The Role of the Military Sector in the Economies of Russia and Ukraine

Proceedings of the RAND-Hoover Symposium, November 1992

Charles Wolf, Jr., editor
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Prepared for the
Under Secretary of Defense for Policy
Director of Net Assessment, Office of the Secretary of Defense

National Defense Research Institute

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PREFACE

by

Charles Wolf, Jr.

This volume contains the proceedings of a symposium conducted in November 1992 by RAND and the Hoover Institution on "The Role of the Military Sector in the Economies of Russia and Ukraine." This meeting, supported by the Office of the Undersecretary for Policy and the Director of Net Assessment in the Department of Defense, and by the Hoover Institution, was the third in a series of biennial conferences organized by RAND and the Hoover Institution in the general field of what had been designated as Soviet defense economics. The first symposium was held at the Hoover Institution in March 1988, resulting in a book entitled The Impoverished Superpower: Perestroika and the Soviet Military Burden, edited by Henry S. Rowen and Charles Wolf, Jr. (ICS Press, San Francisco, 1990). The second was held at RAND in Santa Monica in March of 1990, before the collapse of the Soviet Union, resulting in a RAND volume, Defense and the Soviet Economy: Military Muscle and Economic Weakness, edited by Charles Wolf, Jr. and Steven Popper (RAND, N-3474-USDP, 1993).

The proceedings of the 1992 symposium include the unedited papers presented at the meeting, discussant comments, and a precis of the ensuing discussion. We intend this volume to lead to a book that will contain edited versions of the papers, together with an overview chapter to be written by Henry Rowen and Charles Wolf. This chapter will address some of the major issues of defense industry conversion and of defense policy in Russia and Ukraine, as well as several questions raised for U.S. policymakers concerned with these countries and the other republics of the former Soviet Union.

The 1992 symposium differed in several respects from the two preceding meetings. First, it focused on the two major republics among the fifteen that had constituted the former Soviet Union, analyzing the special role of the defense sectors in these two economies, how that role is changing, and how it will affect and be affected by economic and political reform, as well as some of the issues raised for U.S. and Western policymakers by these changes, such as foreign aid. Second, whereas the two preceding RAND-Hoover symposia had mainly consisted of papers and discussion by U.S. experts from government, academic, and research communities, the 1992 symposium consisted mainly of analytic papers by nine Russian and four Ukrainian experts from government, the academy, the military, and industry, with only two papers written by American authors.

The authors of papers delivered at the symposium were:

Viktor Antonov, Minister of Engineering, Military Complex and Conversion of Ukraine
Alexei Arbatov, Institute of World Economics and International Relations (IMEO)
Oleg Bodrak, Defense Minister Adviser, Defense Department of Ukraine
Oleg Bogomolov, Institute of International Economic and Political Studies, Russian Academy of Sciences
Major General Valery Domontev, Ministry of Defense, Moscow
Vladimir Falt'sman, Institute of Economics, Russian Academy of Sciences
Alexander Horcharenko, Institute of World Economy and International Relations, Academy of Sciences of Ukraine
Fred Iklé, Center for Strategic and International Studies, Washington, D.C.
Grigori Khain, Institute of Economics, Moscow
Larisa Piyasheva, Dean, Moscow School of Economics and Law
Major General Yuri Prokofiev, Chief, Military Education Department, Ministry of Defense of Ukraine
Victor Fassadin, Institute of Economic Forecasting, Russian Academy of Sciences
Lieutenant General Vladimir Sleznev, Ministry of Defense, Moscow
Vladimir Treml, Department of Economics, Duke University
Yury Yaremenko, Director, Institute of Economic Forecasting, Russian Academy of Sciences
Evgeny Yasin, Director, Experts Institute, Russian League of Industrialists and Entrepreneurs

Discussants and other participants in the symposium included:

Anders Aslund, Stockholm Institute of Soviet and East European Economics
Igor Birman, Silver Spring, MD
Eric Edelman, Assistant Deputy Under Secretary of Defense (Russian, Eurasian and East European Affairs)
David Epstein, Deputy Director, Office of Net Assessment, Department of Defense
Rose Gottemoeller, International Policy Department, RAND
Gregory Grossman, Department of Economics, University of California, Berkeley
Don Henry, International Policy Department, RAND
Volodymyr Lanovoy, Former Vice Prime Minister and Minister of the Economy, Ukraine
Claire Mitchell Levy, International Policy Department, RAND
I. Lewis Libby, Principal Deputy Under Secretary of Defense (Strategy and Resources)
Andrew Marshall, Director, Office of Net Assessment, Department of Defense
Phillip Merrill, The Washingtonian Magazine
Michael Rich, Vice President, National Security Research Division, and Director, National Defense Research Institute, RAND
Henry Rowen, Hoover Institution and Stanford University Graduate School of Business
Larry Seaquist, USN, Assistant to the Principal Deputy Under Secretary of Defense (Strategy and Resources)
James Steiner, Chief, Defense Programs Division, Central Intelligence Agency
John Treston, International Policy Department, RAND
Charles Wolf, Jr., Dean, RAND Graduate School, and Director, International Economic Policy Program, RAND
Jeanne Zlotnick, Hoover Institution

The symposium agenda was divided into four sessions (a copy of the agenda follows this preface). The first of the symposium's four sessions addressed the Current Setting. Papers by Professor Vladimir Treml and Dr. Grigori Khain focused on the economic situation and the woefully poor and unreliable character of former Soviet statistical
data, as well as of current Russian and Ukrainian data. In the ensuing
discussion, several participants observed that Western analysts
previously erred in assuming that information was conscientiously
gathered, that data were not falsified, and that uncomplimentary data
were merely suppressed. With respect to currently available statistics,
the discussion elaborated upon the poor quality, huge gaps, inadequate
methodology, and analytic difficulties presented by the statistics and
the statistical agencies in the republics. Participants concurred in
their call for improved statistics (for example, through efforts by the
IMF), but diverged on whether the commercialization of statistics that
is currently underway in Russia—private groups collecting data for
sale—should be viewed as a positive or a negative development. The
conferences disagreed on whether currently available statistics on defense
spending in Russia and Ukraine are complete and reliable.

In assessing the general state of the economy in 1992, there was
agreement about the economic difficulties facing both Russia and
Ukraine, with some disagreement as to the severity of these
difficulties. Both the Tremil and Kahan papers and the ensuing
discussion reflected general agreement that output was down in both
Russia and Ukraine, that their fiscal and monetary systems are under
severe pressure (with Russia’s 1992 budget deficit estimated to be 20
percent of GNP), and that acute inflation is underway in Russia.

Session II, Economic Reform and Military Conversion, began with papers
by Dr. Larisa Piyashcheva and Dr. Vladimir Pal’tsman. Dr. Piyashcheva’s
paper provided the most severe criticism and indictment of the attempted
reform efforts and of the lack of genuine and extensive privatization,
and price liberalization. Dr. Pal’tsman’s criticisms were moderated by
extensive exposition of the magnitude and difficulties of the conversion
and reform problems facing Russian policymakers.

The next paper, co-authored by Drs. Yaremenko and Rassadin, argues for a
comprehensive national program to convert and integrate Russian defense
industries into the civil sector.

Dr. Evgeny Yanin’s paper places less emphasis on defense conversion and
more emphasis on changing attitudes toward work and entrepreneurship.

General Seleznev’s paper on the Chelyabinsk region describes the
significant and often overlooked progress made in both conversion and
privatization in that region.

Minister Viktor Antonov’s paper on conversion of defense industry in
Ukraine stresses the magnitude of these problems. He also emphasized
Ukraine’s promising capabilities in high-technology skills, experience,
and equipment. He suggested that these capabilities, in combination
with Western capital and technology, should enable Ukraine to produce a
competitive range of nonmilitary products for domestic and international
markets.

In Session III, Defense Concepts, Planning, and Budgeting, two experts
on Ukrainian and Russian security policy, Alexander Honcharenko and
Alexei Arbatov, respectively, discuss security issues from their
contrasting national points of view. Honcharenko emphasizes the
contrariety of Ukraine’s relationship with Russia, and in particular the
two highly charged points of contention between them: the control of
nuclear forces on Ukrainian territory and the division of long-term
responsibility for the Black Sea fleet. Arbatov, while acknowledging the importance of Ukraine's concerns, regards Russia's principal security issues as lying elsewhere: notably, in arms control vis-a-vis the United States, the gaps left in Russia's strategic forces by the break-up of the Soviet Union, and the limitations on Russia's economic ability to maintain, develop, or even dismantle its nuclear forces.

General Dement'ev's paper addresses the problem of converting and adapting Russia's military R&D and military technology to the changing demands of a new and smaller military establishment and the increased importance of developing and applying dual-purpose technology.

Addressing the problems of defense planning in Ukraine, Oleg Bodruk argues that rapid elimination of large numbers of defense-related industries would be counterproductive. Instead, he suggests that military conversion should be related to modernization and reorganization of machine-building industry as a whole and that this process could, in the long run, allow Ukraine both to continue its military production and to increase production in civilian industries.

General Yuri Prokofiev, chief of Ukraine's military education department, presented a paper focusing on the changing demands for education and training to produce smaller, but higher quality and more technically advanced, armed forces for Ukraine.

In the fourth and final session, Foreign Assistance and the Reform Process, Dr. Bogomolov severely criticizes IMF and World Bank programs for misconstruing what is needed to stimulate economic recovery in Russia. He suggests that international assistance to Russia and the other new republics should focus on creating the needed economic and legal institutions, developing agricultural and consumer goods industries, and expanding export industries. He opposes additional debt burdens on the Russian economy, and he instead proposes a comprehensive Marshall-plan type aid program, targeted and coordinated technical assistance, and provision of equipment and materials on a grant rather than credit basis.

Prid 1klié's concluding paper proposes a special type of assistance program based on the establishment of an American-Russian defense community. He sees this as a useful mechanism to prevent a slide back into Cold-War practices and mentalities and as an instrument for helping to ensure international order through joint Russian and U.S. cooperation and shared security responsibilities.

The papers presented at the symposium, together with the ensuing discussion, highlighted some issues about which there was consensus and other issues that provoked sharp disagreement:

- Participants agreed on the poor quality and unreliability of current economic statistics in Russia and Ukraine and the critical need to improve them. Accurate assessment of the level of and changes in the economies' performance is severely impeded by the lack of reliable data.

- There was also agreement about the increasing severity of Russia's inflation and the importance of controlling it by reducing the government's huge budget deficit and controlling the expansion of
enterprise credits by the central bank and the five or six main supporting banking institutions.

- Sharp disagreement was expressed about whether economic reform today has totally failed, or whether there has been notable, albeit modest, progress. Opinions also diverged markedly over the proper speed and sequencing of economic reforms—for example, whether privatization should follow, precede, or accompany macroeconomic stabilization and how responsibility should be divided between central and local government entities with respect to economic stabilization and defense conversion.

- Participants concurred in stressing the crucial linkage between conversion of military industry and general economic reform in Russia and Ukraine. Participants disagreed strongly about whether the cutback that has actually taken place in military production has been too much and too fast (e.g., 60 percent or more), or whether it has been too little and too slow because the military industrial complex has continued to receive large subsidies from the Yeltsin government as it received in the past during Gorbachev's tenure.

- Sharp disagreement was expressed about the extent to which, in the short to middle term, Russia's military industry should expect to export weapons to earn hard currency earnings for the beleaguered economy.

- Conferees generally agreed that a sensible defense conversion plan should be linked to an appropriate defense and national security strategy in both Russia and Ukraine. In turn, the new strategy must be translated into a planning and budgeting process to allow for orderly rationalization and downsizing of defense industry in both Russia and Ukraine. Some participants questioned whether any useful purpose is served by continued weapons production in Russia and Ukraine, while others equally strongly asserted that continuing production was necessary to meet the national security objectives of both countries.

- Russian and Ukrainian participants disagreed strongly about whether a security threat is posed by Russia to Ukraine and the merits of a Ukrainian argument to acquire control over the nuclear forces based on its territory as a means of deterring this threat.

- Sharp criticism was expressed about the limited quantity and limited effectiveness of foreign aid to Russia. Among the ideas advanced (as well as criticized) were an enlarged Marshall-plan type of aid program, with emphasis on technical assistance, use of grants rather than additional foreign debt, development of a system of swapping some existing foreign debt for equities in privatizing enterprises, and development of an American-Russian defense community.
RAND-Hoover Symposium
THE ROLE OF THE MILITARY SECTORS IN THE ECONOMIES OF THE REPUBLICS

RAND
2100 M Street NW, Washington DC
November 15–17, 1992

AGENDA

Sunday, November 15
6:00 p.m. Reception, Presidential Boardroom, One Washington Circle Hotel

Monday, November 16
8:30 a.m. Continental breakfast
9:00 a.m. Welcome and introduction

Moderator: Charles Wolf, Jr.

SESSION I: THE SETTING
9:15 a.m. Papers:
Vladimir Treml, Problems with Soviet Statistics: Past and Present

Grigory I. Khanin, The Economic Situation in Russia, 1992

Discussants:
Anders Aslund (Treml paper)
Igor Birman (Khanin paper)

General discussion
10:45 a.m. Coffee

SESSION II: ECONOMIC REFORM AND MILITARY CONVERSION
11:00 a.m. Papers:
Larisa Piyasheva, Privatization, Conversion, Security: On the Wreck of the Socialist Mentality

Vladimir Faltzman, The New Role of Defense Industry in the Economy of Russia

Discussants:
Volodymyr Lanovoy (Piyasheva paper)
Gregory Grossman (Faltzman paper)

General discussion
12:30 p.m. Luncheon
Moderator: Henry S. Rowen

1:30 p.m. Papers: Yuri Yaremenko and Victor N. Rassadin, The Experience and Prospects of Remodeling the Defense Industries in Russia

Evgeny G. Yasin, Market Reform and the Future of the Russian Economy

Discussants: James Steiner (Yaremenko/Rassadin paper)
Henry Rowen (Yasin paper)

General discussion

3:00 p.m. Coffee

3:15 p.m. Paper: Vladimir V. Seleznev, Problems of Reform and Conversion of Military Industry in Chelyabinsk Region

Discussant: Donald P. Henry

General discussion

4:00 p.m. Adjourn

6:30 p.m. Cocktails and dinner
Main Dining Room, International Club
1800 K Street NW
Tel.: 862-1400

Dinner Address: Victor I. Antonov, Conversion of the Military Industries in Ukraine

Discussant: I. Lewis Libby

Tuesday, November 17

8:30 a.m. Continental breakfast

Moderator: Charles Wolf, Jr.

SESSION III: DEFENSE CONCEPTS, PLANNING, AND BUDGETING

9:00 a.m. Paper: Alexander N. Honcharenko, National Security and the Future of Military Buildup in Ukraine

Discussant: Rose Gottemoeller

Paper: Alexei Arbatov, Sizing an Adequate Defense Establishment for Russia

Discussant: Claire M. Levy

10:30 a.m. Coffee
10:45 a.m.  Paper:  Valery A. Dementev, *The Future Interrelations between RDT&E in the Civilian and Military Spheres*

Discussant:  Michael Rich

General discussion

12:15  p.m.  Lunch

Moderator:  Henry S. Rowen

1:00  p.m.  Papers:  Oleg Bodruk, *Economic Principles of the National Security of Ukraine and Problems of Conversion of Military-Industrial Complex*

Yuri Prokofiev, *Contemporary Military Education in Ukraine: Reform and Outlook*

Discussants:  John Tedstrom (Bodruk paper)

Eric Edelman (Prokofiev paper)

General discussion

**SESSION IV: FOREIGN ASSISTANCE AND THE REFORM PROCESS**

2:30  p.m.  Paper:  Oleg T. Bogomolov, *Foreign Aid and the Role of the IMF and the World Bank in the Reform Process*

Discussant:  Charles Wolf, Jr.


Discussant:  Philip Merrill

General discussion

4:00  p.m.  Concluding discussion

4:30  p.m.  Adjourn
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SESSION I: CURRENT SETTING
PROBLEMS WITH SOVIET STATISTICS: PAST AND PRESENT

by

Vladimir G. Treml

INTRODUCTION

The purpose of this paper is to survey and analyze developments in the availability and credibility of statistical information, in the former USSR during the perestroika period, and in the successor states since the dissolution of the Union. Thus, this paper is a sequel to the summary of developments in Soviet economic statistics presented by the author at the previous RAND-Hoover conference (Treml 1992, forthcoming). The author would, however, like to place this inquiry into the much broader context of the general problem of credibility, availability, and useability of Soviet statistics.

By necessity such a discussion must be limited and tentative. The autopsy on the body politick of the former Soviet Union is just beginning. The best we can do at this time is discuss the insights into the Soviet past obtained from recently released documents, formulate the relevant questions, and offer some tentative answers.

It must be stressed that an investigation into the past of official Soviet statistics should be of more than purely historical interest. Firstly, economic analyses, econometric modeling, projection and forecasting of results of alternative policy scenarios for the newly independent states are impossible, or would be greatly flawed, unless they were based on accurate historical statistical series. A realistic evaluation of available data and possible corrections would thus be useful. Secondly, we should consider the data requirements for the effective introduction of market reforms and for the optimal distribution of technical and humanitarian assistance by international organizations and groups such as G-7. Clearly, an inventory and assessment of the accuracy of presently available data and methodologies employed by successor states' statistical agencies are necessary for these tasks. Lastly, no matter how axiomatic and common-sense, it should be stressed that coming to grips with the past is *sine qua non* for an understanding of the present. The last point may be disputable, but the author feels that we need to understand in a most comprehensive manner how statistical data were generated in the former USSR, how these data (and subsets thereof) were distorted, what data gaps existed, and who among the key authorities had access to what information. This is important for both outside observers and analysts and for policymakers in newly independent states, many of whom have strong roots in the Soviet past and whose attitudes towards economic statistics may be significantly colored by their experience.

* * *

The paper is divided into three parts. Section I summarizes past evaluations by Western specialists of the accuracy and useability of Soviet economic statistics and proposes important revisions to our earlier conclusions. Section II focuses on perestroika, incomplete as it was, of the Soviet statistical system under Gorbachev. Lastly,
Section III discusses statistical developments since the dissolution of the Soviet Union.

A short note should be added on sources for the paper. In the second part of the 1980s we observed a quantum jump in the volume of Soviet statistical publications and in the amount of space devoted to discussion in the media (most of it highly critical) of state statistics. The emphasis (not surprising) on current developments and issues, paper shortages, and the budgetary problems which have beset academic journals in the last 3-4 years have produced a marked reduction in serious analytical articles and retrospective reviews of statistics. Thus, a number of broader issues raised in this paper can be fully resolved only with time.

In the last 5-6 years, the author has frequently visited the former USSR and the successor states and benefited from numerous interviews and discussions with former and present staff members of statistical agencies as well as with academic economists interested in quantitative analysis. A large share of the conclusions presented in the paper were derived or verified by these contacts. Thanks are thus due to a large number of colleagues who gave so generously of their time.

SECTION I

The consensus which emerged in the 1960s and 1970s among Soviet specialists in the West can be briefly summarized as follows:  

- It was believed (although not always explicitly stated) that the Soviet Union operated with a comprehensive, coherent, and unified statistical system encompassing all summary national data. Thus, Central Statistical Administration (TsSU), Gosplan, Gosnab, Gosbank, and Ministries of Defense, Internal Affairs, Finance, Foreign Trade, Health, and Education were attributed responsibility for separate sets of data. These data were thought to be defined, collated, and classified in a uniform and consistent manner, ultimately to be incorporated in the Balance of the National Economy (planned or ex post), state, republican, and local budgets, input-output tables, balance of (foreign) payments and Net Material and Gross Social Product (national income accounts) accounts.

- Most Soviet statistics available in the public domain did not lie, i.e., had not been falsified for the purposes of deceiving the domestic user or foreign observers. Statistics unfavorably reflecting on Soviet economic performance, the efficiency of the system, or the welfare of Soviet people were removed from published sources rather than falsified.

- Because of the traditional Soviet insistence on secrecy, a large body of statistical data (which would be expected to be available in the open literature in other countries) has been restricted, that is, denied not only to foreign students of the Soviet economy but to most domestic analysts as well.

- Aggregate statistics in value terms and indexes were far less reliable than statistics in physical units due to the nature of
administratively set prices and the use of biased and archaic formulae and deflators.

- Serious shortcomings of published Soviet statistics were their ambiguity and the absence or paucity of necessary explanatory, descriptive, methodological, and classificational material which necessitated interpretation, estimation, and outright guessing by the user.

It should be stressed that the Western analysis was traditionally focused on the availability, reliability, and useability of Soviet economic statistics accessible to the outside world and from an outsider's point of view. Analysis of the process of internal generation and use of statistical data within the Soviet system and the reliability of information upon which policy, planning, or allocative decisions were made were of peripheral interest and seldom directly addressed by Western specialists.

While much more research remains to be done, it can be already said that the summary assessment outlined above needs serious revision, particularly if we were to take a broader view encompassing both external and internal useability of statistics. Tentatively, we should consider adding the following observations:

- The instances of data falsification at all levels, i.e., at the national TsSU, ministerial, and local reporting enterprises and organizations' level have been much more frequent than suspected earlier. Falsifications were effected in adjusting and manipulating national and republican aggregate measures and indexes for propaganda purposes and in order to please the powers that be. In addition, producing enterprises and other reporting units overstated production statistics and "doctored" other measures (both in value and in physical terms) for their own benefit.

