. []

The Gorbachev-sponsored wage reform, introduced in 1987, has also benefited some republics more than others. The reform was designed to raise the pay of the most skilled and productive workers, particularly those in more technologically advanced industries. Under the terms of the reform, however, pay increases have had to be financed by the enterprises themselves, a stipulation that has encouraged them to lay off excess workers. The most developed regions with higher productivity and more advanced industries have been better able to increase wages than the southern republics. Thus far, wages have increased most rapidly in Belorussia—which has the country's fastest growing labor productivity—Latvia, the RSFSR, and Lithuania. The smallest increases have come in the Muslim republics, which, recognizing the probable negative impact of the reform, were slow to introduce it. According to the Soviet press, by May 1988 the share of workers on the new wage system was only about 25 percent in Azerbaijan and Uzbekistan, as compared with 98 percent in Estonia and 75 percent in Lithuania. Despite the slow implementation of wage reform, the fact that the measure encourages enterprises to lay off excess labor and mechanize manual jobs is reportedly exacerbating the unemployment problem in Central Asia. []

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The campaign to promote individual and cooperative labor activity in order to increase consumer goods and services has also reinforced regional economic inequalities because of regional differences in implementation. In particular, the Baltic republics—already among the USSR's most prosperous—have taken advantage of privatization to a greater extent than have other regions of the country. Although employment in cooperatives still accounts for a small percentage of the work force in these republics, growth in the number and type of cooperatives has been rapid, and public reception of increased private activity has been positive. Increased privatization has aroused resentment and suspicion in other parts of the country, particularly in the Slavic republics and parts of Central Asia. Rather than being welcomed for providing much-needed goods and services, cooperatives are often criticized for high profits, price gouging, and connections to organized crime. In Central Asia, where private businesses are often run by non-Muslim migrants from the Caucasus, the cooperative movement has heightened interethnic rivalries. When unrest broke out in Central Asia in June 1989, cooperatives became the target of mob violence. According to *Pravda*, 17 cooperatives were destroyed in the Turkmen city of Nebit-Dag, 11 were destroyed in the Fergana Valley of the Uzbek SSR, and 27 cooperatives were destroyed and 11 cooperative workers killed in the Kazakh town of Novyy Uzen'. ()

Development Trends

As a result of these policies, continuing differences in population growth, and variations in the degree of local ethnic and labor unrest, regional economic inequalities probably have increased overall during Gorbachev's tenure. In addition, the economic chaos resulting from poorly conceived and poorly implemented economic reforms, as well as from ethnic and labor unrest, has resulted in a deterioration in living conditions in some regions, which has probably heightened discontent over economic inequalities. As in earlier years, moreover, there have been notable changes in the relative standings of republics within both the richer and poorer groupings. Our estimates of proxy GNP, which are available only through 1988, show that the RSFSR, Belorussia, Estonia, Lithuania, and Kazakhstan increased their posi-

tions in relation to the national average, while the rest of the republics declined—the most marked declines were in Armenia and Uzbekistan (see figure 4). ()

The RSFSR. The Russian Republic benefited during 1985-88 from increased investment in the energy and machine-building sectors. Nevertheless, major economic disparities within the republic continued to have some impact on political tensions and relations among ethnic groups. Russian nationalists, for example, continued to have grounds for bitter complaints about the poverty of the Russian heartland. Meanwhile, minorities complained about the backwardness of the non-Russian regions. *Glasnost* has given many of these minority groups more information with which to argue that they are suffering from neglect because of Russian economic planners. The chief of the RSFSR State Planning Committee, for example, recently admitted that the non-Russian regions, particularly the Yakut, Buryat, Tuva, Tatar, Bashkir, and Komi Autonomous Republics, and the Khakass and Gorno-Altay Autonomous Oblasts, have lagged far behind the rest of the republic in terms of housing and other social indicators. The Congress of People's Deputies also has publicized the poor living conditions of the small ethnic minorities of the northern RSFSR. ()

