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Soviet Military Manpower: Sizing the Force

A Research Paper

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Soviet Military Manpower: Sizing the Force

A Research Paper

This paper was prepared by _____ Office of
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SOV 90-10046X
August 1990

Soviet Military Manpower: Sizing the Force

Summary

Information available
as of 24 July 1990
was used in this report.

✓ [] and in-depth demographic research have led us to conclude that Soviet force levels in the 1980s peaked at about 5 million men. The force reductions now being implemented should bring total manpower down to about 4.3 million by the end of this year.

During the 1960s and 1970s, the Soviets were able to routinely supply sufficient conscripts to man their force at high levels. The force structure gradually expanded during this period, and by the end of the 1970s an estimated 5 million men were needed to fill it out. At the same time []

] indicated that military units were manned at fairly high levels of readiness. Demographic data also indicated that the USSR could have conscripted sufficient numbers to support a force of 5 million men.

During the 1980s [] the Soviets were further expanding their force structure both in the interior of the country and in Eastern Europe to one that would have required 5.5 million men to keep the manning at earlier levels. Despite this expansion []

] the Soviet military intended to maintain roughly constant total manpower. Moreover, []

] on Soviet ground forces in central Europe revealed that expansions in force structure were being accomplished by thinning out existing units, rather than increasing manning. Demographic data also indicated that the Soviets could maintain the manning levels of the 1970s only by strictly limiting health and family-based exemptions—which they did not appear to be doing.

Despite these overall constraints on manpower levels, we did not have sufficient information for most of the 1980s to determine the extent of the "hollowing out" of the Soviet military structure. It was not until 1989 that []

] such a hollowing out was, indeed, occurring in Soviet rear service and support units. Consequently, we now believe that other units in the interior of the USSR—such as ground forces staffs, directorates, and other support units—also were manned at lower levels in the 1980s than in the 1970s. As a result of these findings, we have concluded that the Soviets maintained constant military manpower levels of about 5 million men during the 1980s, about 500,000 fewer than we had estimated for 1988. Indeed, Defense Minister Yazov's recent claim of a 400,000-man shortfall in the military supports our conclusion that the Soviets have not been able to fully man their forces

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We have observed changes in the Soviets' force structure that suggest manpower strengths have been reduced to about 4.5 million overall since early 1989 as a result of the unilateral 500,000-man cut announced by Gorbachev in December 1988 and the release of nearly 200,000 student conscripts so that they could return to their studies. The most significant cuts have occurred in the Ground Forces. The Strategic Rocket Forces also are experiencing cuts with the elimination of INF forces and the deactivation of older silo-based ICBMs. Smaller cuts are occurring throughout the other forces, except for the Navy. When the cuts are completed by 1 January 1991, we believe total Soviet military manpower will be about 4.3 million men.

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Contents

	<i>Page</i>
Summary	iii
Scope Note	vii
Problems in Assessing Soviet Military Manpower	1
Revised Assessment of Manpower Availability: The "Supply" Side	2
Soviet Deferment Policies	3
Draft Evasion	7
Conscript Availability	7
Revised Force Structure Estimate: The "Demand" Side	10
Ground Forces	10
Air Forces	11
Air Defense Forces	11
Strategic Rocket Forces	11
National Command and General Support	11
MVD Internal Troops	12
Derivation of a Best Estimate	12
Estimated Decline in Military Manpower in 1989-90	13

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Scope Note

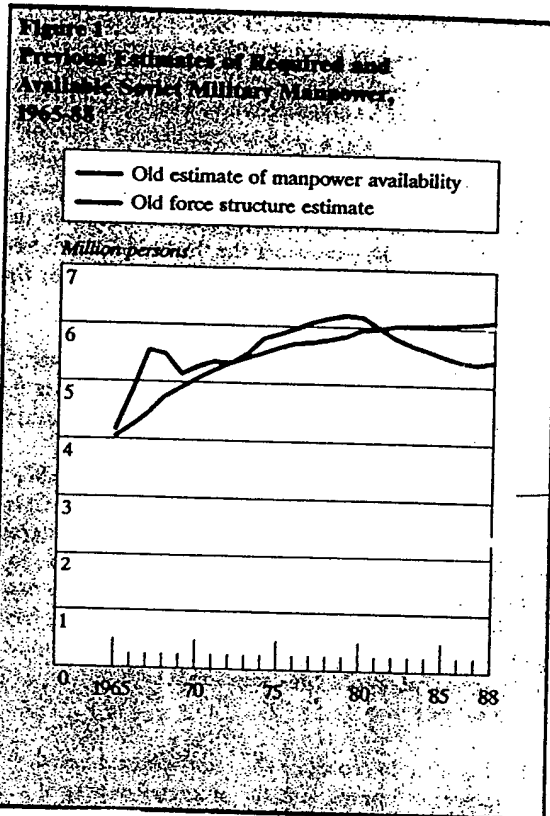
This Research Paper presents the results of a three-year reanalysis of Soviet military manpower strength, including a reassessment of manpower requirements, the number of conscript-age males, and deferment practices. It highlights the new evidence that resulted in a revision of our estimates for the period 1965-88, with particular emphasis on 1988. It also discusses the manpower implications of the USSR's ongoing unilateral force cuts, including new estimates for 1989 and 1990 that take these reductions into account.

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Soviet Military Manpower: Sizing the Force

Problems in Assessing Soviet Military Manpower

The USSR has never revealed detailed, verifiable information on its military manpower levels. Consequently, the Intelligence Community traditionally has estimated the manpower for each component of the Soviets' force structure by means of a building-block approach. We identify nearly 1,300 distinct types of military units in the five armed services, the national command and support structure, and the militarized security forces. We estimate the midyear manning level of each type of unit and the number of such units forcewide. We then aggregate the personnel for all of the units in any given year.¹



As a result, our final estimate, though given as a single figure for each year, is actually a best estimate within a range that differs by as many as a million men between the low and high values

In the past, using the force structure methodology, we estimated that the Soviet military slowly increased to a level of some 6 million men in the 1980s. Our

¹ Military manpower includes officers, warrant officers, career enlisted men, officer cadets, and conscripts. In addition to the traditional armed services, the Soviets conscript men into militarized organizations that have no US counterpart: the KGB Border Guards; the Ministry of Internal Affairs Internal Troops; and the Construction, Civil Defense, and Railroad Troops

estimates of manpower availability would have supported a force of this size in the 1970s (see figure 1). However, because of the decline in draft-age men in the 1980s, we predicted that the Soviets would have to take one or more of the following steps: cut deferments, recruit more career enlisted personnel, extend the term of service for conscripts, call up more reservists (and retain them for longer periods), or possibly even reduce the size of the armed forces.

