

19 November 1986

## MEMORANDUM

SUBJECT: The Impact of Soviet Economic Problems  
on Soviet Arms Control Positions

Summary

Soviet economic problems and priorities have created strong incentives for Gorbachev to reduce the growth of defense spending below the relatively low levels of recent years, but we are fairly confident that he does not believe that it is imperative that he do so. This judgment is based on our assessment of the performance of the Soviet economy since Gorbachev took over, the nature of the resource allocation decisions that will have to be made over the next few years, and the benefits to be gained from an arms control agreement. [REDACTED]

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Since Gorbachev assumed power, economic performance has picked up. GNP growth is headed for 3 to 3 1/2 percent in 1986, substantially better than in recent years. Gorbachev's human factors campaign has had a positive impact on productivity, while agricultural output will apparently match or exceed the previous record achieved in 1983. At the same time, our estimates show that defense spending, already at a very high level, continues to grow, albeit slowly. [REDACTED]

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We also believe that the shifts in machinery demand implied by Gorbachev's industrial modernization program will not have an immediate impact on the level of weapons production. Our analysis indicates that almost all of the weapons we expect to be produced through 1990 will be manufactured in plants already operating. Competition for some basic materials and intermediate goods used in the production process such as high quality steel and microprocessors will be intense and could well cause some delays in the production of certain weapons, but overall these changes are likely to be marginal. [REDACTED]

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While we do not believe Gorbachev feels compelled for economic reasons to sign an arms agreement or cut defense spending sharply in the immediate future, important decisions involving resource allocation will have to be made over the next two to three years. In 1988-89, the Soviets

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will have to decide on production rates for major weapons systems in the 1990s, if planning for the 1991-95 Plan is to proceed on schedule. At about the same time, Gorbachev will be in a much better position to assess how his modernization program is faring. We believe the planned gains in productivity and product quality will not be achieved. Gorbachev will then have to deal with military leaders--who now appear to be backing his modernization program--asking for more money, even as pressures for more civilian investment increase. [redacted]

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We do not know what Gorbachev will do, but the state of the economy, Moscow's perceptions of the military threat, and Gorbachev's domestic political standing would all come into play. Even if the economy is doing poorly, however, there is no guarantee that Gorbachev will feel compelled to cut defense spending sharply, although it would certainly make an arms agreement more attractive. [redacted]

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There is another view of how Soviet economic problems influence defense policy. A few experts outside of government [redacted] argue that that USSR's economic stringencies are so severe that Moscow will have to conclude a strategic arms-control agreement to lessen the defense burden. We believe, however, that the near-term economic benefits to be gained from an arms control agreement are often exaggerated by proponents of this view. Certainly, there are major economic benefits to be gained from an arms control agreement, particularly one limiting SDI, but they are mainly in the area of cost avoidance and would be reaped over the longer term. The immediate benefit to Gorbachev's modernization program from reducing or even eliminating particular strategic systems would be small. Production facilities take time to convert, and spending on strategic offensive systems represents only about 10 percent of total defense spending. [redacted]

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Measuring Soviet Economic Performance

When Gorbachev took over, the economy was mired in a decade long slump. Overall GNP growth during the 1981-85 Plan was headed for its smallest increase in any Five-Year Plan period. Moreover, GNP had increased by less than 1.5 percent in 1984, and during the first quarter of 1985, just before Gorbachev took over, production was essentially flat. [redacted]

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The USSR's economic performance should not be judged primarily in terms of growth rates, however. Soviet economic growth since 1980 has been as good or better than that of other major industrial countries except for the United States and Japan (see table 1). What is more important in analyzing Moscow's willingness to increase rates of military spending is the size and the technological level of the Soviet economy. Soviet GNP in 1960 was roughly half that of US. After closing the gap during the 1960s and 1970s, Soviet GNP as a percent of US GNP fell from a high of about 58 percent in 1982 to about 55 percent last year (see figure 1 for a comparison on Soviet GNP with the United States and other developed countries). [redacted]

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Moreover, although the Soviet economy is the second largest overall, its relative technological standing is better captured by per-capita GNP comparisons. According to this indicator, both the USSR and its East European allies lag far behind the major Western countries (see figure 2). The USSR's failure to modernize its industrial sector is partly responsible for the USSR's relatively weak technological base. [redacted]

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[redacted] equipment in the early 1980 was 20 years old on average. In contrast to the West where the rapid introduction of advanced manufacturing technologies has sparked large efficiency gains, the combined productivity of labor and fixed capital in the USSR has declined in absolute terms over the past decade. [redacted]

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Soviet leaders have been especially worried about the implications of these trends for military competition. They recognize that in most advanced manufacturing technologies--technologies critical to future weapons development--the USSR remains years behind the United States (see figure 3). Indeed, even before SDI, Soviet military authorities had expressed concern about the level of technology embedded in such US programs as the D-5 SLBM, the Stealth Bomber, "smart" conventional weapons, and cruise missiles. SDI, by concentrating competition in those high tech areas where Moscow is weakest, has been viewed as a new and even greater threat. Although they claim they can counter the US SDI, the Soviets are clearly worried by the technological challenge posed by SDI and the possible spin-off of new technologies in other areas. [redacted]

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Table 1

Real Average Annual Growth Rates of GNP  
(percent)

	<u>1961-65</u>	<u>1966-70</u>	<u>1971-75</u>	<u>1976-80</u>	<u>1981-85</u>
USSR	5.0	5.3	3.4	2.3	1.9
US	4.7	3.0	2.5	3.4	2.4
Japan	10.0	11.0	4.3	5.0	3.9
France	5.8	5.4	4.0	3.3	1.2 <sup>1</sup>
West Germany	4.8	4.2	2.1	3.3	1.2
Italy	5.2	6.2	2.4	3.8	0.8 <sup>1</sup>
UK	3.2	2.5	2.1	1.6	1.7 <sup>1</sup>

<sup>1</sup>Data are for gross domestic product (GDP). The difference between GNP and GDP, net factor income from abroad, is small.