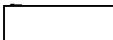
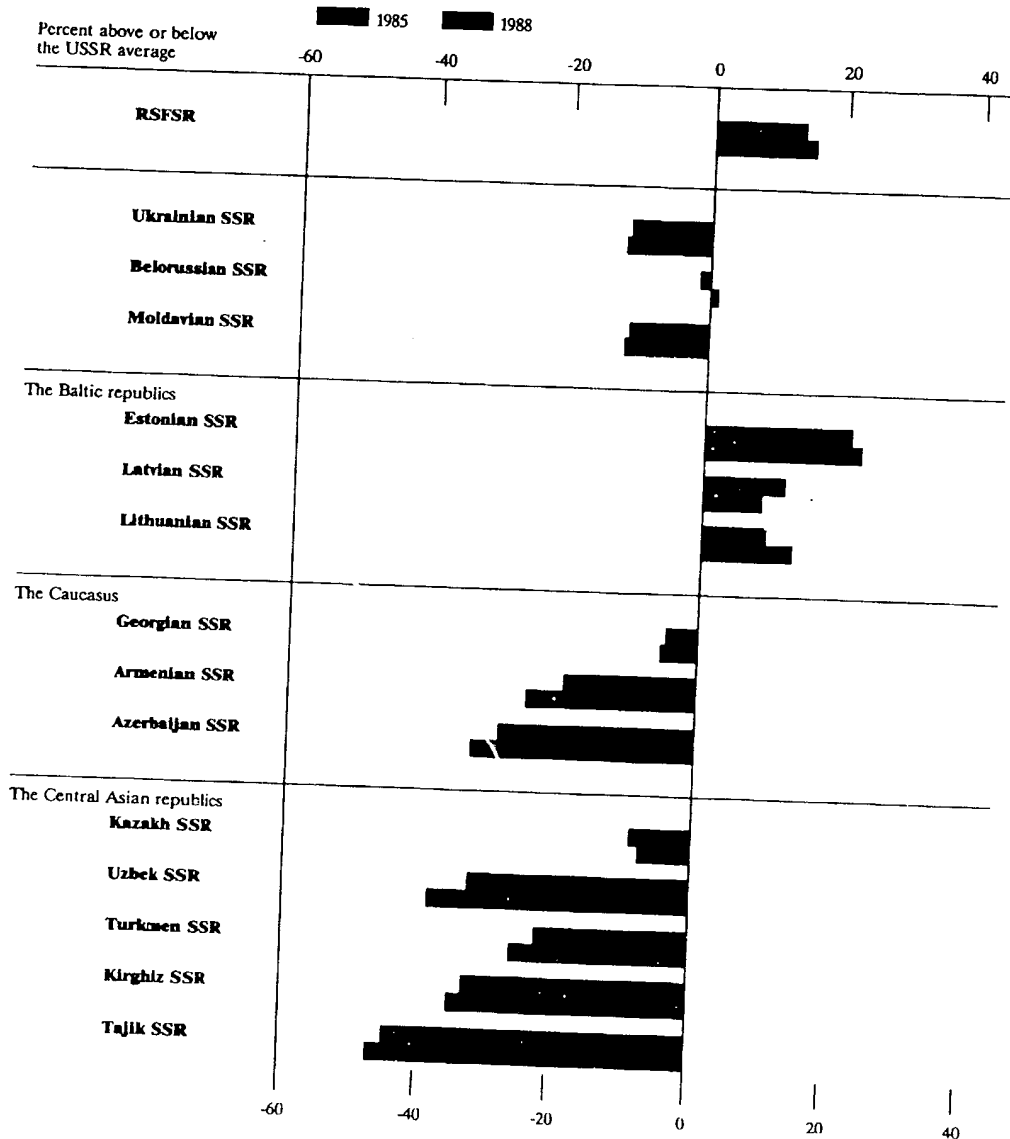
The Ukraine. Continued concentration of investment in the Ukraine's traditional industries—metallurgy and chemicals—and the rapid development of thermal and nuclear power have resulted in growing public discontent in the Soviet Union's second-most-populous republic. Local leaders, particularly after the spring 1986 accident at the Chernobyl nuclear power station, have complained that environmentally damaging, energy-intensive sectors are too dominant in the Ukrainian economy—in fact, the region has become a net importer of energy. Similarly, striking miners in the Donetsk region in the summer of 1989 voiced the anger that many Ukrainians feel over the poor living and working conditions in the polluted, densely populated coal-mining regions. ()

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Figure 4
USSR Republics: Levels of Per Capita Proxy GNP,
1985 and 1988



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Belorussia. Under Gorbachev, the economy of Belorussia continued to do well, as compared with the rest of the USSR: Belorussia rose above the national average both in terms of per capita investment and indicators of consumer welfare, including per capita consumption of key food items. The accident at Chernobyl, however, left a wide contamination zone in the republic. According to the Soviet press, 70 percent of the territory affected by Chernobyl is in Belorussia. The local population has complained about inadequate cleanup and resettlement and compensation of victims. Approximately 90,000 to 94,000 people in Belorussia will need to be resettled by 1998. Another 40,000 to 43,000 in the Ukraine and 50,000 to 80,000 in the RSFSR also await resettlement.

Moldavia. The destruction of vineyards and loss of wine revenues in Moldavia contributed to economic stagnation there during 1985-88. Investment in housing and social services, moreover, did not keep up with the rate of urbanization. This was especially evident in Kishinev, which experienced more rapid population growth in the last decade than any other republic capital. Despite this rapid growth and a growing unemployment problem, the ethnic Moldavian population has charged that enterprises under the jurisdiction of central ministries continue to import skilled labor from other republics.

Baltic Republics. Although the issues that have fueled nationalist passions in the Baltic republics predate Gorbachev and transcend narrow economic concerns, economic developments during the Gorbachev years have clearly complicated relations between these republics and the center. The Balts derived some benefit from their status as a testing ground for *perestroika*, but still complained that they were unable to enjoy the full fruits of their labor. Estonian nationalists, for example, have charged that, although a Gorbachev-era experiment in light industry has resulted in substantial quality improvements, most of the superior goods produced have been shipped out of their republic.

In addition, although the availability of consumer goods and services in the Baltic republics, as compared with other republics, has remained high during

Gorbachev's tenure, increased numbers of "food tourists" from neighboring regions have poured in by bus and train-loads to buy food and consumer goods, leading to an outcry among the ethnic Balts of "plundering" by Russians and other outsiders.