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During the early and middle 1980s, we saw reports of demographic constraints, but the shortage apparently was not severe enough to force the Soviets to change their conscription policies as we had expected. The only major change we observed was elimination of student deferments in 1982.¹ The number of 18-year-olds reached its low point in 1986. Yet [] evidence suggests that Gorbachev's 7 December 1988 announcement at the UN of a unilateral cut of half a million men during 1989-90 was politically and economically—not demographically—motivated. Finally, the reinstatement in March 1989 of student deferments represented a move in the opposite direction—reducing the draftable population by almost the same amount as was being saved by the unilateral cut.

According to [] moreover, Warsaw Pact plans for 1981-85 called for roughly the same total manpower. Any new military organizations were to be manned by reallocating personnel or thinning out support and rear service units. In addition, according to [] in June 1986 Chief of the General Staff Marshal Viktor Kulikov reiterated the goal of stable manpower levels. His failure to outline compensatory measures to accommodate population changes further suggests that the Soviets have not had—nor did they foresee—serious demographic problems that would constrain force levels.

Our inability to reconcile the requirements-based manpower estimates with the predicted supply of Soviet conscripts led us to review both methodologies separately. The estimates for every year from 1965 to the present were reviewed, but we chose 1988 as our base year because it was the last year before the beginning of the USSR's 500,000-man unilateral force reductions and the early release—in the fall of 1989—of some 176,000 student conscripts. Thus, the use of 1988 as our baseline facilitates the comparison

¹ In addition, a six-month extension of the term of service for conscripts with a higher education took place in 1977. This predated the demographic decline, however, and affected only a small percentage of the draft-age population. (With restoration of the student deferments in 1989, this six-month extension has been rescinded. Now, all conscripts with a higher education serve one year.

The Conscription Process

The conscription process in the Soviet Union begins when males reach age 16, although they are not actually inducted until they are 18 years old or over. A series of annual military-related physical examinations begins at age 16 at the local draft board—Voyenkomat—to determine how many of the youths are qualified for military service. While finishing high school or a vocational equivalency, they also participate in one to three years of pre-military training. Actual notification of an induction date is either by postcard or verbal notice at the physical examination before induction. In addition, each April and October, Soviet officials publicly announce the semi-annual callup of conscripts for their two- or three-year tours of active duty. The announcement begins a three-month period of notification, further medical examinations, selection for assignments, and transportation to military facilities of some 700,000 conscripts. Previously, the draft callups were announced in a Defense Ministry order. This year, the announcements are being made by government resolution so that KGB, Railroad, and MVD Internal Troops—who are no longer considered part of the armed forces—can still be conscripted. In making this change, Moscow emphasized that the government is responsible for allocating human resources.

of our new estimate with the previous one without having to take into consideration ongoing manpower reductions.

Revised Assessment of Manpower Availability: The "Supply" Side

One check on the estimates produced by the force structure methodology is to compare our estimated number of conscripts in the force with the number of Soviet males available for conscription (see inset). To obtain this latter figure, we use estimates of Soviet

draft-age males prepared by the US Department of Commerce, based on adjusted Soviet population data. Soviet conscription law provides for deferments based on health, higher education, family hardship, or unspecified "other" reasons. The application of these deferments changes over time, affecting the size of the conscripted force. In addition, a youth can avoid conscription by working on a priority job (although this is specifically prohibited by law), by being an officer cadet, by evasion, or by being in prison. Evidence is available—

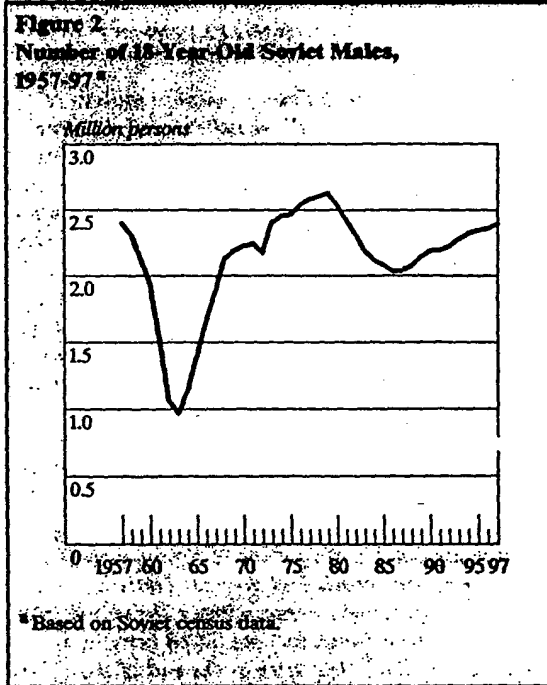
on the percentage of draft-age males who are not conscripted because of various deferments or who illegally evade the draft.⁴ We believe, on the basis of the Commerce Department's estimates, that the main variables that affect the availability of conscripts are the rates of deferment and evasion.

The number of 18-year-old males in the Soviet Union has fluctuated considerably (see figure 2). In the 1960s, there was a dramatic decline—some 60 percent—in the draft-age population, the first "echo" of sharply decreased birthrates during World War II. Partly as a response, Khrushchev reduced military manpower by 2.1 million in the late 1950s and announced that the manpower level had reached 3.6 million in 1960. A steady increase in the 18-year-old population followed until the 1980s, when a second, smaller echo resulting from the reduction in births during the 1960s reduced the number of 18-year-old males by almost 25 percent. Although the number began to increase slowly after 1986, it will remain below the high levels of the 1970s until the turn of the century.