- The statistical system never existed as one unified entity. It is becoming increasingly clear that the state agencies mentioned above, such as the Ministries of Finance and Defense, kept their own records and accounts employing procedures, accounting rules and conventions developed independently of TsSU and shared only a minimal amount of information with the latter or with other state agencies. 4

- TsSU's main responsibility was in the collection and verification of primarily production and cost data in support of planning operations and in the preparation of demographic vital statistics, including periodic population censuses. A large number of statistical series (particularly covering population consumption, real income, health, and welfare) recorded and systematized as a matter of routine by most countries in the world was simply not maintained by TsSU. Instead, TsSU would publish short sections with statistics supplied by the Ministries of Defense, Finance, Health and Education. This narrow view of its responsibility prevented TsSU from identifying, exploring and measuring new and important phenomena such as the impact of environmental disruptions, consequences of budgetary deficits, various forms of deviant behavior, or the rapid growth of the flourishing second economy.

- Data collected and processed by state organizations other than TsSU, especially data collected by Ministries of defense, Internal Affairs,
Finance, and Foreign Trade, have been used for internal purposes by
these organizations without being summarized and assembled into
comprehensive statistical blocks which could be incorporated into
national statistics. These organizations had huge banks of raw data,
and summary reports were routinely prepared for their administrators,
but they apparently did not include (in a classified form or not)
such basic documents as the summary defense budget of the USSR, the
balance of foreign payments, series on domestic and international
debt, or aggregate statistics (monetary emission, money in
circulation, etc).

As stated above, economic statistics and other types of information
traditionally have been highly compartmentalized. What has become
increasingly clear from recently published declassified sources,
investigative reports, memoirs, and other documents is that the
compartmentalization reached the highest level. Thus, even the key
policy decision makers at the Politburo, the Central Committee, and
the Council of Ministers did not have free access to all information
and, very often, the information they received was distorted or
“dressed up” to please the them. Unfavorable information was either
not collected or simply “buried” in ministerial file cabinets at
lower levels.

In the last four-five years the credibility of Soviet state statistics
has been damaged if not fully destroyed. Abel Aganbegyan, one of the
most visible Soviet economists, in his book on perestrojka referred in
passing to the late Vladimir Starovskiy (the head of TsSU for almost
thirty years), as “the man who managed to destroy most of the
(statistical) data and falsified the rest” (Aganbegyan, 1989, p. 212).
Does this mean that Aganbegyan spent the professional life of a
quantitatively-oriented economist working with data he knew were
“falsified?” Numerous other academic economists and journalists have
criticized and dismissed official statistics as completely distorted.

When the economic history of the USSR is rewritten, it will undoubtedly
address the issue of the information base of the Soviet system and note
that it was much poorer than envisioned by either Western or Soviet
historians and economists.

Some additional interpretive notes would be helpful at this point.

It becomes increasingly clear that the information available to key
Soviet officials in the past was fragmentary and often misleading. The
lack of understanding of the true state of the economy reached the
highest level of the government and the party.

One example will illustrate this phenomenon. According to a recently
published report, when Gorbachev, Ryzhkov, and Dolgikh joined the
Politburo, they asked Andropov for detailed information on defense
expenditures and budgetary statistics, but Andropov refused the request
(Kuleshov et al., 1992, p. 537). We can speculate that Andropov,
despite being better informed than other Soviet leaders as a result of
his past position as the head of KGB, denied the request of his younger
colleagues because of the absence of coherent documents.

It was clearly Gorbachev’s tragedy that he did not have complete and
accurate economic information when he embarked on his reforms. He
stated this clearly at the 19th Party Conference when he said that “we
did not realize the depth and the burden of deformations and stagnation of past years... only now do we see that the neglect in economics was much more serious than envisaged earlier" (Gorbachev, 1988, pp. 6-7).

The earlier confusion surrounding Soviet defense expenditures was detailed by the author in his earlier RAND-Hoover paper (1992 forthcoming, manuscript pages 22-25). Evidence which has subsequently become available supports the same conclusion. There never was a comprehensive state document entitled "The Defense Budget of the USSR" which would have been a component of the overall union and republican state budgets, the elements of which would have been integrated with national income (Net Material Product) and gross social product accounts. For years the data on defense and related expenditures were partially recorded in the budget of the Ministry of Defense, spread among the budgets of dozens of other ministries and state scientific organizations, masked by a confusing system of direct and indirect subsidies to industrial ministries and to science, and by arbitrary state-fixed pricing of military and general-purpose machinery. While major components of defense expenditures were identified and published in 1988-1991, many parts, particularly weapons procurement and military R&D costs, remained flawed because of the compartmentalization of data and because of pricing problems.

The absence of a summary defense expenditure document has recently been directly confirmed by the Chairman of Russian Goskomstat, Guzhvin. In an interview he said that not only did Goskomstat not have summary defense information but that he doubts that such information can be found (1992, p. 7).

A review of past Western analyses, adjustments, and estimation and reconstruction of unavailable or suspect Soviet economic statistics is beyond the scope of this paper. We should, however, make some observations in the light of new insights into Soviet statistical practices, particularly in reference to the data on defense and related issues.

In the past, a number of Western specialists attempted to estimate the size of the Soviet defense budget by the so-called residual method, i.e., by starting with the total Soviet state budget and subtracting all expenditures which could be classified as civilian and arrive at a residual; this residual would then be taken to be close to the total true defense budget of the USSR. It is apparent from the recent revelations about the manner in which various defense components have been recorded (or rather "misrecorded") that this method could not have produce satisfactory results.

We now understand that there never existed a secret unified balance of the national economy fully integrated with several major sets of data such as national income accounts, the state budget, foreign trade balances, and input-output tables. Accordingly, broader scope Western estimates of national aggregates which had been based on piecing together disparate blocks of Soviet data derived from published parts of national income accounts, financial flows, or input-output data cannot be accepted as valid.
SECTION II

Restructuring and reforming statistical methods proved to be as difficult, painful, and confused as reforms of other Soviet state institutions and establishments. While most political and ideological forces which had historically influenced Soviet statistical systems and which were responsible for their shortcomings and defects had dissipated by the late 1980s, the systems themselves underwent little change.

The irony of the situation was that while Gorbachev was aware of the paucity and the distorted nature of information he was receiving, he was unable to remedy the system.

In the first two years of Gorbachev’s rule the Central Statistical Administration continued its operations without any noticeable change—the volume of published economic statistics did not increase to any appreciable degree, and there was no observable improvement in the quality of the released data. The pressure for change came from government authorities and from the public. Under Gorbachev’s “glasnost” policy journalists and economists began critically examining and questioning the TsSU figures. Two things happened almost at the same time in the early 1987.

Selyunin and Khanin’s article in NOVYY MIR in February of 1987, which attacked the TsSU for numerous biases in output indexes (related to the use of faulty price deflators) and propaganda-dictated distortions, became an important watershed in the history of official Soviet statistics (1987). Until then the data published under the imprimatur of TsSU were absolutely unchallengeable, or at least unchallengeable in print. For a long time, academic economists, journalists, and even analysts employed in other government agencies had not only to accept the official data but, under the rules of Glavlit censorship, were not allowed to use any statistics unless it they had been released by TsSU. The appearance of Selyunin and Khanin’s article opened a virtual floodgate of media criticism and ridicule of TsSU suggesting that the distrust of official statistics may have been long present in the Soviet society generally, certainly among many specialists.

Somewhat belatedly Gorbachev realized that the economic situation in the Soviet Union was much more critical than he thought and that “he had been misled by local officials” (Kaiser, 1991, p.127).

In March, the house organ of TsSU, VESTNIK STATISTIKI, published an unsigned lead article which was said to have originated in the Central Committee or with somebody on Gorbachev’s staff. The article discussed the tasks ahead for the Soviet economy and criticized TsSU for not providing timely and accurate economic information (“Statistika...,” 1987, pp. 3-9). Soon thereafter, Pravda reported that the Politburo reviewed the need for “radical improvement” of statistics in the country, and TsSU was instructed to work on improving the reliability of statistics and to increase their availability.

The July 1987 package of perestroika reforms announced by the Central Committee and the Council of Ministers included a special resolution demanding major improvement in state statistics. TsSU was reorganized into a more prestigious Goskomstat (State Committee on Statistics) and
was directed to improve quality and coverage and to expand publications ("O KORENNY... 1988, pp. 178-190).

The immediate, positive result of the July resolution was a rapid increase in the volume of published economic statistics but, unfortunately, not much else. Topical statistical compendia on such topics as labor, industry, agriculture, and the like, which had vanished from the open literature in the early 1960s, as well as special statistical press releases and bulletins, began to appear regularly. This sign of progress, no matter how welcome, should not be interpreted as signifying major reforms in the state statistical system or as a particularly serious Goskomstat effort. For many years specialized statistical compendia had been prepared and printed in a classified form, so all that had to be done was to remove the "administrative use only" stamp and release the data. Real improvements in the quality of state statistics or the introduction of new statistical measures and series were much slower to come. Goskomstat continued to produce the summary data by collecting reports from all levels of state enterprises and organizations, and no progress was made towards introduction of sampling techniques—a less expensive and often more reliable method of collection. The scope of publications was expanded by the addition of several new topical sections in handbooks, such as environment, crime and some other forms of deviant behavior. A sign of progress was the introduction of a Western-type Gross National or Domestic Product (GNP or GDP) aggregate measure of national output to supplement the traditional Soviet national income (Net Material and Gross Social Product) estimates. This was accomplished, however, by relatively simple mechanical conversions of existing national aggregates and the addition of some elements (the so-called "nonproductive services" and depreciation), rather than by the introduction of a comprehensive system of multi-stage national income accounts (SNA). The demands for increased republican independence which marked the last years of Gorbachev's rule resulted in the expansion of local statistical agencies autonomy, but these changes were not substantive, remaining mainly on paper. Some methodological improvements were made in the construction of price indexes and national income deflators but the results were mixed.

If we were to examine the last national statistical abstract published by Goskomstat before it was disbanded (NARODNOYE ... 1991) we would find little substantive change or improvement compared with, say, the 1975 or the 1980 abstracts. There were, of course, some data which have not appeared before or which were removed from the open literature long ago—GNP series, statistics on crime, life expectancy, abortions, data on prices in rubles, per capita consumption of alcohol, corrected data on grain harvests, environmental disruptions, and monetary stock. New phenomena considered crucial for the success of perestroika, such as the activities of private cooperatives, enterprise leasing, individual economic activity, and operations of joint ventures, were briefly summarized in a haphazard manner. The coverage of handbook sections on foreign trade, state budget and financial matters remained virtually unchanged. The balance of (foreign) payments and any meaningful data on defense were still absent. Explanatory, descriptive, classificational, and definitional notes were expanded, but only marginally.

Defense, financial, budgetary, and foreign trade statistics stayed outside the purview of Goskomstat and, one must add, remained in a chaotic state; the volume of statistics covering these areas in
Goskomstat publications remained as meager and often as ambiguous as before.

The confusion present in the last two-three years of Gorbachev's rule with respect to information on national defense, domestic and foreign debt, budgetary deficit, open and hidden price subsidies, Soviet gold stock, money stock in circulation, consumer and wholesale price indexes, trade among republics, interenterprise debt, the extend of monopolistic concentration in industry, the number of people living below the poverty line, and the like have been well documented in Soviet and Western reports. The absence of the needed statistical information or the uncertain quality of the information made Gorbachev's struggle for reforms more difficult.

A couple of examples should illustrate this confusion.

As noted above, for a number of years Soviet statisticians and economic planners and administrators did not recognize the existence of the second economy. This, needless to say, was regrettable, as the vast underground system of private entrepreneurship should have been an important factor to consider in drafting Gorbachev's legislation of individual economic activities, unearned income, private cooperatives, and the movement towards free consumer markets in general. As late as 1990, no one in the country had a clear idea of the size or the structure of the second economy. Addressing the 28th Congress of the CPSU, the KGB Chairman, General Kryuchkov, said that the overall size of the "second economy" had reached 150 billion rubles. In giving this figure the KGB Chairman obviously disagreed with an earlier GOSKOMSTAT estimate of 55.5 billion rubles (SOTIAL'NOYE..., 1990, p. 121). In July, Deputy Prime Minister, Leonid Abalkin, challenged Kryuchkov's estimates as unsupported and undocumented and restated GOSKOMSTAT's figures (Nadzharov, 1990, p. 1). In August, the KGB Chairman repeated his figure of 150 billion rubles and, without references to Abalkin, gave other estimates related to the second economy which were significantly different from GOSKOMSTAT's (Kryuchkov, 1990, pp. 1-2).

In the summer of 1990 a team of economists created by a joint decision of Yeltsin and Gorbachev and headed by Shatalin was working on what became known as the "Five-hundred-day Program of Transition to a Market Economy." The authors of the program stated that their work was made more difficult, and certain analytical conclusions rendered impossible, because many of the key statistical agencies of the USSR and the Russian Federation either fully ignored the requests for information or fulfilled them only in part. Goskomstat USSR was among a small number of state agencies which fully satisfied Shatalin's team. It is doubtful that these agencies (except, possibly, party organizations) would willingly refuse a direct request by a team headed by a member of the Presidential Council and working with the full support of both Gorbachev and Yeltsin. The explanation probably lies with the phenomenon highlighted repeatedly in this paper, i.e., the absence of a comprehensive and coherent state statistical information base—these agencies simply did not have the needed summary data.

The removal of secrecy stamps from statistical documents affected under the glasnost policy revealed huge gaps in coverage, the absence of methodological documents, and many other defects. It would be thus safe to say that the state statistical system, i.e., Goskomstat USSR and various ministerial statistical offices, did not contribute to the
progress of Gorbachev's perestroika in any appreciable degree. More likely, they have hindered it in certain respects.

SECTION III

The situation with state statistics did not improve following the dissolution of the Soviet Union in December of 1991. In fact, one can make a strong case to suggest that, generally speaking, the statistical situation remained as dismal as before and possibly even deteriorated.

The paucity and shortcomings of the information on the basis of which the Soviet economic system had operated in the past came as a surprise not only to Western observers but to key post-Gorbachev economic administrators as well. They believed that beyond the facade of published Goskomstat statistics, full of gaps, inconsistencies, and propaganda distortions, they would find a different set of accurate and comprehensive data that was accessible only to a small number of key officials. They were dismayed when they learned that they had to operate on the basis of the same poor information (Sokolin and Volkov, 1992).

Goskomstat USSR system was disbanded and republican statistical committees were reorganized into main statistical agencies of newly independent states with functions and lines of subordination differing from state to state. In Russia, the former Goskomstat RSFSR was transformed into the State Committee on Statistics and subordinated to the Supreme Soviet.\textsuperscript{15} The Goskomstat of the Ukrainian republic was reorganized into a cabinet-rank Ministry of Statistics. The designation of the central statistical administration as the State Committee on Statistics was retained by the majority of the former republics. In some cases, however, these committees became subordinated to the republic's parliament (Supreme Soviet) as in Russia, and in others retained the position of a sub-cabinet level department of the executive branch. Three republics—Belarus, Uzbekistan, and Kazakhstan—reorganized the former goskomstats into State Committees on Statistics and Analysis which ostensibly meant that additional responsibilities included analysis of economic conditions and the rendering of advice to policymakers. It should be added that virtually no key statistical officials in the former republics have been removed or replaced in the first year of the new states.

The administrative subordination (to the parliament, the council of ministers, or, say, the ministry of economics) of the central statistical agency is not a trivial matter. The public continues to view state statistical services as being fully controlled by the political authorities. Subordinates are thought to be willing to select or modify statistics to accommodate their superiors. It is, for example, a widely shared view that Goskomstat of Russia often produces statistical reports which support policies advocated by the Supreme Soviet rather than those of the executive branch of the government, or presents data showing the results of Gaidar’s programs in an unfavorable light. Needless to say, other observers accuse the Russian government of a selective use of statistics. In December of 1992 a heated exchange took place between Goskomstat of Russia and Ministries of Foreign Economic Relations and Fuel and Energy concerning foreign trade statistics. Goskomstat estimated that in the January-September
period Russian exports declined by 35 percent compared with the same period in 1991, while the Ministry of Foreign Economic Relations reported that exports rose by 4 percent. Similar discrepancies between Goskomstat and government data were noted in total imports and for individual commodities (FBIS-SOV, 1992, pp. 18-19).

For this and other reasons the restoration of the credibility of statistics attempted by key officials of statistical agencies so far has not borne fruit.16

Somewhat later, a new organization was formed to collect, process and disseminate economic statistics of eleven new states (i.e., excluding the three Baltic republics and Georgia)—the Statistical Office of the Commonwealth of Independent States. Dr. Mikhail A. Korolev, who was dismissed by Gorbachev as the Chairman of Goskomstat USSR in 1989, was appointed to head the Commonwealth Office. Several key officers of the former Goskomstat USSR, such as Nikolai Rekov, Boris Ryabushin, Leonid Umansky, and Nikolai Ivanov were appointed as his deputies. If would be a mistake, however, to view the Commonwealth Statistical Office as a replacement of Goskomstat USSR—its effectiveness will depend on the effectiveness of the Commonwealth organization and, at the present time, it does not appear to be too promising. Its staff was much reduced and the funding—expected to be shared by member states—is somewhat uncertain. The newly created agency is not expected to independently collect and process statistics but will rely on submissions from member states. The push for the reform agenda for all statistical offices of newly independent states, that is, for improved methodologies, expansion of statistical coverage, computerization, shifting to sample surveys, and other urgently needed innovations, is not likely to originate with the Commonwealth Office.17 The best that can be hoped for is that the Commonwealth Statistical Committee would be successful in maintaining some semblance of uniformity in statistical reporting originating with newly created states.

The staffs of the former republican statistical committees were decimated in the process of reorganization. Some employees of the former goskomstats were retained, some were absorbed by newly created or expanded ministries, state committees, and institutes, and some just left for other better paying jobs.

The main problem facing statistical agencies in new states does not, however, lie with the administrative structure or intra-government frictions. Under the old Soviet regime Goskomstat USSR was the true center of the system at which virtually all methodological, analytical, and classification work was done; even such aggregate measures as current and constant price national income (Net Material Product) and industrial output indexes were prepared in Moscow.18 Republican and lower level (krai, oblast, etc.) statistical organizations were reduced long ago to agencies for the collection and processing of primary statistics based on reporting forms and using classifications, formulae, and definitions developed in Moscow and for the verification (albeit rather spotty) of collected reports. The cadres of former republican goskomstats thus do not have the training, the experience or the expertise to assume the responsibilities for staffing independent state statistical offices not even to mention the dire need for reforming the statistics. The alarmingly poor state of statistical systems in successor states is particularly unfortunate at a time when reliable economic data are required in restructuring national economies,19 and
innovative approaches to measuring the progress of economic reforms are so badly needed.

The dissolution of the Soviet Union and of its centralized controls and institutions created major collection difficulties for the republican statistical agencies. The disintegration or significant modification of the responsibilities of the central supply and distribution systems, such as Gosnab and the Ministry of Domestic Trade, ruined the well-established collection system for state wholesale and retail consumer trade and, needless to say, the emergence of non-state distribution systems in the form of private and cooperative stores and of "street trade" made the collection of statistics even more difficult.

The collection and processing of aggregate capital investment statistics suffered a similar fate and investment series being produced at this time are of uncertain accuracy. A comprehensive system of recording of the exchange of goods and services (in value or in physical terms) among republics did not operate too efficiently in the past and, once these flows became exports and imports of sovereign states, became much more difficult.

The disappearance of the legislative and administrative system of the former Soviet Union created special problems for statistical agencies which are now operating in an administrative vacuum and also in a new environment consisting of state and private entities. Some data are reported to statistical agencies by inertia but new laws on statistics are needed to codify responsibilities of various state entities. These are, however, relatively low on the list of legislators' priorities.\textsuperscript{20}

A novel phenomenon observed throughout the former Soviet Union which is particularly irksome for foreign observers and international agencies such as The World Bank and the International Monetary Fund is the rapid growth of alternative sources of statistical information. With the centralized censorship and control of Goskomstat USSR gone from the scene, a large and rapidly growing number of newspapers, magazines, academic institutes, and private organizations compete in preparing, publishing, and in many instances selling economic statistics. In some instances these organizations are simply "commercial" outlets of existing (or former) state statistical organizations, such as, for example, a joint venture with a Dutch bank, EWTX, which maintained strong links with Goskomstat USSR.

Moscow newspapers such as DELOVOY MIR and KOMMERSANT regularly publish economic statistics, with the former usually reprinting Russian Goskomstat press releases and summaries, and the latter producing their own undocumented and unverifiable economic information. Academic institutes, small ventures, and even private individuals offer alternative statistics which, not surprisingly, are often inconsistent among themselves. Needless to say, the multitude of sources of information, some of which cannot be verified or even fully identified, compounds the problem.\textsuperscript{21}

Some of the new organizations have already acquired an excellent reputation and complement state statistical reporting in important ways. One such organization is the Center of Economic Analysis and Forecasting attached to the Ministry of Economics of Russia. The Center, which hired a number of experienced analysts from the former Goskomstat USSR, generates important and respectable statistical series.\textsuperscript{22} Although it
cooperates to a certain degree with Goskomstat Russia, it is also in competition with the agency.