The Caucasus. Since 1985 the economy of the Caucasus has been shaken by the antialcohol campaign, ethnic unrest, and the devastating earthquake in Armenia. Cutbacks in wine production beginning in 1985 hit employment and farm earnings especially hard in Azerbaijan, where a fourth of the agricultural work force was employed in viticulture and winemaking. Average daily earnings in Azerbaijan fell by 15.4 percent between 1985 and 1987 for both state and collective farm workers, making Azerbaijan the only Soviet republic to experience a substantial increase in the gap between urban and rural incomes. This decline in rural earnings probably increased rural migration to cities such as Baku and Sumgait, accelerating the growth of shantytowns and social problems in these already overcrowded cities.

Ethnic unrest in all three Caucasian republics has had a severe impact on the region's economy. Since the late summer of 1989, for example, rail traffic in the Caucasus has been disrupted by acts of sabotage and threats of violence connected to the disputes over Nagorno-Karabakh and Abkhaziya. An intermittent rail blockade of Armenia by Azeris has resulted in acute shortages of fuel, feed for livestock, food, consumer goods, and raw materials. Most Armenian enterprises had to slow or stop production last year, and harvesting was delayed by lack of fuel.

The Armenian earthquake of December 1988 also dealt a severe blow to an economy already weakened by unrest. The earthquake killed an estimated 25,000 people, left 500,000 homeless, and destroyed about 10 percent of Armenia's industrial base. An estimated 11 percent of Armenia's total housing was also destroyed. Cleanup and recovery in the republic was severely set back by the continued unrest. The rail blockade delayed reconstruction in earthquake zones, leaving thousands of earthquake victims in makeshift housing.

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These problems have created an enormous refugee problem. Soviet officials report over 200,000 refugees in Armenia as of August 1989 and 160,000 refugees in Azerbaijan as of late June 1989. At least 15,000 refugees have swelled the shantytowns of Baku and Sumgait. Refugees have exacerbated the region's already acute shortages of housing, schools, hospitals, and jobs.

Central Asia. A lag in investment growth relative to other regions and rapid population growth were the major factors in the relative economic decline in most of Central Asia during 1986-88. The populace's resentment of the republic's failure to develop more rapidly has evidently compounded resentment over the problems associated with the cotton monoculture. In the Uzbek Republic, for example, the share of total land planted in cotton currently accounts for about half of total sown acreage, while only 5 percent is devoted to vegetables, potatoes, and melons. Opposition to the cotton monoculture has become a rallying point for Central Asian nationalists, academics, and writers. Informal groups such as the Uzbek Birlik movement advocate a sharp cutback in cotton production and a wholesale switch to the cultivation of more fruits and vegetables. The first secretaries of the Tajik and Uzbek Republics have formally requested reductions in the area sown to cotton in order to introduce better crop rotation and devote more acreage to food production.

The tightening food supplies resulting from increasing population density and shortages of arable land and water are also fueling rising regional prices in collective farm markets and cooperatives throughout Central Asia. According to Soviet statistics, collective farm market food prices rose 5.4 percent in the Kazakh Republic and 8 percent in the Uzbek Republic in 1988, as compared with a 3-percent rise for the Soviet Union as a whole. In the Fergana Valley of the Uzbek SSR, prices rose even higher—14 percent in the city of Fergana and 18.5 percent in Kokand. Both cities were the scene of violent ethnic unrest in June 1989, which the authorities attributed, in part, to high prices.

The combination of rapid population growth and slow economic development has led to rising unemployment and poverty in Central Asia (see figure 5). According to Soviet statistics, growth of working-age population has significantly outpaced growth in socialized employment since 1985. While some of the surplus labor is employed in the private economy, the Soviet press reports that unemployment has been growing steadily—1 million unemployed have been reported in the Uzbek Republic alone.