Soviet Deferment Policies

Until 1982, we used a constant deferment/evasion rate of 12 percent in our estimates, indicating that the USSR could conscript up to 88 percent of its 18-year-old males. In 1982, student deferments were legally reduced, and we adjusted our deferment/evasion downward to 8 percent. Beginning in 1983, however, even this low deferment and evasion rate would not have allowed Moscow to maintain its armed forces at

⁴ The Soviets technically grant only temporary deferments. Until the early 1980s, however, a youth who was "temporarily" deferred for three or more years was unlikely to be conscripted once his deferment had expired.



our estimated levels. Moreover—

indicated that deferment/evasion rates were in fact well above 8 percent (see inset)

To develop a more accurate picture of the cohort, we reviewed the evidence to determine what percentage of young males are deferred from service. For each of the categories, we reexamined historical and current evidence and tested the comparability of our data with historical information on conscription in Eastern Europe. The deferment rates for all categories are shown in table 1. The percentages are presented as a range because the information—particularly for more recent periods—is fragmentary

Medical Deferments. Deferments for reasons of health are the largest category of deferments but also the most difficult to predict because the Soviets

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[] access to deferment data in the late 1960s provided us with annual medical deferment rates from 1953 through 1970. This evidence shows that between 9 and 29 percent of the draft-age population were found physically unfit in the period. The trend over time is consistent with the demographic changes. The lowest deferment rate occurred during the early and middle 1960s when the number of draft-age males dropped precipitously, and the highest rate took place in the late 1960s, when there were increasing numbers of 18-year-old males.³ Hence, the Soviets have been more selective when demographic trends were favorable.

From fragmentary information, we estimated the range of medical deferments separately for each of the decades after 1970. In each case, we have taken the prevailing demographic situation into account:

- We believe health-related deferments for the 1970s were in the range of 14 to 20 percent of the 18-year-old cohort. [] the average medical deferment rate from 1970 to 1974 was 14 percent. Later in the decade, the 18-year-old population steadily increased, and the Soviets could either have become more selective and raised the deferment rate or have kept the rate steady and used the growing population to expand the number of men conscripted. The upper end of our estimated range—20 percent—reflects the possibility that the Soviets became more selective.
- Health-related deferments in the 1980s probably were between 12 and 14 percent. Because of the decline in the draft-age population, the Soviets probably lowered their deferment rates during the decade. An open-press article cites a rate of "almost 12 percent" for 1987, which, because that year was

[] ³ When the number of 18-year-old males rebounded in the late 1960s, the Soviets gradually shifted from a three-year term of service (four in the seagoing Navy) to a two-year term (three in the seagoing Navy). With the previous three-year term of service, the USSR needed to draft only one-third as many men as there were conscripts in the armed forces, but, with a two-year term, the annual draft quota had to provide half as many men as there were conscripts

[] change conscription standards depending on the number and quality of men available. We also lack data on health standards and how strictly they are applied.

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Table 1
Estimated Deferment and Evasion Rates *

Reason	1965-88		1988 Only
	Period	Percent	Percent
Medical	1965-69	9-13 ^b	
	1970-79	14-20	
	1980-88	12-14	12-14
	1965-88	6-18 ^b	6
Occupational	1965-84	1	
	1984-88	0.1-0.5	0.1-0.5
Cadet	1965-88	0.8-2.0 ^b	2
Criminal	1965-88	3-6	3-6
Hardship	1965-88	4-5	4-5
Evasion	1965-88	3-10	3-10
			Total 30-44^c

* Includes only permanent deferments and exemptions.
^b These figures represent a range of individual annual estimates; a different value applies to each year.
^c The estimate for the total deferment rate excludes the double counting that would otherwise result from an individual being eligible for more than one type of deferment—for example, education and health.

near the decade's low point in the number of 18-year-olds, might have been the lowest rate in the decade.

Student Deferments. Except during 1982-88, the Soviets granted deferments to those enrolled full-time in higher education. We estimate that the student deferment rate rose from 6 percent in the 1950s to 17 percent in 1962 and then declined to 12 percent in 1981, because of changes in Soviet educational levels. Our estimate combines Soviet statistics on the size of the student population with ¹ indicating that about 15 percent of students eventually were conscripted. Technically, deferred students were

* The article was unclear whether this was the national rate or just one for Moscow. The figure is valuable, though, even if limited to Moscow; the city has a large enough share of the USSR's population that the figure is statistically reliable. It is safe to assume that the national rate would be somewhat higher than that for Moscow because of the city's highly privileged status with respect to health care.

eligible for conscription after graduation, but in practice few were drafted.

After student deferments were restricted in 1982, the deferment rate gradually declined to about 6 percent. This judgment is based on an analysis of press statements that link the reinstatement of student deferments to the recently announced unilateral troop reduction. Because the Soviets changed the deferment rate from year to year and much of the evidence for 1985-87 is fragmentary, we have less confidence in our estimate for those years.

During 1982-88, student deferments were granted only to those individuals attending certain schools, although we do not know which institutions were included. An analysis of Soviet published data shows a reduced number of graduates from higher education four years after deferments were cut back, allowing us to estimate that the deferment rate fell from 13 to 12 percent in 1982, and to 9 percent in 1983-84. This analysis and press reporting suggest that the list of specified schools gradually became shorter, so that in 1987 they allegedly could be "counted on the fingers of both hands." Some ¹ reporting supports such a declining trend.

Despite the apparent near end to student deferments during this period, a significant—but lower—number were still granted. Some students and university employees assert that their schools were not affected by the official cutback until 1985 or later ¹

¹ the cutback had a highly uneven impact. The military press noted that graduates of higher education frequently were draft evaders, which indicates that these individuals had been deferred until they completed their education.