The publication record of republican statistical agencies was always irregular. All the gaps and shortcomings notwithstanding, while it existed Goskomstat USSR annually published such basic statistical abstracts as NARODNOYE KHOZYAYSTVO SSSR, a shorter version of the same compendia under the title of SSSR V TSIFRAKH, and periodically some topical collections; all of these included a significant amount of republican data. Some republics, such as Russia, Ukraine, Estonia, Lithuania, and Belorussia have long been publishing regular republican statistical compendia differing in coverage and scope from the released data of Goskomstat USSR. Other republics, such as Armenia, Turkmenistan, Tadjikistan, and Georgia, have been releasing their compendia with gaps of several years and with a significantly lower amount of information; Georgia has always been notorious for the shabby quality of its published statistics which, continued to be full of typographical and numerical errors and mislabelled tables. It was thus quite clear that republican goskomstats differed markedly in the quality of their publications and effectiveness of information centers.23

The situation with state statistical agencies in newly independent states is thus alarming, and it is possible that in at least some states it will continue to deteriorate in the immediate future.
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1See Treml, 1972, and Treml, 1992. For a recent succinct statement see Hewett, 1988, pp. 7-9, 35-37.

2"Tsentr'al'noye statisticheskoye upravleniye" from mid-1940s and reorganized in 1987 into the State Committee on Statistics of the USSR, "Gosudarstvenny komitet po statistike," or Goskomstat.

3The pressure for secrecy on TsSU is illustrated by several formerly secret KGB documents recently released in Russia. It will be recalled that publications of summary statistics stopped in the USSR in the early 1930 and was resumed only in 1957, when the first rather slim NARODNOYE KHOZIAYSTVO SSSR volume appeared. Almost immediately, the KGB Chairman, Serov, addressed an alarmed letter to the Central Committee reporting that foreign embassies have been purchasing Soviet statistical compendia (e.g., the American and British embassies bought thirty five copies of the Ukrainian handbook!). The Central Committee investigated the matter and ordered restrictions on the distribution of statistical handbooks, particularly of regional and city handbooks. Similar letters were sent to the Central Committee in by KGB 1960, 1961, and 1963 (Maksimov, 1992, p. 2).

4In the past, the extend of cooperation between TsSU/Goskomstat and other central Soviet agencies varied. Powerful ministries of Defense, Finance (including the Gosbank), Internal Affairs, and Foreign Trade
were least likely to share their data or to abide by general regulations, methodology, and classifications prepared by the central statistical agency. On the other hand, Ministries of Domestic Trade and Education appeared to have cooperated with TsSU without much difficulty.

5 See, for example, the book by Shmelev and Popov with a whole chapter devoted to distortions in official Soviet statistic (Shmelev and Popov, 1983, pp. 23-42).

6 A prominent Soviet economist, Men’shikov, reported that one subrefuge employed to hide the cost of military procurements in the state budget was to record these as additions to the capital stock of defense industries and not as sales from these industries to the military. Thus, unbelievable as it seems, the cost of all or most weapon procurements shown in the budget of the Ministry of Defense was therefore zero. Men’shikov does not explain how the capital account of defense industries recorded these entries (Men’shikov, 1990, pp. 278-279).


8 In November, 1985, Gorbachev addressed a memorandum to the Politburo referring to numerous instances of distortions in reports submitted to the Politburo by state and party organs. Successes, he noted, are highlighted while shortcomings are neglected. The Politburo responded by a resolution condemning distortions and demanding that “absolute reliability” in information submitted to the Central Committee and other leading government agencies (“Zapiska t. Gorbacheva...,” 1989, pp. 39-41).

9 According to several reports, the introduction of GNP measures long resisted by Soviet statisticians was done on direct Gorbachev’s orders.

10 The July, 1987 resolution directed the reorganized Goskomstat to take over foreign trade statistics. Western visitors to Moscow Goskomstat offices, including this author, were told in 1988 and 1989 that the process of integration of Ministry of Foreign Trade export and import data with other national statistics had been started and new approaches to data collection (such as recording at custom points) are being experimented with. However, a short foreign trade statistical handbook published under Goskomstat’s name appeared only in early 1991 and contained no new type data and used the same classification scheme.

11 Consider the following statement by the Chairman of Goskomstat USSR and his first deputy: “Financial, credit, monetary statistics are collected and summarized by the Goskomstat USSR, State Bank, Ministry of Finance, Foreign Trade Bank, and other organizations. Collection programs of different organizations are not unified, a summary statistical base is not prepared, not published, and not analyzed. This makes the development of monetary and financial policies difficult.” Kirichenko and Pogosov, 1991, p. 95.

12 Some Western observers and Soviet commentators speculated that the 1986-1987 legislation on individual economic activity and private cooperatives was prompted by the existence of large gray and black markets and numerous underground entrepreneurs with the goal of legitimizing at least some of these activities so that they could be regulated and taxed by the state. Several interviews conducted by the author in the USSR in the late 1980s suggested that this was not so and that the extant second economy was not recognized as a factor in the preparation of new legislation or in reforms generally. The recognition of the importance of legitimization of the second economy began to appear only in 1990 (see, for example, Shatalin’s “500 Day Program,” PEREKHOD... 1990, pp. 123-128)
The magnitude of discrepancies can be illustrated by estimated size of the illegal narcotics business. According to GOSKOMSTAT, the market in narcotics, prostitution, and smuggling amounted to one billion rubles (SOTSTIALNOYE... 1990, p.121). Kryuchkov's reported that illegal narcotics trade alone generated 14 billion rubles.

The record of Goskomstat's published estimates of the magnitude of the second economy illustrates the general confusion. The initial 1989 figure of 56.6 billion rubles reported in 1990 was revised in a subsequent Goskomstat publication to 59 billion rubles (SOTSTIALNOYE... 1991, p. 127). The same publication gave the 1990 estimate as 68.8 billion rubles but a few months later a Goskomstat press release revised it upward to 99.8 billion rubles (PRESS-VYPUSK 1991).

The report specifically lists Gosplan, the Ministries of Finance and Defense, the Foreign Economic Bank, the State Committee on Foreign Economic Relations, and the administrative offices of the Central Committees of the Communist Party, Komsomol, and of the All-Union Association of Trade Unions (PEREKHD... 1990, pp. 189-192).

For an excellent summary of the state of Russian statistics see the paper by Grigory Khain in this volume.

For reports on critical dismissal of current statistics see Ellman, 1992, p. 53.

Western observers' interviews with some statistical officials and other government officials in republics other than the Russian Federation indicate that the Commonwealth Statistical Committee is mistrusted as a remnant of the Soviet past. The fact, that all key administrators of the new agency are former officials of Goskomstat USSR makes the relations only worse.

The ostensible reason given by Goskomstat USSR was that certain sets of data, such as for instance, turnover tax payments and exports and imports could be distributed among republics only at the center.

The paucity of economic information adversely affected the implementation of a number of reform proposals and handicapped policy. Two recent examples should suffice. The Kazakhstan authorities had to suspend the announced privatization campaign because of difficulties of accurate evaluation of capital assets of state enterprises being privatized (RFE/RL Research Report, November 11-17, 1992). The extremely grave situation with the rapidly growing interenterprise debt in Russia in the summer of 1992 was exacerbated by the confused state of banking statistics (Whitlock, 1992, pp. 33-38).

In January of 1992, the Supreme Soviet directed Goskomstat of Russia to prepare a program of modernizing of statistical services of the Federation and introduction of international statistical concepts and conventions. But not much progress has been shown.

The invaluable and rich statistical handbook on the former USSR prepared by The World Bank illustrates the existing problem. Statistical sources cited in tables include various goskomstats of former republics, Bank's own estimates and projections, US Census Bureau estimates, and reports, estimates, and projections of the International Monetary Fund. The frequency with which Bank and IMF estimates are used underline the degree of the absence of the needed data in official statistical agencies in newly created states (THE WORLD BANK, 1992).

A good example is a recently released statistical summary of the economic situation in Russia prepared by the Center. This relatively short document compares favorably with most other statistical compendia produced by statistical agencies in newly independent states. It offers a variety of statistical series usually not present in other publications such as a long section on budgetary and banking statistics.
detailed price statistics, and important data on employment, output, and conversion of Russian defense industries (Tsentr..., 1992).

Diversified languages base created additional difficulties. It is, of course, perfectly reasonable that newly independent states establish the language of their titular nationality as the official state language. The publication of statistical handbooks and press bulletins only in the native language with parallel Russian titles or in the extreme case of the recent Georgian statistical abstract only in Georgian, will make communications and commercial relations among new states more difficult.
THE ECONOMIC SITUATION IN RUSSIA, 1992

by

Grigorii I. Khanin

INTRODUCTION

The discussion of the state of military sector in the Russian economy would be natural to begin with the analysis of the general economic situation in Russia. The very size of the military complex depends on it. And the decisive cause for the attempts to curb it that were made in the late 1980s-early 1990s was that the huge military expenses proved unbearable for the economic growth and living standards of the population. The less satisfactory is the state of economy, the more urgent is a need to cut military expenses in general and military output in particular. On the other hand, the state of economy itself puts certain limits to these cuts. The economic decline impedes the workers displaced from the military sector being absorbed by other branches, enhances the role of arms sales in the balance of payments, reduces financial resources needed to implement conversion.

Since the year still lasts, in estimating its results I will rely on the records after the first seven months, i.e., for the period immediately preceding the time of writing this paper. More detailed estimates relate to the first half of the year on which data on industrial output in physical terms are available. The estimation of the physical index of industrial production is the most difficult part in the estimation of the index of national income. For this period many other data on the economic growth or decline are available too. The transition from the appraisal of the economic results after the first seven months to those anticipated at the end of the year is made on the basis of the trends reveal in the previous period and within the whole year, on the envisaged outcomes of the Russian government's economic policy and on the efficiency (or, more precisely, inefficiency) of the economic mechanism which has established itself in this year. The prediction for the year 1992 is of a tentative nature because some factors such as inclemency of the winter, possible changes in the economic policy of the government and of the Central bank, vagueness about the decisions that can be made by International Monetary Fund about allocation of $3 billion as a reserve credit etc. cannot be foreseen. All these factors however do not seem very important because they can not be expected before the end quarter of the year and their influence on the general situation, in view of the well-known inertia of the Russian Economy, should not be overestimated.

THE STATE OF ECONOMIC STATISTICS IN 1992

The validity of conclusions about the economic situation in Russia much depends on the quality of the existing economic information. This long-standing object of concern for any student of the Russian economy has not been removed but indeed was intensified after last year's August and after the announcement by Russian leaders of their intention to reform Russian into a modern country. The maxim that good intentions pave the road to hell once again has come true. There is plenty of evidence that
the state of economic information in Russia not only has not improved but actually deteriorated. For the sake of justice, we should note that some favorable changes did occur: some data on the stocks of gold and its production as well as the balance of payments of Russia for 1991 and its prediction for 1992-1993 were published. The balance of the Central bank of Russia as of October 1, 1991 was published. But these positive changes, though very important, seem to be lost in the bulk of changes to the worse.

To begin with, the Russian Goskomstat has ceased to publish the statistics of absolute gross national product and national income in current prices. Over the previous two or three years these data were published by the Goskomstat of the USSR in press or bulletins on a quarterly basis. Now they have disappeared from press and from publications of the Russian Goskomstat. They are absent from President's and other high officials' reports and from the draft "Reform Developing Program" submitted in June by the Government to the Supreme Council, though the latter contains the widest set of economic indicators.

The lack of data obviously hinders the possibility of analysis. The only source which could have helped to elucidate the absolute value of the GNP would be data on particular budget items which were published in the Russian press. But the attempt to estimate on their basis the value of gross national product, when using different items, yielded different results. For example, the thus obtained value of the GNP for the first quarter of the year varies from 1.005 trillion rubles to 1.406 rubles.

The quality of the estimates with respect to other aggregate indicators of the Russian economy and of its individual branches also remains low. Now their validity still more depends on the validity of price estimations because it is rather they that the accounts from plants that is the base for the Goskomstat. The price indexes however have always been a weak point with the Soviet statistics. The statistics of these prices (except for kolkhoz market prices) proceeded upon an absurd assumption that changes in prices occur only through government. Lately however the Soviet statistics began to abandon this preposterous postulate and had to accept the basic methodology used in the world statistics for estimation of prices index. But in order these methods could be used, the whole activity of the statistical bodies must be improved, above all, by staffing them properly. In reality however, due to a widening gap in pays between these bodies and the commercial organizations, the quality of their personnel has changes to the worse. Also, some new instructions on price estimations permit such methods which for sure lead to a distortion of the real situation. For example, the estimation of changes in products' quality is permitted to be made on the basis of changes in production costs. Considering the weakness of the statistical service, this method will be used most of all, and this will lead to continuing errors in price index estimation, i.e., to their underestimation.

There is one more factor of price index distortion. The statistical bodies exercise control over conventional channels of sales, i.e., over state and cooperative trade, public catering, kolkhoz market. Over the last two or three years, however, an increasing share in the retail trade is made by such channels as commercial shops and street trade. These kinds of retail trade much better than the conventional trade reflect level of prices and their trends. But the official statistics
ignores either size, or price dynamics in these new kinds of retail trade. In January 1992 still another distortion factor appeared. In consequence of price liberalization they soared so that many good proved to be inaccessible for the most of the population. But statistical bodies, in estimating the general price index, weighted individual indexes by weights of the current period thus reducing the influence of the most highly rising retail prices in the general price index.⁵

Even the data previously thought of as relatively reliable such as data on output and services in physical terms, are now arousing ever more distrust. It is because of overall deterioration of discipline among officials. The absence of fear increased their possibilities to victimize the state to fraud in this field too. It is true that the absence of control over plan fulfillment could have removed their motives for distortion. But the long-standing habit cannot be easily extirpated, it has become an instinct. New motives such as illicit export and tax dodging have appeared too. The inclination to embellish the performance, on the one hand, and to conceal the output, on the other, coexist-exist, though the former prevails; it is because the reporting false data in most cases goes unpunished. For this reason, previously most reliable data, e.g. trends in shipments by rail or electric output on which analysis could have been based are getting less trustworthy. And this conclusion is not merely a matter of logic. The always existent dependence between these indicators and the related economic indicators in very often disturbed. The published data in their dynamics often differ from each other. To illustrate, the prime-minister deputy V. Shumeiko wrote about the reduction of electric output in May 1992 by 16.2 percent over the corresponding period last year,⁶ while actually the reduction for the whole quarter was not more than 6 percent (the average daily power output decreased from May by 6 percent). A considerable part of economic information is not published at all or published in a very brief form and with great delay. For example, so far have not appeared the overall balance of commercial banks and the balance of the Central Russian bank for this year.

Some part of economic information is faulty and, subsequently may be corrected as was the case of the initially declared size of Russian export in the first quarter which later on was found to be 40 percent lower than was declared.

Absent is information about many important economic events such as illicit export and import, plants currency deposits in foreign banks. The information about output of many industries (nonferrous industry, radio engineering, electronics) as well as about the whole military output is not subject to publication.

The matters as they stand in economic statistics obviously do not permit to obtain full objective appraisal of the economic situation. A possible solution may be developing more or less substantiated hypotheses and approximate estimations.

Behind all these deficiencies, apart from the disorganization of management, lower skill of the personnel (Russian statistical bodies typically were inferior even to their Union counterparts) seems to be manifest unwillingness on the part of Russian government to have objective information which would expose serious failures in their economic policy. This seems the only possible explanation for their absolute reluctance to bring order in this field and attract new
specialists able to set things right. The present Russian leaders continue the line of behavior habitual of the Soviet leaders since the Stalin rule. But what is most surprising is the indifference exhibited by international financial organizations which avoid to exercise pressure on the Russian leaders in order to get a more complete and valid economic information.

DYNAMIC IN PRODUCTION AND IN THE USE OF NATIONAL INCOME

The state of production in 1992 was determined by the influence of a long-term (since the late 1950s) trend of declining growth rates especially marked in 1989-1991 because of the disintegration of the state management and mistakes made in the process of the transformation of the Russian economy. Over three years (1989-1991) the total size of the national income by my estimates, with allowance for hidden rise of prices, declined by a third, i.e., the decline equaled that in the USA and Germany during the greatest in the history of capitalism depression of 1929-1932.

After the downfall of the August coup the depression still deepened because of nearly total disorganization of the economy: cessation of the activity of Union bodies, delay in the formation of efficient Russian management and development of the Russian economic policy. Using the data for the CIS (which are almost entirely determined by the economy of Russia), in the fourth quarter of 1991 the national income fell by 21 percent, or if the hidden annual 5 percent rise in prices is taken into account (this rise was shown in my earlier publications), by 26 percent. The data of the Russian Goskomstat comparing to those for the CIS suggest an essentially lower reduction of the national income in the fourth quarter; this can be accounted for, in my opinion, by the fact that in the fourth quarter Russia had not enough time to take under its control a great part of the economy (military industry, part of heavy industry, foreign trade) where the slump was the deepest.

In 1992 there were objective factors for the decline to be slackened. Labor and material resources suffered not much. The reduction of import, very painful for industry on 1991 could have been stopped due to promised Western credits and humanitarian help. The planned dramatic cuts in military procurement could have permitted to increase export of the released raw materials and manufactured products as well as to use released materials, labor and production capacities to increase the output of consumer and investment goods, mostly for export branches of the economy. The experience of many other countries which had in the past similar difficulties shows that the abatement of economic recession under these conditions was quite possible provided the right choice of economic policy. Unfortunately, the Russian leaders (supported by many influential economists) could not find right solution. Russian President B.N. Yeltsyn and acting Prime-Minister Ye.T. Gaidar not once pointed out that at the end of 1991 Russia stood before two alternatives in economic policy, i.e., extraordinary administrative measures or radical economic reform. For fear of a possible restoration of the command system in the consequence of extraordinary measure, the Russian leaders have chosen the reform whatever ill-prepared and thoughtless it might be, and this only intensified the economic difficulties.
In my estimations of the 1992 national income dynamics I will use mostly the records of output in physical terms. For all their inaccuracy, they remain the only more or less reliable characteristic of the economic growth. Other methods I used earlier for estimation of the output of certain branches and of the national income this time could not be employed because of the lack of the required data. But the index of the produced national income which I have estimated will be verified by the index of the spent national income. The dynamic of industrial output was estimated by staple commodities produced in the first half of 1992. Fuel-and-power complex was presented by main fuels. Steel complex by main commodities of ferrous industry, machine building complex by 55 types of civil machine productions, wood-chemical complex by 25 items, food industry by 21 items, light industry by 15 items. All in all, the data on 137 items of industrial products were used in compiling the index. The data on the output dynamics of the most important industrial commodities in physical terms by individual industries and complexes are supplied in Appendix 1.

Out of industries, omitted from estimation were non-ferrous industry, branches of chemical industries producing military items, military part of machine building complex, double-purpose branches of machine building (instrument-making, electronics), part of tailoring industry. By industries included in the estimation, the index of industrial output was determined as the non-weighted average of the index of particular products. If we take into consideration the incompleteness of the set of industries, this estimation may appear not worse than the weighted average. Later on however the weighted average by particular industries will be estimated too.

The estimation of the index of the total industrial output was based on indexes on individual branches weighted by shares of industries in total employees. The results of estimation are supplied in Appendixes 2 and 3.

The industrial output according to the set of branches, complexes and items which were included in the estimation was in the first half year 82.9 percent to the similar period of the last year. For the estimation of the index on the total economy it was necessary to estimate the share and dynamics of the branches omitted from estimation.

In the estimation of the dynamics of the output of branches omitted from the estimation of indexes I divided those remaining branches into two groups: those making civil commodities and those making military commodities. With regard to the former group of branches I proceeded upon the thesis that their dynamics were essentially worse than those of the total economy. This assumption is supported both by theoretical considerations and factual data. The above mentioned branches (electronics, optics, radio engineering, communication equipment) are most closely connected with the production which in this year has been declining at an extremely swift speed. Besides that, due to curtailment of capital construction and worse financial standing of plants, the biggest recession occurred in the demand for technologically sophisticated items. Thus, the decline in the output of high-quality ferrous rolled products was more than of the total rolled products; of metal-cutting and forge-pressing machines with numerical control more than the total of these machines etc. The output of non-ferrous industry declined more (by 23 percent) than that of ferrous industry. According to this, on the judgment basis, I estimated the decline in
these industries at a third which I think is still underestimation. As to military output proper, its decline was estimated at 68 percent.\(^7\)

The share of industries of the former group I estimated also by judgment at one fourth of the machine building output and, according to this, their labor at 1.95 million workers, or 11.3 percent of the total industrial labor. This number of the employed in military industry proper was taken as 10 percent to the total employed in industry. As is seen from Appendix 3, the index of the total industrial output was in the first half of the year 75.7 percent.