Republic Economic Development in the 1990s: Gorbachev's Options

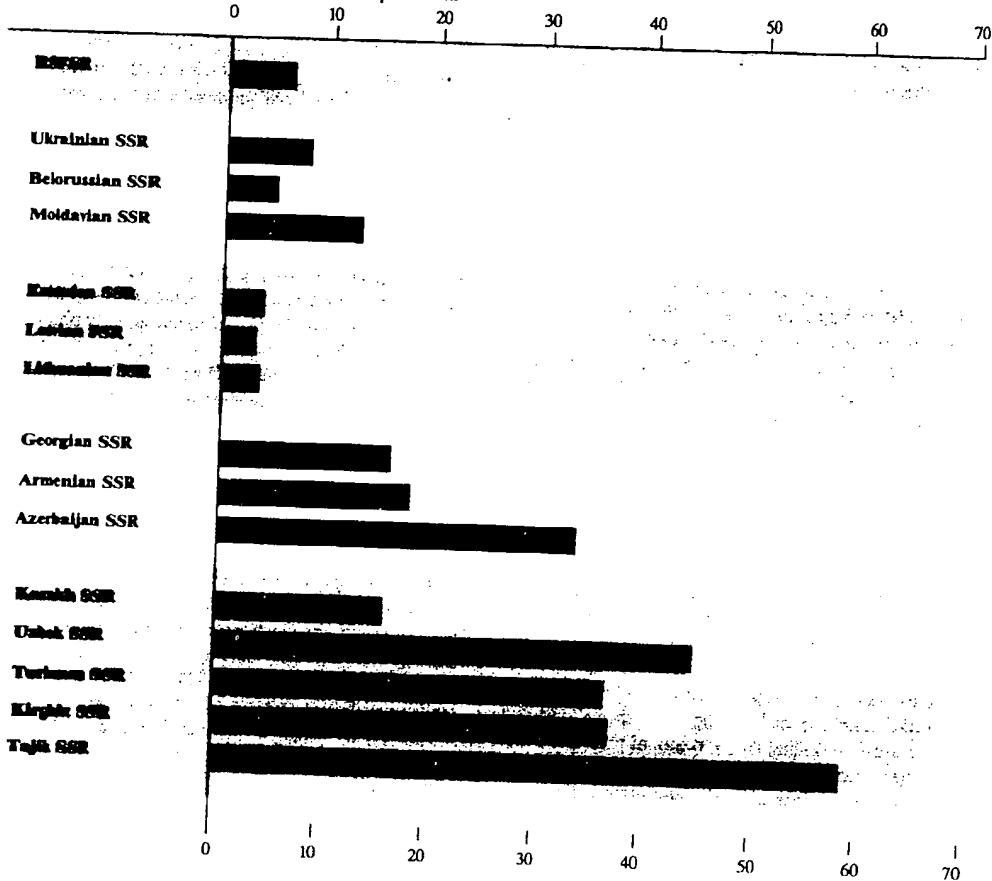
In 1990, after five years of *perestroika*, the Soviet Union has arrived at a crucial point in its history as a multinational state. With Lithuania already declaring independence, other republics moving to do the same, and ethnic violence acute and widespread, the prospects for political fragmentation are clearly increasing, and Moscow has no obvious means of improving its chances of maintaining control of the Soviet republics.

Gorbachev's options for dealing with the economic inequalities that are fueling tensions among the republics are especially limited. At a time when reducing the enormous budget deficit and increasing supplies of consumer goods have become top priorities of the regime, expensive regional development projects are luxuries Moscow cannot afford. As a result, the traditional Soviet strategy of throwing resources at a problem is no longer a viable option, and Gorbachev must look instead to two approaches that may enable him to get by on the cheap. The first, which is already being pursued to some degree, is to leave the existing economic system essentially intact but turn over responsibility for most activities to the republics in hope that their greater concern with local conditions will translate into better economic performance. The second option is to supplement greater republic economic autonomy with price reforms and other measures that would facilitate the use of genuine market forces to redirect the flow of resources.

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Figure 5
USSR Republics: Population Below the Poverty Line
in 1988^a

Percent of population earning less than 75 rubles per month



^aThe official poverty line is 78 rubles per month.

~~Confidential~~**Greater Regional Autonomy**

Prompted by the growing difficulties of running an increasingly complex economy from the center as well as by pressure from the republics for more autonomy, Moscow has begun to devolve economic decision making to the regional level. A new law gives republics greater jurisdiction over agriculture and the social sphere, including food production, light industry, housing, and services,⁹ but leaves control of monetary, price, and wage policy in Moscow's hands. Heavy industry, the extractive industries, national communications and transportation systems, and the defense industries also remain under central control. Republics are to take on more of the burden of social programs but would have a broader revenue base because of increased latitude to tax the profits of all-union enterprises. Beginning in January 1990, the Baltics, Belorussia, and six territories within the RSFSR switched over to a system of self-financing following this plan. Other republics are scheduled to transfer to self-financing by 1991. []

A special law passed in November 1989 that took effect on 1 January 1990 gave the Baltic republics more latitude in running their economies. It allowed these republics to set up independent banks, create financial markets, control prices and wages, and introduce local currencies. The law, however, did not give those republics exclusive ownership of their land and natural resources as they had demanded, kept key sectors of the economy under Moscow's control, and bound the Baltic republics to state orders and dependence on centrally allocated resources. Moreover, when the Baltic republics attempted to exercise powers, such as price setting, supposedly given to them under the law, they encountered resistance from Moscow. Such difficulties have fueled secessionist sympathies. []

As Lithuania attempts to secede from the Soviet Union and independence movements in other republics gain momentum, Moscow has stressed the economic interdependence of Soviet republics and the difficulties individual republics would have if they attempt to stand alone. With its economic blockade of Lithuania, Moscow attempted to drive home this

⁹ Formerly, jurisdiction over agriculture and the consumer sector was shared by local and central authorities. []

point. Recently published Soviet data depict the extent of economic interdependencies among republics.⁹ For example, 1985 Soviet data show that only the RSFSR, Kazakhstan, Azerbaijan, and Turkmeniya were self-sufficient in energy. Republics such as Moldavia and Lithuania, in contrast, were almost entirely dependent on energy imports. []