Late in 1987, the downward trend was partially reversed. Press articles stated that deferments had been reinstated for an unspecified number of schools; and, a few months after Gorbachev's announcement of the unilateral force reduction, the Soviets fully

reinstated educational deferments. Press statements linking the reinstatement with the unilateral cut of 350,000 conscripts allow us to estimate both the number of students who were conscripted and the deferment rate—6 percent in 1988. After full reinstatement in 1989, student deferments jumped to 14 percent.

Deferments for Those in Priority Occupations. We previously ignored deferments of individuals with priority jobs, even though we have numerous reports of such deferments, because they are specifically prohibited in Soviet conscription law. The law does permit, however, deferments to be granted by the Council of Ministers in cases of "special necessity." We know of at least one press announcement of a Council of Ministers decree establishing an occupational deferment for teachers in rural areas. In addition, press reporting implies that draft boards have some latitude to give special deferments to individuals who do not meet the criteria for normal deferments. Both of these "special" categories may refer to occupational deferments.

We estimate that only a small portion of the population is deferred from service on the basis of their occupation. [] prior to 1984, the occupational deferment rate was probably about 1 percent. An East European country which appears to have similar occupational deferment practices also had a deferment rate of about 1 percent, []

In recent years, the level of occupational deferments has been between 0.1 and 0.5 percent of the conscriptable population. [] occupational deferments at military-related enterprises were to be eliminated in 1984. If both civil- and military-related deferments were cut by 90 percent, as one report predicted in 1984, only 0.1 percent of Soviet youths would have remained eligible for occupational deferments. The upper bound of our estimated range reflects the chance that reductions in occupational deferments were less severe than predicted.

Officer Cadets. Officer cadets are not part of the conscriptable population because they are already in the service. We have estimated the number of cadets

commissioned annually—at least prior to the USSR's unilateral reductions—from the number of officer schools identified in the open press, from [] on cadet enrollment, and from press articles during the past 30 years that list the percentage of officers with higher education. By our estimate, commissionings grew from about 4,000 in 1950 to about 38,000 in 1987, or about 2 percent of the 18-year-olds. With the ongoing cut in the number of officers in the Soviet armed forces, there undoubtedly will be some reduction in the number of cadets

Deferment of Criminals. Soviet conscription law states that persons serving a criminal sentence or involved in a criminal investigation cannot be drafted. Ex-convicts receive no exemption and [] and the open press, are conscripted into nonsensitive units like the Construction Troops. Many men are no doubt released while still young enough to be eligible for service, but we do not know whether they are likely to be drafted. [] two-, three-, or five-year sentences—or repeated sentences—disqualify a person from the draft, but we cannot explain the disparities between [] reports.

A recent interview with the USSR's deputy general prosecutor revealed that, out of every draft, 60,000 men are not inducted because of repeated convictions or conviction for a serious crime. Because there are two induction periods each year, it is uncertain whether this is an annual or semiannual figure—if the latter, it should be doubled to obtain an annual level. The lower end of the estimated deferment range of 3 to 6 percent assumes that 60,000 is an annual figure; the upper end assumes it is semiannual.

Hardship Deferments. According to the conscription law, hardship deferments are granted to those who are the sole supporter of one or both parents, if one or both are either retired or disabled. The youth must be an only child or have no siblings of working age who could be considered a source of parental support. Evidence points to a 4- to 5-percent deferment rate for hardship:

- Official Soviet data in 1970 [] listed the national rate as 4 to 5 percent.

- On the basis of Soviet demographic data and US disability rates, there was a 4.8-percent rate for the period 1958-85.
- US academics place the hardship deferment rate in the 4- to 5-percent range or higher.
- [] indicated an average 4-percent rate for the period 1945-74.
- [] indicated a rate of about 4 percent for an East European country in the early 1970s.

Draft Evasion

The predominant attitude of Soviet youth toward military service is dislike or apathy: "If a man's life is a good book, then military service is two pages torn out of this book." This attitude is apparent [] even in the open press, which describes evasion as commonplace and gradually becoming more widespread. As one article noted, "People used to despise and loathe" evaders; now they are indifferent. "Gradually over long years, a moral atmosphere has come about whereby children of leading workers and other influential people have evaded service by hook or by crook." In addition, rising nationalism, particularly in the Baltic and Transcaucasian republics, has led to open protest over conscription and refusal to report for service.

The penalties for evasion are relatively mild. For not registering, there is a fine of up to 10 rubles for a first offense, and 10 to 50 rubles for subsequent offenses. Repeat offenders can also be jailed, but only for two years (after which they must still satisfy their military obligation if they are under age 27). Press articles complain that the militia is lax in prosecuting known offenders. In addition, because prosecution is handled by local authorities, few men are actually convicted and those that are convicted usually receive suspended sentences.

Determining the number of successful draft dodgers—defined for our purposes as those who were neither deferred nor conscripted—is extremely difficult because, by definition, successful draft dodgers have "beaten" the system. In April, Chief of the General Staff Moiseyev stated that the number of attempts to evade the draft had increased from 837 in 1985 to 6,647 in 1989 []

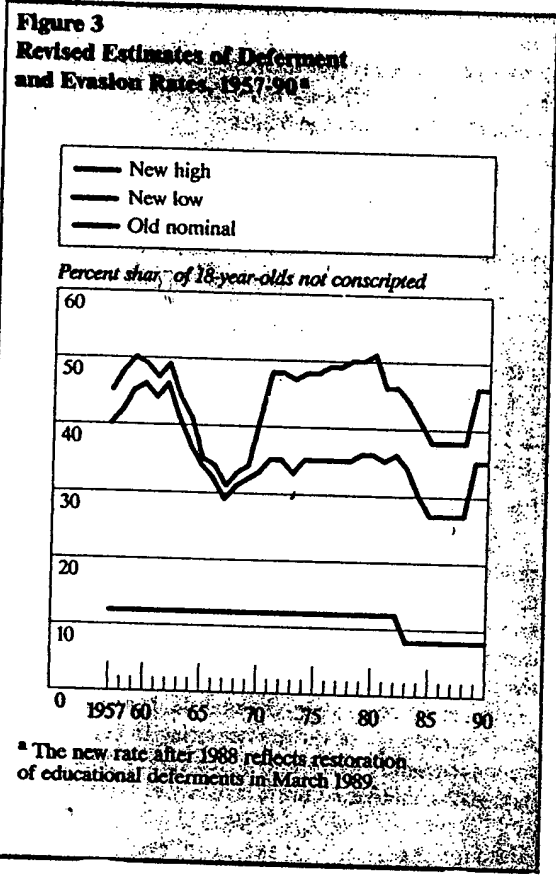
Table 2

Percent

Although the number of successful evaders [] is too small to estimate trends reliably, the evasion rates are generally consistent with the experience of other countries. For example, [] indicated that 7 to 8 percent of youths in an East European country failed to register for the draft during the early 1970s. Similarly, on the basis of experience during the Vietnam era, US mobilization planning allows for a 6-percent evasion level.

