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March 1987

STRAINS IN THE SOVIET LABOR FORCE

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Summary

Gorbachev's effort to push the Soviet economy onto a path of faster economic growth coincides with a period of very slow labor force growth. This represents a critical challenge to the Gorbachev regime. The Soviets must now rely to a greater extent than before on increases in labor productivity rather than labor force size to obtain their economic goals. The inefficient use of labor, slack work effort and low labor productivity that characterize Soviet industry must be overcome or industrial modernization and technological advance will be disappointingly slow.

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A number of labor force trends will exacerbate the difficulties Gorbachev faces in successfully implementing his industrial modernization program:

- o The working-age population of the European republics of the USSR is actually declining and will continue to do so through 1995.
- o There is little prospect of boosting labor force growth in the USSR through increased labor force participation rates. These rates--record highs for developed industrial economies--achieved peak levels in the early 1970's and have been largely flat since then.
- o Growth in labor supply will come primarily from the Central Asian republics, while labor demand will be concentrated in the western industrialized regions of the country, Siberia and the Far East.

This memorandum was prepared by Office of Soviet Analysis. Comments and queries are welcome and may be directed to the Chief, Economic Performance Division, SOVA

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Information available as of 1 February 1987 was used in this report.

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- o The problem of slow labor force growth for industry is compounded by the energy sector's increasing demand for manpower. Labor requirements in energy-rich Siberia, for example, have generally been met by workers drawn from the western industrialized USSR. While total industrial employment increased an average 0.6 percent per year in 1981-85, employment in the fuels branch grew twice as fast, at 1.2 percent per year.
- o In 1982-83 Moscow restricted educational deferments, effectively giving the military a larger share of the declining pool of 18 year-old males. Military manpower has been maintained at a level of about 6 million persons.

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Gorbachev has approached the labor problem on several levels: through administrative measures to encourage more efficient labor utilization; through "human factor" policies such as the discipline and temperance campaigns to boost work effort; through a wage reform aimed at improving work incentives; and through planned mechanization of many tasks presently performed manually. Gorbachev is counting on these measures to dramatically increase labor productivity and economic growth in 1986-90. While he can expect some positive results--some gains were apparently realized in 1986--there are a number of impediments to the long term success of this approach:

- o Administrative measures to save labor are vulnerable to footdragging at the ministry and enterprise levels--where a labor hoarding mentality persists.
- o Efforts to make wages better reflect skill and performance tend to be circumvented by enterprise managers who use wages and bonuses to bid for workers in a labor short market, rather than to reward work effort.
- o The discipline and temperance campaigns--intended to spur the economy until gains from mechanization kick in--will probably fade away as sources of further productivity growth after 2 or 3 years, once the most glaring faults are corrected.
- o In Soviet industry there is a strong tendency for investment to go into the creation of new jobs rather than the mechanization of old ones because of the heavy emphasis on boosts in output. Unless basic incentives in the economic system can be turned around, the reduction of manpower needs through large-scale mechanization is likely to continue to be a slow process.

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Slack performance and continued imbalances in the demand for and supply of labor could lead Moscow to more seriously consider policy options thus far resisted, such as cutbacks in military manpower or more coercive efforts to resettle Central Asians in labor deficit regions. Another option would be to push the reform effort much farther, for example, allowing bankruptcy and some degree of unemployment, thereby increasing worker motivation by reducing job security.

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Given the importance of labor in the Soviet economic growth equation we carried out a thorough review of statistical and other indicators of the labor force environment facing the Gorbachev regime over the next 15 years. This memorandum represents a compilation of tables, graphs, and other information which illustrates the strains and imbalances in the Soviet labor force that Gorbachev will have to address if his program of economic revitalization is to succeed.

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STRAINS IN THE SOVIET LABOR FORCE

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SOVIET LEADERS' PERCEPTIONS OF THE LABOR PROBLEM

The Soviet centrally planned system has been characterized by both labor shortages and overmanning. To meet high output targets, ministries tend to channel investment into new production facilities--using funds to create new work places rather than to mechanize existing jobs. Managers in existing enterprises hoard surplus labor as a hedge against (1) steadily rising plan targets, (2) periodic demands to supply temporary labor for the harvest or special civic projects and (3) time lost due to disruptions in work activity associated with erratic supply of materials and equipment. As a result, new facilities are often short of labor while older production facilities are overmanned--usually with large numbers of low skill and manual laborers. 25X1

Long before the onset of the current squeeze in labor supply, Soviet leaders recognized the need to curb labor demand and raise productivity in order to ease the effects of rapidly declining increments to the labor force. For two decades the Soviet press has exhorted industry to get more work done with fewer people and to eliminate practices which waste labor. Recent leadership statements indicate the extent to which the effort to change the way Soviet industry utilizes labor has foundered: 25X1

M.S. Gorbachev in a CPSU Central Committee report, June 1986--

"The extensive buildup of fixed production assets led to an artificial shortage of labor resources...Of course, we know the demographic situation in the country. But we may ask "If there is a shortage of labor resources then why continue building new enterprises, and on the basis of obsolete equipment at that...At the present time, industry alone has about 700,000 job vacancies. And this practically with a one-shift use of equipment. At a

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shift coefficient of 1.7, the number of job vacancies in industry will exceed 4 million." [redacted]

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Boris Yeltsin in a 20 July 1986 address to the Moscow Gorkom--

"To suit departmental and sector interests, over the last three 5-year plans, instead of setting about the automation and mechanization of production, the flywheel of increasing the number of jobs was spun, and now it is very difficult to stop it. Over 15 years, more than 700,000 workers from other cities were brought into Moscow. At the same time the rate of abandoning obsolete production facilities and mechanizing manual labor fell." [redacted]

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and on enterprise resistance to staff reductions--

"After the city party conference we came up against the fact that a number of ministries and departments, oriented toward the customarily low rate of growth in labor productivity, defend with a zeal worthy of a better purpose their own proposals for increased numbers, proposals which, in total, exceed the city's potential fivefold. And scientific institutions, in place of the planned reduction, have requested an increase of 50,000 in the number of workers."