Although having some limited potential to enlist greater assistance from the republics in addressing economic problems, decentralization of economic decision making will also make it more difficult for Moscow to implement its economic policies. Decentralization is already complicating the equitable distribution of food and consumer goods. Local officials are erecting barriers between regions to protect their own markets and consumers. K. Z. Terekh, USSR Minister of Trade, has complained that "interrepublic deliveries of goods are being torpedoed" and cited several examples: Azerbaijan has refused to ship 2,000 tons of detergent, and the Ukraine has cut back deliveries of toys to other republics. In the Baltic republics and the city of Moscow, local governments have enacted measures to allow only the local population to purchase goods in short supply. In April of 1990, the Uzbek SSR announced that the export of locally produced goods would be drastically reduced, and the export of some fruits and vegetables would be temporarily banned or limited. One Soviet commentator wrote that continuation of this trend "could lead to 'customs wars' between cities and regions." []

Greater Reliance on Market Forces

An important lesson to be learned from such problems is that increased regional economic autonomy has little to offer the republics unless it is accompanied by measures to increase incentives to produce and sell more and better goods and services. The reforms required to accomplish this—which primarily involve pricing and the privatization of economic activity—may be especially painful for some republics. Ultimately, however, such reforms are essential for all the republics to overcome the waste and inefficiency that constrain their economic development. []

⁹ See appendix, table 12. []

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As Gorbachev and others in the leadership have come to realize and acknowledge, price reform is necessary to improve the efficiency with which resources are used. Such a move is certain to have a major impact on relations among the republics. The current system of wholesale prices overvalues manufactured goods and greatly undervalues raw materials and agricultural products, thereby putting the less industrialized republics of the south at a greater disadvantage relative to the more industrialized republics of the north and west. The proposed revision of wholesale prices that is to be implemented in 1991 will reportedly double the prices of commodities such as oil and natural gas. Average prices of ferrous and nonferrous metals would increase by 71 percent and construction materials 68 percent.

Price increases of this sort and scale would improve the republic trade balance for republics in which fuel production accounts for a large share of total industrial output—specifically, the RSFSR, the Ukraine, Turkmeniya, and Azerbaijan. Energy-poor republics—most notably the Baltic region—would be adversely affected by these price increases.¹⁹ Similarly, agricultural price hikes will boost earnings in republics such as Kazakhstan, Kirghiziya, Lithuania, Moldavia, Tajikistan, and Turkmeniya, where agriculture accounts for more than 50 percent of total output.

Privatization is another measure that must be pursued if the Soviet economy's prospects for recovery are to be enhanced, and it is one that could have a major impact on relative rates of economic development among the Soviet republics. The experience of the new cooperatives, as noted previously, has clearly demonstrated that the republics differ substantially in their support for legitimizing the activities of private entrepreneurs in order to increase the availability and the quality of goods and services. Prohibitive taxes imposed on the new cooperatives in the RSFSR and several Central Asian republics during the summer of 1989, for example, threatened to destroy the fledgling businesses. Low tax rates on cooperatives in the Baltic republics, on the other hand, encouraged the spread of cooperatives there and enabled the new businesses to

¹⁹ See appendix, table 13.

contribute to an improvement in local living standards and to the smoother running of the state-controlled enterprises to which they provided support.

In August 1989, the USSR Supreme Soviet decreased the maximum tax rates but left the determination of specific tax rates on different types of cooperative-produced goods and services for the individual republics to decide. The center's willingness to devolve responsibility for the taxation and regulation of the new cooperatives may indicate that it would pursue a similar approach to other forms of private economic activity.

Implications of Gorbachev's Options

To note that privatization, price reform, and greater regional autonomy will not necessarily reduce economic inequalities among the Soviet republics—and may even magnify these differences in some instances—is not to suggest that these options should not be pursued. On the contrary, although some republics have clearly fared better than others under the current economic system, all the republics have suffered from the system's failings, and all are in need of reform. To describe the limitations of these measures, however, is to emphasize the enormity of the problems that have resulted from the long-term economic policies Moscow has pursued and from the deficiencies of the Soviet economic system. In the face of such enormous problems, Gorbachev is unable to promise the republics a steady—much less, quick—improvement in their living standards or a narrowing of their economic differences. Nor can he promise that the sacrifices and hardships required to solve these problems will be distributed evenly among the republics. Instead, he can do little more than acknowledge the problems and their causes and promise to reduce the ineffective central controls that have done so much to create the problems.

In our view, this approach entails a great risk of encouraging the very separatist forces and tendencies that Gorbachev is trying to counter. Gorbachev's willingness to take this risk suggests, however, that he sees no other way to deal with the problem and that the continuation of Moscow's previous approach to the economic development of the republics would be an even riskier course.

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Appendix

Methodology for Calculating Proxy GNP

Proxy GNP is calculated by summing estimates for consumption, investment, and government expenditures during a given year for each of the republics:

- *Consumption.* CIA estimates rely on current ruble estimates of total incomes supplemented by government outlays on communal services adjusted to remove nonconsumption expenditures—savings, taxes, investment in private housing, and the government housing subsidy.¹¹
- *Investment.* Our data are the fixed capital investment entry for each republic from *Narodnoye khozyaystvo SSSR*. This value accounts for 75 to 88 percent of total Soviet investment. Our estimates do not make adjustments for net changes in livestock, budget investment, uninstalled machinery, or inventory changes.
- *Government Expenditures.* These include outlays for administrative services (culture, general agricultural programs, forestry, and government administration), as well as research and development. Lack of republic-level data precludes the inclusion of municipal services such as police and fire protection, inventory changes, and net exports.