Conscript Availability

Combining the new estimates for each of the deferment categories with the evasion estimate results in a range of 29 to 42 percent not drafted in the demographically unfavorable late 1980s. Deferment rates



peaked at approximately 50 percent in the mid-1950s, when the demographics were favorable and military manpower levels were being cut. In the 1960s, when the 18-year-old cohorts were smaller and the shorter terms of service raised the demand for conscripts, the rates gradually declined to about 30 percent. With the more favorable population trends of the 1970s, deferment rates gradually increased again to between 35 and 50 percent. These figures contrast sharply with our previous estimate of either 8 or 12 percent, as shown in figure 3 (see inset).

Uncertainty regarding the annual deferment and evasion rates precludes a firm estimate of the numbers actually conscripted into military service over

Supporting Evidence on Deferment Rates

There are collateral indications that our new range of deferment estimates is more realistic than the previous assessment:

- Deferment rates for East Germany, Czechoslovakia, Poland, and Hungary during 1966-86 were within or above the new estimated range for the USSR.

as well as statements by

supported deferment rates within our estimated range.

- Writing in 1982, Chief of the General Staff Ogarkov noted that "a substantial number" of citizens are not conscripted. He cited historical examples from other countries to support a range for the Soviets of 35 to 44 percent, which is comparable to our estimated range for the years before 1982.

time. Moreover, other factors further cloud the picture:

- There is evidence that some conscripts are assigned to firefighting duties, a practice followed by several countries in Eastern and Western Europe. There are some 400,000 MVD firefighters in the USSR (see inset).
- We are not certain of conscription practices regarding the timing of callups. Although most males are drafted when they reach 18, there is some evidence that others are not conscripted until they are in their twenties. A flexible conscription policy would allow

Soviet MVD Firemen

There [] are some 400,000 Soviet firemen under the MVD. []

The evidence that some of these firemen are conscripted comes from [] as well as from hints in the open press. []

[] an open-press article states that firefighter cadets, in contrast with students at other MVD civilian officer schools, are excused from military service. Finally, the open press typically describes firefighters as "militarized" (voyenizirovan), although the exact meaning of that term remains unclear.

We have no indication of the number of conscripts in the reported 400,000-man force. On the high side, we use 90 percent for the number conscripted, a percentage based on one report by a former firefighter and by analogy with the MVD Internal Troops. For the low side, we use a figure of 5 percent, assuming a need for a large cadre of professional and long-term volunteer firemen. For instance, in 1987 France had a firefighting force of 230,000—202,000 volunteers, 20,000 professionals, and 8,000 military conscripts.

Some East European countries, such as Romania and Poland, are known to use conscripted firemen, and others are reported to use them. In all cases involving East European countries, data are fragmentary, and there are no reports of the actual number—or percentage—of conscripts.

for a rippling forward of eligible manpower from times of relative surplus and thereby mitigate the effect of a short demographic downturn, such as the one that occurred in the mid-1980s.

- Misdiagnosed health problems result in the discharge of some conscripts after only a few months of service. [] 5 percent of those conscripted were discharged early.

Given the range of uncertainty, our "supply" side estimate of the number of military conscripts in 1988 is between 2.1 and 3.7 million men. The low end of the estimate assumes somewhat more liberal health deferments and a 10-percent evasion rate. It also assumes all conscription occurs at age 18 and that the Soviet Union's firefighting force is largely conscripted. The high end of the estimate, in turn, results from more conservative assumptions on deferment policies, a firefighting force that is composed largely of professionals, and the calling up of some conscripts in their early twenties

The range of conscript availability, in turn, implies a total Soviet military force of between 4.0 million and 5.5 million men for 1988:

- On the basis of a detailed analysis of unit organization, we estimate that only 7 percent of the force are career noncommissioned or warrant officers. The Soviets have long complained about the shortage of volunteers for career NCO and warrant officer positions, and we have evidence that many of these billets are filled either by conscripts or commissioned officers. Another 4 percent of military manpower are officer cadets. The cadet estimate is based on the number of officer schools, documented by both open-press and [] and an estimate of enrollments broken down by type of school.
- We believe the USSR had an active-duty officer corps of roughly 1.1 million men in 1988. This estimate is supported by the number of graduates from officer schools, based on cadet enrollment estimated above, and officer retention rates, and by published Soviet data on Communist party membership rates among officers, career NCOs, and conscripts.

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Table 3
Force Structure Estimates of Soviet Military
Manpower, 1988*

Thousands

Force	Old Force Structure	New Force Structure	Key Changes
Ground Forces	2,035	2,140	Division and military district headquarters manning increased by 105,000.
Air Forces	610	480	Elimination of a 75,000-man double count.
Air Defense Forces	575	545	Decrease of 30,000 men at SAM and ABM sites and their headquarters and support units.
Strategic Rocket Forces	315	315	
Naval Forces	435	435	Offsetting evidence on peacetime ship manning estimate and Soviet statements.
Command and Support			
Construction troops	805	645	New methodologies indicate a lower number of units and manning levels.
Railroad troops	235	150	
Civil defense troops	50	40	
Other	385	275	
KGB Border Guards	215	225	Reanalysis indicated higher number of men in KGB naval units
MVD Internal Troops	460	325	New data indicated fewer divisions and lower manning.
Total uniformed personnel	6,125	5,575	
Less KGB, MVD, and railroad troops	-910	-700	
Total armed forces	5,215	4,875	

* The numbers may not add to the totals because they have been rounded to the nearest 5,000.