Note: Growth rates are measured in national currencies.

Sources: 1961-80, OECD, National Accounts  
1981-85, IMF, International Financial Statistics

FIGURE 1

## Gross National Product, 1985

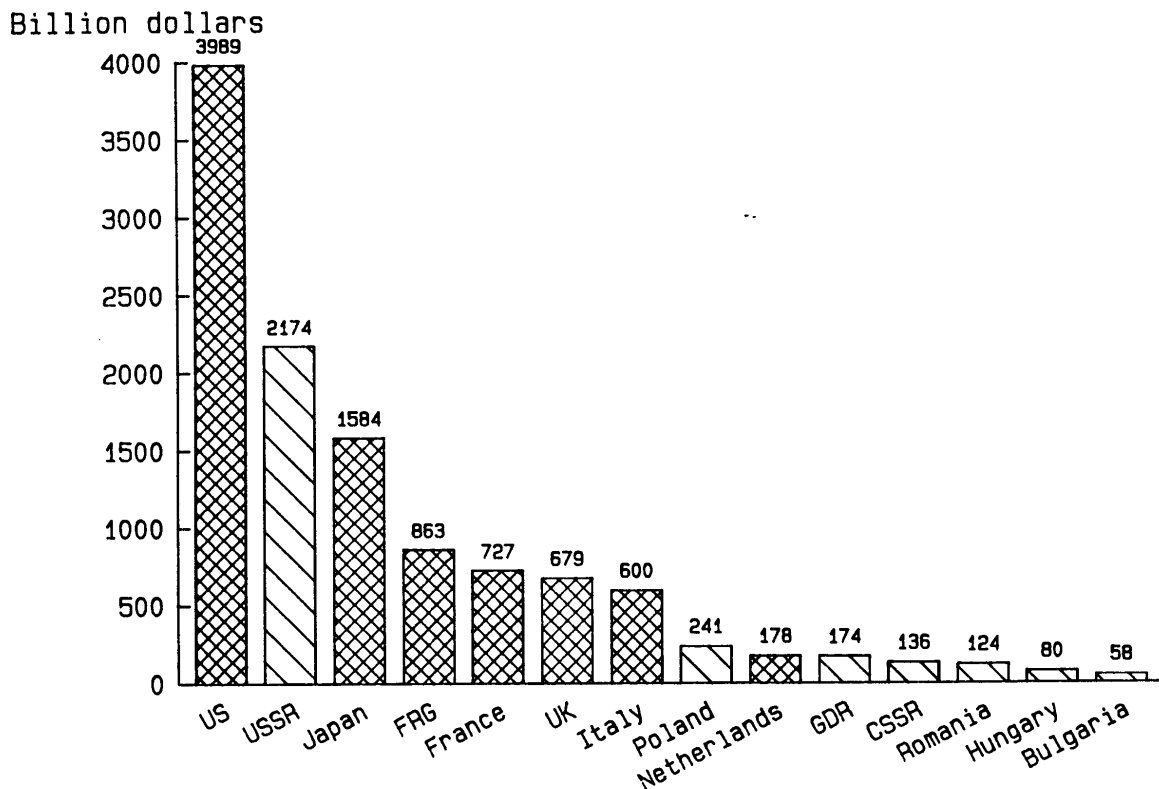


FIGURE 2

### Per Capita GNP, 1985

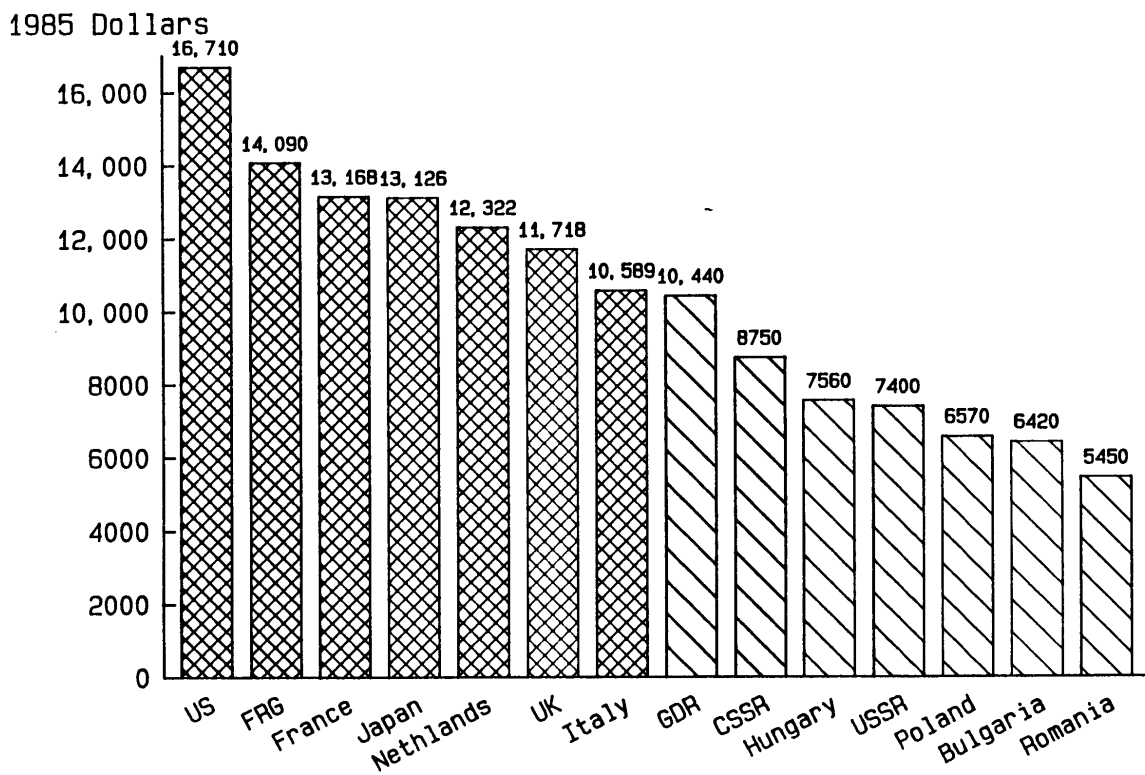
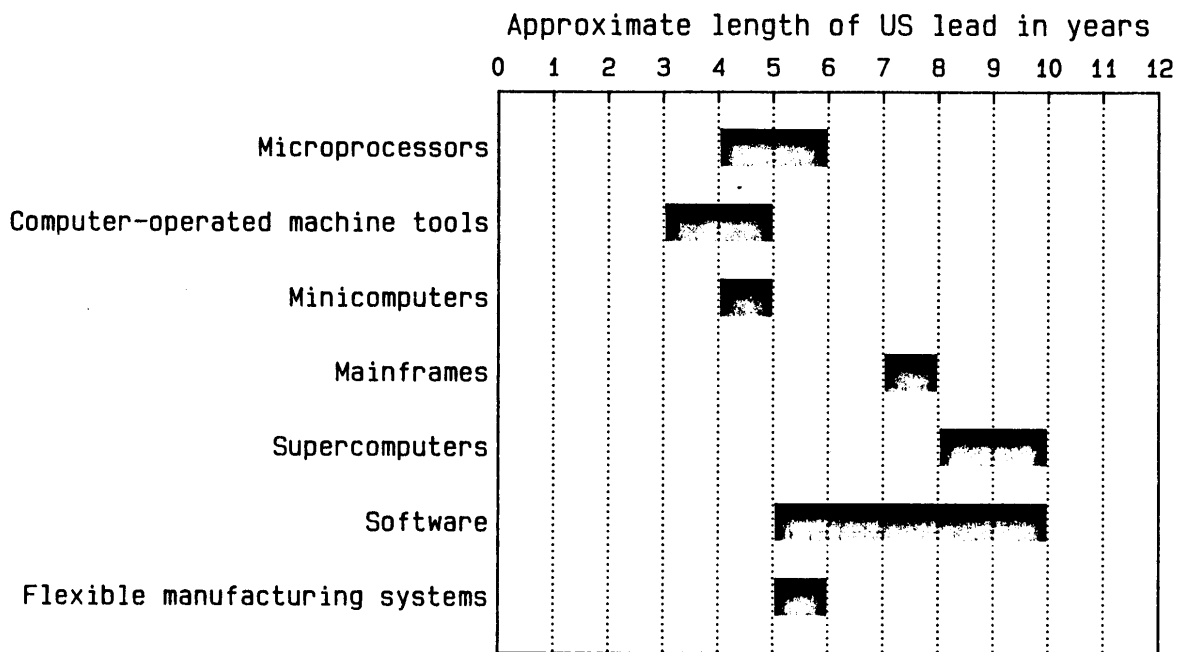


Figure 3  
Selected Advanced Manufacturing Technologies:  
The United States Versus the USSR



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### Gorbachev's Economic Agenda and the Competition for Resources

Gorbachev's commitment to revitalizing the country's economic base--and hence future military modernization--has been evident since before he became General Secretary. Essentially, he has adopted a two-step approach. Initially, Gorbachev is relying on a combination of measures to strengthen party discipline, improve worker attitudes and weed out incompetents--what he refers to as the "human factor." Over the longer term, Gorbachev is counting on achieving major productivity gains as a result of organizational changes, reform initiatives, and, most importantly, an extremely ambitious campaign to modernize the country's stock of plant and equipment. [REDACTED]

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#### Addressing the Human Factor

Gorbachev's first and most accessible target in his program to boost productivity has been his campaigns for discipline and against corruption and alcoholism. These efforts--like those pushed less vigorously by Andropov before him--have received widespread public support and yielded positive results. At the same time, Gorbachev has removed an unprecedented number of senior economic managers, including the Chairman of the Council of Ministers, the Central Committee Department Chiefs responsible for the machinebuilding, construction, and trade and services sectors, and over two dozen of the country's economic ministers and heads of state committees. [REDACTED]

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Gorbachev has moved only somewhat more slowly on the organizational front. During the past year, he has established new bureaus to oversee the machinebuilding and energy industries and embarked upon major reorganizations of the agro-industrial and trade bureaucracies. Gorbachev also has overseen the enactment of a series of measures designed to increase the autonomy of Soviet enterprises and improve workers' incentives. He has openly complained about the bureaucracy's resistance to his efforts, however, and the decrees that have emerged thus far appear to be the products of political compromise and not the "radical" reforms he has said are needed. [REDACTED]

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#### Industrial Modernization

But the heart and soul of Gorbachev's drive to accelerate productivity is his industrial modernization program or, in his words, "the structural transformation of the economy." In laying out his program, Gorbachev has proposed:

- Doubling retirement rates of capital stock to accelerate the replacement of obsolete capital by more efficient, largely state-of-the art machinery.