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Chelyabinsk Obkom Chief writing in Kommunist, No. 8, 1986--

"In the 10th Five-Year Plan (1976-80) the oblast's average annual growth rate in labor productivity amounted to 5.7 percent. In the 11th (1981-85) this indicator decreased to 2.4 percent...Conditions are exacerbated by the demographic situation in the region: taking into account the 12th Five-Year Plan (1986-90) and the prevailing extensive methods of accomplishing economic tasks, the shortage in the work force will amount to about 150,000 people. It is clear that it is necessary to abandon the old methods once and for all. However, the question is one of habits of many years' standing which in a number of cases have become stereotypes of thinking among a certain group of party and economic leaders. Therefore, we do not expect a quick and easy victory here." [redacted]

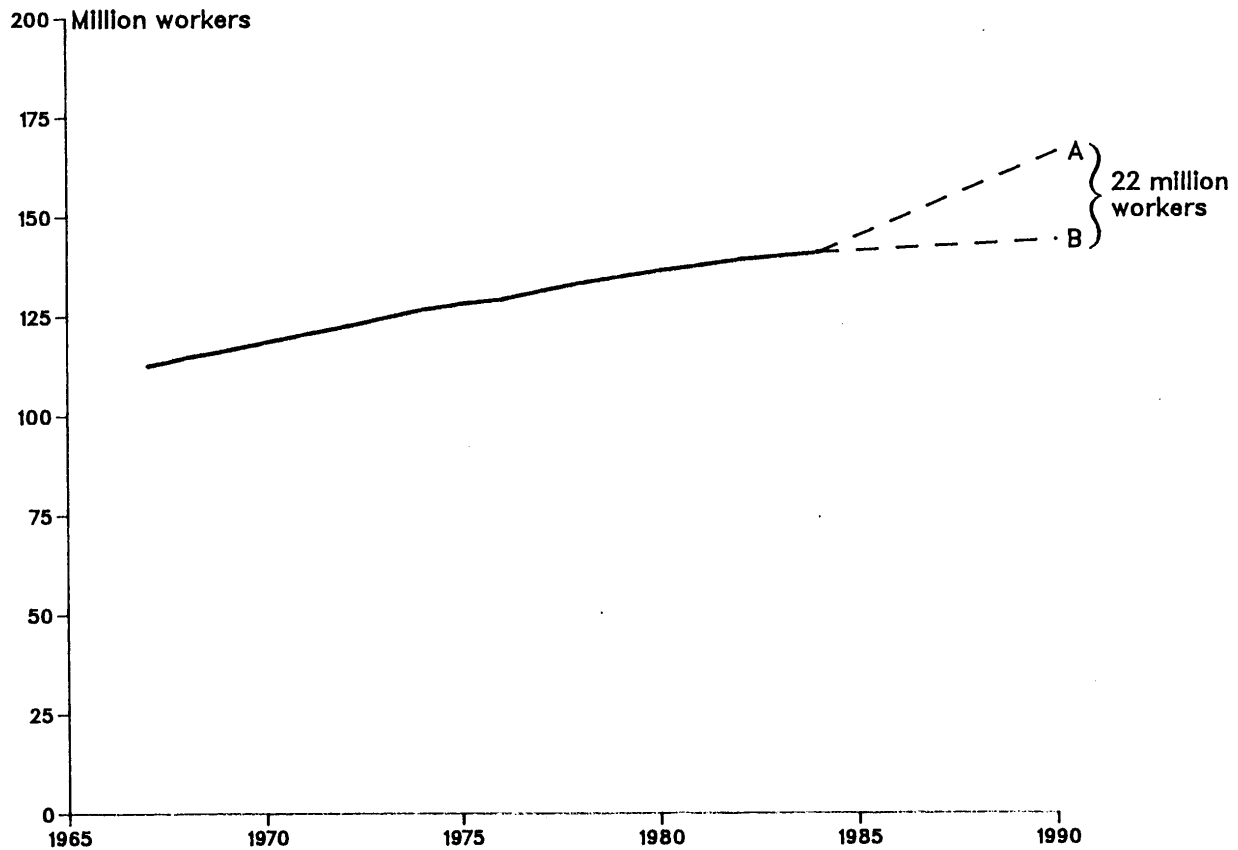
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N.I. Ryzhkov, Chairman of the USSR Council of Ministers, June 1986:

"Over (the 12th FYP) the increase in labor resources will diminish and amount to only 3.2 million persons. Without the planned increase in labor productivity (20-23 percent), the national economy would need more than 22 million additional workers. We simply do not have such labor resources at our disposal." (Figure 1.) [redacted]

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Figure 1
Ryzhkov's Estimates of Labor Demand in 1990 ^a



^aEstimate A: Labor needed to reach national income goal without planned increase in labor productivity.
Estimate B: Labor needed with planned 20-23 percent increase in labor productivity.

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DEMOGRAPHIC CONSTRAINTS

Soviet demographic trends led to a sharp deceleration in growth of both the working-age population and the labor force during the early eighties (figure 2).^{*} The working-age population, which grew by 22 million persons between 1971 and 1980, is expected to grow by only 5.6 million persons between 1981 and 1990. On the other hand, the US Bureau of the Census estimates that the labor force will increase somewhat faster, growing by 8.1 million persons during 1981-90. This is the result of a greater concentration of people in the middle age groups which have the highest participation rates (see table 3, p.16 below), as well as a rise in the number of pensioners who stay in the labor force after reaching retirement age. Approximately a third of pensioners remain economically active and this age-group will grow substantially in the eighties (figure 3).

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In the mid 1990s the number of new entrants to the labor force will pick up, easing strains on labor supply.

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* The working-age population is composed of men aged 16-59 and women aged 16-54. The labor force is the economically active population, including working pensioners and those engaged in private subsidiary farming.

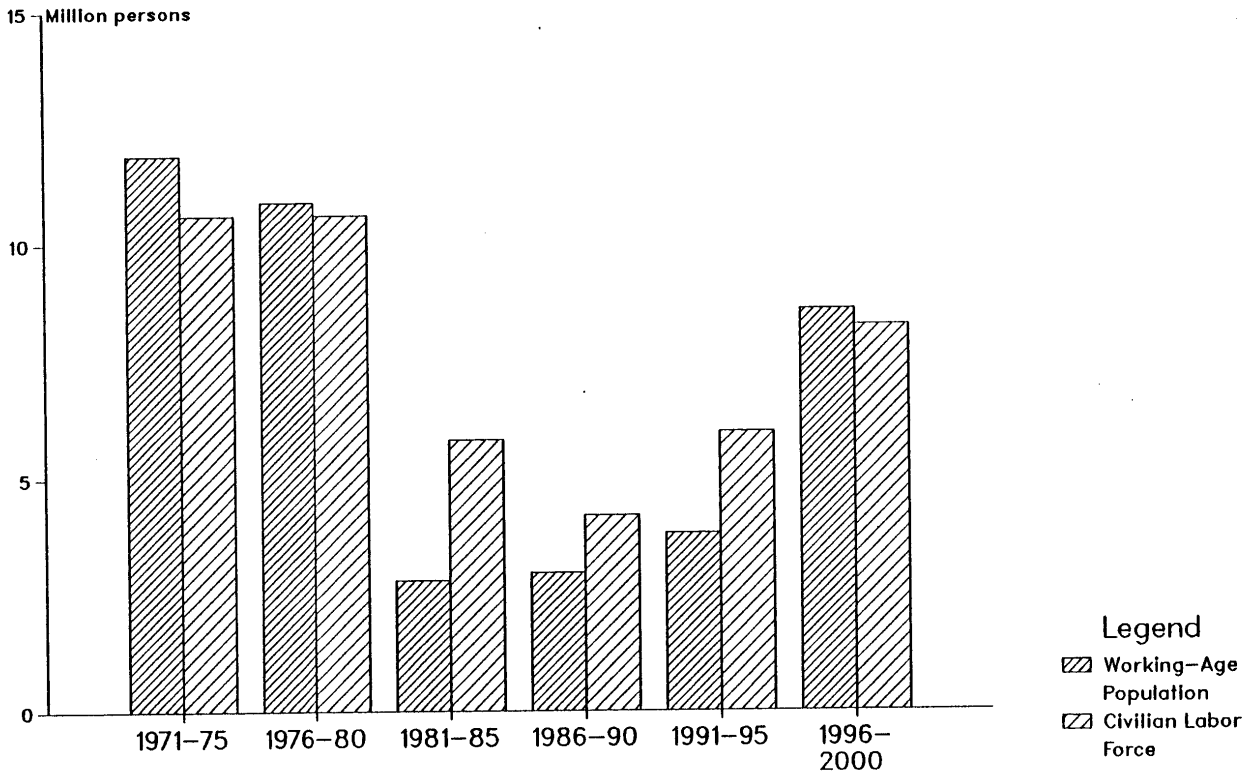
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Figure 2
USSR: Increments to the Soviet Working-Age
Population and the Civilian Labor Force