¹¹ See "Regional Living Standards," in I. S. Korepekyj and Gertrude E. Schroeder, eds., *Economics of Soviet Regions*, (New York: Praeger, 1981, p. 129)

Proxy GNP reflects the majority of outlays for goods and services by all sectors of the economy—private households, state production enterprises, collective farms, and government administrative organizations. Total defense expenditures for each of the republics are not included in the measure, except to the extent that these outlays are included in other categories such as investment or research and development. Proxy GNP data were deflated to account for inflation in the Soviet economy since 1970. Data do not allow for inclusion of the activities of the underground economy in these estimates. The contribution of such activities may differ considerably among republics.

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26 18

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Table 1
USSR Republics: Shares of Land, Population,
Investment, and Proxy GNP, 1970 and 1988

Percent

	Land	Population		Investment		Proxy GNP	
		1970	1988	1970	1988	1970	1988
RSFSR	76.2	53.7	51.4	59.4	63.3	58.6	59.3
Ukrainian SSR	2.7	19.5	18.1	16.1	13.5	17.7	15.9
Belorussian SSR	0.9	3.7	3.6	3.3	3.5	3.4	3.6
Moldavian SSR	0.2	1.5	1.5	1.2	1.1	1.3	1.3
Baltic republics							
Estonian SSR	0.2	0.6	0.6	0.7	0.6	0.7	0.7
Latvian SSR	0.3	1.0	0.9	1.1	0.9	1.2	1.0
Lithuanian SSR	0.3	1.3	1.3	1.4	1.5	1.5	1.5
Caucasus							
Georgian SSR	0.3	1.9	1.9	1.4	1.4	1.6	1.8
Armenian SSR	0.1	1.0	1.2	1.0	0.7	0.9	0.9
Azerbaijan SSR	0.4	1.8	2.4	1.5	1.6	1.3	1.6
Central Asia							
Kazakh SSR	12.1	5.4	5.8	6.6	6.0	5.3	5.3
Uzbek SSR	2.0	5.0	6.9	3.8	3.5	3.7	4.2
Turkmen SSR	2.2	0.9	1.2	1.0	0.9	0.8	0.9
Kirghiz SSR	0.9	1.2	1.5	0.9	0.7	0.9	1.0
Tajik SSR	0.6	1.2	1.8	0.8	0.8	0.8	0.9

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26 19

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Table 2
USSR Republics:
Population at Midyear *

Millions

	1970	1980	1985	1988
USSR	242.8	265.9	277.5	285.5
RSFSR	130.4	138.8	143.6	146.8
Ukrainian SSR	47.3	50.4	51.0	51.6
Belorussian SSR	9.0	9.6	10.0	10.2
Moldavian SSR	3.6	4.0	4.1	4.3
Baltic republics				
Estonian SSR	1.4	1.5	1.5	1.6
Latvian SSR	2.4	2.5	2.6	2.7
Lithuanian SSR	3.1	3.4	3.6	3.7
Caucasus				
Georgian SSR	4.7	5.1	5.2	5.4
Armenian SSR	2.5	3.1	3.3	3.3
Azerbaijan SSR	4.5	6.2	6.7	7.0
Central Asia				
Kazakh SSR	13.0	15.0	16.0	16.5
Uzbek SSR	12.1	16.0	18.2	19.7
Turkmen SSR	2.2	2.9	3.2	3.5
Kirghiz SSR	3.0	3.6	4.0	4.2
Tajik SSR	3.0	4.0	4.6	5.0

* Because of rounding, totals may not add to figures shown.

Table 3
USSR Republics: Levels of
Per Capita Investment

Index:USSR=100

	1970	1980	1985	1988
RSFSR	110.3	119.1	119.5	123.1
Ukrainian SSR	82.4	75.9	76.3	74.7
Belorussian SSR	88.1	86.4	94.4	99.2
Moldavian SSR	78.3	74.1	75.1	71.4
Baltic republics				
Estonian SSR	125.7	110.2	111.7	107.0
Latvian SSR	111.1	100.5	112.1	95.5
Lithuanian SSR	107.5	93.3	105.6	113.5
Caucasus				
Georgian SSR	69.8	69.8	83.7	72.9
Armenian SSR	97.2	72.6	74.2	61.9
Azerbaijan SSR	79.3	64.6	77.3	65.1
Central Asia				
Kazakh SSR	123.1	107.4	101.8	103.3
Uzbek SSR	75.7	66.5	57.8	50.3
Turkmen SSR	106.8	85.1	88.2	78.3
Kirghiz SSR	72.0	54.4	53.3	48.5
Tajik SSR	63.9	48.8	46.1	44.8

2620

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Table 4
USSR Republics: Distribution of
Investment Among Sectors
of the Economy *

Percent

	1971-75	1981-85
RSFSR		
Industry	39.3	39.3
Agriculture	11.7	11.6
Social sphere ^b	29.8	26.9
Other	19.2	22.1
Ukrainian, Belorussian, Moldavian SSRs		
Industry	42.8	44.1
Agriculture	12.7	12.8
Social sphere ^b	25.9	25.3
Other	18.6	17.8
Baltic republics		
Industry	29.9	33.0
Agriculture	22.4	17.6
Social sphere ^b	30.5	28.5
Other	17.2	20.9
Caucasus		
Industry	37.0	39.9
Agriculture	17.7	18.8
Social sphere ^b	28.0	23.4
Other	17.2	17.9
Central Asia		
Industry	30.5	32.3
Agriculture	26.1	27.3
Social sphere ^b	27.3	25.7
Other	16.1	14.7

* Because of rounding, totals may not add.