- Soviet press articles have given a figure of 35 percent for the share of professional military personnel, the same figure we derived from independent analysis.

Revised Force Structure Estimate: The "Demand" Side

As evidence mounted that the availability of manpower might not support our previous manpower estimates based on force structure, we established a task force (in CIA's Office of Soviet Analysis) to gather new—and revisit old—data on unit order of battle (O/B) and manning. The purpose was to determine whether we could improve the manning data in our "building-block" estimates. Much of these data had remained unchanged over the past 10 years.

New data and reanalyses of old data produced changes in manning and in O/B which in turn produced adjusted force structure estimates for the entire 1965-88 period; the impact for 1988 is shown in table 3. Using this methodology, we derived an overall estimate of the peacetime "demand" for uniformed personnel of 5.6 million in 1988, a reduction of about 600,000 from our previous estimate.

Ground Forces

We increased our estimate of ground forces manpower in 1988 by 105,000 to 2,140,000. A detailed analysis of [] reporting indicated that our estimates of divisional and headquarters personnel

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were too low and that support unit manning was probably lower at the army and corps levels and higher at the military district levels than we had previously estimated.'

At the time of this reanalysis, we had received evidence that manning levels for two rear service and support units in the forward area were lower than we were estimating and below levels reported for the 1970s. We made adjustments to include these data but did not have sufficient detailed information to lower the manning estimates for all such units. Although we suspected that this "thinning" was occurring in other units, we had no specific evidential basis for making further adjustments in our force structure estimate.

Air Forces

We decreased our estimate of Soviet Air Forces manning after discovering a double-counting error involving approximately 75,000 personnel associated with helicopter forces. These men were being counted as part of both the Air Forces and the Ground Forces. Although they are functionally assigned to the Ground Forces, organizationally they are a part of the Air Forces. We decided to count them in the Ground Forces only. The remaining decline resulted from lowered estimates of both O/B ' and unit manning levels.'

Air Defense Forces

More than half the reduction in our estimate of Air Defense Forces manpower in 1988 was the result of a reanalysis of the effects of the Soviet Air Forces reorganization in 1980. The reorganization changed the subordination (but not the mission) of a number of air and air defense units. We reduced the estimate for manning associated with PVO interceptor aircraft to reflect the reorganization and the assessed manning for individual airfields. In addition. []

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[] indicated lower manning levels at early warning and ground control intercept units. Although another reorganization of the Air Defense Forces occurred in the late 1980s, the available evidence indicates that it had little or no effect on the manpower total for the forces.

Strategic Rocket Forces

We have adjusted our estimate of Strategic Rocket Forces manpower frequently, because of the changing structure of the force and the increasing availability of reporting. New deployments of mobile ICBMs, coupled with deactivations of older silo-based ICBMs and the drawdown of the INF force in particular, have complicated our efforts to estimate manning levels. At the same time, however, we have received an increasing number of [] reports on manning for the force, []

Although the overall new estimate for Strategic Rocket Forces manpower in 1988 is the same as the old estimate, we have made corrections to several force components. Previously, we used average manning factors for ICBM division and group headquarters. The new data we obtained, however, allowed us to disaggregate the estimates for these headquarters by missile type. This research indicated lower manning levels for SS-18, SS-20, and SS-25 headquarters. In addition, we eliminated the SS-16 headquarters from our estimate once we learned that the program had been canceled. These reductions were offset by evidence of an increase in the number of warrant officer schools and the introduction of a separate SS-25 division headquarters.

National Command and General Support

National command and general support consists of a number of subcategories, the most important of which are Construction, Railroad, and Civil Defense Troops. As part of our reassessment, we developed new methodologies for estimating the size and structure of the Construction and Railroad Troops by building up the entire organization from detailed reports. In the case

of the Construction Troops, a reanalysis of all available data resulted in a reduced count and average manning level of construction detachments.¹⁰ Likewise, a new analysis of the Railroad Troops yielded a lower number of brigades than had been previously assessed and produced a "brigade model" that was normally organized with fewer battalions than the previously applied standard configuration, which again resulted in a smaller average unit size.

MVD Internal Troops

We reduced our estimate of the number of men assigned in 1988 to the MVD Internal Troops by 135,000 as the result of a new, more detailed methodology and a thorough analysis of the data on these troops.¹¹ This research indicated that the number of divisions was one-third less than we previously estimated and that we had overestimated the average manning level [

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Derivation of a Best Estimate

Our estimating methods combine to present a wide range of manpower levels throughout the 1970s and 1980s (see figure 4). For the 1970s, we believe actual uniformed manning levels were at the level implied by the Soviet force structure. Although Soviet officials did not publicly discuss manning levels during this period, the availability of conscripts and the detailed evidence on unit manning levels suggest that Moscow could routinely supply sufficient conscripts to man this force without scraping the bottom of the barrel. Indeed, our force structure estimate remains feasible through 1988 when compared with the demographic data; we cannot demonstrate conclusively that military manpower was less than this total.