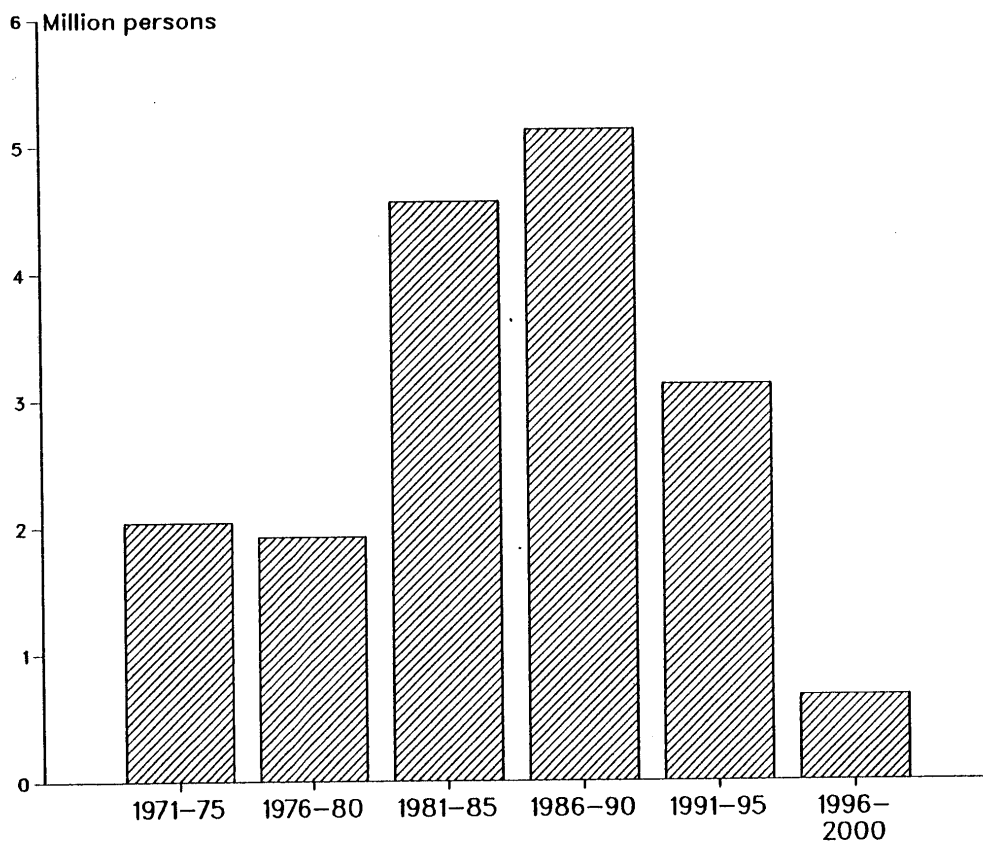


Source: Ward Kingkade, "Estimates and Projections of the Labor Force and Civilian Employment in the USSR: 1950 to 2000," Center for International Research, Bureau of the Census, September 1986.

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Figure 3
USSR: Increments to the Pension-Age Population



Source: Godfrey Baldwin, "USSR: Population Estimates and Projections, 1970-2020,"
Center for International Research, Bureau of the Census, November 1984.

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THE MILITARY BITE

The number of males reaching draft age (eighteen) has declined sharply in recent years (see figure 4), intensifying competition for manpower between the civilian economy and the military.* To maintain the size of the armed forces at around 6 million the Soviets have:

- o Virtually eliminated educational deferments
- o Further restricted medical exclusions
- o Conscripted men up to age 26 who had not been inducted earlier
- o Conscripted women with medical or certain other specialized training.

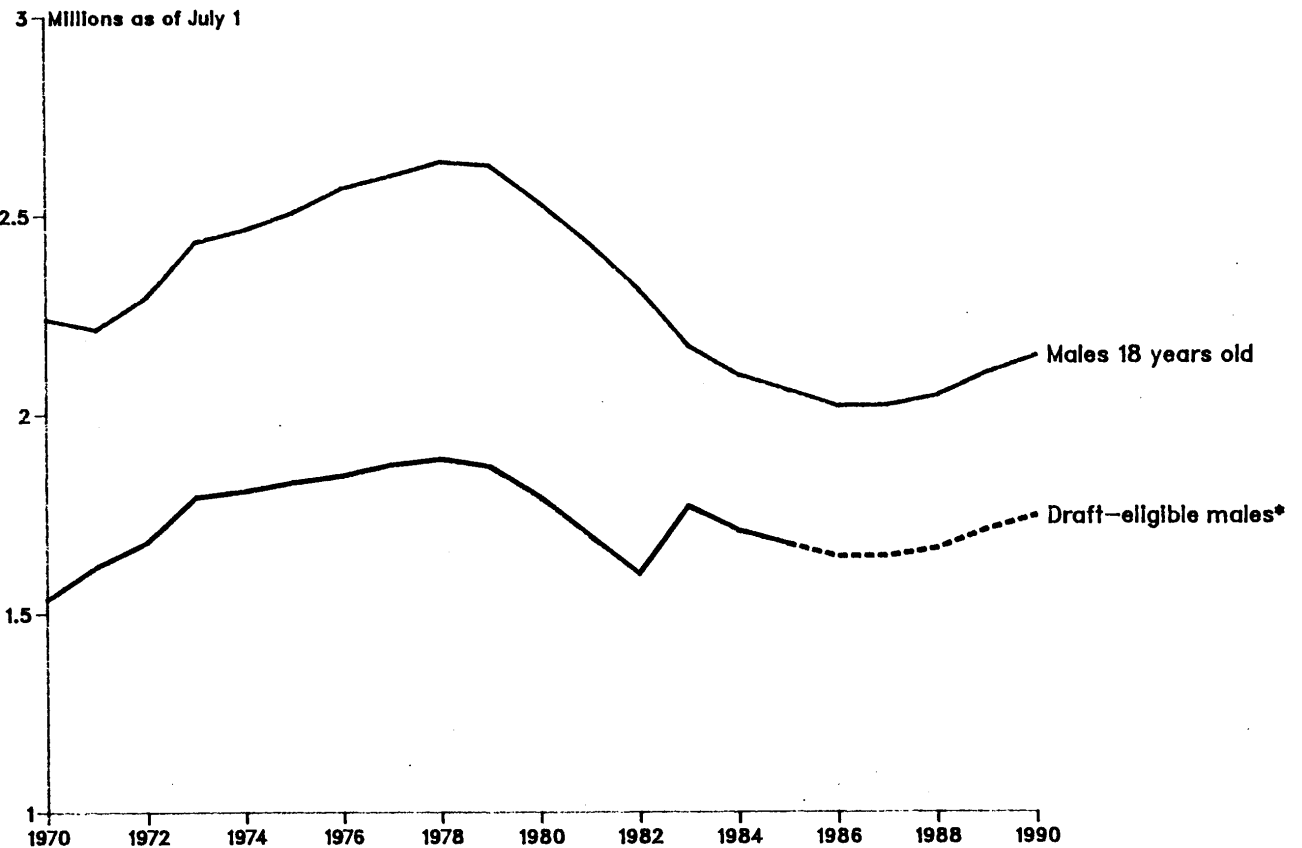
As a result, the military has effectively increased its share of a shrinking pool of draft-age youth--reducing the man-years available for job training and employment in the civilian labor force.