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- [REDACTED]
- Modernizing the nation's capital stock so that by 1990 more than a third of the machinery portion will have been installed within the preceding five years.
  - Increasing capital investment in the civilian machine building sector in 1986-90 by 80 percent compared with investment in 1981-85. [REDACTED]

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Achievement of these goals would require extremely rapid growth in the machinery allocated for Soviet plant and equipment. Because the machinery needed for industrial modernization is produced in the machinery and metalworking sector--which is also the primary source of military hardware and consumer durables--the competition for resources will, of necessity, increase. [REDACTED]

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#### Leadership Attitudes Towards Defense Spending and Arms Control

The competition for resources for plant modernization certainly creates incentives for Gorbachev to hold down current military spending and to reduce the need for future programs through an arms control agreement, but we do not believe that Gorbachev feels that it is essential that he do so. Recent improvements in the economy's performance and the momentum of ongoing military programs weigh heavily in this judgment. [REDACTED]

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Since Gorbachev assumed power, economic performance has picked up. GNP growth is likely to be about 3 to 3 1/2 percent in 1986, substantially better than in recent years. Gorbachev's human factors campaign has had a positive impact on productivity, and agricultural output this year apparently will match or exceed the previous record level achieved in 1983. [REDACTED]

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At the same time, our estimates show that defense spending--already at a very high level--continues to grow, albeit slowly. In this connection, we believe the shifts in machinery demand implied by the industrial modernization program will not have an immediate impact on the level of weapons production. Our analysis indicates that almost all of the weapons we expect to be produced through 1990 will be manufactured in plants already operating. Competition for some basic materials and intermediate goods used in the production process, such as high quality steel and microprocessors, will be intense and could well delay production of certain weapons, but these adjustments are likely to be marginal. [REDACTED]

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In short, we believe Gorbachev's commitment to industrial modernization will not significantly impede the major deployments of strategic weapons that the Soviets have programmed for the next decade. In the absence of a major arms reduction agreement that limited the deployment of new systems by the early 1990s, we expect that a

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comprehensive modernization of the USSR's strategic forces will have been completed with the widespread deployment of new generations of land- and sea-based ballistic and cruise missiles. Strategic defensive force improvements, although less substantial, also will permit sustained improvements in capabilities with the fielding of the SA-10 and SA-X-12 strategic defense missiles. [redacted]

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### Longer Term Pressures

While we do not believe Gorbachev feels compelled for economic reasons to sign an arms agreement or cut defense spending sharply in the immediate future, important decisions involving resource allocation will have to be made over the next two to three years. In 1988-89, the Soviets will have to decide on production rates for major weapons systems in the 1990s, if planning for the 1991-95 Plan is to proceed on schedule. Based in part on these decisions, the Soviets will also have to accelerate renovation of their defense industries, as they start preparing to produce the next generation of weapons. [redacted]

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Meanwhile, Moscow will be trying to gain a better understanding of the outlook for US military programs and the potential for derailing these programs politically. It has already launched a massive active measures campaign against SDI aimed at influencing public opinion in the United States and Western Europe. Interestingly, Foreign Minister Shevardnadze commented after the recent US Senate elections that the loss of control by the Republicans could be viewed as a public referendum on the President's SDI policy. While his remarks are obviously self-serving, the Soviets may, in fact, believe--though they cannot be sure--that budgetary pressures, as well as mounting public opposition, will force the next President to go more slowly on SDI. [redacted]

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Equally important, in a few years Gorbachev will be in a much better position to assess how his modernization program is faring. Despite the economy's better performance this year, in our judgment the improvements in productivity needed to accelerate growth during the 1990s will not be forthcoming without some major economic reforms and even greater investment in technology and civilian industry. If, in fact, the planned gains in productivity and product quality have not been achieved, Gorbachev will have to deal with military leaders--who now appear to be backing his modernization program--asking for more money, even as pressures for more civilian investment increase. [redacted]

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We do not know what Gorbachev will do, but the state of the economy, Moscow's perceptions of the military threat, and Gorbachev's domestic political standing would all come into play. Even if the economy is doing poorly, however, there is no guarantee that Gorbachev will feel compelled to cut defense spending sharply, although it would certainly make an arms agreement more attractive. [redacted]

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Arms Control Leverage: Different Perspectives

Our conclusion that Gorbachev wants but is not desperate for a reduction in the defense burden has been challenged by some. One view held by a few experts outside of government is that the Soviet economy is currently in such bad shape that the leadership will have to find ways to reduce the defense burden. It is based on a much more pessimistic view of recent Soviet economic performance and prospects, a higher estimate of the burden, and a more optimistic assessment of the benefits to be reaped from an arms control agreement. [redacted]

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[redacted] Soviet GNP may have actually declined in the late 1970s and early 1980s and that the defense burden currently stands at over 20 percent of GNP (vice the 15 percent we are currently estimating for a comparable set of activities). We do not agree with [redacted] figures. Indeed, an independent panel commissioned by the President's Foreign Intelligence Advisory Board three years ago generally gave the Agency good marks for its estimates of Soviet economic performance, noting that they were somewhere in the middle of the spectrum between those with a much rosier picture of the economy [redacted] Similarly, the DCI's Military-Economic Advisory Panel--consisting of experts outside of government--has reviewed our defense spending estimates and endorsed our analytical approach and the results of our analysis. [redacted]

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Moreover, we believe that the near-term benefits to be gained from an arms control agreement are often exaggerated. Certainly, there are major economic benefits to be gained from an arms control agreement, particularly one limiting SDI, but they are mainly in the area of cost avoidance and would be reaped over the longer term. The Soviets want to avoid draining off scarce high technology R&D resources to near-term weapons development applications. In addition, for both military and economic reasons, the Soviets place a high premium on planning certainty. [redacted]

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The immediate benefit, however, to Gorbachev's modernization program from reducing or even eliminating particular strategic systems would be small. Production facilities take time to convert, and spending on strategic offensive systems represents only about 10 percent of total spending for defense. Moreover, even if a strategic arms control agreement were reached, the Soviets might not reduce defense spending. Rather, Gorbachev might choose to devote more resources to conventional arms as some Soviet military leaders are currently urging. [redacted]