In the second half of the year a further decline of industrial output index can be anticipated. This will be caused by worse operating conditions (reduction of import, forthcoming sharp cutback of military industry which has already in the first half year fulfilled\(^8\) its annual procurement order, vast stocks of manufactured goods unsold because of marketing difficulties for a number of industries). The action of these factors has already caused a sharp decline of business activity in June–July. In June 1992 the average daily output of many commodities has declined over May by 10–25 percent. Only in July, according to the estimation of the Russian Goskomstat, the output has declined over June by 6.4 percent and was 77.6 percent to the similar period of the last year instead of 86.5 percent in the first half year, i.e., has declined by 8.9 percentage points.\(^9\) On the other hand, due to greatly expanded cash and credit emission, since July of this year a certain revival in the demand can be anticipated which may lead to a certain rally for many branches. The base will also decrease as the result of striking recession in the forth quarter of the last year. According to all this, I think that for the second half of 1992 the slump of the industrial output will be 30 percent and for the whole year 27.5 percent.

The Russian Goskomstat estimates the decline in the output of building organizations of all forms of ownership in the first half year at 37 percent. The truth of this estimation is supported by the data on the commissioning of new short cycle buildings of non production sphere. The commissioning of residential housing has declined in the first half year by 34 percent, of general education schools by 35 percent, of preschool facilities by 35 percent, of hospitals by 33 percent, of outpatient facilities by 42 percent.\(^10\) At the same time one should bear in mind that, according to the estimation of the Russian Goskomstat, the size of production capital investment has declined more (nearly to half) that non industrial ones (by 42 percent).\(^11\) So it is quite possible that the Goskomstat even somewhat underestimated the total decline in the building output. It is also significant that in the first half year not a single unit of the republican starting program for 1992 financed from the budget has been commissioned. According to the above said about the dynamics in the output of building, the total decline can be estimated at 40 percent.

At the same time, there is a manifest inconsistency between the data on declined output of building industry and on the use of building materials in the first half year. Thus, the output of building materials industry has decreased by my estimations by 15.7 percent, of the finished crude steel rolled products by 14 percent, of merchantable wood by 11 percent. On the average, therefore, the decline of building materials output was less than half of the estimated index of the building industry output.
I cannot suspect the Goskomstat of overestimating the degree of the decline of the building output. The price index in building mounting works (1000 percent to the first half year of 1991) estimated by it is even lower than the price indexes for materials used in building (of industrial-construction materials 1149 percent, wood processing 1205 percent, ferrous industry 2402 percent). Such a great disparity can be explained as I see it, first, by underestimating the decline in building materials output used in construction in physical terms and, second, by the underestimating of construction in the private sector, where the decline was not so great as in the public sector. Third, it seems that illicit export of all commodities used in construction as well as their stocks in construction have increased.

In the second half years, as the result of some improvement in the plants' financial standing after measures taken by the Central bank, the decline in the building industry can be expected to remain at the first half year level, i.e., 40 percent and, therefore, for the year it will be 40 percent.

The output of agriculture, according to the latest data made public by vice-president A. Rutskoi, declined by 27 percent. These data, according to the time when they appeared, relate to seven months of 1992. These data are supported by the decline in the output of agricultural staples in the half year: cattle slaughter by 23 percent, eggs by 11 percent, whole-milk output by 18 percent. As of July 20, hay was stored 36-58 percent down over the last year.

One should bear in mind however that these results in the agriculture for the first seven months were determined mainly by production of livestock. As to plant growing (except fodder), weather conditions and the state of harvesting show that the matters in it may be better than in the production of livestock. It is true that the harvesting has not yet finished and taking into consideration the mess existing now in agriculture as well as shortage of many resources it will be not easy. But still it can be hoped that the output of plant growing will diminish insignificantly from the last year (I believe not more than by 5 percent). At the same time, the decline in livestock production will continue to reach most probably 30 percent. Then, taking into account the shares of livestock production and plant growing in the agriculture of the USSR (the data for Russia are non available) in 1990 (58 and 42 percent), the total decline of agriculture output will be 20 percent.

Cargo traffic by vehicles of general use, according to the Goskomstat of Russia, came down by 16 percent in the first half year. I have great doubts about this estimate, in particular, with regard to shipments by rail the decline in which was estimated only at 11 percent though the bulk of commodities to be shipped declined much more. I will return to this problem a bit later in the analysis of my estimate of the national income. But as I am unable to give another, more precise estimate, I have to agree with the official one. By the end of the year the index of transport output (according to cargo traffic which is the main) will further decline. The size of this decline I have estimated by industries the output of which is shipped. The annual index of shipments will be, according to my estimate 0.815.

The basic services of intercommunications (dispatch of newspapers and magazines, letters, parcels, printed matter, money remittances, telephone conversations) have declined in the first half year by 19-44
percent. Non weighted average arithmetic makes 26 percent. Just this degree of decline I think it possible to extend to the whole year.

According to the Russian Goskomstat, for the first half year the volume of the retail commodity turnover came down by 43 percent. At the same time, the output of consumer goods declined, according to the Russian Goskomstat, only by 14 percent. Such a great divergence stems mainly from two facts: a great reduction of imported consumer goods and increased stocks of commodities. Thus, the stocks in retail trade increased from 39 days of trading as of 1.1.92 to 55 days as if July 1, 1992; in the whole-sale trade and manufacturing from 6 days to 26 days. And the greatest decline in retail turnover occurred in January immediately after the prices soared. In June this decline was 34 percent.

In the matter of trustworthiness of the official data on retail turnover, one should bear in mind that on the one hand they underestimate the decline because of understating the real boost of retail prices; on the other hand they overestimate it because of the omission of the trade of commercial shops and of street trade the decline in which seems to be not so great (in commercial shops) or even some growth takes place (street trade). The total trade employed, due to vast growth of street trade, has increased, but it is very inefficient. I think that these two factors balance each other, so it is possible to agree with the data of Goskomstat on the dynamics of retail turnover.

The index of the goods turnover in the second half of the year I assume at the level of June, i.e., 0.66, therefore, the annual index will be 0.62.

At this point we have all necessary data for the estimation of the index of the aggregate national product in 1992. As weights, taken are the shares of particular industries in the average monthly payroll fund in goods producing branches in Russia in 1991. The steps and results of estimations are supplied in Appendix 4.

The estimation has shown that the aggregate national product in 1992 can be expected 70.9 percent over 1991. For the estimation of the index of national income produced in goods-production it is necessary to estimate the index of materials use. In the years of stagnation (the 1970s-middle 1980s) it was increasing 1 percent annually, according to my estimates. At the end of the 1980s, by the same estimates, the annual increase was 5 percent. I concede however that this increase, to a certain degree, was due to reporting false data in extraction and, in particular, to underestimation of export of raw materials the illicit sizes of which have sharply grown in the late 1980s. But the tremendous leap of underloading of production capacities in 1992 objectively was conducive to materials use. The production premises, for example, have to be heated and it even if the production activity comes down. The 3 percent increase of materials use in 1992 can be taken as minimum. Taking into account this rise in materials use, the index of the national income will be 67.9 percent to 1991. Before I relate this estimate to the index of the spent national income I am going already now to reply to possible objections concerning the difference from the usual relationship of the dynamics of the produced national income and the dynamics of two key indicators of economic growth, i.e., shipments by rail and electric output. In the past, shipments by rail were increasing often in the same manner as was the estimated by me index of
the national income, and electric output was rising about 1.3 or 1.5 times faster. In 1992 (as in 1991 too) this relationship sharply changed. The decline of shipments by rail became 3 times slower and of the electric output even slower.

As to shipments by rail, the explanation is rather simple. The greater part of shipments by rail falls on the output of branches (mainly of extraction) the index of production of which has been declining in 1992 (as in 1991 too) at a much lower speed than that of other branches. Thus, e.g., coal output which accounted in shipments by rail in the first half year of 1992 for about 20 percent declined in this period only by 2 percent. Reporting false data, according to the above mentioned reasons, in railway transport is also possible. Part of shipments, further, are associated with foreign trade the illicit transactions of which have recently assumed considerable dimensions rather than with the production.

The difference between the index of the national income and that of the electric output is not so easy to explain, though such a decline of the national income and electric output has already been witnessed in similar economic depressions in the West. Since quarterly and, the more so, monthly indexes of the national income before World War II were not published, I limit myself to the comparison with the index of the industrial output. In the USA the index of industrial output from July 1929 to July 1932 (maximum and minimum of the depression) fell from 125 to 56.5, i.e., by 44.8 percent, and the electric output from 7.76 to 6.55 billion kw/h, i.e., by 15.6 percent, or about to a third of the former. In the economy of Russia the gap between the dynamics of the industrial output and the electric output is greater--over 6 times as that. I see two explanations: (1) a more wasteful use of electricity of Russia; and (2) possible inaccuracy in the estimation of its dynamics (over-estimation of its growth). Unfortunately, no direct arguments in favor of the latter have been available to me so far.

For the specification of the estimated dynamics of the national income produced in goods-producing branches I will consider in brief (space limitations and paucity of evidence do not permit me to perform a more detailed estimation and analysis of this indicator) the dynamics of the spent national income. At the same time, due to such estimation it will be possible to find out changes in the structure of the spent national income and its effect on the economic growth or decline in the near and distant future.

I begin with household consumption of the population. The index of that part of household consumption which is provided at the expense of the retail turnover was estimated earlier at 0.52.

The index of consumption by households was higher because of the anticipated growth of consumption in kind from private plot. For the evaluation of this factor, I estimated the share of the population incomes in kind in total incomes of blue- and white-collars (in 1991 it was 13 percent) and income growth from private plots. The latter was estimated using the growth of planted areas in 1991 (with regard to gardens it rose from 955 thousand. In 1990 to 1464 thousand. In 1991, or one and a half times) and the livestock increased by 10 percent and on the average (without weighting) -1.3 and with account taken of the income in kind, the aggregate private consumption of the population in the first half of the year declined by 29 percent.
In the second half of the year further decline in household consumption of the population should be anticipated due to the decline in the production of items of personal consumption and in their import. No increase in incomes from subsidiary plots should be expected either. The overall crisis of the economy hit subsidiary agriculture too though of course to a lesser degree than the public sector. Thus, the shortage of fodder in the public sector will tell itself on the private agriculture too, since it is often stolen from the public farms. On the whole, personal consumption of the population till the end of the year I think will decrease by the same value as the total national income, i.e., by 2.5 percentage points.

According to the Goskomstat of Russia, the decline of investments in this year comparing to the first half year of 1991 was by 46 percent including those in production by 48 percent (estimated by me using the last year's investments and the data on the reduction of total investments and of those in non-production sphere) and in non-production sphere by 42 percent. As is seen, the Goskomstat estimations suggest a much greater decline in the size of capital investments comparing to the size of construction. This is accounted for, first, by increased share of capital investments to services where the percentage of construction-mounting works is much less than in investments to industry. Second, by the decreased life of equipment because of the curtailed output of domestic equipment and, in particular, of the 40 percent decline of imported equipment making a great share in the expenditures on equipment.

I think that the Goskomstat records about investment cuts are close to reality. Neither index of prices of construction-mounting work, nor index of prices of investments estimated by the Goskomstat of Russia contains exaggeration. They well agree with the indexes of prices in branches delivering inputs for construction and engineering. One would rather expect underestimating the price boost on investments; on the other hand, it is quite possible that the size of investments in private sector has been underestimated. Both these factors seem mutually extinguishing.

A vast cutback of investments in goods-producing sphere has behind it, first, typical of market economies in depression periods especially fast declines of investments because of relative surplus of productive capacities; second, huge financial difficulties experienced by plants and the necessity to use the available free resources for financing growing backlogs of products rather than for investments on fixed capital.

By the end of the year, one should anticipate further decline of the size of investments on the whole including the productive sphere because of the drop in production and increased financial difficulties. This decline seems to be more substantial than in the standards of living because the population will attempt to oppose further decline in the living standard. The considerable increase in monetary income of the population achieved in July-August (by 30-40 percent monthly) and of the average pay shows that to a certain degree this has been successful. At the same time, wholesale prices in these months are rising at a slower rate than the rise of average earning and of the whole payroll fund. According to this, one can anticipate further reduction of the real profit and of investments. I think that the overall decline of
investments by the end of the year will make a half, including in production investments by 52 percent.

It should be noted that the decline of investment in production occurs non-uniform by industries. Though complete data on the structure of investments by industries are yet unavailable, it is seen that to a minimal degree, they have declined in the fuel-and-power complex which reflects its rising importance in the economy of the country and in the foreign trade. However even here it is quite sizable (of an order of a third).

The dramatic cuts in the size of production investments and overhauls in 1992 (after its less important decline in the previous 2-3 years) will greatly influence the subsequent events in the Russian economy. I will discuss this in a more detail below but even now it is possible to say that after the stagnation of basic production assets in the late 1980s a rash downfall will come in their size.

A great role in the use of the national income is played by weapons procurements subsumed under the budget item of allocations to defense. Lately, in contrast to what was before, these expenditures have been made known to public. These published figures however of not reflect the real burden of military expenses for the Russian economy. The point is the degree to which the prices for military equipment correspond to real inputs in its production. The mechanism of price setting on military equipment and, more important, the relationship of prices that are paid to enterprises out of budget on these purposes are still unknown. The simple fact that the Soviet expenditure costs of military procurements converted to dollars by the official rate of exchange and, the more so, by "black market" rate are much lower than the American defense expenditures whereas in physical terms they exceed them shows very vividly that the prices set by the Defense Ministry of the USSR on military procurements were below the real price. Thus, in budget expenditures of the USSR for 1989 it was provided to spend on the procurement of arms and military equipment 32.6 billion rubles, while the allocation on such purposes in the USA budget for 1988 was $79.2 billion. Even if we assume arms procurements were equal, then taking into consideration the official (up to 1992) rate of ruble exchange of 1.7 rubles per $1, the reduction of prices on military equipment in the USSR will be 4.1 times (in the USSR $19.2 billion, in the USA $79.2 billion). Still greater reduction of prices on military equipment in the former USSR is contained in the estimates of the Institute of National Economic Predictions of the Russian AS (6-9 times) but the methods of these estimations and the initial data unfortunately were not published. For this reason I will use my estimate though recognizing that it is below the real one (among other things, due to greater sized of Soviet military procurements comparing to those of American counterpart in physical terms).

In 1991 arms procurements and purchases of military equipment accounted for by Russia were 24.5 billion rubles (with allowance for reduced prices on military equipment, their actual size in prices comparable to other economic indicators will be 100 billion rubles).

Now we have a possibility to estimate the value of the change in the spent national income by its three largest items, i.e., by consumption fund of the population, capital investments and military procurements. The results of the estimation are presented in Table 1.
Table 1
The index of the spent national income by three items
(In billions rubles in the 1991 prices)

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>1991</th>
<th>1992 to 1991 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Household consumption</td>
<td>526.23</td>
<td>68.4</td>
</tr>
<tr>
<td>2</td>
<td>Capital investments</td>
<td>196.8</td>
<td>98.4</td>
</tr>
<tr>
<td>3</td>
<td>Military</td>
<td>100</td>
<td>32</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>822.8</td>
<td>490.2</td>
</tr>
</tbody>
</table>

As is seen, the spent national income estimated by three largest items have reduced in 1992 even much more than was the projected decline of the produced national income, i.e., by 39.0 percent. A natural question arises about the causes for the divergence between the dynamics of the produced and spent national income in 1992. To answer it, it is necessary to recourse to the directions in which the national income was spent which have assumed especially important implications.

Under the influence of the financial difficulties the stocks of good hoarded by plants and by population have sharply grown up in this year. The statistics here is far from being complete either but even what is known supports this statement quite clearly. It is true, on consumer goods the increase of stocks is more nominal than real. In retail trade their growth in days from January 1 to July 1, 1992 proved to be 1.43 times, lower than the index of retail turnover in June comparing to December-November. But in the wholesale trade and manufacturing the growth of these stocks in days (from 6 to 26 days for retail trade for the same period) exceeded the increase in retail turnover. On the whole, in constant prices of December 1991 the stocks have increased, by my estimation, by 6.1 billion rubles, or by about 60-80 billion rubles in the prices of the first half year of 1992. It should be noted however that in the middle of the year their real growth stopped.

Great dimensions were assumed in this year by the increase of projects in process. It is true that the gap between the size of capital investments and the commissioning of fixed capital in the first half year always was substantial but in this year it proved especially wide. With the size of capital investments of 447 billion rubles commissioned were fixed assets of 115 billion rubles, i.e., a forth of the size. Projects in process have increased by 362 billion rubles. In the 1990 prices this increase is quite bulky: by about 30 billion rubles for half a year comparing to the increase by 10 billion rubles per annum in the 1985-1990 period.24

But the greatest scales of buildups of finished products took place in heavy industry. As customers were insolvent, many enterprises of
machine building and of other branches had either to keep their finished products in stores and generally in free premises or to ship them to their customers making them responsible for keeping these products. Vast stocks have built up also in wholesale stores. Huge dimensions of these stocks are evidenced by tremendous size of overdue debts of plants which by the end of the first half year exceeded 3 trillion rubles. According to the data of the tax service of Russia, the gap between the output and sales has reached on the average 45 percent. Only with respect to industry which certainly accounts for the main bulk of the growth in stocks this yields 2.2 trillion rubles only for the first half year. As was put by Ye.Gaidar: "The stocks in industry and in trade have increased several times."26

At the same time, by a number of items (for example, by strategic materials, rare-earth metals) a great decline in stocks seems to occur due to their legal and illegal export. Nevertheless, the general growth of stocks in the national economy in this first half year seems to exceed 2 trillion rubles (for comparison, the size of capital investments was 477 billion rubles). This, certainly, appeared possible only due to the awkward character of economic growth in 1992 when the reduction of demand was influencing the reduction of production very slowly (the situation did not change until summer 1992 when the decline of production in industry has accelerated). By the end of the year, the share of the growth of material stocks in the national income will considerable decrease due to stoppage of their growth in retail trade, approximation of the commissioning of the fixed assets to the size of capital investments and a faster curtailment of industrial production. An important factor in the decline of the volume of finished products stocks will be expected in the fourth quarter (and partly already started in the third quarter) due to substantial expansion of credit emission which will permit the plants to receive payments for their products and put them in production.

A new factor in the use of the national income appeared in the recent 2 to 3 year, i.e., capital leakage from Russia in the result that some plants and private persons are depositing part of their currency (mostly from illicit export) in foreign banks. The estimates made public in reference to the International Financial Institute in Washington suggest $15-20 billion deposits as early as the end of the last year and the beginning of this year. A very tentative estimation I made for the last year27 shows that the value of capital leakage was about as high as a half of the legal export. Since the Russian plants, for lack of experience, are selling substantial part of their products for prices below the world ones, the damage inflicted to the Russian economy by this export is still higher. I believe however that in this year the capital leakage from Russia has slightly reduced. First, after price liberalization foreign and domestic prices considerable have come nearer to each other, especially so on consumer goods, and this should have made the illegal export less profitable. Second, the rate of exchange at the "black market" has come nearer to the real purchasing power of ruble. Third, frontier, customs and bank examination for illicit export and leakage of currency has been somewhat strengthened.

From the above considered two items of the spent national income I dare to give my estimation only to one—to the change in stocks. I think that the size of their increase in this year will be double last year’s. Then if their size in 1991, as the experience of past years prompts, is equal to about 20 percent to the size of capital investments, the
decline of the national income will be 32.3 percent (862.1 billion rubles and 593.5 billion rubles respectively). In the connection with lower leakage of capital, this size will slightly increase. So this tentative calculation of the spent national income dynamics supports in general the earlier estimated change in the produced national income.

FINANCIAL AND ECONOMIC SITUATION

I am not going to give a detailed characterization of the financial-economic situation of Russia in 1992. This is not the theme of the conference. I am tackling it only with regard to its influence on the Russian economy in this period.

The stabilization of the monetary system as the key to the revival of the whole economy, from the very beginning of the Ye. Gaidar government’s activity was seen as the central task. The most important element for the revival of the money circulation, in its turn, should have become the achievement of the balanced state of the budget.

In order to achieve this goal the Russian government undertook a substantial reduction of expenditures: expenditures on military equipment procurements as well as central capital investments and donations came down several times. Moreover, when the budget was not fulfilled by incomes the government automatically reduced the major part of budget expenditures, often bringing down them to a dramatically low level. Due to these measures, the government managed to keep nearly the whole first half year the budget without cash deficit. But in doing this, external credits were also included in budget incomes.

If instead of cash fulfillment of the budget we will consider its fulfillment from the view of traditional in the world practice estimations, i.e., proceeding upon the planned expenditures and with exclusion from incomes of external credits, then it will be seen that in the first half year the deficit of the Russian budget exceeded 20 percent of the GNP, i.e., remained at an extremely great level of the last year.28

The immediate cause for such a high budget deficit was the extremely low level of income receipts to the budget. Really (with account of rise in prices) the size of receipts in the first quarter, for example, was as little as 22.4 percent to what had been planned.29 Subsequently the situation with income collection was slightly improved but not much. The failure in budget incomes was caused by a sharp drop in production, unpaid bills of enterprises to each other and, therefore, by low sales on the basis of which the value-added tax is calculated, huge leakage of capital of foreign countries and other states of the Commonwealth of Independent States (CIS) (all in all, according to my estimates, 10-15 percent of the GNP), extremely poor financial discipline of enterprises and absolute helplessness of the tax service which is unable to fight the colossal dodging from taxes. As is seen, most part of reasons are stemming from the general disorganization of the economic mechanism and state management.