^b Includes housing, science, culture, art, health, and communal services.

Table 5
USSR Republics: Distribution of the
Labor Force, 1970 and 1985

Percent

	Industry		Agriculture	
	1970	1985	1970	1985
USSR	26.7	27.1	29.5	22.3
RSFSR	30.7	30.2	23.6	17.5
Ukrainian SSR	24.7	28.1	35.5	24.8
Belorussian SSR	21.0	26.7	43.5	28.6
Moldavian SSR	15.3	20.1	45.6	34.4
Baltic republics				
Estonian SSR	30.5	28.9	23.8	20.1
Latvian SSR	29.4	27.6	28.6	23.1
Lithuanian SSR	22.2	24.8	41.0	29.3
Caucasus				
Georgian SSR	17.8	17.8	36.4	29.1
Armenian SSR	26.7	29.8	25.3	17.7
Azerbaijan SSR	17.3	16.6	36.1	32.2
Central Asia				
Kazakh SSR	19.1	18.9	33.4	28.5
Uzbek SSR	14.0	14.7	42.9	35.1
Turkmen SSR	11.4	10.0	39.1	35.7
Kirghiz SSR	18.4	18.1	36.9	33.0
Tajik SSR	13.0	13.8	44.5	37.7

Source: Agricultural employment and total employment were estimated according to methodology described in Ann Goodman, Margaret Hughes, and Gertrude Schroeder, "Raising the Efficiency of Soviet Farm Labor: Problems and Prospects," in US Congress, Joint Economic Committee, *Gorbachev's Economic Plans* (Washington: US Government Printing Office, 1987), Vol. 2, p. 118.

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2621

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Table 6
USSR Republics: Indexes of Labor
Productivity in Industry and
Agriculture

1970=100

	Industrial Labor Productivity ^a			Agricultural Labor Productivity (per man hour) ^b		
	1980	1985	1988	1980	1985	1987 ^c
USSR	156	181	206	116	129	143
RSFSR	158	185	212	113	132	147
Ukrainian SSR	145	165	189	125	148	172
Belorussian SSR	179	217	260	126	168	209
Moldavian SSR	149	171	189	140	148	166
Baltic republics						
Estonian SSR	162	185	209	157	161	177
Latvian SSR	156	184	214	126	153	171
Lithuanian SSR	157	187	214	125	165	188
Caucasus						
Georgian SSR	166	184	198	146	152	161
Armenian SSR	153	176	190	128	144	134
Azerbaijan SSR	172	198	206	162	166	145
Central Asia						
Kazakh SSR	139	153	172	114	104	116
Uzbek SSR	139	149	157	120	104	100
Turkmen SSR	136	141	156	103	94	104
Kirghiz SSR	143	169	186	103	94	106
Tajik SSR	129	134	143	117	102	99

^a Narodnoye khozyaystvo SSSR 1980, p. 139, and 1988, p. 268.

^b Narodnoye khozyaystvo SSSR 1985, p. 318, and Selskoye khozyaystvo SSSR, p. 439.

^cData for 1988 not available.

Table 7
USSR Republics: Levels of
Per Capita Proxy GNP

USSR=100

	1970	1980	1985	1988
RSFSR	109.2	113.2	113.7	115.3
Ukrainian SSR	91.0	86.4	88.6	88.0
Belorussian SSR	91.5	94.4	98.6	101.0
Moldavian SSR	84.6	87.9	88.7	88.1
Baltic republics				
Estonian SSR	131.8	123.3	121.9	123.4
Latvian SSR	120.2	110.4	112.3	108.9
Lithuanian SSR	114.0	108.0	109.7	113.6
Caucasus				
Georgian SSR	82.9	86.8	95.7	95.0
Armenian SSR	89.7	81.9	81.1	75.5
Azerbaijan SSR	72.1	66.3	71.3	67.3
Central Asia				
Kazakh SSR	98.6	93.4	91.3	92.6
Uzbek SSR	75.5	72.4	67.5	61.5
Turkmen SSR	88.1	78.8	77.8	74.0
Kirghiz SSR	74.9	67.6	67.0	64.9
Tajik SSR	65.0	57.7	55.4	52.9

2622

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Table 8
USSR Republics: Levels of
Per Capita Consumption

USSR=100

	1970	1980	1985	1988
RSFSR	106.9	109.2	109.5	110.3
Ukrainian SSR	96.5	92.3	96.0	96.5
Belorussian SSR	95.4	99.5	102.3	104.0
Moldavian SSR	90.7	97.2	98.1	100.0
Baltic republics				
Estonian SSR	135.6	131.2	128.9	134.9
Latvian SSR	126.3	115.3	113.2	116.5
Lithuanian SSR	119.9	116.2	113.2	115.9
Caucasus				
Georgian SSR	88.8	94.0	102.6	108.4
Armenian SSR	86.2	85.1	83.6	81.2
Azerbaijan SSR	69.7	67.9	69.6	69.7
Central Asia				
Kazakh SSR	89.7	89.6	88.0	88.9
Uzbek SSR	78.0	77.6	74.2	69.2
Turkmen SSR	82.0	78.1	74.8	74.6
Kirghiz SSR	76.0	72.7	72.9	73.0
Tajik SSR	66.5	62.6	60.3	57.7