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Nor do we believe that Soviet economic prospects would be markedly improved by a reduction in support for insurgencies abroad or a withdrawal from Afghanistan. While Soviet leaders continue to express frustration over the protracted nature of the war in Afghanistan--and may have good political reasons for wanting to get out--the economic costs of the war have not been a substantial drain on the economy. We estimate the Soviets are currently spending about 3 billion rubles per year on the conduct of Afghanistan, or about two and one-half percent of total defense spending. [redacted]

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19 November 1986

## MEMORANDUM

SUBJECT: Soviet Approaches to a "Conventional Arms Race"

Summary

A transfer of the primary arena of superpower competition from nuclear to conventional forces--and, therefore, from intercontinental to theater forces--would shift the focus to an area of current Soviet strength but would raise the prospect of great uncertainties in the future for Soviet planners. The Soviets probably view NATO's superior industrial and economic potential as being brought to bear during a war rather than in a peacetime arms race. For the West to replace its reliance on an economical defense based on the threat of use of nuclear weapons--to deter and to terminate a conflict--would require a substantial increase in resources devoted to conventional forces. The Soviets probably question whether or not most Western countries would make the necessary investments in peacetime. Nevertheless, they will remain deeply concerned that Western technological developments will produce weapons that could threaten the viability of their armored forces. [redacted]

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1. For more than a decade Soviet doctrine, planning, and force development for theater warfare have moved increasingly in the direction of preparing for more intense and longer conventional war. This period has witnessed a gradual growth in the size, modernization, combat capabilities, and sustainability of Soviet ground forces (see figures). These gains are partially offset, however, by what the Soviets regard as an unfavorable shift in the relative capabilities of NATO and Warsaw Pact air forces. Another Soviet concern is the lagging modernization of their allies' forces. With the single exception of the East Germans, all of their allies' forces are falling increasingly behind the Soviet standard. Moreover, the Soviets see NATO conventional defenses as having grown stronger and more difficult to crack. In the Soviets' view, the greatest potential threat to their ability to prevail in a conventional conflict--a parallel to their concerns about SDI--is the possibility that new technological developments may render infeasible operations by their large armored forces. [redacted]

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2. Nevertheless--barring such a disjunctive development--reliance on conventional forces would favor the Soviets' traditional strengths--mass and staying power. Although they view the cost of breaking through NATO defenses as having increased, NATO's continuing lack of operational reserves in the crucial Central Region of NATO's Allied Command Europe leaves the West vulnerable to irretrievable defeat if a Warsaw Pact breakthrough can be achieved. To that end, the Soviets have been developing new formations and operational methods aimed at maintaining a rapid tempo of offensive operations. By using such methods, the Soviets would aim to avoid a protracted war, which they view as permitting some Western advantages--primarily superior economic and industrial potential--to come into play. At the same time, Soviet military writers--notably Marshal of the Soviet Union N. V. Ogarkov--have emphasized the need to prepare to apply the full resources of the USSR in a protracted conventional war. [redacted]

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3. The Soviets probably view their primary advantages in conventional arms competition as including:

- Centralized planning for themselves and their allies, provided by a General Staff operating from a national perspective.
- Continuity of effort that is not subject to the fluctuations inherent in democratic systems.
- Dominance over their allies, enabling them to establish doctrine and standards for force development (although their allies continue to fall short of Soviet goals).
- The massive structure and firepower of their ground forces, which give them a large secure base on which to build.

Moreover, in the Gorbachev era, they probably will be more adept at avoiding clumsy and provocative actions that would galvanize the West into greater cooperation and a sustained commitment of greater resources to defense. Sensing that many of the West European members of NATO seek to avoid an increased defense burden, they may choose to pursue dramatic arms control initiatives to forestall a large investment in high-technology defenses. To date, however, such dramatic proposals as the Atlantic-to-the-Urals Budapest appeal seem directed more toward political effect than genuine arms reductions. [redacted]

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4. The Soviets perceptions of their own economic and demographic problems and their desire to avoid an open-ended competition in high technology where they see themselves

permanently at a disadvantage pose opportunities and dangers for the West. Such fears could lead to significant concessions by the Soviets in negotiations for reductions in conventional forces; but, paradoxically, they also could lead to an increase in the threat to the West. The Soviets' perception that they must get an early start to have any hope of keeping up with Western developments has often led to long-term commitments to programs that have not been cancelled when the West failed to carry through on its own initiatives. For example, the MIG-25 interceptor was developed to counter the B-70 bomber, which was cancelled. The Soviets already are working on technical and operational countermeasures to developmental programs such as Assault Breaker and FOFA, which are still largely in the conceptual stage. [REDACTED]

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#### Elimination of Ballistic Missiles

5. The US proposal to eliminate all ballistic missiles--especially if extended to include short-range systems--would pose great difficulties for the USSR.

- Strategic deterrence would be based on bombers and cruise missiles, where they probably perceive the United States has more experience and technological advantages.
- They would be concerned about potential US development of strategic air defenses using advanced technologies that could result from SDI.
- An increased requirement for strategic air defense systems, conventional forces, or interim modernization of ballistic missile systems could cancel any potential saving from the elimination of strategic and intermediate ballistic missiles.
- Elimination of short-range systems would create severe problems for nuclear or conventional operations by their theater forces. [REDACTED]

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6. In recent years, Soviet theater forces have become increasingly dependent on short-range ballistic missiles. As is the case for the Soviets' strategic forces, ballistic missiles are an area of comparative strength and one seen by Soviet planners as a means of making up for the shortcomings of their air forces. In nuclear or conventional operations, they plan to use such missiles to strike heavily defended targets, to open corridors through NATO air defenses, and to hit targets that must be engaged quickly. The advent of new, accurate systems (SS-21 and SS-23) with improved warheads is making the SRBM force genuinely capable for conventional operations. [REDACTED]

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7. Elimination of SRBMs would place a nearly impossible double burden on the already strained Soviet air forces.