Since June, the government has been encountered with a strong opposition on the part of the workers of budget-financed sphere with regard to their low, comparing to profit-making organization, wages, and on the
part of peasants and so was enforced to raise the wages in budget-financed organizations as well as procurement prices on farm products which led to visible budget deficit. In the republican budget of the second half year (calculated as the difference between the incomes and expenditures planned for the whole year and actually produced ones over the first half year) the budget deficit was planned as 10-15 percent of the GNP. In reality obviously it will be much higher even than that. Such a huge size of the budget deficit enforces the government to undertake further reduction in budget expenses. Under threat of further reduction are defense expenses (and here it becomes unavoidable to implement large curtailment of the size of the military forces and expenses on R&D), expenses on education, science and health services. The increase of excise rates and import duties suggests itself too. All these measures will be very painful for the population because they lead to further deterioration of living standards.

A very bitter experience for the entire economic life over nearly the whole year was a rapid buildup of mutual unpaid bills of enterprises and delays with payment of wages. At the core of these events (quite impossible in a market economy) were errors of the government and Central Bank of Russia in the estimation of the needed money in view of exorbitant prices which had been forced up by enterprises—monopolists and which the government had no power to cope with, drop in production, reduction in solvable demand of the population, and artificial setback exercised by the government in printing money in the first months of 1992. The government proved unable either to influence the price behavior of the state enterprises or to find a solution to the crisis in payments. Ultimately it had to permit since July 1 the postponing of mutual debts which actually meant an amnesty to bankrupted enterprises. However since under the threat of bankruptcy nearly entire economy found itself in, such a decision seems the only reasonable one under the given conditions. Later on for the abatement of the marketing crisis and for financing budget expenditures the Central bank and the government set to great cash emission increase (from 40-50 billion rubles monthly at the beginning of the year up to 350 billion rubles in August—September) and to credit emissions. Thus the attempt of the government and of the Central bank to curb inflation ended in a total failure, and the country is on the verge of hyper inflation combined with a giant drop in production. There is no need arguing that hyper inflation under the conditions of non established market economy means further intensification of the economic chaos and is fraught with a danger of return to the authoritarian system in order to prevent the economy from total collapse. In a critical situation the whole system of commercial banks is in this year. In addition to the well-known negative effect the inflation and economic depression has on banks, the hard position of the commercial banks was accounted for also by their insensible policy, thoughtless waste of credit resources. This behavior of commercial banks reflects the absolute immaturity of the private sector of the Russian economy, its professional and moral inadequate preparedness to the activity under the conditions of a market economy. From utter bankruptcy the bank system was saved by the Central bank and their timely reorientation to the transactions in foreign currency which led to an increase in the share of currency accounts in the assets and liabilities of many banks up to 75 percent of their total size. At the same time, in the first half of the year a real reduction of credits given in rubles to one seventh or one eighth occurred which was financial catastrophe for enterprises.
After the stormy upward movement when the rates of many shares exceeded their nominal value several dozens times, in this year there was witnessed a regular collapse of these rates. With account of price rise, their actual size has dropped in the first half year by 90-95 percent which is inconceivable for capitalist stock exchanges.

In the result of the crisis at stock exchange the market of securities appeared practically paralyzed. Concurrently with actual stoppage of the activity of stock exchanges the turnover on commodity exchanges also dropped because of the decline in production and high prices on their services.

The general conclusion from the brief analysis of the financial-economic situation is as follows: the market mechanism created by the radical reform and the new economic institutions proved to be a large soap bubble unable to provide even for a modest economic growth, and they lead the economy to chaos and collapse.

THE SCENARIOS OF FURTHER EVENTS IN THE RUSSIAN ECONOMY

It is a very easy task to project the developments in the economy of Russia for the nearest future, for several quarters, even for a year. Under any course of political events and changes in the economic policy it will be determined by the inertia of the previous period. The most influence on the prospects of the economy next year will be exercised by the continuing collapse of the economic mechanism which may even intensify due to chaotic hasty privatization, unavoidable drop in livestock production and, due to this, deterioration of people's nutrition and, therefore, their lower power to work, reduction in oil production and other fuels production which will be very painful for legal export and import. The unknown however term still remains the dimension of foreign assistance next year and the character of social opposition against deteriorated living conditions of the population. For example, in case of total strike a vast damage will be done to the economy. Despite these vague factors, one can anticipate further reduction in production. The prediction made by the government on the decline of the GNP in 1993 by 5 percent is, by way of exception, quite realistic. Given unavoidable for this reason further deterioration in the living standards, the political and economic instability will increase.

I will take on myself to predict the developments in the Russian economy only extending to the year 2000. It is possible to distinguish three probable scenarios: pessimistic, realistic and optimistic.

The pessimistic scenario proceeds from the continuation of the present, inadequately prepared economic policy with all suggestions about its modification which are now proposed and with the real political chaos. In this case a low efficiency of production will continue, social and ethnic conflicts abound, regional separation grow, civil war, famine and cold, epidemics caused by shortage of food, fuel and medicines and collapse of medical services, growing criminal behavior quite possible. The economy will sink deeper and deeper to primitive extremely ineffective forms of economic activity such as tiny self-providing units, increased barter because of the collapse of the monetary system, regional self-isolation, stop of the technological progress. Foreign
assistance though will be given in order to avoid the worst but in limited size and not accompanied by large private investments in production because they may prove hazardous.

This variant however seems not very probable in the long run. A country cannot afford to doom itself to a slow death (though there were such examples in history). Most probable is that in the nearest future a more satisfactory solution in the implementation of the economic reform will be found, or, which unfortunately seems more probable, there will be return to the old command system which despite all its deficiencies provided and can still provide for a higher efficiency of production than the present economic mechanism.

The realistic scenario proceeds upon the restoration in the nearest future of the political stability and workability of the economic mechanism in the form of command system. In this case motivation to work and to technological progress also will be restored. However the action of the long-term trend to the degradation of the genetic fund and the collapse of the economic system and work discipline, exhaustion of mineral resources make it possible only the achievement of efficiency at the 1990 level. For this reason, the only factor for economic growth for the whole period will be the changed size of fixed capital which will be reduced due to incongruence of the reduced size of investments and overhaul and the depletion and wear of the fixed production assets. Foreign assistance in this case will stop but this can be reimbursed by stoppage in capital leakage.

The third scenario proceeds upon that there will be created a workable democratic political system and a cogent way to implement the economic reform by combining stability and dynamism in the economy. Motivation to raising the efficiency of production, of technological progress and capital investments will be restored. Due to this, the efficiency of production will be somewhat raised and, which is the main thing, the attractiveness of the Russian economy for foreign capital will much increase.

In my estimation of the influence of particular scenario on the economic development of Russia used were earthier calculated by me (in my doctorate dissertation) for the USSR dynamics for the fixed capital from 1955 to 1985 in constant prices index for investment goods and assumptions that the depletion and wear of the fixed capital will make 3 percent to their total cost. The estimation was made in the 1955 prices. Later on it was continued, taking into account new data up to 1990. For the appraisal of future dynamics I extended the calculation up to the year 2000. Since discussed was dynamics I did not undertake recalculation of the data for Russia, but the appropriate data for 1991-1992 (changed size of capital investments and supposed dynamics of capital overhauls) were taken from the available or probable ones for the data of overhaul for Russia.

The estimation was based mainly on the realistic scenario which is supplied (Appendix 5). It proceeds upon that over three years after 1992 the size of production capital investments will remain at the 1992 level, then in 1996 a leap-like growth of them from 10.9 billion rubles to 35 billion rubles will occur, after which the capital investments will increase by 1 billion rubles annually, but yet will not reach the level of the year 1990 because of the shortage of material and financial inputs. As to inputs to capital overhaul, after their huge curtailment
in 1992 because of extremely low size of amortization deductions caused by many fold underestimation of fixed capital, their level after the reestimation of the fixed capital will double in 1993 and will remain at this level up to 1996. Possible changes in the ratio of inputs to capital investments and to capital overhaul will not much influence the results of the calculation. In 1996 the size of the capital overhaul will sharply increase and nearly equal the 1990 level, remaining at this level up to the year 2000 which will be consistent with the reduced size of the fixed capital even at increased rate of amortization.

As the calculation has shown, under the mentioned prerequisites the depreciated cost of the fixed capital will make 70 percent to the 1990 level. Since in the realistic scenario the efficiency of the use of fixed capital is supposed to be in the 2000s at the 1990 level, the size of the national income also will make 70 percent to the 1990 level which, however, by absolute size will be higher than in 1992.

I concede that I slightly exaggerated the drop in fixed capital and production. First, under reduced production the load on capital and, according to this, the scales of their depletion and wear decrease. Second, in many economic branches there is a great surplus of capital and a possibility to put them, at the expense of the redistribution of capital investments, in branches where assets are in shortage or where they can be more efficiently used (for example, in oil and gas industry, in the infrastructure etc.). Due to this, the reduction of the national income will decrease. But even in this case, the national income will be much lower than in 1990. At the same time, it is already in the second half of the 1990s that a revival in the economy due to better use of the fixed capital can be expected.

Under optimistic scenario the main prerequisite for the economic upswing is a radical increase in the size of foreign capital investments attracted to this country. In order to imagine what size of foreign investments is needed I will only point to that the deficit of capital investments in 1992 from the level needed to retain only their constant size required for maintaining the level of the fixed capital (i.e., for the 1990 level) makes, in comparable 1991 prices, 90.2 billion rubles (estimated proceeding from the 1990 production capital investments in Russia equal to 155.4 billion rubles and their reduction over the 1990-1992 period). According to the official exchange rate of ruble to dollar in 1991 of 1.7 rubles, this makes $53 billion. By the actual purchasing power of invested ruble this figure seems to be slightly lower. In any case, it is going about dozens billion dollars of annual foreign private investments. It is inconceivable that even under the most favorable conditions in Russia annual capital investments can reach such a colossal figure. At best, possible are only 10-20 billion per annum. Therefore, even in this scenario the capital investments will not reach the level need to maintain the constant size of fixed capital. However as it is supposed that a slight increase in the efficiency of the use of fixed capital comparing to 1990 is thought very difficult but possible to achieve, it may be possible to reach the 1990 level of the national income by the year 2000. The 1987-1988 level however cannot be reached by this time, and only after the year 2000 a real upswing in the Russian economy can be expected.
### Appendix 1

The estimation of the index of the output of industries in the first half year of 1992, percent to 1991

<table>
<thead>
<tr>
<th>No.</th>
<th>Product</th>
<th>Index by product</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td><strong>Fuel-energy complex</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Electricity</td>
<td>0.97</td>
</tr>
<tr>
<td>2</td>
<td>Oil</td>
<td>0.87</td>
</tr>
<tr>
<td>3</td>
<td>Gas</td>
<td>0.9988</td>
</tr>
<tr>
<td>4</td>
<td>Coal</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td>3.82:4=0.955</td>
</tr>
<tr>
<td>II</td>
<td><strong>Steel industry</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Iron ore</td>
<td>0.86</td>
</tr>
<tr>
<td>2</td>
<td>Steel</td>
<td>0.87</td>
</tr>
<tr>
<td>3</td>
<td>Finished rolled products of crude metals</td>
<td>0.86</td>
</tr>
<tr>
<td>4</td>
<td>Steel pipes</td>
<td>0.75</td>
</tr>
<tr>
<td>5</td>
<td>Coke of 6% humidity</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td>4.26:5=0.825</td>
</tr>
<tr>
<td>III</td>
<td><strong>Machine building and metal processing</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Steam turbines</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>Gas turbines</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Diesel engines and Diesel generators</td>
<td>0.97</td>
</tr>
<tr>
<td>3</td>
<td>Large electric machines</td>
<td>0.90</td>
</tr>
<tr>
<td>4</td>
<td>Alternating current motors</td>
<td>0.67</td>
</tr>
<tr>
<td>5</td>
<td>Low-power motors</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Price</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>6</td>
<td>Storage and lead-acid cells</td>
<td>0.79</td>
</tr>
<tr>
<td>7</td>
<td>Explosion-proof motors</td>
<td>0.87</td>
</tr>
<tr>
<td>8</td>
<td>Metal-cutting machines</td>
<td>0.84</td>
</tr>
<tr>
<td>9</td>
<td>Metal-cutting machines with numerical control</td>
<td>0.50</td>
</tr>
<tr>
<td>10</td>
<td>Wood-working machines</td>
<td>1.23</td>
</tr>
<tr>
<td>11</td>
<td>Forge-stamping machines</td>
<td>0.80</td>
</tr>
<tr>
<td>12</td>
<td>Forge-stamping machines with numerical control</td>
<td>0.28</td>
</tr>
<tr>
<td>13</td>
<td>Immersion centrifugal pumps</td>
<td>1.07</td>
</tr>
<tr>
<td>14</td>
<td>Automatic and semiautomatic sewing machines for industry</td>
<td>0.73</td>
</tr>
<tr>
<td>15</td>
<td>Sewing industrial machines</td>
<td>1.06</td>
</tr>
<tr>
<td>16</td>
<td>Presses for foot-wear industry</td>
<td>1.03</td>
</tr>
<tr>
<td>17</td>
<td>Spinning frames</td>
<td>0.83</td>
</tr>
<tr>
<td>18</td>
<td>Looms</td>
<td>0.84</td>
</tr>
<tr>
<td>19</td>
<td>Baking ovens</td>
<td>0.80</td>
</tr>
<tr>
<td>20</td>
<td>Traveling cranes</td>
<td>0.56</td>
</tr>
<tr>
<td>21</td>
<td>Truck mounted cranes</td>
<td>0.84</td>
</tr>
<tr>
<td>22</td>
<td>Pneumatic cranes</td>
<td>0.89</td>
</tr>
<tr>
<td>23</td>
<td>8t and over tower cranes</td>
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</tr>
<tr>
<td>24</td>
<td>Bulldozers</td>
<td>0.85</td>
</tr>
<tr>
<td>25</td>
<td>Motor graders</td>
<td>0.85</td>
</tr>
<tr>
<td>26</td>
<td>Excavating machines</td>
<td>0.79</td>
</tr>
<tr>
<td>27</td>
<td>Scrapers</td>
<td>0.24</td>
</tr>
<tr>
<td>28</td>
<td>Main-line locomotives</td>
<td>0.81</td>
</tr>
<tr>
<td>29</td>
<td>Main-line electric locomotives</td>
<td>0.53</td>
</tr>
<tr>
<td>30</td>
<td>Freight cars</td>
<td>0.75</td>
</tr>
<tr>
<td>31</td>
<td>Passenger cars</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------</td>
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</tr>
<tr>
<td>32</td>
<td>Trolley buses</td>
<td>0.62</td>
</tr>
<tr>
<td>33</td>
<td>Trucks</td>
<td>0.93</td>
</tr>
<tr>
<td>34</td>
<td>Cars</td>
<td>0.93</td>
</tr>
<tr>
<td>35</td>
<td>Buses</td>
<td>0.69</td>
</tr>
<tr>
<td>36</td>
<td>Trucks with Diesel engines</td>
<td>0.75</td>
</tr>
<tr>
<td>37</td>
<td>Trailers and semi trailers</td>
<td>0.69</td>
</tr>
<tr>
<td>38</td>
<td>Tractor trailers</td>
<td>0.48</td>
</tr>
<tr>
<td>39</td>
<td>Rolling bearings</td>
<td>0.90</td>
</tr>
<tr>
<td>40</td>
<td>Tractors</td>
<td>0.71</td>
</tr>
<tr>
<td>41</td>
<td>Grain combines</td>
<td>0.72</td>
</tr>
<tr>
<td>42</td>
<td>Potato combines</td>
<td>0.57</td>
</tr>
<tr>
<td>43</td>
<td>Tractor mowers</td>
<td>0.72</td>
</tr>
<tr>
<td>44</td>
<td>Refrigerators</td>
<td>0.82</td>
</tr>
<tr>
<td>45</td>
<td>Washing machines</td>
<td>0.76</td>
</tr>
<tr>
<td>46</td>
<td>Electric vacuum cleaners</td>
<td>0.88</td>
</tr>
<tr>
<td>47</td>
<td>Tape recorders</td>
<td>0.84</td>
</tr>
<tr>
<td>48</td>
<td>Radio devices</td>
<td>0.88</td>
</tr>
<tr>
<td>49</td>
<td>TV sets</td>
<td>0.79</td>
</tr>
<tr>
<td>50</td>
<td>Sewing machines</td>
<td>1.03</td>
</tr>
<tr>
<td>51</td>
<td>Motorcycles</td>
<td>0.88</td>
</tr>
<tr>
<td>52</td>
<td>Bicycles</td>
<td>0.75</td>
</tr>
<tr>
<td>53</td>
<td>Cameras</td>
<td>0.98</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>4.13853+0.752</td>
<td></td>
</tr>
</tbody>
</table>

### IV Chemical-wood complex

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Primary oil refining</td>
<td>0.98</td>
</tr>
<tr>
<td>2</td>
<td>Synthetic ammonia</td>
<td>0.96</td>
</tr>
<tr>
<td>3</td>
<td>Sulfuric acid</td>
<td>0.87</td>
</tr>
</tbody>
</table>
4   Soda ash                        0.90
5   Caustic soda                   0.95
6   Synthetic dyes                0.85
7   Synthetic resins and plastics 0.91
8   Chemical fibers and filaments 0.92
9   Synthetic rubbers             0.91
10  Synthetic alcohol             0.90
11  Films                         0.69
12  Magnetic tape                 0.94
13  Rubber-cloth tape             0.93
14  Automobile tires              0.93
15  Polymer foot-wear             0.77
16  Merchantable wood             0.89
17  Round timber                  0.90
18  Sawn timber                   0.85
19  Ties                          0.85
20  Wooden houses                 0.69
21  Plywood                       0.90
22  Wood particle boards          0.95
23  Cellulose                     0.95
24  Paper                        0.83
25  Cardboard                     0.92
TOTAL                            2.048:25=0.819

V   Industry of building materials
1   Cement                        0.86
2   Asbestos cement sheets        0.98
3   Asbestos cement pipes and clutches 0.88
<table>
<thead>
<tr>
<th></th>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Building bricks</td>
<td>0.96</td>
</tr>
<tr>
<td>5</td>
<td>Built-up concrete iron constructions</td>
<td>0.83</td>
</tr>
<tr>
<td>6</td>
<td>Aluminum alloy constructions</td>
<td>0.83</td>
</tr>
<tr>
<td>7</td>
<td>Radiators</td>
<td>1.01</td>
</tr>
<tr>
<td>8</td>
<td>Pipes</td>
<td>0.89</td>
</tr>
<tr>
<td>9</td>
<td>Linoleum</td>
<td>1.06</td>
</tr>
<tr>
<td>10</td>
<td>Asbestos</td>
<td>0.92</td>
</tr>
<tr>
<td>11</td>
<td>Soft roofing materials</td>
<td>0.91</td>
</tr>
<tr>
<td>12</td>
<td>Structural glass</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>1.012:12=0.843</strong></td>
</tr>
</tbody>
</table>

### Food Industry

<table>
<thead>
<tr>
<th></th>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meat</td>
<td>0.73</td>
</tr>
<tr>
<td>2</td>
<td>Sausage</td>
<td>0.63</td>
</tr>
<tr>
<td>3</td>
<td>Animal fat</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>Cheese and bronze</td>
<td>0.70</td>
</tr>
<tr>
<td>5</td>
<td>Whole milk</td>
<td>0.52</td>
</tr>
<tr>
<td>6</td>
<td>Granulated sugar</td>
<td>0.98</td>
</tr>
<tr>
<td>7</td>
<td>Oil</td>
<td>0.86</td>
</tr>
<tr>
<td>8</td>
<td>Bread and baked products</td>
<td>0.97</td>
</tr>
<tr>
<td>9</td>
<td>Confectionery</td>
<td>0.65</td>
</tr>
<tr>
<td>10</td>
<td>Margarine</td>
<td>0.89</td>
</tr>
<tr>
<td>11</td>
<td>Non-alcoholic beverages</td>
<td>0.33</td>
</tr>
<tr>
<td>12</td>
<td>Mineral water</td>
<td>0.67</td>
</tr>
<tr>
<td>13</td>
<td>Canned goods</td>
<td>0.71</td>
</tr>
<tr>
<td>14</td>
<td>Vodka and alcoholic beverages</td>
<td>1.02</td>
</tr>
<tr>
<td>15</td>
<td>Wine</td>
<td>0.72</td>
</tr>
<tr>
<td>16</td>
<td>Beer</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Tee</td>
</tr>
<tr>
<td>---</td>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td>18</td>
<td>Salt</td>
<td>1.05</td>
</tr>
<tr>
<td>19</td>
<td>Food concentrated products</td>
<td>0.78</td>
</tr>
<tr>
<td>20</td>
<td>Flour</td>
<td>0.99</td>
</tr>
<tr>
<td>21</td>
<td>Fish catch</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td><strong>1.678:21=0.799</strong></td>
</tr>
</tbody>
</table>