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We can demonstrate with our analysis that force structure requirements exceeded the availability of men by 1989, and accumulative, fragmentary evidence on manpower shortfalls suggests the Soviet military experienced increasing difficulty in filling out its steadily growing force structure through the 1980s:

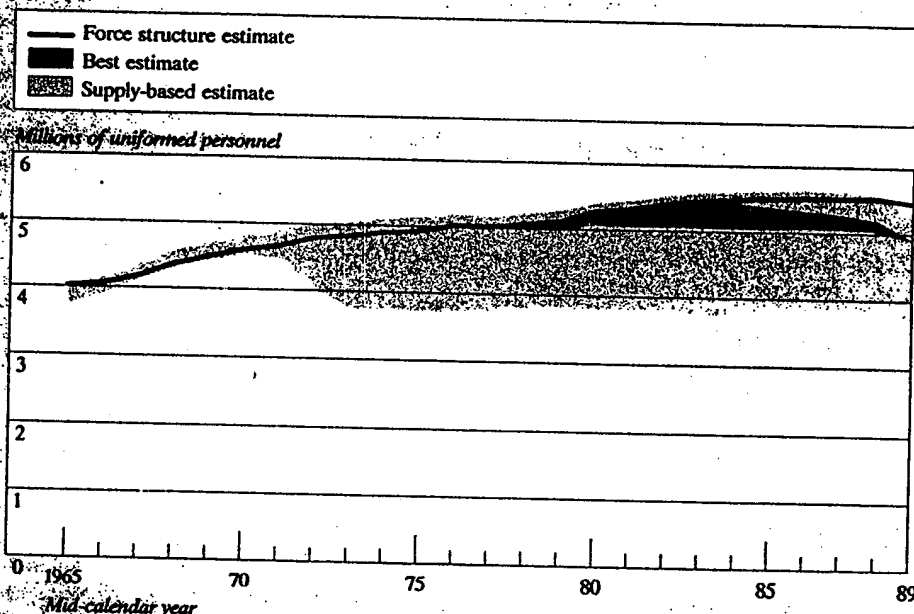
- [] Warsaw Pact plans for 1981-85 indicate, for example, that the Soviet military intended to maintain roughly stable manpower levels. Moreover, extensive data from the early 1980s on Soviet Ground Forces in central Europe reveal that expansions in force structure were accomplished by personnel reallocations instead of manning increases.
- [] on ground forces rear service and support units suggest shortfalls in manning in the 1980s. If this "hollowing out" were replicated throughout ground forces staffs, directorates, and other support units, manpower for the ground forces alone would be 500,000 lower than our force structure estimate.
- Since mid-1989 [] have been reinforced by high-level Soviet officials who have openly acknowledged that demographic shortfalls have constrained military manpower. Indeed, Defense Minister Yazov's recent claim of a 400,000-man shortfall in the military supports our conclusion that the Soviets have not been able to fully man their forces.

These data are insufficient to justify revision of our detailed force structure estimates. Soviet military readiness standards and operating practices, however, would argue that any shortfall would be concentrated in headquarters and support units, especially in the ground forces, and this is supported by our fragmentary data.

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Figure 4
Best Estimates of Soviet Military Manpower, 1965-89



Note: The best estimate equals the force structure estimate through 1977.

Moreover, although the upper end of our estimate of manpower availability just exceeds our force structure estimate, it is very unlikely that actual manpower availability was this high. Statistically, there is a very low probability that the true deferment and evasion rates for all of the independent categories fall at the low extremes of the ranges—necessary to sustain manpower availability of 5.6 million in 1988. Soviet officials try to tighten exemptions in times of scarcity, which argues that manpower availability throughout much of the 1980s fell in the middle to upper portions of our range

On balance, we judge that Soviet military manpower levels were fairly constant during the 1980s, although our estimates are less certain than for earlier periods—as indicated by the line labeled “Best estimate”

in figure 4. Our baseline estimate for mid-1988 approximated just over 5 million men (see table 4). This figure is generally consistent with Soviet statements on manpower levels since Gorbachev’s speech before the UN in December 1988. Although some of these statements were inconsistent and vague, they implied an overall manpower level between 4.8 million and something over 5 million men in 1988 (see inset).

Estimated Decline in Military Manpower in 1989-90

We estimate that military manpower in mid-1989 dropped from 1988 levels by 140,000 men to 4.9 million as the Soviets began to implement their

Soviet Statements on Manpower Strength

Over the past few years, Soviet officials have begun to make numerous public announcements on manpower. Shortly after his speech before the UN in December 1988, Gorbachev announced that "the armed forces numerical strength . . . amounted to 4,258,000 men," but he did not explain what this total included. In the previous month, the Presidium of the USSR Supreme Soviet had issued a decree redefining the armed forces to exclude the MVD Internal Troops, KGB Border Guards, and Railroad Troops. Gorbachev's number probably excluded these three categories of troops because, a few days later, General Batenin reiterated the Gorbachev figure of 4.2 million but also stated that, when MVD Internal Troops, Civil Defense Troops, and KGB Border Guards were added, "they [the Soviet military] number over 5 million."*

Defense Minister Yazov stated in a May 1988 interview that the London-based International Institute for Strategic Studies (IISS) overstated Soviet combat power by 1 million men. The IISS, at the time, estimated Soviet armed forces manpower at 5.2 million men, with an additional 570,000 paramilitary troops. Yazov's use here of the term "combat power" hinders our understanding of what categories of troops he included. He may have been referring to a level of 4.2 million troops—arrived at by subtracting the 1 million from the 5.2 million armed forces figure. He also may have included the 570,000 paramilitary troops—that is, KGB, MVD, and Railroad Troops—and subtracted the 1 million from the resulting 5.77 million figure for a total of some 4.8 million.

* General Batenin may have erred in saying Civil Defense Troops, rather than Railroad Troops. At the time of his statement, the Civil Defense units apparently were considered part of the Soviet armed forces. Recent evidence, however, suggests that the Civil Defense Troops may be reassigned to the MVD—to which they had been assigned until the early 1970s—or to a special committee of the USSR Council of Ministers

On 11 July 1989, Chairman of the Council of Ministers Ryzhkov noted that the early release from military service of 176,000 conscripted students in August and September 1989 would reduce the number of combat troops ("privates and sergeants") by 4.8 percent. These numbers suggest a force size of 3,667,000 men. He may have used this term to indicate only enlisted personnel, as his addition of the words privates and sergeants implies. If we add in our estimate of the number of officers, we arrive at an overall total of 4.8 million