- A larger portion of the air forces would have to be withheld in readiness for nuclear operations.
- The air forces would assume the entire burden of conventional strikes beyond the range of cannon and rocket artillery and attack helicopters.
- Western air forces are already heavily committed to tactical nuclear missions, and, relatively speaking, would be less encumbered by picking up non-nuclear targets from eliminated SRBMs. [redacted]

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8. The elimination of US INF systems and all NATO SRBMs would relieve the air forces of a large number of high priority targets. The resulting gain probably would be offset by requirements to attack heavily defended targets that otherwise would be struck by SRBMs. [redacted]

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9. Thus, the elimination of SRBMs would put more emphasis on air forces--and probably short-range cruise missiles--where the Soviets see themselves at a permanent technological disadvantage. Advanced combat aircraft and highly accurate cruise missiles require production techniques with which the Soviets have had great difficulty. Increases in the rate of production of modern combat aircraft would require large new investments. [redacted]

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10. In the near term, the elimination of ballistic missiles would free a large portion of the Soviet SSN force for offensive operations such as interdiction of US reinforcements for NATO. Unless the Soviets could develop a sea-launched cruise missile with very long range, however, their sea-based nuclear deterrent would become much more vulnerable. [redacted]

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Elimination of Nuclear Weapons  
(As Well as All Ballistic Missiles)

11. The Soviets would view the elimination of nuclear weapons (or their reduction to levels so low that they could serve only for mutual deterrence) as leading to great uncertainty and potential instability. The greatly reduced potential of both sides to attack each other's national territory would make Europe the prime focus of competition. The Soviets seem confident that they can maintain their preponderance in ground forces, but they surely would be concerned that Western Europe, deprived of its nuclear umbrella, might react by developing more cohesion and a

stronger conventional defense. Still, they may question whether NATO would have the resolve to do this. [redacted]

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12. Elimination of nuclear delivery missions would lessen somewhat the burden on the air forces, but the Soviets probably see little prospect that they could catch up to Western capabilities. To make substantial changes would require not only expensive improvements in the aircraft industry but also the development of advanced standoff munitions. They probably would, however, further increase their field artillery firepower; and with the potential for greatly protracted conventional operations, they might begin creating the structure to support mobilization of even larger ground forces. [redacted]

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13. Elimination of nuclear weapons would result in further emphasis on interdiction of shipping between the United States and Europe and would leave a larger portion of the Soviet SSN force free to pursue this mission. The Soviet surface navy, however, has little capability for sustained operations. Moreover, to develop the capability for surface operations away from the USSR would require a large new investment of resources. [redacted]

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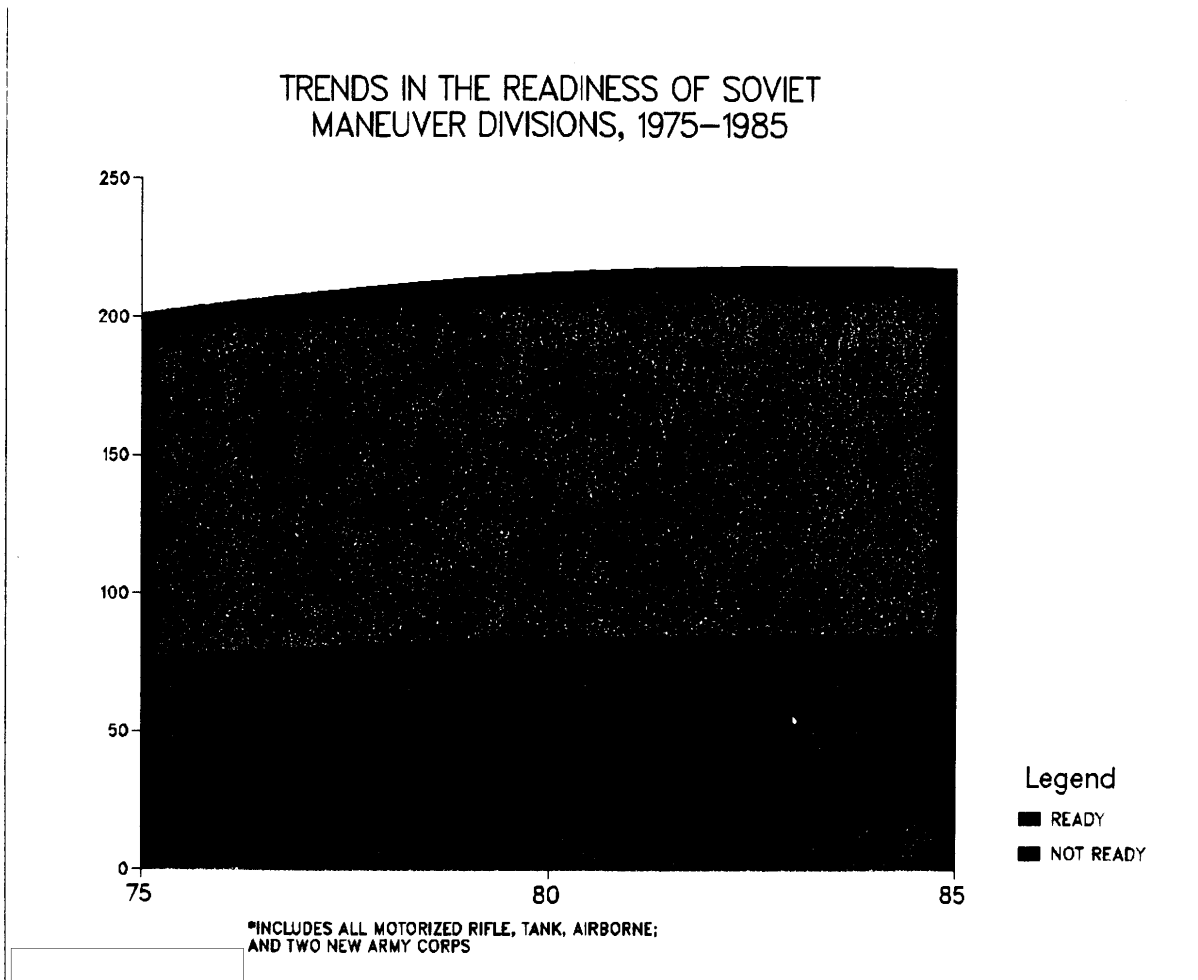
14. In sum, the Soviets probably see advantage in a conventional arms race as dependent primarily on two factors:

- The potential development by the West of advanced technology systems that would negate their advantage in armored forces, which they fear.
- The willingness and resolve of the West to make the sustained investment necessary for a strong conventional defense, which they doubt.

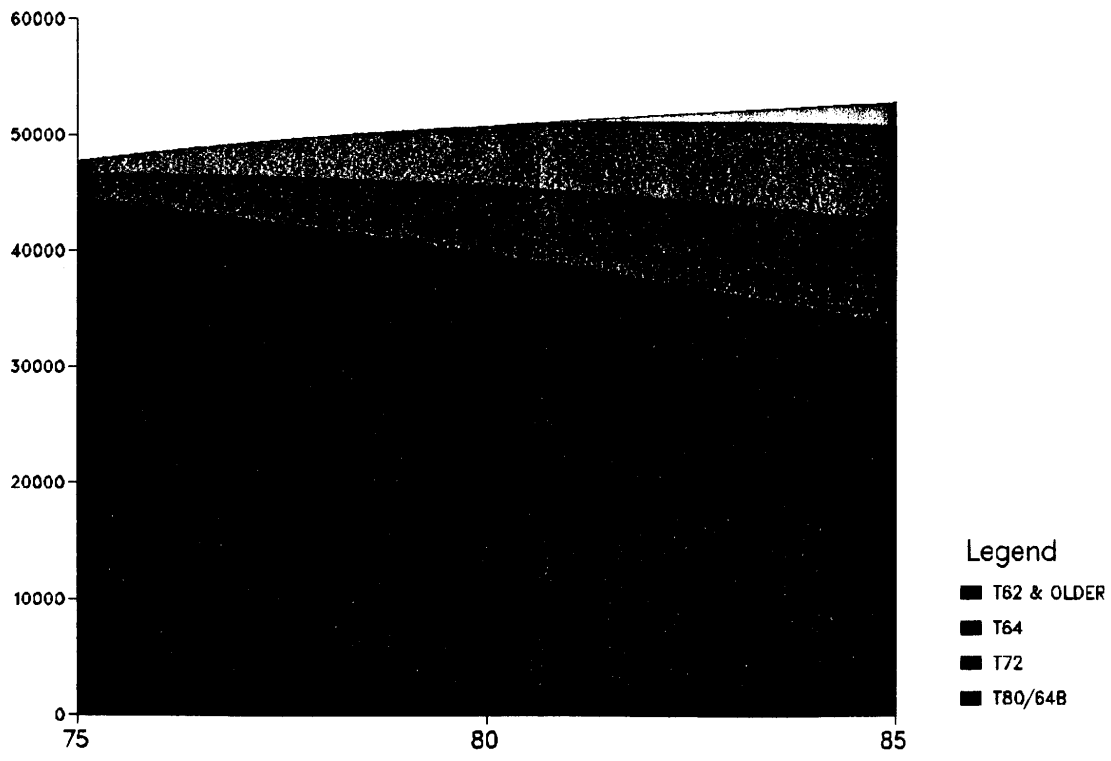
They would approach a "conventional arms race" as an integrated political-economic-military competition. They would seek to compensate for their economic and industrial shortcomings--with the aim of outperforming the West by making more efficient and sustained use of their smaller resources. They would endeavor to maintain their current superiority in ground forces and to avoid having their air forces fall farther behind those of the West. Confident of their superior staying power, they probably would follow a non-confrontational approach to avoid prodding the West into greater efforts. They would continue to use political initiatives to attempt to fragment the West and seek to use arms control as a means of forestalling commitment of greater Western resources to conventional forces, especially in areas of high technology. [redacted]