* In theory a Soviet youth can be called up at any time from age 18-26. In practice, a youth who is temporarily deferred for several years is unlikely to be conscripted. Deferments are granted only for reasons of health, higher education and family hardship.

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Figure 4
USSR: Draft-Age Males and Conscript Demand: 1970--90



*Total males 18 years old less those deferred.

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THE REGIONAL MANPOWER IMBALANCE

The greatest future demand for workers in the Soviet Union is in the highly industrialized western USSR and in resource-rich Siberia. However the able-bodied population in the RSFSR and other European republics has actually been declining since 1984 and will continue to decline until 1996 (table 1).



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In the last 20 years Soviet population growth has been concentrated in the high-fertility Southern tier republics (figure 5). During the eighties most of the increment to the able-bodied ages in the Soviet Union will come from Central Asia--where workers generally have less education, fewer skills and less plant and equipment to work with than those in the rest of the country (figure 6).



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Table 1

Increases in Soviet Working-Age Population by Demographic Region*

Year	<u>European</u>		<u>Transitional</u>		<u>Central Asian</u>	
	Working-Age Population	Average Annual Rate of Growth (percent)	Working-Age Population	Average Annual Rate of Growth (percent)	Working-Age Population	Average Annual Rate of Growth (percent)
1970	108,582		14,497		8631	
1975	117,310	1.6	16,702	2.9	10,700	4.4
1980	124,264	1.2	18,683	2.3	12,846	3.7
1985	124,174	0	19,913	1.3	14,747	2.8
1990	123,228	-0.1	21,190	1.2	16,904	2.8
1995	122,172	-0.2	22,405	1.1	19,455	2.8
2000	124,389	0.4	24,143	1.5	22,679	3.1

*The European region, characterized by low birth rates, includes the RSFSR, Latvia, Lithuania, Estonia, Belorussia and the Ukraine; the transitional region, characterized by marked declines in birthrates, includes Kazakhstan, Azerbaidzhan, Georgia, Armenia and Moldavia; the Central Asian republics, characterized by high birth rates, are Uzbekistan, Turkmenistan, Tadzhikistan and Kirghizia.

Source: Godfrey Baldwin, "Estimated and Projected Population of USSR: 1970 to 2025." Center for International Research, U.S. Bureau of the Census. November 1984.

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Figure 5
Soviet Demographic Regions

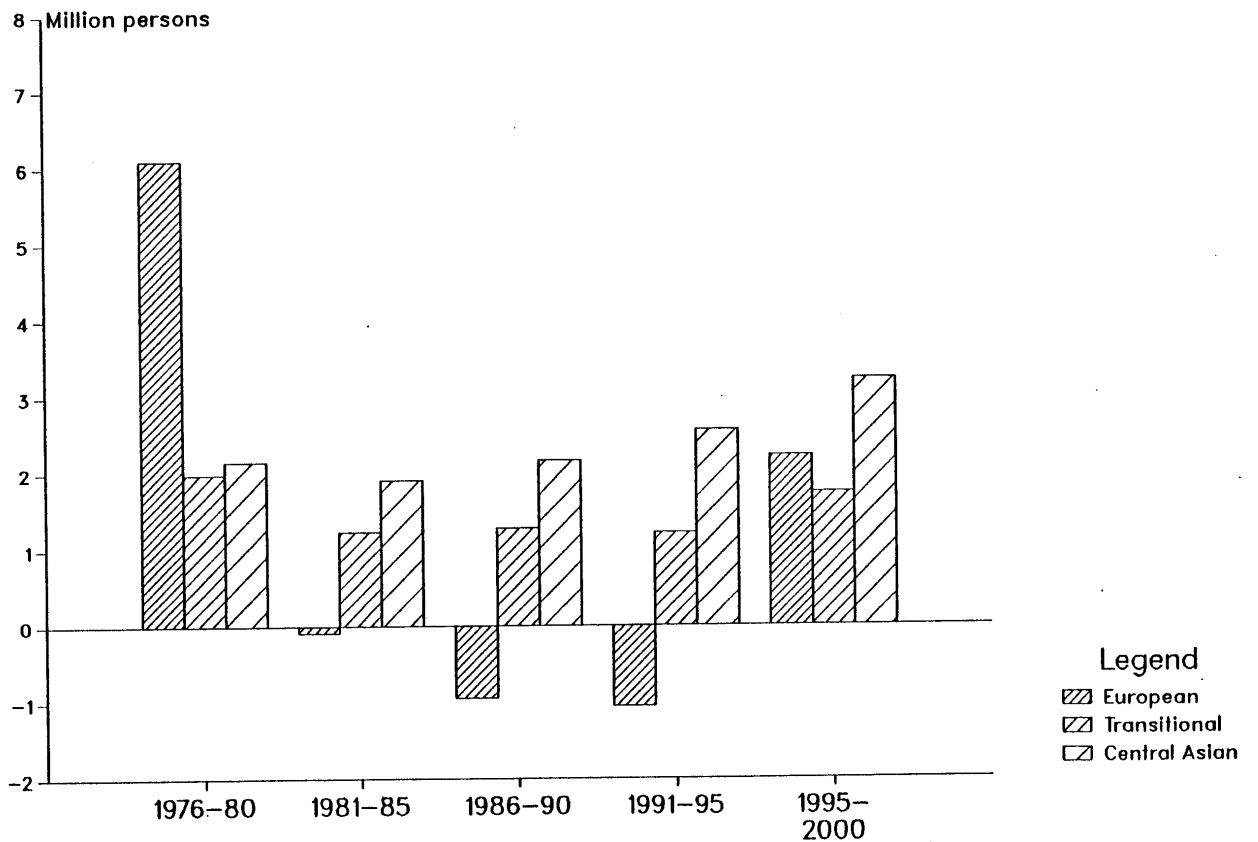


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Figure 6
Increments to the Working-Age Population
by Demographic Region



Source: Godfréy Baldwin, "USSR: Population Estimates and Projections 1970-2025," Center for International Research, Bureau of the Census, November 1984.