**VII**

<table>
<thead>
<tr>
<th></th>
<th>Light industry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cotton textiles</td>
</tr>
<tr>
<td>2</td>
<td>Linen textiles</td>
</tr>
<tr>
<td>3</td>
<td>Wool textiles</td>
</tr>
<tr>
<td>4</td>
<td>Silk textiles</td>
</tr>
<tr>
<td>5</td>
<td>Non-weaved materials</td>
</tr>
<tr>
<td>6</td>
<td>Hosiery</td>
</tr>
<tr>
<td>7</td>
<td>Knitted garments</td>
</tr>
<tr>
<td>8</td>
<td>Leather foot-wear</td>
</tr>
<tr>
<td>9</td>
<td>Rough towels</td>
</tr>
<tr>
<td>10</td>
<td>Pantyhose for women</td>
</tr>
<tr>
<td>11</td>
<td>Socks</td>
</tr>
<tr>
<td>12</td>
<td>Carpets and rugs</td>
</tr>
<tr>
<td>13</td>
<td>Cloaks</td>
</tr>
<tr>
<td>14</td>
<td>Ship-skin coats</td>
</tr>
<tr>
<td>15</td>
<td>Felt foot-wear</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
</tr>
</tbody>
</table>
The estimation of the index of civil industry for the first half years of 1992 (percent to 1991)

<table>
<thead>
<tr>
<th>No.</th>
<th>Industries</th>
<th>The share of industry in total employed</th>
<th>The index of products by industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Steel complex</td>
<td>0.076</td>
<td>0.825</td>
</tr>
<tr>
<td>2</td>
<td>Fuel and energy complex</td>
<td>0.089</td>
<td>0.955</td>
</tr>
<tr>
<td>3</td>
<td>Machine building</td>
<td>0.47</td>
<td>0.752</td>
</tr>
<tr>
<td>4</td>
<td>Chemical-wood complex</td>
<td>0.14</td>
<td>0.810</td>
</tr>
<tr>
<td>5</td>
<td>Building materials</td>
<td>0.06</td>
<td>0.843</td>
</tr>
<tr>
<td>6</td>
<td>Light industry</td>
<td>0.09</td>
<td>0.818</td>
</tr>
<tr>
<td>7</td>
<td>Food industry</td>
<td>0.073</td>
<td>0.800</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>0.96</td>
<td>0.796:0.95~0.829</td>
</tr>
</tbody>
</table>

The estimation of industrial output in the first half of 1992 (in percent to 1991)

<table>
<thead>
<tr>
<th>No.</th>
<th>Group of Industries</th>
<th>Share in total employed</th>
<th>Product index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Civil industry included in estimation</td>
<td>0.79</td>
<td>0.829</td>
</tr>
<tr>
<td>2</td>
<td>Rest of civil industry</td>
<td>0.11</td>
<td>0.67</td>
</tr>
<tr>
<td>3</td>
<td>Military industry</td>
<td>0.10</td>
<td>0.32</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>0.76</td>
</tr>
</tbody>
</table>
Appendix 4

The estimation of the index of aggregate national product of Russia in 1992

I. The estimation of average monthly payroll fund

<table>
<thead>
<tr>
<th>No.</th>
<th>Branches of industry</th>
<th>Total employed in 1991 (millions of persons)</th>
<th>Average monthly payroll fund (thousand of rubles)</th>
<th>Payroll fund (billions of rubles)</th>
<th>Share in payroll fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Industry</td>
<td>20.233</td>
<td>0.5834</td>
<td>11.7</td>
<td>0.45</td>
</tr>
<tr>
<td>2</td>
<td>Agriculture</td>
<td>9.1</td>
<td>0.45</td>
<td>4.1</td>
<td>0.16</td>
</tr>
<tr>
<td>3</td>
<td>Transport</td>
<td>4.0</td>
<td>0.61</td>
<td>2.9</td>
<td>0.11</td>
</tr>
<tr>
<td>4</td>
<td>Communications</td>
<td>0.8</td>
<td>0.51</td>
<td>0.4</td>
<td>0.01</td>
</tr>
<tr>
<td>5</td>
<td>Construction</td>
<td>6.2</td>
<td>0.68</td>
<td>4.2</td>
<td>0.16</td>
</tr>
<tr>
<td>6</td>
<td>Retail trade</td>
<td>5.3</td>
<td>0.49</td>
<td>2.6</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td></td>
<td></td>
<td>25.9</td>
<td></td>
</tr>
</tbody>
</table>

2. The estimation of the index of the aggregate national product

<table>
<thead>
<tr>
<th>No.</th>
<th>Branches of industry</th>
<th>Index of industrial output</th>
<th>Share in average payroll fund</th>
<th>Estimations of index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Industry</td>
<td>0.725</td>
<td>45%</td>
<td>32.6</td>
</tr>
<tr>
<td>2</td>
<td>Agriculture</td>
<td>0.8</td>
<td>16%</td>
<td>12.8</td>
</tr>
<tr>
<td>3</td>
<td>Transport</td>
<td>0.82</td>
<td>11%</td>
<td>9.0</td>
</tr>
<tr>
<td>4</td>
<td>Communications</td>
<td>0.74</td>
<td>1%</td>
<td>0.7</td>
</tr>
<tr>
<td>5</td>
<td>Construction</td>
<td>0.6</td>
<td>16%</td>
<td>9.6</td>
</tr>
<tr>
<td>6</td>
<td>Retail trade</td>
<td>0.62</td>
<td>10%</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td></td>
<td></td>
<td>70.9</td>
</tr>
</tbody>
</table>
Appendix 5

Estimation of fixed capital dynamic for 1990-2000
(billions of rubles in the prices)
(billions of rubles in the 1955 prices)

<table>
<thead>
<tr>
<th>Year</th>
<th>Fixed capital size by acquisition cost</th>
<th>Size of depletion</th>
<th>Size of wear</th>
<th>Fixed capital size by depreciated cost</th>
<th>Current wear</th>
<th>Commissioning of fixed capital</th>
<th>Overhaul</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>586.2</td>
<td>17.2</td>
<td>196.4</td>
<td>389.8</td>
<td>17.6</td>
<td>25.7</td>
<td>9.5</td>
</tr>
<tr>
<td>1991</td>
<td>594.3</td>
<td>17.8</td>
<td>204.5</td>
<td>398.8</td>
<td>27.8</td>
<td>21.8</td>
<td>8.0</td>
</tr>
<tr>
<td>1992</td>
<td>598.3</td>
<td>17.9</td>
<td>214.3</td>
<td>384.0</td>
<td>17.9</td>
<td>10.9</td>
<td>3.0</td>
</tr>
<tr>
<td>1993</td>
<td>592.3</td>
<td>17.8</td>
<td>229.2</td>
<td>639.1</td>
<td>17.8</td>
<td>10.9</td>
<td>6.0</td>
</tr>
<tr>
<td>1994</td>
<td>585.4</td>
<td>17.5</td>
<td>241.0</td>
<td>344.4</td>
<td>17.5</td>
<td>10.9</td>
<td>6.0</td>
</tr>
<tr>
<td>1995</td>
<td>578.8</td>
<td>17.4</td>
<td>252.5</td>
<td>326.3</td>
<td>17.4</td>
<td>10.9</td>
<td>6.0</td>
</tr>
<tr>
<td>1996</td>
<td>572.3</td>
<td>17.2</td>
<td>263.9</td>
<td>308.4</td>
<td>17.2</td>
<td>15.0</td>
<td>9.0</td>
</tr>
<tr>
<td>1997</td>
<td>570.1</td>
<td>17.1</td>
<td>272.1</td>
<td>298.0</td>
<td>17.1</td>
<td>16.0</td>
<td>9.0</td>
</tr>
<tr>
<td>1998</td>
<td>569.0</td>
<td>17.1</td>
<td>280.2</td>
<td>288.8</td>
<td>17.1</td>
<td>17.0</td>
<td>9.0</td>
</tr>
<tr>
<td>1999</td>
<td>568.9</td>
<td>17.6</td>
<td>288.3</td>
<td>260.6</td>
<td>17.1</td>
<td>18.0</td>
<td>9.0</td>
</tr>
<tr>
<td>2000</td>
<td>569.8</td>
<td>17.1</td>
<td>966.4</td>
<td>273.4</td>
<td>17.1</td>
<td>19.0</td>
<td>9.0</td>
</tr>
</tbody>
</table>

1The paper is based on the author's earlier reviews of the economic situation in Russia in January-July of 1992 which appeared in "ECO," Nos. 6-7, 10. Along with that, new, unpublished estimates and conclusions are also introduced.
2The basic data for estimations are taken from Project "Programma uglublenia ekonomicheskikh reform," Moscow, June, 1992, p.46, Appendix 3, Table 3.1.
3New methods of price statistics can be found in a methodological volume published by the USSR Goskomstat "Methodologia statisticheskago izuchения zhiznennogo urovnya naselenia i finansovo-ekonomicheskikh protsessov," Moscow, 1989.
4Ibid., p.88.
7Rossiiskaya gazeta". June 21, 1992, p. 3.
10Soobshchenie Goskomstata Rossii. Sotsialno-ekonomicheskoe
polozhenie Rossiiskoi Federatsii v pervom polugodii..., "Ekonomika i
11Soobshchenie Goskomstata Rossii. Sotsialno-ekonomicheskoe
polozhenie Rossiiskoi Federatsii v pervom polugodii..., "Ekonomika i
13Soobshchenie Goskomstata..., p. 6.
15Materialy k voprosu "O khodie ekonomicheskoi reformy v Rossiiskoi
16Ibid.
18Rossiiskaya Federatsia v tsifrakh, op. cit., p. 82.
20N.I. Ryzhkov, O programme predstoyashchei deyatelnosti
Pravitelstva, Moscow, Politizdat, 1989, p. 33.
22Materialy k voprosu "O khodie ekonomicheskoi reformy v Rossiiskoi
23Estimated on the basis of the size of the consumption fund in 1991
(618.7 billion rubles) and of the share of expenditures on personal
consumption in the total consumption in the USSR in 1990 equal to 0.85.
24Rossiiskaya Federatsia v tsifrakh, op. cit., p.204.
25N. Berger, "Nalogi polegovshi," no vyrosli tochisom, Izvestia,
September 12, 1992, p. 4.
7, 1992, p.56.
28The corresponding expenditure is given in above mentioned paper in
"ECO" for the first quarter - No. 7, p. 62.
29"ECO", No. 7, p. 60.
30My vision of this turn of events coinciding with that of many
western and Russian economists has been exposed in my article
31G. Khanin. "Economic Growth in the 1980s" in The Disintegration of
the Soviet Economy System, edited by M. Ellmon and V. Kontorivich.
65-66.
34Average monthly pay - op. cit., pp. 72-73.
SESSION II: ECONOMIC REFORM AND MILITARY CONVERSION
PRIVATIZATION, CONVERSION, SECURITY:
ON THE WRECK OF THE SOCIALIST MENTALITY

by

Larisa Piyasheva

The Gaidar government has been called a pro-market, liberal democratic government of radical economic reform. Sometimes, it is even called monetarist and Chicago-school-oriented, that is, committed to the Fischer quantitative theory of money.

Yet the program statements, the actions and decisions of this government cast doubt on the accuracy of these evaluations and give cause to suspect the government of allegiance to traditional socialist principles. One may suggest that the current reform policies have no direct or indirect relation to liberalism or monetarism but represent a specifically Soviet course, which reflects the entire mosaic of the Abalkin-Shatalin-Agarbeygan versions of reform and which has absorbed all the errors and mistakes of Harvard socialists.

The socialist virus injected into several generations of economists still dictates and defines the logic of the economic reforms being conducted in Russia.

The statist orientation of the reformers, their planned-economy thinking (a five-year program of "deepening reforms," a three-year privatization program, etc.), their failure to understand the role of private property in the economic life of society—all these lead to erroneous decisions which are all too clearly plunging the country into social and political chaos.

The strategy of reform selected by the government (price liberalization and financial stabilization not preceded by privatization of property), as well as its programs of privatization and of defense industry conversion make it possible to conclude at this point, as we approach 1993, that the Gaidar course has failed in all three key areas: freeing the prices, balancing the budget, and making the ruble convertible. The likelihood that the privatization program will fail is also high. Therefore, there is cause for grave concern for the future of national and international security.

The Gaidar reform plan contained an inherent strategic error which was present in the program of the Harvard team and in the "500 Days" program. This was the division of the reform process into two stages: the stage of preliminary financial stabilization and price liberalization (which was to take place in 100 days in the Yavlinsky plan) and the stage of privatization, structural reform, and final liberalization.

Over the course of a year, the Gaidar government tried in vain to cure the monetary system, to balance the budget and to liberalize prices without conducting large-scale privatization of property. Yet the essence of economic reform actually required that, after launching large-scale privatization, all kinds of investment commodities—basic and floating assets, real estate, buildings and facilities, raw materials, land, cattle, etc.—be released into the open market at
unregulated prices. At the same time, the price of labor had to be freed as well, with tight restrictions imposed on credit and money emission. This would have prevented hyperinflation and ensured a rapid transition to private property.

The Gaidar reform was conceived as a three-phase process. The first phase involved placing the economy on a “regimen of survival” (a term used by Gaidar): administering shock therapy through the gradual freeing of prices and “pushing the producer against the barrier of purchasing power and demand” (to quote Gaidar once again). The second phase was called “consistent stabilization;” in this stage, all possible revenues were to be consolidated into the treasury in order to balance the budget. The third phase, which reform is entering now, was to come after “the successful completion of the first two phases” (declared by the government)—the launching of large-scale privatization of property.

THE REGIMEN OF SURVIVAL

To achieve its desired goal of reaching the ceiling of purchasing power, the government did not resort to traditional monetary reform but to inflation therapy—a temporary continuation of money and credit emission combined with selective liberalization of prices (on food and some consumer goods), without indexation of savings, without privatization of trade, without eliminating the system of government distribution of goods to the shops, but with restrictions on markups and with confiscation of superprofits.

As a result, a tenfold increase in prices caused demand to plummet: food stayed in the shops, and just a few weeks after the start of reform there were reports of “goods surpluses.” Goods that had been in short supply just recently—sausage, sour cream, milk—were no longer being bought and were being “written off” to feed pigs. The government shops had not been given the right to reduce prices, and there was as yet no private trade.

It was much the same with consumer goods. “Having already run into the barrier of purchasing power, collective farms and state farms are refusing to buy agricultural equipment at the prices offered,” Gaidar stated. “This means that we are now moving up a self-reproducing chain, from ultimate consumption by the population to the production of resources, pushing the producer against the barrier of demand and purchasing power at every stage... Essentially, this is A VERY POSITIVE DEVELOPMENT.”

The government did cope with the task of balancing demand with the supply of goods, though this was not accomplished with the promised doubling or tripling of prices: prices increased by ten, twenty, sometimes even a hundred. The “regimen of survival” was clearly beyond what anyone had expected.

Having adopted the “Harvard” idea of gradual, step-by-step price liberalization, where free, regulated and state-fixed prices would coexist side by side, and delaying privatization of property by a year, the reformers, whether they wanted to or not, extended the life of the
state distribution system and made barter the main form of commodity exchange.

The principal miscalculation of the "first phase" was the idea that, running into the barrier of purchasing power, the producer would have to lower his prices. Gaidar had not counted on the effects of a drastic reduction in output.

As a result, having caused living standards to collapse and all past savings to be confiscated through inflation, having undermined the financial base for privatization through buyouts, the government provoked a decline in production but did not achieve the main goal of the first stage of reform—a true liberalization of prices that would have meant a transition to a free pricing system, a fundamentally new one for us.

Left untouched by liberalization were the price of labor and the prices of all investment commodities—land, buildings, facilities, basic assets, fuels, etc.—which could and should have played the role of a price buffer, a stabilizing and anti-inflationary role at the same time. And so all deferred purchasing power was directed at the "liberated" goods—food and some consumer items—appearing on the shelves. Prices skyrocketed, and potential investment capital, which normally would have been directed at the acquisition of real estate and shares in privatized companies, was lost.

The so-called success of the first phase of economic reform amounted to the confiscation of savings that could have been a financial base for giving the average citizen a stake in privatization, and to the rise (unforeseen by the government) of consumer prices in state-run trade, which had not been ready for reform. As a result, goods from the state trade network "went out into the streets," depriving the treasury of legitimate revenues and introducing a criminal and unsanitary element into daily life. All the "problems" local authorities have had with street trade are a direct result of Gaidar's "commercialization" which has taken the place of privatization.

The intensification of strikes which involved more and more social and professional groups (miners, workers in the oil and energy industries, teachers, doctors, air traffic controllers, etc.) was a byproduct of the "regimen of survival" established through the piratical confiscation of savings and the "shock-therapy" increases in food prices. The population demanded raises in salaries to keep up with inflation, and the strongest of trade unions were able to get the government to meet these demands. This led to escalating demands from other groups, to a growth in social tensions, and to the consolidation of "national communists" and national socialists exploiting anti-reform and anti-government slogans.

Whether the preliminary confiscation of income and savings was a part of the reformers' strategy or just an oversight is something we will learn some day from eyewitnesses. There are two points here of interest to us:

1. The customary, familiar logic of the Aganbegyan-Abalkin programs—stabilize the economy first, start reform later—worked yet again.
2. The customary, ever-ready weapon of all socialist and communist
governments—the demagoguery that always takes advantage of the
economic illiteracy of a population drugged with ideology—was used
yet again.

In the eyes of the "conservatives," whose most extreme position was
expressed in the manifesto of the 1991 coup plotters, stabilization
meant restoring past economic contacts, fixing the distribution
mechanism based on planned expenditures and planned revenues, and
bringing back administrative command channels of regulation.

In the eyes of Gaidar's reformers, who rejected the norms and values of
the planned command economy, preliminary stabilization had to do with
strengthening the ruble. According to Gaidar, "money had to acquire
real purchasing power." This was an idea just as attractive as all the
other socialist ideas and projects that have possessed the minds of
reformers since the late 19th Century. Instead of launching reform—
giving back the wealth confiscated in 1917 and in all subsequent years,
and starting structural reforms from this base—the reformers started
trying to "cure" the monetary system, that is, the system that supplied
paper money for the economic process.

In order to "cure" this system of the ruble overhang, some of it in the
savings accounts of individuals, the government decided to undertake
"liberalization"—that is, to confiscate this surplus by selectively
freeing prices without indexing. When the Sixth Congress of People's
Deputies voted to introduce indexing of individual savings, the
government declared, "This measure will have destructive consequences
for the monetary cycle: hyperinflation, increasing social
differentiation, a drastic increase in social tensions," and "will
violate the principles of social justice toward those who have no
savings."

Surely, the government that calls itself "the best qualified" had to
know that hyperinflation arises from uncontrolled money-printing,
excessive inflationary credits and demands for wage increases that
outstrip price hikes. Income indexation, while by no means a desirable
measure at a time of anti-inflationary policies, actually restores
social justices by compensating individuals for piratical confiscations,
and lowers social tension and differentiation. We get yet another
lesson in upside-down logic, in which the desire of citizens (and their
elected representatives) to protect their savings from officially
sanctioned robbery was branded as "populism" while the unabashed
confiscation of unprotected income was presented as a way of restoring
social justice toward people with no personal savings. It's the old
paradigm of levelling the rich and the poor in the name of social
justice.

The true solution to the problem of the "first phase" of privatization
lay in starting large-scale privatization of property, involving the
release—again, on a large scale—of prices of industrial entities,
land, real estate, etc. Thrown into the open market, these goods could
have absorbed all the "surplus" savings left over from "the era of
stagnation," and could have been transformed into properties of the
population, which would have thus received the full equivalent of its
deferred consumption. This, in fact, would have been a radical anti-
inflationary measure, which would have prevented the skyrocketing food
prices (which Gaidar, who had predicted that prices would merely double,
called "an abnormal reaction"). The prospect of imminent privatization would have also prevented the credit expansion, spending inflation, and consequently the cash crisis as well. Just as the population, with inflation spiralling out of control, rushed to buy food in order to use at least a part of their savings (thus causing the predictable and entirely normal, under the circumstances, jump in prices), enterprises, for the same reasons, rushed to spend their cash and non-cash assets and started chasing new credits in a race with inflation. As a result, all the savings of the previous years—deferred purchasing and investment power—were lost, and with them the prospects of acquiring real estate and becoming property owners and investors. Had privatization been launched, it would have acted as a powerful stabilizing factor, reducing social tensions and preventing both the credit expansion and the cash crisis that have now caused a new spiral of money-printing, bringing us closer and closer to hyperinflation.

Confronted with the start of privatization, enterprises would have done their best to minimize the values of the properties to be bought out, treating credits with the timid caution of an owner who knows he faces debtors' prison if he cannot meet his obligation. The state-appointed "nomenklatura managers, assured by the government that privatization would be postponed by at least a year, acted like ordinary regents who are not responsible for anything and are disposing of other people's wealth.

Whether someone organized, provoked, or conceived an operation with the code name "Credit Expansion," whether it was part of the government reform plan is something historians will know. To us, it is already obvious that even the most inexperienced, inept, irresponsible property owner would never have acted the way the regents from the managers' corps did, as they went on a binge of borrowing, exporting raw materials, and wasting accumulated investment capital. If privatization had been started in a timely fashion, it would have been a sure way to save the country from looting, economic devastation, and disinvestment, from the consumption and waste of cash assets, and from the throwing away of future investment opportunities.

What has been declared "the transition period" will not be known in the economic history of Russia as the period of primary capital accumulation. We are living through the final looting of everything that has been accumulated—so far, with zero potential for future prosperity.