With one exception, the Soviets have described the unilateral cut of a half million men as a 12-percent reduction, implying a baseline total in 1988 of 4.2 million men. The exception was a general statement by General Batenin that the cuts represented a 15-percent reduction, which implies a total of 3.3 million men. A possible explanation for this discrepancy is that Batenin may have excluded the 1.7 million men in national command and support, KGB Border Guards, and MVD Internal Troops. Soviet officials have also provided manpower numbers for some branches of military service. Gorbachev stated in April 1989 that the Soviet Ground Forces numbered 1,596,000 and that the Navy had 437,000 men. In addition, two other reports from 1989 indicate that about 200,000 men were in the KGB Border Guard:

The Soviets' statements on their overall manpower levels suggest they seem to be focusing on two different definitions when they refer to military manpower:

- *The most comprehensive definition they have used appears to include all uniformed personnel, which totals "over 5 million."*
- *Another definition—which excludes KGB Border Guards, MVD Internal Troops, and Railroad Troops—covers what the Soviets now call "armed forces." This figure was announced as 4,258,000*

Table 4
Best Estimates of Soviet Military
Manpower for Mid-1988

Force	Old Estimate (thousands)	New Estimate (thousands)	Percent Change
Ground Forces	2,035	1,610	-21
Air Forces	610	480	-22
Air Defense Forces	575	545	-5
Strategic Rocket Forces	315	315	0
Naval Forces	435	435	0
Command and Support	1,475	1,110	-25
Construction troops	805	645	-20
Railroad troops	235	150	-36
Civil defense troops	50	40	-14
Other	385	275	-29
KGB Border Guards	215	225	5
MVD Internal Troops	460	325	-29
Total uniformed personnel	6,125	5,045	-18
Less KGB, MVD, and Railroad Troops ^b	-910	-700	
Total armed forces	5,215	4,350	-17

^a The numbers may not add to the totals because they have been rounded to the nearest 5,000.

^b The Soviets no longer consider these militarized troops as part of their "armed forces." We still count them in our estimate of total military manpower, however, because they consist primarily of uniformed, conscripted personnel.

announced unilateral force reduction of 500,000 troops (see table 5). The most significant cuts occurred in the Ground Forces, which dropped by an estimated 55,000 men, particularly as a result of demobilization of units in the Groups of Forces in Eastern Europe. All of the other forces were assessed to have sustained reductions in the range of 1.5 to 3.2 percent from their 1988 levels, with the exception of the MVD Internal

Table 5
Estimated Soviet Military
Manpower: 1989-90

Thousands

	1989	1990
Ground Forces	1,555	1,380
Air Forces	470	465
Air Defense Forces	510	490
Strategic Rocket Forces	305	280
Naval Forces	425	380
Command and Support	1,095	975
Construction troops	645	560
Railroad troops	150	130
Civil defense troops	40	40
Other	260	245
KGB Border Guards	220	220
MVD Internal Troops	335	345
Total uniformed personnel	4,910	4,535
Less KGB, MVD, and railroad troops ^b	-705	-695
Total armed forces	4,205	3,845

^a The figures shown are for midyear. They may not add to the totals because of rounding to the nearest 5,000 men. For both years, we have taken into account the assessed manpower cuts resulting from the USSR's unilateral force reductions.

^b The Soviets no longer consider these militarized troops as part of their "armed forces." Nevertheless, we still count them in our estimate of total uniformed personnel because they consist of uniformed, conscripted personnel.

Troops, which gained 10,000 men, and the Construction Troops, which maintained the previous year's estimated level of 645,000 men. [11

] the Soviets are carrying out the reductions at the speed and in the manner they said they would. [

] recently released officers who are unable to

Improving Manpower Estimates

Although considerable uncertainty remains concerning Soviet manpower levels, we have a much higher degree of confidence in our new, best estimates than in their predecessors. In deriving these estimates, we have considered all the available evidence, including information on O/B and manning levels, demographic data, reporting on deferment and evasion rates, and Soviet announcements.

The prospects for further improving our estimates are mixed. [

the Soviets may well make more detailed statements and, as part of future negotiations, allow more intrusive means for verifying the accuracy of such statements. On the other hand, although we have in the past periodically acquired some high-quality, [] data on the manpower of some Soviet units in the NATO guidelines area and occasionally even in the USSR's western military districts— [

On balance, manpower supply and demand estimates will continue to have large uncertainties and depend heavily on analytical judgments []



* The NATO guidelines area includes Poland, East Germany, and Czechoslovakia

find jobs and, more important, housing for their families.

Our estimate for mid-1990 assumes the Soviets continue to carry out their announced reductions. In making assessments for each service, we made cuts in O/B and unit manning, taking into account the evidence on the scope and pace of the reductions to date. The 1990 level for total Soviet uniformed forces is projected to be some 4.5 million men, down 375,000 from 1989 and 510,000 from 1988.¹² The most substantial cuts are projected to take place in the Ground Forces (175,000) and in the Construction Troops (85,000). In addition, the Strategic Rocket Forces are expected to take a cut of some 25,000 men because of the elimination of INF forces and deactivation of older silo-based ICBMs—actions that are being offset to some extent by the transfer of men to units supporting other missile systems. The MVD Internal Troops will again increase by 10,000 men, and the remaining services will sustain reductions at rates similar to those in 1989. Additional collection and research probably will serve to reduce uncertainties in these estimates, but we are unlikely to achieve a level of accuracy sufficient to confidently monitor unilateral or negotiated force reductions (see inset).

¹² A further complicating factor in assessing current Soviet military manpower levels is the USSR's early release—in the fall of 1989—of some 176,000 student conscripts so that they could return to their studies. According to Soviet statements, this release is not part of the 500,000-man reduction and is being compensated for by a "temporary" diversion to the combat services of 30 percent of the conscripts who would normally go to the Construction Troops. More recently, Soviet officials have proposed that the Construction Troops—primarily those working on civilian projects—began "permanent" reductions in 1990. From these statements, we cannot determine whether the Soviets are currently rebuilding the size of their Construction Troops to pre-1989 levels and plan to draw them down again in 1992, or whether the so-called temporary diversion is actually permanent. Consequently, the overall manpower reductions during 1989-90 could be as little as 500,000 men or as many as 676,000.