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LOW MOBILITY OF CENTRAL ASIAN NATIONALITIES

A south to north migration may eventually occur, but in the near term Central Asians are unlikely to move to the urban industrial centers of European Russia on a scale large enough to offset the numerical shrinking of the labor pool there. On the contrary, comparison of the 1970 and 1979 census results shows that Central Asians are becoming even more concentrated in their own republics or elsewhere in Central Asia (table 2). Reasons for this reluctance to move include: the higher cost of living in European Russia, the language barrier, ethnic prejudice, Central Asians' cultural attachment to their homeland and the absence of established Central Asian neighborhoods in European Russia that could act as poles of attraction.

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Table 2

Distribution of the Soviet Union's Major Central Asian Nationalities

Nationality	Population (Millions)		Percent Residing in Own Republic or Elsewhere in Central Asia	
	1970	1979	1970	1979
Uzbeks	9.195	12.456	96.8	97.2
Tadzhiks	2.136	2.898	98.4	98.5
Kirghiz	1.452	1.906	98.5	98.5
Turkmens	1.525	2.028	98.3	98.5
Kazakhs	5.299	6.556	90.8	91.8

Sources: Census results. 1970 Itogi Vsesoyuznoy perepisi naseleniya SSSR 1970 goda vol.IV. Natsionalniy sostav naseleniya SSSR, pp.9-15 1979 Naseleniye; SSSR po dannym Vsesoyuznoy perepisi naseleniya 1979 goda. Politizdat. 1980, pp.23-30.



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NATIONAL LABOR FORCE PARTICIPATION RATES LEVEL OFF

It will be difficult for Moscow to achieve significant increases in labor force participation rates because most of the adult population in the Soviet Union--particularly in labor deficit regions--is already working (table 3). In 1950 there was a relatively large labor reserve in terms of relatively low participation rates (figure 7). By the 1970's the Soviets had successfully pushed these rates to over 80 percent of the working-age population--largely by achieving one of the highest female labor force participation rates in the world (table 3). As participation rates rose above 80 percent, however, it became much more difficult to mobilize the remaining labor reserve--consisting largely of students, housewives, pensioners, the disabled, and those between jobs. As a result, the labor force participation rate has leveled off since 1970.

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Soviet leaders have taken steps to further increase participation in the labor force at the margins by changing pension laws to encourage retirees to stay in the work force; expanding part-time schooling and correspondence courses to encourage student employment; and by expanding the use of labor placement bureaus to attract pensioners and women with children to part-time jobs and piecework that can be done at home. Under a new law on individual labor activity, pensioners and housewives are also being encouraged to increase their economic contribution by engaging in small-scale private activity in the sphere of handicrafts and consumer services.

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High labor force participation rates have not come without substantial costs to the Soviet Union. High female participation in the work force in the European part of the country has depressed birth rates and will lower future

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Table 3

USSR: Labor Force Participation Rates by Sex and Age Group
(Percent)

	<u>1959</u>	<u>1970</u>	<u>1979</u>
Males	89	88	87
Females	69	82	84
<u>Age Group</u>			
16-29	78	74	76
30-49	80	93	96
50-54/59	70	80	84
Pension-age*	23	13	11

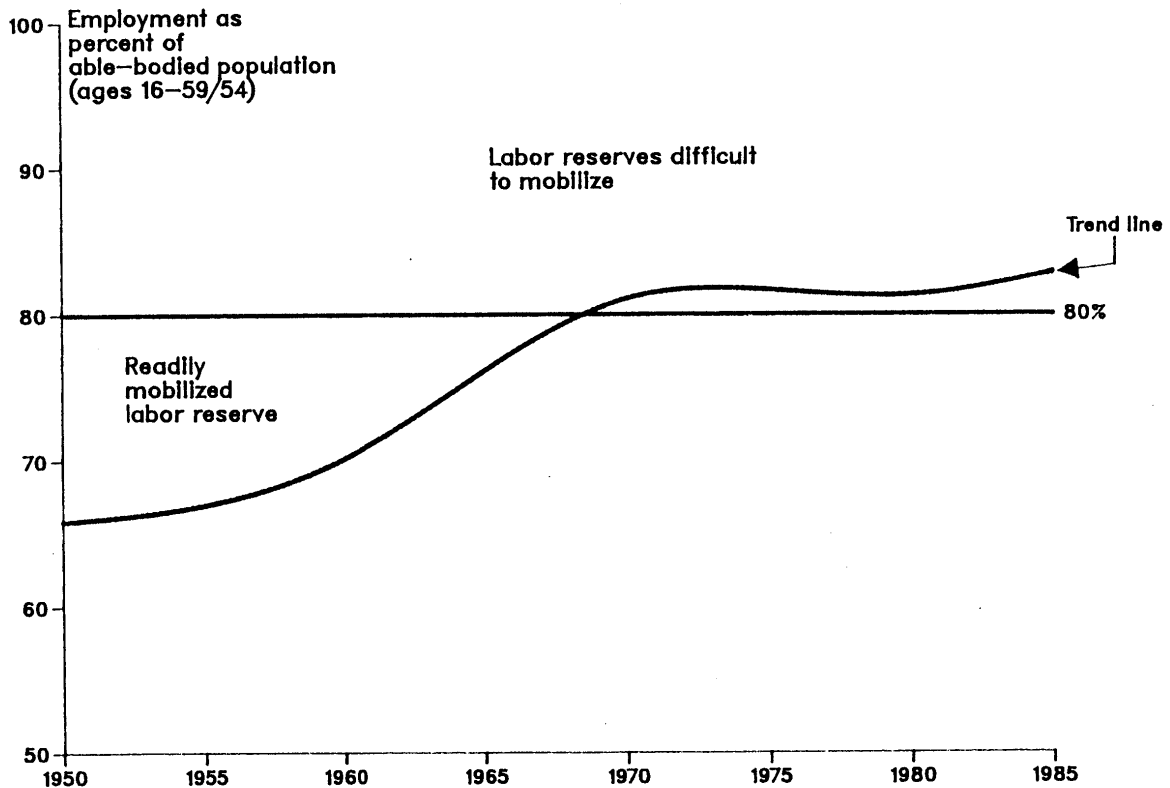
Source: L. Chizhova, "Kak luchshe ispolzovat trud razlichnykh sotsialno-demograficheskikh grupp naseleniya," Sotsialisticheskiy trud, No.8, August 1984.

* Chizhova's estimates exclude private farming and part-time employment. If these activities are taken into account, the participation rate of the pension-age group becomes roughly a third in 1980.



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Figure 7
USSR: Shrinking Potential of Reserve Labor



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labor force growth in this region. In addition, increased use of part-time and correspondence schooling nationwide tends to lower future labor force quality.