CONSISTENT StABILIZATION

"We hope that our program will allow us to receive financial assistance for the specific purpose of stabilizing the balance of payments, in addition to other credits for food and commercial goods, and to humanitarian aid." Yegor Gaidar

It was the Gaidar government that undermined the potential of economic development, declaring financial stabilization and a balanced budget to be the second phase of its reform program. Again, these are noble goals, worthy of any monetarist government and sanctified with the names of Friedrich Hayek, Milton Friedman, and the International Monetary Fund—which undertook somewhat clumsily to give us financial assistance by
providing $24 billion worth of credits to subsidize reform. Mikhail Gorbachev spent six years globe-trotting in search of credits and subsidies for his economic reforms which he never had the heart to launch. The Gaidar government, which succeeded him and started round two of begging for credits and humanitarian aid, was hoping to attract large amounts of foreign capital by promising special breaks to Western investors and imposing restrictions on domestic ones.

The IMF demanded that all energy prices be freed, that the budget be balanced and the ruble strengthened, and that a genuine liberalization of prices for all goods and services, rather than a pseudo-liberalization, be conducted. The IMF also demanded that the Russian government end the administrative regulation of exports and abandon the system of export quotas and licenses.

In order to receive guaranteed IMF subsidies, the government had to make major “sacrifices.” It had to give up its fairly comprehensive list of regulated prices, its 25 percent sales tax, its anti-monopoly program with a virtually unlimited list of monopoly enterprises whose products would have remained subject to price controls, and its practice of government regulation of exports and imports. In other words, the state had to “compromise its principles” and drastically lower its own claims to a major role in the economy.

Even as the IMF demanded that fuel and energy prices be liberalized, it said not a word about privatization as a prerequisite of continuing reform, or about the need to relax the clearly excessive pressure of unreasonable taxation. By February 1992, the economy, for all intents and purposes, adopted a posture of self-defense from confiscatory, draining taxes. All sorts of sophisticated methods of tax evasion and income concealment were invented, including the transfer of hard currency abroad (in amounts exceeding, according to some estimates, the expected 24 billion).

The real danger arose that the first shock-therapy price increase which raised “the barrier of purchasing power” (in ordinary economic terms, the insufficiency of combined demand, which has been one of the principal causes of world economic crises) would be followed by a second shock or blow to the economy when fuel prices were raised to international standards. (There was not a chance that the government would maintain oil prices at the levels of its own forecasts (under 3,500 rubles per ton). Without privatization therapy, the second phase of the “regimen of survival” raised the imminent threat of instant economic collapse: instead of “consistent stabilization,” the economy could be brought into a state of inflationary-deflationary shock.

The likelihood of such a turn of events was increased by the government’s intent to impose a 40 percent oil tax. Together with the escalation of prices on all consumer goods and services, this would bring most industrial enterprises--by then already lacking funds to buy energy sources--to a standstill.

The Sixth Congress of People’s Deputies had decided to lighten the tax burden. The 40 percent oil tax was an attempt by the government to squeeze more taxes out of industry, going to absurd lengths.

Promises to balance the budget by increasing tax revenues from enterprises on the verge of bankruptcy were not simply impossible to
fulfil. They amounted to a provocation—a second insulin injection in the course of shock therapy, meant to bring about the mass suicide of enterprises, which the reformers expected to lead to structural reform. The government’s idea of “massive surgery” was the excision of the most vital parts of personal wealth (the confiscation of savings) and general revenues (intolerable taxes), and the channelling of these revenues into the state budget—just to balance the budget.

The strikes of rebellious workers in the “survival phase” were followed by the mutiny of managers in the “stabilization phase.” The former were defending their money, the latter were defending their right to exist. The government tried to persuade, pacify, or intimidate both groups, simultaneously retreating from its “liberal” stance and issuing credits, subsidies, seed supplies, equipment and other benefits, writing off debts. The freeing of energy prices was postponed until summer, then until the fall. The goal of a balanced budget was silently abandoned for lack of tax revenues; instead of tight financial restrictions, more money was printed in order to find a way out of the artificially manufactured cash crisis.

The legacy of Valentin Pavlov—hidden inflation under the pressure of “surplus” savings (forced by the lack of consumer goods)—made price liberalization necessary. But this should have been a full and genuine liberalization. The drop in industrial production, which was already under way, required stimulants to boost entrepreneurship and create new jobs—that is, LOW TAXES and TAX BREAKS for new INDUSTRIAL entrepreneurial structures. The only way to balance the budget was to broaden the tax base and get ADDITIONAL tax revenues from the expansion of entrepreneurship while, at the same time, radically reducing government spending. An ascetic regimen should have been imposed on administrative expenditures and parasitic waste of funds. There should have been cuts in military spending—a comprehensive reform of the military that would not undermine national security but would eliminate excessive consumption by this state-within-a-state, with its academies and factories that transform people and resources into soldiers and tanks.

The largest budget revenues, however, should have come from the sale of land, real estate, unfinished industrial projects, from leasing, franchising, or selling most of the properties left behind by the elimination of Soviet state structures—ministries, agencies, offices. The unprecedented spectacle of the world’s wealthiest government asking for handouts from the rest of the world rather than let go of its looted riches had to end.

Instead, the government’s “second phase of stabilization” for the remaining three quarters of 1992 involved even harsher tax policies: the reinstatement of the value-added tax on all goods, a 20 percent export tax (calculated from the market value of goods), the introduction of a tax on oil consumption at 40 percent of the wholesale price, the imposition of a VAT and excise taxes on imports, and a substantial reduction in tax breaks for taxes of profits.

At the same time, measures were proposed to toughen administrative controls. Strict oversight of cash money was introduced starting April 1; state outlets were forbidden to have “extra-budget” funds (revenues from commercial activities of which they could dispose
at their discretion), and 95 already existing "extra-budget" funds were
to be confiscated into the state treasury.

Instead of the presidential decree, expected in Moscow, on "accelerated
privatization of trade and services," President Yeltsin issued a decree
on "the commercialization of trade." Instead of decree, expected in
Russia, on "the freedom of exports, imports, and currency exchange for
individuals and organizations," there was the January 29 decree "on
freedom of trade," which allowed individuals to sell whatever they
wanted on the streets. These decrees, which clearly had a negative
impact, were followed by the February 20 decree "on measures to
stabilize industry," which stated the need to preserve former economic
links in 1992 and to have special regulations of enterprises "which
permit monopolistic actions" (among other things, such enterprises could
be forced to renew their economic contacts with other industries; the
state could forcibly set their prices and distribute their output).

Combined with a 40 percent tax on oil consumption, and the plan to
extend "the commercialization of trade" to all industry, this decree-
mongering concluded the "liberal-democratic" stage of Gaidar's reforms
tinged with the socialist aura of Harvard professors.

The IMF, which distributes credits to developing countries, had to be
sure that the borrower would be able to repay these credits, and thus
set legitimate requirements to ensure ability to repay: ruble
convertibility, free prices, and a healthy budget. However, Western
experts should have foreseen that Russian reformers would not balk at
robbing their own population and strangling their own industry just to
get the coveted credits. They coveted these credits so that one more
government could extend the viability of the military-industrial complex
for one more term.

Economic illiteracy is no vice. But balancing the budget at the expense
of non-indexed expenditures on social needs (which had been on the back
burner all through the decades of Soviet socialism) was a crime. Health
care, education, day care, children's recreation and other social
institutions have been devastated. At the same time, private
enterprise, which should have performed the healing functions of new
investment and job creation, was undermined through taxation and
regulation. These are deeds for which society will yet hold the
government to account.

LARGE-SCALE PRIVATIZATION: WITHOUT CONVERSION OR PRIVATE PROPERTY

The Harvard economists wrote their "prescriptions" for the countries of
Eastern Europe where some properties had never been nationalized, and
agriculture had been mostly composed of private farms. By the time
Gaidar's reforms began, we already had the Polish experience before us:
monetary reform without "big" privatization plunged national industry
into a crisis, resulting in political cataclysms which threaten to turn
"stabilizing" therapy into a destabilizing political factor. Here,
there is a great temptation to "play at liberalism" once again by
flooding the domestic markets with "curative" foreign capital, which is
expected to bring the country out of its crisis. After the
"humanitarian aid" of the first phase and the IMF credits of the second
come third-phase efforts to organize the invasion of dollars into the
real-estate market, with the battle cry, "Buy us up or you'll be sorry!" Poland had a full dose of the effects of the consumer invasion, with quickly flooded the shelves with imported goods, absorbing demand and purchasing power and crowding out or wiping out the un-privatized domestic industry.

With no illusions concerning the viability of most domestic enterprises with their obsolete technology and equipment, this great political game still should have been staked on domestic forces. The way to do this was to launch privatization as broadly as possible—to turn land and industries over to the individuals who live and work in this country, to find potential for survival and revival young people or people who have not been crippled by socialist ideology: craftsmen, professionals, entrepreneurs, farmers.

This is now a missed opportunity which will not be realized soon. It won't happen because in the year of "preliminary stabilization," which destroyed the remnants of the country's financial system and let inflation loose (known, for some reason, as liberalization), other processes have started. With no legal protection, honest private business was stifled, while surviving business in the hands of those who made their money in shadowy Communist party and Mafia structures has been criminalized to a fantastic degree.

What is, then, the Gaidar government's idea of privatization? More than anything, it looks like a huge scam. The privatization program is extended over three years and does not include some of the largest enterprises of the military-industrial complex, which are exempt from privatization. Land, mines, and many other forms of wealth are also exempt. Properties subject to privatization are divided into three groups: those to be privatized by their own decision; those to be privatized by special permission of the State Committee on Property (leaving plenty of room for bribes and scheming) and those privatized by permission of local authorities (also leaving much room for officials to do as they please). Everything proceeds according to the principle "divide and conquer." Some enterprises are released, some will be released if they behave themselves and reach an agreement with the government, while others will remain in state captivity—that is, a part of the state budget. Our taxes and the taxes of surviving privatized enterprises will be used by government officials to protect these state enterprises from bankruptcy and to cover their debts.

The enterprises which will be privatized will be able to select one out of three options: in the first option, the government will retain 60 percent of stock (25 percent of non-voting stock will be distributed to the employees, 5 percent of voting stock will be sold to the top management of the enterprises, and employees and managements each can buy another 10 percent of stock at a 30 percent discount). In the second option, the enterprise can buy out 51 percent of its stock with no special breaks, while the government keeps 49 percent. In the third option, the government keeps 80 percent of stock for a year; with good behaviour and good commercial results, another 20 percent will be given to the "entrepreneurial" managers' group in a year.

Under no circumstances will the employees of an enterprise have controlling interest in it. Only the second of the three options gives people an opportunity to own an enterprise by buying out 51 percent of stock. To keep this from happening (and the entire Gaidar-Chubais
privatization program is meant to make sure no private owners emerge),
an August 4, 1992 government resolution (No. 547) stipulates that if
employees buy stock, its value rises by a factor of 1.7. This virtually
derives employees of the opportunity to buy out their enterprises and
become independent of administrative command.

Enterprises which have "social service entities" attached to them
(preventive medicine centres, vacation homes, warehouses and other real
estate) do not have the right to sell these properties and use the money
to buy themselves out. Enterprises will not be given full ownership of
these entities, merely the right of use; that is to say, these will be
state entities financed by shareholder-owned enterprises.

For "small-scale" privatization, there will be competitive bidding and
auctions at free market prices. To enable rank-and-file individuals to
participate in privatization, they will be issued vouchers worth 10,000
rubles each, which is clearly below the value of the wealth created by
the people and below the market prices at which properties will be
auctioned.

Already, there are plans to create governmental banking and stock-
exchange structures to buy up vouchers and take charge of the process.
They will act as official commercialized investors risking other
people's capital and bearing no financial liability for their mistakes,
miscalculations, or failures.

For state-owned stocks (20 percent of stock in any enterprise must be
owned by the state), there will be holding companies (miniature versions
of the old Gosplan, the central planning board), which will decide on
investment, distribution and redistribution strategies. For all intents
and purposes, this reproduces the old socialist model of management, in
which the function of Gosplan is divided between state holding companies
in various industries, which own controlling interest in virtually all
enterprises.

The present program of conversion of military industries to civilian
needs fits into this logic. The program of rapid conversion adopted
earlier, involving privatization, downsizing, and transition to civilian
production, has been rejected and replaced with a 15-year conversion
plan. This plan is based on the division of enterprises into two
categories: unprofitable (60 percent, according to most estimates) and
profitable (40 percent). The former--the low-priority kind--are to be
privatized. The latter--high-priority enterprises--will be maintained
in every way possible to keep up the production of weapons intended for
sale to the Third World. Conversion is now tied to successful arms
trade, proceeds from which are to be used to boost the health of
civilian industries. The refusal to privatize the enterprises of the
military-industrial complex is openly linked to the special importance
of the monopolistic military giants for Russia's future.

Clearly, such a program of privatization and conversion is rife with
serious social cataclysms. It does not lead to the creation of an
efficient economic system; on the contrary, it presupposes the continued
mobilization of mineral, financial, and human resources to serve the
needs of the military-industrial machine.
A number of questions need to be asked.

1. What were the motives of the IMF when it prescribed high confiscatory taxes on our producers? Did they expect the domestic Russian economy to be dismantled and military industry to go bankrupt fast? Or, demanding radical spending cuts and knowing full well that in our socialist society this would mean cuts in social spending, did they want to observe social pauperization and rising mortality in Russia? Is it that the Russian empire is expected to disintegrate into small provinces, cities, and principalities? Is it, perhaps, that the IMF has no desire to see Russia enter the world markets quickly and effectively with her own fully competitive manufactured products? Surely, they know the laws of market competition, as rigid as the formula “low taxes = high economic growth?”

2. What were Gaidar’s motives when he delayed privatization, and what are his motives now as he substitutes genuine privatization with bureaucratic “commercialization” and bureaucratic shareholding which do nothing to guarantee transition to private property?

3. How much longer is the government going to strangle private (and government) companies with high taxes?

4. How much more can social spending be cut, and will the government continue to balance the budget by not paying salaries to employees?

5. How much longer will the government continue its tricks to bring down the dollar exchange rate--freezing hard-currency accounts, confiscating hard-currency revenues, or resorting to even more sophisticated methods?

And finally, the last question. When will Russia finally have real price liberalization? When will free producers and free traders who own their shops be able to establish prices reflecting the balance of supply and demand, and when will ordinary Russian men and women be able freely to buy land, to build a home, or a cow, or a horse, or cattle feed, or a personal Mercedes?
The new role of the defense R&D in the economy of Russia.

About 50 years (beginning from the 1930-ies up to the end of the 1980-ies) soviet Military-Industrial Complex (MIG) pumped out the best production them resources of the national economy, transforming them to modern armaments. Russia carried out 91% of all finishing R&D of the armaments and provided 79% of finished arms /21,p.7/. As the share of the Russian Federation accounted for a half of the total population of the country, the military expenditures per head were more here, than in other republics. The new role of MIC in the Russian economy is usage of its possibilities for the sake of not only defense, but also economic security. The new role of MIC is implemented in the idea of conversion. The conversion of MIG includes the conversion of the productive capacities of MIC and the conversion of the defense R&D.

Alternatives of conversion of capacities and their social consequences were analyzed in the previous paper /1/.

The purpose of the analysis of conversion of capacities was to estimate technological and economic difficulties emerging on the ways of its carrying out and to estimate positive and negative social consequences of each of these ways.

The analysis was based on the variant of conversion, which was developed in the State Program of Conversion in the USSR [December,1990]. It presupposed the increase of the output of the civil production by MIC-durables, technological equipment for transport and communication. This variant needed big investments, construction capacities, metal, that the deficit economy didn't obtain. Meanwhile it didn’t provided saturating of the market with durables and liquidation of the technological backwardness of the country.
That's way an alternative, more realistic variant of the conversion of defense capacities was proposed in the paper. It presupposes more significant and fast liquidation of production and banning of the tests of military techniques, lowering of the coefficient of usage of the defense capacities without their total reorientation and liquidation. Such variant doesn't demand any additional resources. On the contrary, it permits to economize metal, fuel, energy, other production resources, that can be sold as in the national, as in international market.

The real course of the conversion of the MIC capacities in 1991-1992 corresponded to the alternative variant.

The "snow-slide" reduction of the armaments production took place. Although the data on physical volume of arms production in Russia aren't published, some speeches contain such figures as 50-60 percent reduction of arms production and more, meanwhile in 1990 the question was of a reduction by 20-25 percent. For example, Maley president's adviser, said over the radio about 2.5 times reduction of the tanks production, 4.5 times reduction of military aircraft production. For all that the physical volume of production of durables in MIC not only hasn't grown, but even substantially reduced in 1992 in comparison with 1991. Thus, the production of TV-sets has reduced by 20%, washing-machines - by 24%, tape-recorders - by 20%, radio-sets - by 14%, vacuum-cleaners - by 12% /23/. The process of almost uncontrolled export of ferrous and non-ferrous metals, cole, oil and oil-products, other raw-materials freed out as a result of conversion has begun.

As the choice between variants of carrying out of the conversion of capacities of the defense industry has been already made in practice, main attention should be payed to the analysis of variants of the conversion of R&D.

The difference between the conversion of R&D and the conversion of defense capacities consists in the long-term character of the consequences of those processes, that take place in certain moment. For example, a reduction of the charge of defense
capacities or even their full conservation in future can be easily made up. Unlike the productive potential—restoration of the scientific potential requires many years: that's way the state shouldn't permit disintegration of the scientific potential as a result of the economic crisis and other phenomena of temporary character.

This paper is dedicated to the analysis of ways of preservation of the scientific potential of MIG in Russia.

1. Social order to the defense science.

The state support to the scientific potential of MIG may have two long-term purposes: (1) high technological level of defense sufficiency of Russia and (2) overcoming of technological backwardness in production of civil goods.

Moreover, survival of science of MIG, which share amounts to more than 70% of all expenditures is the problem of preservation for future the main part of the scientific and educational potential of Russia.

The conversion of MIG takes place in conditions when the doctrine of defense sufficiency for Russia, the state program of armaments and the concept of state regulation of conversion are still developed. It's impossible to determine priorities of survival of science of MIG without such criteria. Meanwhile developing and forced adoption of these documents don't guarantee from high political and economic instability in future, emerging of new centers of tension, military centers and unions, capable to change program aims in short terms.

Meanwhile the problem of maintenance of defense sufficiency for Russia is of not only local, but also global importance. The thing is that the Federation borders on states with type of reproduction of population, that differs from that in Russia.

In connection with this contradictions typical for relations
between North and South may emerge.

In the necessity of the defense sufficiency for the Russian Federation exists, it should be maintained at high technological level. Otherwise, its economy will face two practically insuperable difficulties /12/.

First, Russia will lose once and for all world markets of armaments, succeeded from the ex-USSR. According to western estimates, export of arms from the USSR in 1989 totaled 11.6 billion rubles.

The reduction of armaments export has already begun and, according to some data, has come up to 8 billion rubles /3/. The economic damage to Russia from this reduction of the arms export is still not very large, because it takes place in the market sectors of free supply of armaments or supply on long-term credits, which can't be repayed.

MIC steadily supports an idea of further increase of arms sales in world markets with the aim of getting currency for consequent purchase of the civil production /5,p.12/. However, realization of that idea faces objective difficulties of the general reduction of the demand for arms in the world markets, that, naturally, will be substantial for the Russian industry in the case of growing lagging behind.

Second, in the case of growing lagging behind of the defense industry, in Russia will fact the choice between the necessity of maintaining of the army of a great number that partially compensates lack of quality of armaments and transition from export to import of arms. Though such variant permits to maintain small but well-armed army without own scientific potential, it is impossible under the conditions of import of grain and food and in the near future—also oil, which resources are quickly running short in Russia.

As both variants of trends of development bring immense
additional external burden to the Russian economy, maintaining of the high technological level of the defense industry and its products in necessary and sufficient limits of its production may be an alternative. Practical possibility of attaining this aim should be accounted in formulation of geopolitical interests of Russia, concepts of defense sufficiency and the program of arms production.

The second purpose of the R&D conversion is overcoming of technological backwardness of the civil sphere as a necessary condition for survival and competitiveness of the Russian economy under the conditions of its inclusion into world economic relations. In conformity with this object, conversion is causally regarded as a source of technological modernization of the very updated civil machine-building, which competitiveness in world markets, that is its real export possibilities), is very low now. The share of civil R&D was also big in the defense industry before the beginning of conversion. In 1988 the estimated share of civil R&D was 25.2-28.5% (see Table 2). According to projections, this share will come up to a half of all expenditures for R&D in MIC by 1995. Under these conditions R&D of the defense industry should, naturally, have the decisive influence on overcoming of technological lagging behind of the civil sphere of production.

The State program of Conversion (December 1990) defines the following directions of the most important influence on the technological level of the Russian economy. These are civil aviation and shipbuilding, peaceful space, communication, new materials, computers, technological equipment for light and food industries. Electronics takes the first place in investments (43% of total investments in conversion, potentially necessary in early 1990-ies).

Some authors propose to include in the spheres of influence of conversion on the civil industry some other branches: cars production, housing, construction, production of furniture.
ecological equipment e.t.c./13,p.24-25/.

In addition, the defense industry of Russia traditionally produces the main part (up to 90 and more percent) of TV-sets, refrigerators, tape-recorders and other complicated domestic apparatus and practically is the monopolist in the field of R&D in this sector.