Table 9
USSR Republics:
Growth in Per Capita Consumption

Average annual percent

	1971-80	1981-85	1986-88
USSR	2.4	0.7	0.4
RSFSR	2.6	0.8	0.6
Ukrainian SSR	2.0	1.5	0.6
Belorussian SSR	2.8	1.3	1.0
Moldavian SSR	3.1	0.9	1.1
Baltic republics			
Estonian SSR	2.1	0.4	1.9
Latvian SSR	1.5	0.3	1.4
Lithuanian SSR	2.1	0.2	1.2
Caucasus			
Georgian SSR	3.0	2.5	2.3
Armenian SSR	2.3	0.4	-0.6
Azerbaijan SSR	2.1	1.2	0.4
Central Asia			
Kazakh SSR	2.4	0.3	0.8
Uzbek SSR	2.4	-0.2	-1.8
Turkmen SSR	1.9	-0.2	0.3
Kirghiz SSR	2.0	0.8	0.4
Tajik SSR	1.7	0.1	-1.0

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Table 10
USSR Republics: Infant Mortality *

	1970	1980	1985	1988
USSR	25	27	26	25
RSFSR	23	22	21	19
Ukrainian SSR	17	17	16	14
Belorussian SSR	19	16	15	13
Moldavian SSR	23	25	31	23
Baltic republics				
Estonian SSR	18	17	14	12
Latvian SSR	18	15	13	11
Lithuanian SSR	19	15	14	12
Caucasus				
Georgian SSR	25	25	24	22
Armenian SSR	25	26	25	25
Azerbaijan SSR	35	30	30	27
Central Asia				
Kazakh SSR	26	33	30	29
Uzbek SSR	31	47	45	43
Turkmen SSR	46	54	52	53
Kirghiz SSR	45	43	42	37
Tajik SSR	46	58	47	49

* Number of children dying before age 1 per 1,000 live births. The Soviets use a different definition of a live birth from that accepted by the World Health Organization. Western experts estimate that Soviet infant mortality statistics omit approximately 14 percent of infant deaths that would be counted under the WHO definition.

Source: *Narodnoye khozyaystvo SSSR*, 1988.

Table 11 *Square meters*
USSR Republics: Per Capita
Housing Space

	1980	1985	1988
USSR	13	15	16
RSFSR	13	15	16
Ukrainian SSR	15	16	17
Belorussian SSR	14	16	17
Moldavian SSR	15	16	17
Baltic republics			
Estonian SSR	18	20	21
Latvian SSR	17	17	19
Lithuanian SSR	15	16	18
Caucasus			
Georgian SSR	17	17	19
Armenian SSR	13	14	14
Azerbaijan SSR	10	10	12
Central Asia			
Kazakh SSR	12	13	14
Uzbek SSR	10	11	12
Turkmen SSR	10	10	11
Kirghiz SSR	11	11	11
Tajik SSR	9	9	9

Source: *Narodnoye khozyaystvo SSSR*, 1988.

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Table 12
USSR Republics: Importance of
Interrepublic Trade

	Share of Production Exported to Other Republics in 1988	Share of Consumption Imported From Other Republics in 1988
RSFSR	11	14
Ukrainian SSR	16	18
Belorussian SSR	27	26
Moldavian SSR	28	27
Baltic republics		
Estonian SSR	25	29
Latvian SSR	24	27
Lithuanian SSR	24	27
Caucasus		
Georgian SSR	26	27
Armenian SSR	28	29
Azerbaijan SSR	26	22
Central Asia		
Kazakh SSR	12	20
Uzbek SSR	18	24
Turkmen SSR	22	25
Kirghiz SSR	21	28
Tajik SSR	21	29

Source: *Vestnik statistiki*, No. 3, March 1990, p. 36.

Table 13
USSR Republics: Projected Effect
of Wholesale Price Reform on
Republic Trade Balance ^a

Billion rubles

	Change in Trade Balance ^b
RSFSR	16.6
Ukrainian SSR	-1.9
Belorussian SSR	-2.1
Moldavian SSR	-0.6
Baltic republics	
Estonian SSR	-0.3
Latvian SSR	-0.5
Lithuanian SSR	-1.0
Caucasus	
Georgian SSR	-0.4
Armenian SSR	0.5
Azerbaijan SSR	0
Central Asia	
Kazakh SSR	-0.2
Uzbek SSR	-0.6
Turkmen SSR	0.5
Kirghiz SSR	-0.3
Tajik SSR	-0.2

^a Based on the changes outlined in decree No. 741 of 14 July 1988 on the reform of wholesale prices.

^b Positive = improvement, negative = deterioration.

Source: *Vestnik statistiki*, No. 3, March 1990, p. 38.

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