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CENTRAL ASIANS' PARTICIPATION IN THE STATE SECTOR LAGS

The proportion of Central Asia's working-age population employed in the public sector has been falling slightly in recent years (table 4). It is currently about 67 percent--compared to an average 84 percent for the Soviet Union as a whole. Efforts to reverse this trend are hampered by a labor surplus in rural Central Asia where the rapid growth of the working-age population has begun to outstrip the ability of the state to create appropriate jobs. Rural Central Asians have been slow to migrate to urban areas of their own republic, much less to labor deficit regions farther north. Central Asian leaders complain that jobs in their cities often go unfilled. Moreover, a slow rate of urbanization also suggests a slow demographic transition to lower fertility rates and higher female participation in the workforce.

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The rural labor surplus in Central Asia presents a number of problems for the Soviet leadership. A rising number of Central Asians now work outside the state economy, both legally and illegally--a development Soviet leaders complain about with increasing frequency. The labor surplus also slows efforts to boost low labor productivity in agriculture, to raise the educational level of the population, and to narrow the gap between rural and urban living standards.

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Moscow has a number of options for coping with the rural labor surplus in Central Asia:

- o Develop labor-intensive, low-tech industries in small cities and towns near rural areas. Soviet leaders have endorsed this idea, but higher investment priorities in other regions of the country will likely put limits on what can be done.
- o Find ways to speed urbanization within Central Asia--for example, design housing and work schedules that are better adapted to Central Asians' way of life.

Table 4

Central Asia: Proportion of the Able-Bodied Population Employed in the State Sector and on Collective Farms*

(Percent)

<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
72.3	69.3	67.1	67.5	67.9	68.7	67.4	66.7

Source: Estimates were made by dividing employment in the state sector and collective farms by the total able-bodied population for the following republics: Uzbekistan, Tadzhikistan, Turkmenistan and Kirghizia. Employment data are from various issues of Narodnoye khozyaystvo SSSR (hereafter referred to as Narkhoz). Population data are from G. Baldwin, Population Estimates and Projections: 1970-2025, Center for International Research, Bureau of the Census, November 1984.

* The downward trend in this proportion partly reflects a relative shift in age distribution toward the younger age groups which have lower participation rates than the rest of the working age population.



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- o Crackdown on the second economy. This would run serious political risks by making life in rural areas of Central Asia much more difficult, but might increase outmigration through economic necessity.
- o Encourage migration to labor deficit regions. Step up resettlement programs, including the organized recruitment (Orgnabor) of Central Asians and the placement of Central Asian youths in schools in regions where they are then required to work for two years after graduation. In the past, resettlement efforts have largely failed as the recruits soon return to their homeland. Any effort to use coercion to accelerate outmigration would probably run into substantial opposition.

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SOVIET COMMENTS ON THE CENTRAL ASIAN RURAL LABOR SURPLUS

Kh. Umarov, Voprosy ekonomiki No 9, September 1986

o on continued high birthrates

"Birthrates in rural areas of Central Asia are now 36-42 per thousand. In the rural areas of the country as a whole they are only 22.8 per thousand. According to projections, in the next five years a significant decrease in the rate of natural increase of the population of this region is not expected." [redacted]

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o on the development of squatter settlements

"The growth in rural population density in the valleys of cotton growing regions is reaching a critical level, promoting the migration of a certain segment of the population to less densely populated regions. The migration is marked by the formation of rural-urban agglomerations in rayons. The newly settled villages--especially the mountain villages--are outside of the sphere of influence of the planning and economic organs of the region. In Tadzhikistan alone, according to incomplete data, nearly 300 of such villages can be counted. They lack enterprises and facilities to provide a social infrastructure. Many of them lack electricity and are not even connected by roads with other, more developed types of settlements." [redacted]

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o on slow urbanization

"One of the features of the labor surplus countryside is the low territorial mobility of the population. Sociological research shows that in Dushanbe only 8.2 percent of the working youth are those who have migrated from the rural areas of Tadzhikistan..." [redacted]

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Kommunist Uzbekistana No 7, July 1986

o on the growth of private activity

"In the rural areas of the republic one in four, and in Andizhan, Fergana, and Kashdadarya oblasts nearly one in three of the able-bodied population is occupied with home work or tending private plots. In some mountain and foothill areas of Uzbekistan where the population is engaged primarily in animal husbandry, the situation is even worse: half or more of the working-age population is not employed in the public sector." [redacted]

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I. ALYABYEVA, ZVEZDA VOSTOKA NO 8, AUGUST 1986...

o on overmanning and depressed labor productivity

"In contrast...to the Russian countryside, here children prefer to stay on the land of their parents, taking an already well-trodden path. Today in the Andizhan countryside high population density affects the earnings of the peasants, lowers their labor and social activity, and develops an 'anti-mechanization mood.' In certain rayons the average load for one cotton

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harvesting machine is 20-30 tons, while on a few farms they are not used at all...In general in the oblast, in all of its sectors, labor productivity remains at a 'frozen' level..."

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EMPLOYMENT TRENDS BY MAJOR SECTOR

Low labor productivity and a high percentage of manual work dictate the maintenance of a large agricultural labor force. The decline of employment in Soviet agriculture has been markedly slow for a developed country. Employment in socialized agriculture decreased at an average annual rate of less than one-half of one percent during 1971-85 (figure 8). In 1985, state and collective farms accounted for a 19.2 percent share of total employment in the socialized economy. If private agricultural activities are taken into account this proportion grows to 25.2 percent.

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Gorbachev hopes to turn this situation around by accelerating the mechanization of agriculture; he argues that this could result in the release of over 10 million workers by the year 2000. This would represent a tremendous acceleration in the decline of agricultural labor. In the previous fifteen-year period--1971-1985--the number of workers in socialized agriculture decreased by only 1.4 million. The total decrease of employment in agriculture--including private activities--was 2.4 million. If Gorbachev's goal is to be achieved, major improvements will be needed in the quantity, quality and assortment of Soviet agricultural machinery, storage and maintenance facilities, and incentives for farms to use the equipment efficiently.

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In the nonagricultural sphere, average annual employment in the service sector has been growing at a comparatively faster rate than other sectors of the economy. Between 1970 and 1985 it increased at an average annual rate of 1.2 percent as compared to an average annual increase of 0.8 percent in industry (table 5).

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Figure 8
USSR: Employment in Socialized Agriculture
Compared to Total Civilian Employment



Source: S. Rapawy, "Estimates and Projections of the Labor Force and Civilian Employment in the USSR: 1950 to 2000," Center for International Research, Bureau of the Census, September 1986.