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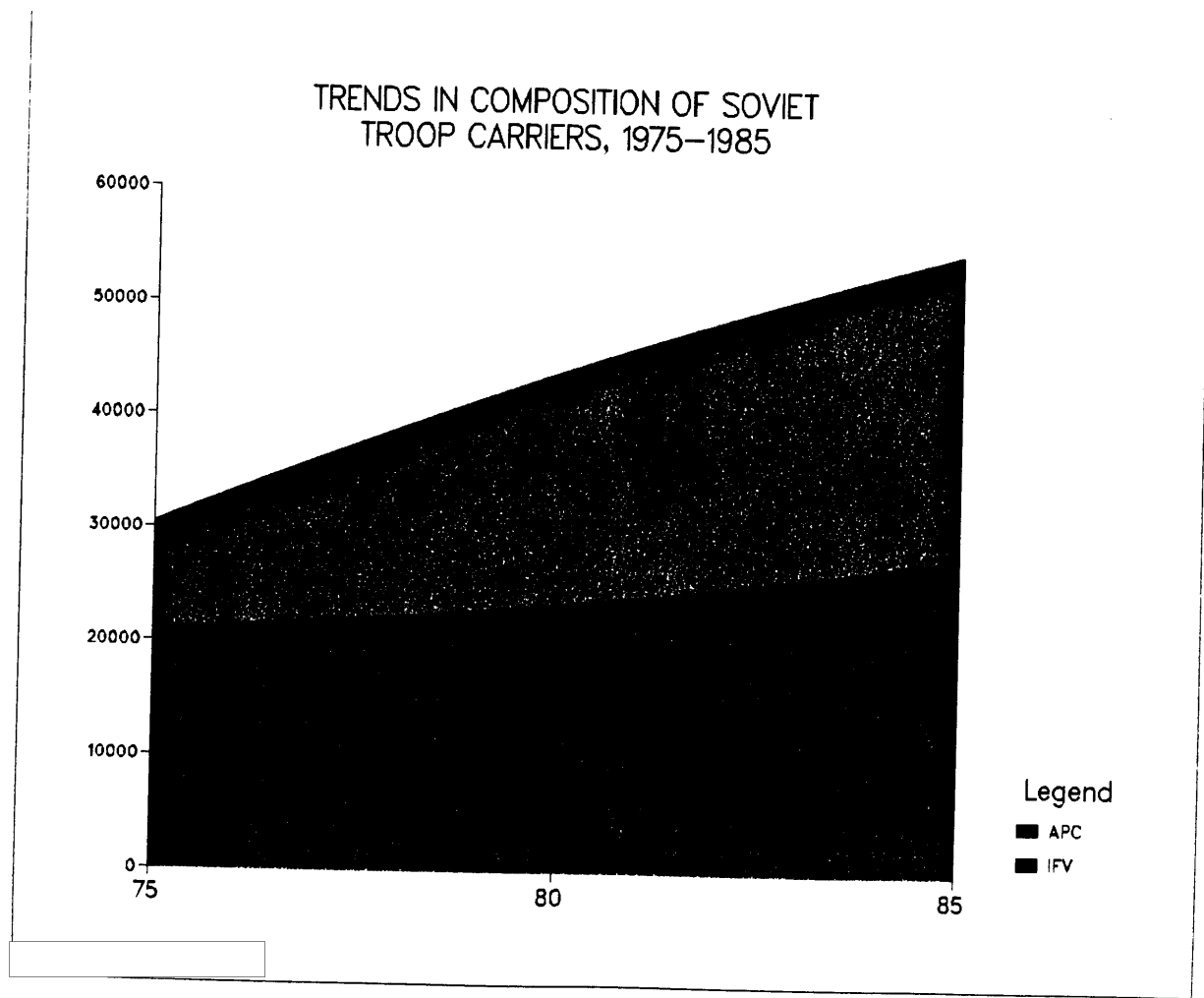




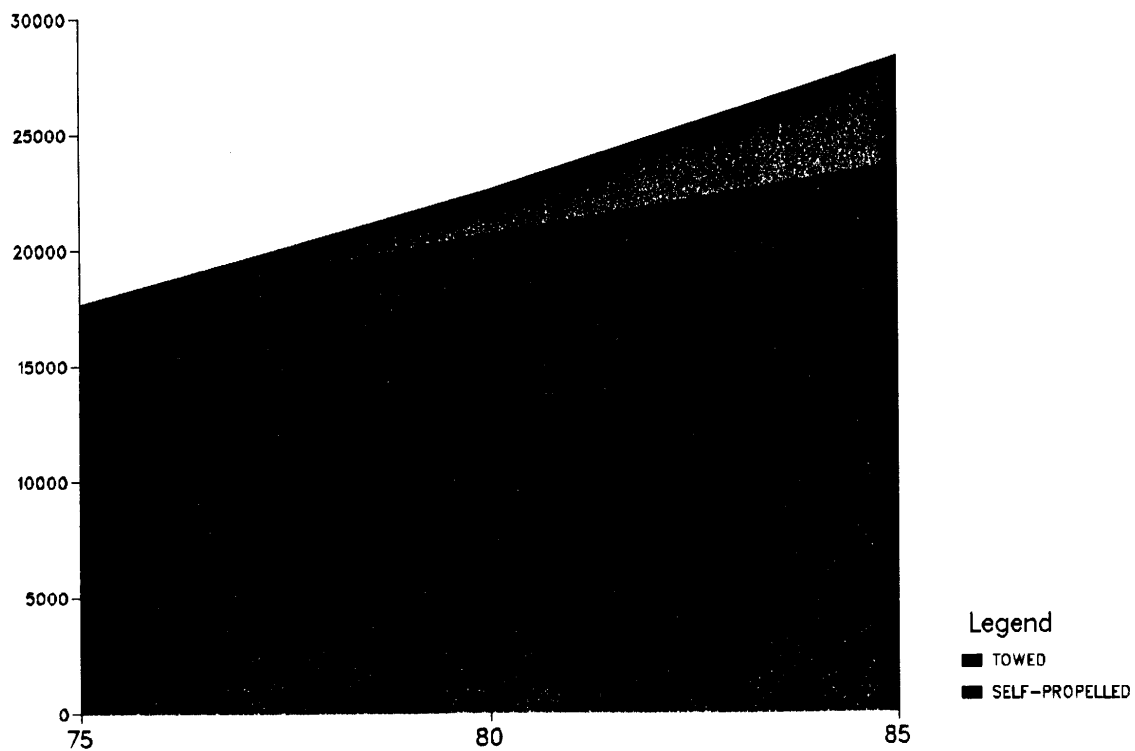
### TRENDS IN COMPOSITION OF SOVIET TANK FORCE, 1975-1985



- Legend
- T62 & OLDER
  - T64
  - T72
  - T80/64B



### TRENDS IN THE COMPOSITION OF SOVIET ARTILLERY, 1975-1985



### TRENDS IN COMPOSITION OF SOVIET ATTACK HELICOPTERS, 1975-1985