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Table 5

USSR: Employment^a

	(thousands)							
	1970	1975	1980	1981	1982	1983	1984	1985
Civilian Employment ^b	107,186	117,560	125,998	127,161	128,263	129,052	129,829	130,300
Industry	31,593	34,054	36,891	37,236	37,610	37,830	37,957	38,103
Indust. Materials ^c	8,069	8,320	8,667	8,696	8,792	8,844	8,826	8,806
Fuels (incl's Petroch)	1,907	1,852	2,009	2,057	2,091	2,105	2,101	2,135
Electric Power	633	686	785	799	823	837	853	872
Machinery	12,017	13,816	15,437	15,574	15,735	15,833	15,948	16,047
Consumer Goods ^d	7,920	8,124	8,458	8,517	8,511	8,459	8,452	8,376
Construction	9,052	10,574	11,240	11,298	11,299	11,315	11,349	11,492
Agriculture ^e	26,419	25,921	25,150	25,014	25,119	25,165	25,206	25,040
Transport & Commo.	9,315	10,743	11,958	12,172	12,337	12,438	12,487	12,549
Trade & Services ^f	29,376	34,565	38,865	39,530	39,940	40,309	40,784	41,336
Military Manpower	5,081	5,638	5,941	5,970	6,021	6,034	6,044	6,018

average annual growth rate percent

	1971-75	1976-80	1981-85	1983	1984	1985
Able-bodied population ^g	1.7	1.5	0.4	0.3	0.2	0.2
Civilian Employment	1.9	1.4	0.7	0.6	0.6	0.4
Industry	1.5	1.6	0.6	0.6	0.3	0.4
Industrial Materials	0.6	0.8	0.3	0.6	-0.2	-0.2
Fuels	-0.6	1.6	1.2	0.7	-0.2	1.6
Electric Power	1.6	2.7	2.1	1.7	1.9	2.2
Machinery	2.8	2.2	0.8	0.6	0.7	0.6
Consumer goods	0.5	0.8	-0.2	-0.2	-0.5	-0.9
Construction	3.2	1.2	0.4	0.1	0.3	1.3
Agriculture	-0.4	-0.6	0.2	0.2	0.2	-0.7
Transport and Commo.	2.9	2.2	1.0	0.8	0.4	0.5
Trade and Services	3.3	2.4	1.2	0.9	1.2	1.3
Military Manpower	2.1	1.0	0.3	0.2	0.2	-0.4

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(Table 5 continued)

- a Employment data are from various issues of Narkhoz. Breakdowns for employment by branch of industry were done by the Center for International Research, Bureau of the Census.
- b Civilian employment is the average annual number of persons working in all branches of the national economy--wage and salary workers and collective farmers.
- c Includes chemicals, ferrous metals, nonferrous metals, construction materials, and wood, pulp, and paper.
- d Includes light and food industry.
- e Excludes private agriculture, but includes nonagricultural employment subordinate to agricultural enterprises.
- f Includes trade, public dining, material-technical supply and sales, procurement; housing, communal economy, and personal services; health services; education; culture; art; science, and scientific services; credit and insurance organizations; and government administration.
- g Males aged 16-59 and females aged 16-54. Figures are estimated by Center for International Research, Bureau of the Census.



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Within industry, the energy sector has shown the highest employment growth. Employment in the electric power industry grew at an average of over 2 percent per year during 1971-85. Employment growth in the fuels sector, which declined in the early seventies, picked up to an average of 1.6 percent per year in 1976-80, and 1.2 percent in 1981-1985. The effect of the slowdown in labor force growth was thus magnified for the remaining sectors of industry, especially the consumer oriented branches. In the eighties the average annual growth rate for employment in the machinery sector has been less than half the high rate achieved in the seventies--falling from 2.2 percent per year in 1976-80 to 0.8 percent per year in 1981-85. Employment in the consumer goods sector, which includes the light and food industries, has declined at a rate of 0.2 percent per year since 1980.

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GORBACHEV'S LABOR FORCE STRATEGY

To return to higher rates of economic growth, Moscow must rely on gains in labor productivity to make up for the current slow expansion of labor supply. Gorbachev has approached the problem on several levels:

- o Efforts to improve labor utilization--primarily administrative measures that attempt to make it more difficult for enterprises to hoard labor.
- o Mechanization. Moscow hopes that the mechanization of labor intensive processes can free 20 million workers from manual labor by the year 2000. This goal is to be realized largely through production of more modern equipment.
- o 'Human factor' policies. Moscow is counting on its discipline and temperance campaigns to reduce shirking; while wage reform is to increase incentives for good performance.
- o Management and planning reforms to improve incentives.

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Efforts to Improve Labor Utilization

Moscow has long tried to control poor labor utilization through administrative measures, better incentives to save labor, and improved management and planning. Gorbachev has intensified this effort through a number of initiatives including:

- o Work position certification. Under this program, begun in 1985, all enterprises are tasked with a systematic inventory and evaluation of their labor and equipment--with the aim of eliminating low productivity jobs and obsolete machinery. The inventory is also to provide planners with the information necessary to draw up regional balances in supply and demand for labor--and to more critically evaluate ministries' requests for labor.
- o Shchekino-type schemes. Under these programs--variations on the experiment begun in 1965 in the Shchekino Chemical Combine--enterprises are assured a fixed wage fund and encouraged to release their least productive workers and use the resulting savings in wages to reward their most productive personnel. The Shchekino system is factored into the overall reform experiment in the Soviet Union. It is the basis for the new pay system recently introduced in scientific research institutes as well as the staff-cutting scheme recently mandated for all Soviet railways.

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Gorbachev's programs will be difficult to implement successfully. In the case of work certification, enterprises are essentially being asked to regulate themselves--certification committees are to be formed within the enterprise. There have been complaints of footdragging on the part of both enterprises and some ministries. There is also some doubt as to the ability of administrators and planners to manage the mass of paperwork generated by the program. Previous attempts to implement Shchekino-type labor saving measures on a wide scale have had disappointing results. When such experiments spread they often run into opposition and interference from ministries and state committees who tend to protect the status quo. Nevertheless, the program may lead to some marginal improvements in labor utilization.

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Mechanization

Every Soviet regime since Khrushchev has tried to reduce the size of the work force engaged in manual labor. While slow progress has been made, Moscow's current plan to reduce the number of manual laborers by 20 million by the year 2000 seems overly ambitious (table 6). Five million manual workers are to be released during the 12th Five-Year Plan--as compared to a reported reduction of less than half that figure in 1981-85. This acceleration in the reduction of manual labor would require both increased production of materials-handling equipment and greater incentives for ministries and enterprises to use investment funds to save labor. While Gorbachev has sharply increased investment in machine building, thus far Moscow's attention seems to be focused more on increased production of high technology robots and advanced machine tools rather than relatively simple materials-handling

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Table 6

Manual Labor in Soviet Industry, Agriculture and Construction

(.Percent)

<u>Industry</u>	All Workers	Of which those who perform:		
		Work With Machines	Manual Labor	Maintenance and Repair Work
1975	100	45.7	41.6	12.7
1982	100	48.8	37.4	13.8
1985	100	51.0	34.9	14.1
<u>Agriculture</u>				
Kolkhoz				
crop-cultivation				
1982	100	23.6	75.2	1.2
1985	100	25.5	73.3	1.2
animal husbandry				
1982	100	23.5	73.9	2.6
1985	100	28.3	68.9	3.2
Sovkhoz				
crop-cultivation				
1975	100	24.9	75.1	--
1982	100	27.0	72.1	1.8
1985	100	28.5	69.8	1.7
animal husbandry				
1975	100	17.7	78.8	3.5
1982	100	19.4	76.9	3.7
1985	100	23.6	72.4	4.0
<u>Construction</u>				
1975	100	36.8	59.9	3.3
1982	100	38.8	57.4	3.8
1985	100	40.0	56.4	3.6

Source: Narkhoz 1985.

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SOVIET LEADERS ON THE PROGRESS OF MECHANIZATION

Gorbachev remarks during Far East Tour, July 1986:

"Some of the programs and measures are just a collection of superficial and insufficiently thought out plans for the introduction of new equipment and technology, and only one-third of them have a direct effect on the reduction of manual labor, whose proportion in machine building is up to 40 percent."

[redacted]

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Report of the RSFSR Government Presidium, September 17, 1986:

"It was noted that despite certain positive results achieved in the sphere of speeding up scientific and technical progress, these results do not constitute a qualitative breakthrough and the restructuring process is still moving slowly. Labor productivity growth rates have slowed down in industry and the plan to reduce the proportion of manual labor is not being fulfilled. Thus, in the RSFSR Ministry of the Fish Industry the proportion of manual labor is 54.5 percent and in the RSFSR Ministry of the River Fleet it is 51.5 percent."

[redacted]

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N.N. Slyunkov, Belorussian First Secretary, at the 30 July 1986 republic plenum:

"The forecast...of scientific and technical progress in the Belorussian SSR chemical industry complex envisages a pace of renewal--if one may use the expression--for the equipment pool that will increase the service life of equipment 2-2.5 times in 20 years. And the underlying pace of mechanization will produce only a 2 to 5 percent reduction in manual labor." (U)

Boris Yeltsin in a 20 July 1986 address to Moscow Gorkom plenum criticizing award-winning enterprises of the Ministry of Instrument Making and Automation Equipment:

[redacted]

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"And in practice? Here, for years on end, they produce obsolete types of output which lag substantially behind the best foreign models. New machinery is assimilated only on a small scale and manual labor prevails in production. That is the example of acceleration which our frontrunners set."

[redacted]

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equipment (such as fork lifts and gantry cranes) which could free up many more workers at a seemingly lower cost.

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Gorbachev has yet to find an effective way to instill a labor saving mentality in ministry officials and enterprise managers. Soviet leaders complain that requirements for large numbers of manual laborers are still being 'built in' to ministries' plans for new construction and reconstruction of plants, and that enterprise managers are still reluctant to release redundant workers.

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"Human Factor" Policies

Gorbachev's so-called "human factor" policies include temperance and discipline campaigns to spur greater work effort. Tightened worker discipline probably raised labor productivity both in 1986 and earlier during Andropov's discipline campaign in 1983-84. Such boosts become increasingly difficult to sustain however as the most obvious shortcomings are overcome. Moreover, attempts to further tighten discipline eventually become counterproductive if workers view them as too repressive.

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The most visible discipline policy is the temperance campaign. When Gorbachev came into power, alcohol abuse had become a major drag on growth of labor productivity in the Soviet Union. Alcohol figured prominently in absenteeism, shoddy workmanship, and accidents on the job; and it had damaged the health of a large segment of the labor force, contributing to the rise in

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mortality rates among working-age men. In May 1985 Gorbachev initiated a temperance campaign which included measures to cut alcohol production, reduce liquor store hours, and stiffen penalties for alcohol-related crimes.

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The temperance campaign has had some success--cutting alcohol consumption by an estimated 20 percent and reducing drunkenness and absenteeism. The campaign probably contributed to the improvement in labor productivity in 1986. But the temperance drive has also been accompanied by certain costs: popular resentment, loss of state revenue from the sale of alcoholic beverages, and the expansion of illegal activities related to the production, distribution and sale of alcohol--consumption of illegal home brew may have jumped by more than 40 percent. It will be difficult for the regime to maintain strict temperance measures for an indefinite period of time. There are already signs that the temperance campaign is letting up in some areas. In late October liquor stores hours in Moscow were extended to cut down on embarrassingly long lines; and in November alcohol was reintroduced in Moscow restaurants.

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Wage Reform

The implementation of a new wage system in Soviet industry began on January 1, 1987. The new system is designed to improve incentives to perform well and acquire advanced skills by reversing the long-standing trend towards wage-leveling. Currently many trained professionals make little more than blue collar workers. Under the new system sharply higher wage increases would go to those with skills vital to the modernization program--top engineers, designers and skilled labor in machine-building. Wage increases are to be funded by the enterprises themselves--through increases in productivity and through savings in the wage fund created by releasing excess labor.

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SOVIET'S CITE BENEFITS, AND COSTS, OF TEMPERANCE CAMPAIGN

According to M.A. Korolev, Chief of the USSR Central Statistical Administration, Izvestiya 12 October 1986:

- o In year 1 of the temperance campaign the number of fatal accidents connected with drunkenness at the work place fell by 20 percent. 25X1
- o In the first 6 months of 1986 losses of work time through absenteeism were reduced by one-third in industry and by 40 percent in construction. 25X1
- o The number of road and transport accidents caused by drunk drivers fell by 15 percent. 25X1

On the other hand:

- o On December 3 1986, Boris Zabolin, deputy minister of internal affairs, said that illicit sales of alcohol had risen 42 percent, while instances of private wine-making had tripled. 25X1
- o In a 10 November speech at the CPSU Central Committee, Yegor Ligachev noted that drinking has gone indoors--with people increasingly drinking at home rather than in public. 25X1
- o The Soviet press tells of people resorting to home brew, cologne, and even industrial preparations to satisfy their need for alcohol. In parts of the country perfume outlets now open the same time as liquor stores--2 p.m. 25X1
- o By the beginning of 1987, cutting alcohol sales had cost the state more than 10 billion rubles in lost tax revenue. 25X1

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The effect of changes in the wage and incentive structure may not be evident for some time. Implementation of the new system is likely to be slowed by the stipulation that enterprises must fund the wage increases out of their own resources.

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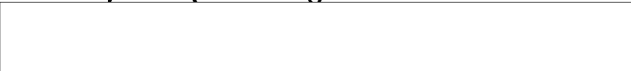
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External

- 45-Col. Tyrus W. Cobb, Director, East-West Section,
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- 46-Paula J. Dobriansky, European and Soviet Affairs,
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- 48- [redacted] Dean, Defense Intelligence College, DIAC (C3-124 Bolling AFB) 25X1
- 49-Dr. Donald Goldstein, Principal Director, International Economics, Trade, and Security Policy, Department of Defense (4C76 Pentagon)
- [redacted] 25X1
- 51-Robert H. Baraz, Director, Office of Analysis for the Soviet Union and Eastern Europe, Bureau of Intelligence and Research, Department of State (4758 State)
- 52-John Danylyk, Chief, Communist Economic Relations Division, Bureau of Intelligence and Research, Department of State (8662 State)
- 53-Robert W. Clark, Deputy Director (Economic Affairs), Office of Soviet Union Affairs, Bureau of European and Canadian Affairs, Department of State (4223 State)
- 54-Ralph Lindstrom, Director, Office of Economic Analysis, Bureau of Intelligence and Research, Department of State (8722 State)
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