Certainly, the defense industry has many prerequisites for raising the technological level of the civil production. These are engineers and scientific workers of high qualification, high-tech, universal character of machine-building (except rigid lines for products of the mass production and the unique metal-working equipment), that permits relatively easily to change for any products of metal-working. These priorities of the defense industry could be easily realized in the process of transfer to the civil industry of R&D of double application (for example, elements of electronics) or in the technologically similar types of civil and defense production (for instance, equipment for air and automobile transport, communication e.t.c.).

But realistic appraisal of possibilities of MIG in reasoning of the technical level of civil production requires to answer a number of questions.

But should the increase of the share of R&D in the defense industry from 25-28% up to approximately 50% result in change of the trend, should it lead to the transition of the Russian economy from technological backwardness to its overcoming? It is supposed, that the transfer of a one forth of scientists and designers of MIC from the defense civil R&D causes partial devaluation of knowledge and experience, their loosing. That's why scientists and designers face great difficulties in any country when they transfer from military Research and Development to civil ones.

In any country possibilities of double using of the results of
R&D of the defense and the civil sphere are very limited. That’s the reason for great difficulties for the defense industry in putting into production the equipment for agriculture industry and the light industry.

The causes of such difficulties are not only small possibilities for convertibility of knowledge and especially -of production experience but also relatively low share of high tech in the civil product, that is the cause of unjustified raise prices and reduction of demand. As a result, in practice excessively expensive technological equipment of the defense production can’t be sold not only under conditions of market economy, but also in the Russian national economy of deficit.

Possibilities for application of defense R&D in the civil sphere are limited because of growing gap between technological demands to the defense production and to the civil production. For example, the demands to fighting qualities of battle planes, in particular, to their air speed are much higher than that in the civil aviation. The demands to computers substantially differ depending on their dedication-control of missiles or management of an industrial enterprise, where scale of problems and real time regime are substantially different. If for the technological equipment and civil transportation means it’s important to provide durability, for military equipment it would be apparently unnecessary, because its life-time is estimated in hours and even in minutes. If in the process of development of military technics, the target can be attained at any price, in the development of the civil production the price in many cases is its most important characteristics.

In such conditions the question is if the existing civil R&D are to be kept in MIC or they should be out of the limits of the defense branches. The first step in this direction has been already made: the management of civil R&D in the defense sector has been transferred from the defense industry to the Ministry of Science. But even under such conditions it’s impossible to control distribution of expenses between civil and defense
objects, especially in the case of R&D of double orientation.

Civil R&D within the limits of MIC were and still remain a by-product. Hence, in a case of their double purpose not civil but the military purposes will ever prevail.

In spite of the sufficiently high technological level of MIC it's doubtful whether the defense industry is able to secure competitiveness of durables under the conditions of functioning in conformity with its traditional principle: "monopolistic supplier to monopolistic customers". In the defense sector of Russia there is not only free market with its free competition, but also monopolistic competition. The most substantial reserves of the defense R&D are created in the field of the military production of unit or small-series production. By this reason they can't be used for production of the mass durables.

Moreover, in the process of enlargement of MIC as a result of producing of the civil production this complex looses its unique character, economic sphere for realization of its priority and joins the rest of the economy. Pole possibility of producing of high quality products, civil and defense, disappears as well.

Further we shall analyze the state of scientific potential of MIG from the point of view of its conformity with the social order.

2. The state of the scientific potential of MIG and trends of its change.

R&D of MIG assured high competitiveness of the defense production and world leadership of certain products up to the moment of the beginning of the conversion (see Table 1).
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<td>Antitank Guided Missiles</td>
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<tr>
<td>Attack Helicopters</td>
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<tr>
<td>Chemical Warfare</td>
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<tr>
<td>Biological Warfare</td>
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<tr>
<td>Fighter/Attack and Interceptor Aircraft</td>
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<tr>
<td>Air-to-Air Missiles</td>
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<tr>
<td>Air-to-Surface Munitions</td>
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<td>SSNs</td>
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<tr>
<td>Torpedoes</td>
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<td></td>
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<tr>
<td>Sea-Based Aircraft</td>
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<tr>
<td>Surface Combatants</td>
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<tr>
<td>Mines</td>
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<tr>
<td>Communications</td>
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<tr>
<td>ECM/ECCM</td>
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<tr>
<td>Early Warning</td>
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<td></td>
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<tr>
<td>Surveillance and Reconnaissance</td>
<td></td>
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</tbody>
</table>

According to the USA Armaments Department /11/ (possibly, overestimated in favors of the USSR), in 1990 the ex-USSR liquidated only 5 (chemical, bacteriological arms, two of
missiles and anti-sputniks) of 31 types of armaments, meanwhile the USA - 17 types (bombers, submarines, helicopters e.t.c.). In the rest 9 types of armaments technological parity was retained. In the opinion of soviet specialists, we are already lagging behind in many defense technologies for 5 - 7 years /5, p.9/. This lagging behind is rather the consequence of unfavorable general economic situation in the field of the scientific-Technical Progress, than of the weakness of The defense R&D. However hard the defense sector would try to reduce its ties with the environment by self providing of materials and R&D, he will never manage to get the entire autonomy.

MIG, possessing the best intellectual and natural resources, contributes to the general backwardness of the country that, in its turn, lowers the technical level of the MIG itself. For instance, such situation is characteristic of the computers field. According to V. Avdoquevsky, estimates, their production for civil purposes lags 15-20 years behind because of absorption of all necessary resources by MIG. These resources have been used for resolving of specific defense problems. But this lagging behind in the general computerization of the national economy, as V. Avdoquevsky believes, negatively influenced the level of electronization of the defense industry /10, p.1/.

But with all this soviet MIG retained one of the leading places in the scales of armaments at world markets.

Meanwhile, the competitiveness of the civil production of MIG was very low. True, traditional export items were, for instance, the air-planes of civil aviation. But in contrast to it, deliveries of domestic apparatuses of long-term use to the world markets were small.

During a long period of time the efficiency of the scientific potential of MIG and also of the whole russian science was falling down, with growing number of scientific workers (see Table 2).
Efficiency of Russian R&D.

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1985</th>
<th>1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of scientific workers,</td>
<td>937,7</td>
<td>1019,1</td>
<td>1031,4</td>
</tr>
<tr>
<td>thousand men</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of models of new</td>
<td>2277</td>
<td>1948</td>
<td>1166</td>
</tr>
<tr>
<td>techniques, units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of models of new</td>
<td>17,1</td>
<td>16,3</td>
<td>3,9</td>
</tr>
<tr>
<td>techniques, surpassing the best</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>existing analogies, %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of certificates given,</td>
<td>251</td>
<td>265</td>
<td>66</td>
</tr>
<tr>
<td>units</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


The collapse of the USSR (1990) reduced the scientific potential of MIG, but possibly let Russia to retain its "critical mass" (see Table 3).

Table 3

Number of specialists in R&D of primarily defense orientation, thousands of persons on January 1, 1991.

<table>
<thead>
<tr>
<th>Branches of science and speciality groups</th>
<th>USSR</th>
<th>Russia</th>
<th>Share of Russia in the USSR, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of specialists with high education in R&amp;D (including scientific pedagogical specialists)</td>
<td>1632,9</td>
<td>1090,8</td>
<td>66,8</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aviation and space</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>missiles technology</td>
<td>22,5</td>
<td>20,4</td>
<td>90,5</td>
</tr>
<tr>
<td>ship-building</td>
<td>23,8</td>
<td>17,4</td>
<td>73,1</td>
</tr>
<tr>
<td>electrical engineering</td>
<td>43,1</td>
<td>27,7</td>
<td>64,4</td>
</tr>
<tr>
<td>instrument-making</td>
<td>59,8</td>
<td>42,9</td>
<td>71,6</td>
</tr>
<tr>
<td>radio engineering</td>
<td>100,5</td>
<td>78,6</td>
<td>78,2</td>
</tr>
<tr>
<td>informatics &amp; electronic computers</td>
<td>166,0</td>
<td>112,2</td>
<td>67,6</td>
</tr>
</tbody>
</table>
Table 3 gives some idea of the quantity of specialists in R&D of primarily defense orientation in the USSR and Russia. Certainly, the chosen specialties and branches of science don't cover all directions of military researches. Defense R&D takes substantial place also in many other branches of science. For instance, in metallurgy and biology. Vice-versa, in physics chemistry and other branches of science-specialization, included into the table along with the defense orders, the civil researches take some place.

That table shows, that specialists of scientific branches, in which the defense researches dominate, bent to Russia. Thus, the share of Russia in the total number of researchers in the field of aviation and rocket-space technology is 90%, in the sphere of radio engineering and communication-almost 80% in electronics and shipbuilding - three thirds of specialists.

But under the conditions of reduction of military expenses and economic crisis the number of scientific workers in defense institutes and engineering offices is decreasing because of uncertain conditions of financing and loss of prestige. In 1990 MIC lost about 40 thousand workers of scientific-research institutes and engineering offices, in 1991 - more than 90
thousand workers. 1992 the number of discharged from the defense scientific-research institutes and engineering offices may sharply increase (in 1992 general discharge of 1.4 million persons from MIC is expected). Mass "brain drain" abroad is taking place.

For example, in above mentioned "Telecom" concern the discharge in 1990 totaled 5.5 thousand persons (9.7% of the staff of the scientific-research institutes and engineering offices being converted). 1.8 thousand persons among them are transferred to civil production, 3.7 thousand persons (14% of the staff of research institutes and engineering offices). 3.6 thousand persons among them are transferred to the civil R&D and 5 thousand persons (58%) are discharged (2, p.67).

Mass "drain" abroad of the specialists of the Sibirian branch of the Academy of Sciences has begun; its financing has been reduced by 25% as a consequence of defense orders reduction. Thus, 50 biologists will leave for Brazil to work there (3).

In in the "Telecom" concern, that unites enterprises, producing means of communication one can divide converted scientific-research institutes and design office into two groups. The first group (about three thirds of all scientific-research institutes and design offices) is is characterized by high proportion of R&D (60-70%). The reduction of volumes of military R&D was almost entirely compensated by the growth of scale of civil R&D. The second group (25-30%) of scientific-research institutes and design offices of the branch) is characterized by a small share of military orders, not more than 35%. One could expect, that conversion of such scientific-research institutes and design offices face less difficulties, than in the first group. However, the reduction of military R&D is accompanied by simultaneous reduction of volumes of civil R&D, that puts these organizations in extremely hard conditions /2, p.68/.

Relative reduction of wages was a consequence of the reduction of financing of the MIC science. The average wage for a month in
scientific bodies of the MIC, that was on a high level in the past, occurred by 50 rubles less than in the machine-building. (9) Defense industries practically stopped getting foreign literature, imported apparatus and equipment.

The defense science is trying to reorientate its researches for more simple applied civil ones that causes damage to the fundamental researches. As a result, R&D efficiency is decreasing more rapidly than financing. The data, received by J.G. Koolikov in a branch scientific-research institute of defense orientation, that are included in the Table 3, are indicative of that.

The data of the table show, that the defense orders in this institute have been reduced almost by a quarter. In the beginning they managed to compensate this reduction by economic contracts, among which small applied R&D dominated. Fundamental research have been practically stopped, that means loss of a perspective and orientation only to survival. Financing of the defense R&D have been reduced by 23, publications and applications number - by 34 and 39%.

Table 4

<table>
<thead>
<tr>
<th>Years</th>
<th>Volume of defense orders' financing</th>
<th>Number of contracts/financing</th>
<th>Volume of fundamental researches financing</th>
<th>Number of publications</th>
<th>Number of applications for inventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1989</td>
<td>0,87</td>
<td>1,29</td>
<td>0,73</td>
<td>1,21</td>
<td>0,9</td>
</tr>
<tr>
<td>1990</td>
<td>0,80</td>
<td>1,51</td>
<td>0,42</td>
<td>0,89</td>
<td>0,4</td>
</tr>
<tr>
<td>1991</td>
<td>0,77</td>
<td>1,54</td>
<td>0,03</td>
<td>0,66</td>
<td>0,1</td>
</tr>
</tbody>
</table>

1. First published with the author's permission.
Sociological inquiry of engineers of several defense enterprises /14/ shows, that 40 percent of interrogated workers of scientific-research institutes and design offices understand, that conversion will lead to partial devaluation of their knowledge and practice and hence will require their reorientation. However, they regard social consequences of conversion rather optimistically. Unemployment is anticipated by 40 percent of all inquired of some enterprises and 5% of other enterprises. The decline of wages is anticipated by 24 percent, the rise of wages by 15 percent. The change of location anticipate only 3 percent of persons, that took part in the poll, both in small towns and in big cities.

About one third of designers, researchers, technologists and managers believe that carrying out conversion, it's necessary to rest upon market relations and economic liberty of enterprises. Seven percent of interrogated persons suppose to turn to business. But almost a half of respondents believe in the social support of the state.

It's necessary to work out the state program of conversion of the defense R&D to stop the process of disintegration of the defense industry scientific potential. In the Ministry of science, high school and technological policy of the Russian Federation initiative working-out of such program began. The program is supposed to be based on the defense doctrine of defense sufficiency and on conception of the new structural investment policy of Russia. As there is still high uncertainty in both fields, there is still no conditions for fulfillment of such work in the country. Hence, it's already necessary to analyze possible variants of conversion of the defense R&D with the aim to choose the best of them.

3. Variants of conversion of defense R&D.

There are five variants of conversion of defense R&D in the Table 5. They differ in direction and intensity of the vector of financing change of the total scientific potential
of MIG and defense R&D as well.

<table>
<thead>
<tr>
<th>N</th>
<th>Basic variants</th>
<th>Financing Total MIG</th>
<th>Including defense R&amp;D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>R&amp;D double use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Disarmament at the expense of R&amp;D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Reduction of the defense R&amp;D is compensated with expansion of civil ones</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Preservation of the &quot;nucleons&quot; of R&amp;D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Expansion of the armaments export</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conventional designations:
- growth
- reduction
- conservation in the same level.

Variant 1. The expenses for R&D aren't reduced they even raise. Meanwhile the scientific potential of MIG is wider used for resolving of the problems of the civil economy, particularly for raising of the level of competitiveness of civil products of high technological level by R&D of double application. Such variant of conversion looks very attractive, because its aim is is to attain technical leadership by both spheres-civil and defense ones. It doesn't destroy the scientific potential of MIG, neither its organizational structures, nor its staff. Such variant of the conversion of R&D is to be carried out in the USA, where the expenditures for military researches not only reduce but even raise (by 9 percent in 1992 /16/ under the conditions of reduction of the total assignments for defense. Moreover, some american specialists don't envisage any variants of decline of expenses for R&D in their analysis of possibilities of a more substantial decline of the military expenditures /4/.

What practical problems of the raising the competitiveness of the civil products are to be solved in the USA with the help of R&D of double orientation? For example, problems of creation of the artificial intellect and recognition of images, highly productive
computers of the fifth generation, new composition materials for aviation and motor-car industries, biological apparatus for control of pollution of environment e.t.s./ 16/. The Russian military science is able to raise and to solve problems of this kind. However, it's necessary to realize, whether solution of these problems meets social demands of our society and whether they are to be widely implemented in the civil industry.

Certainly, possibilities of wide usage of R&D of double orientation exist not only in the USA, but in the Russian Federation as well. The difference consists only in the degree of readiness of the Russian economy to assimilate the most advanced scientific-technological achievements. The thing is that the civil industry of Russia has lagged behind not only of the technology of highly developed western countries, but of our MIC as well. That is the reason, why in many cases it isn't ready for wider implementation of many high technologies. Some time ago one could be convinced in it by the example of the flexible automatization, that "got well accustomed" in MIC, but occurred devastating in the civil economy.

That's why conversion in Russia can't be limited to R&D of double orientation and has to search for its own ways.

Variant 2. Expenditures for military R&D are reduced more rapidly than ones for the production of armaments and maintainance of the army. Such variant was adopted in the first year of carrying out of conversion, when the share of R&D in military expenses began to diminish (see Table 6)
Table 6
Reduction of military expenses by items in 1990

<table>
<thead>
<tr>
<th>Items of military expenditures</th>
<th>Military expenditures, billion rubles</th>
<th>Index 1990/1989</th>
<th>Structure of expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>15.3</td>
<td>13.1</td>
<td>0.86</td>
</tr>
<tr>
<td>Purchases of armaments</td>
<td>32.6</td>
<td>31.0</td>
<td>0.95</td>
</tr>
<tr>
<td>Maintainance of the army</td>
<td>20.2</td>
<td>19.3</td>
<td>0.96</td>
</tr>
<tr>
<td>Other expenditures</td>
<td>9.2</td>
<td>7.5</td>
<td>0.81</td>
</tr>
<tr>
<td>Total</td>
<td>77.3</td>
<td>70.9</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Source: (1, p.p. 39,44), data from official publications

As it is mentioned above, as a result of the reduction of the military expenditures mainly at the expense of the decline of the share of high-tech in the defense production its technological level declines. For the sake of keeping the level of the defense sufficiency stable, it should be necessary to compensate a short-term gain in expenses for science at the expense of the large scale of the army and of purchases of the armaments. Large size of the army causes the damage to the national economy by direct deductions of the Gross National Product for its maintenance. Moreover, it diminishes GNP by taking hard working people out of production. This variant leads to disintegration of defense R&D, to the inevitable loss of working places for designers, technologists and scientists. On the other side, metal, production capacities, working power and other resources, necessary for production and the civil products are released very slowly, because of the preservation of big volumes of the armaments production.

Variant 3. Expenditures for defense R&D are reduced only to the
extent of their compensation in MIC by the increase of financing of the civil research and development. This variant became the base of the State Program of Conversion (December, 1990), in which the reduction of the expenditures for military R&D up to 1995 by approximately 15 percent in comparison with pre-conversion 1988 was suppose. But simultaneously the 41 percent growth of the volumes of research and development in MIC on civil themes was envisaged. As a result, the total expenditures for R&D in the defense complex in constant prices were maintained on the same level /5, p. 57/.

Such variant permitted to retain the staff of defense scientific-research institutes and design offices by reorientation of the each forth engaged in this sphere from the defense R&D to civil ones.

However a shortcoming of this variant consists in the fact, that it leads to reduction of the share of high-tech in the defense production, to the decline of its technological level. In the end it can mean for Russia not only the loss of markets for export of arms but the necessity of its import. This variant is oriented in the first place to own achievements of the civil sphere in the field the scientific-technical progress—that is rather doubtful—and rejection from the real achievement in the field technological level of internal arms production in the name of this aim.

Variant 3 may occur efficient for the country in a hypothetical case if it is possible to achieve high competitiveness (at first, in the national market) of durables, technological and transportation and communication equipment of domestic production. In this case it will be possible to reduce import of durables and products of the machine-building (during pre-crisis years fort each third ruble of investments in equipment imported goods were bought), and in the most favorable situation—to expand their export. This way it's possible to create currency possibilities for the purchase abroad of technologically advanced armaments and to reject from the perspective of its production on
own technological basis.

Achievement of high technological level of the mass production of the civil machine-building (including durables) by conversion of MIC still seems problematic and doubtful as it was mentioned above. But it's no doubt, that the reduction of financing of defense R&D will lead to increasing backwardness in the field of those 22 types of arms, in which our country still takes the front line.

It's unreasonable to give up keeping of technological level of the defense production: "A bird in the hand is worth two in the bush." Acknowledging undoubtful social priority of raising of technological level of the production by conversion, one shouldn't sacrifice technological achievements in the defense sphere, of course, to the extent of their conformity with the new doctrine of the defense sufficiency for Russia.

If the defense of the country is necessary it should be ensured on a high technological level. Otherwise it would be inefficient and too expensive.

Variant 4. The expenditures for defense R&D are reduced only for types of arms, which don't meet the requirements of the concept of defense sufficiency for Russia. For types of arms and military technics, that are the base of the Russian army, expenditures for R&D not only aren't reduced, but even raised. Military research and development is concentrated in creation of advanced models of principally new types of arms.

In this variant it's advisable to use wider, along with state financing of new projects of defense sufficiency, the form of interstate financing of international projects with a partial participation of the Russian Federation. The interstate treaties and projects in the field of defense R&D will not only permit Russian payers to economize big sums for financing of science, they also will prevent the transfer of arms race to the sphere of R&D, that would have a ruinous effect for the economy.
and the defense of the country.

In this variant the reduction of military expenses is achieved mainly by diminishing of number of persons in the army, of volumes of arms production, that is compensated by raising of technological level of the last one. The leadership in the field of scientific and design R&D of armaments not necessarily envisages their whole scale implementation into production and in the army.

The technological level of the defense production should be raised along with the growth of the share of high-tech in it. In this respect the forth variant envisages more economical way of development of the defense, that is based on high technologies and full usage of the innovation potential of the country instead of taking great quantities of fuel, metal, men and other resources for the defense purposes. To the extent of the necessity of defense it should be very effective. It can't be achieved without basing on science.

The influence of the conversion of R&D on the technological level of the civil production (including durables) in the Variant 4 is achieved mainly out of the limits of MIC and under the influence of the market. It's favored by gradual transition to the new system of financing of projects and programs instead of conventional apportion of the means to organizations. The new system of financing will favor transition of a part of the scientific workers of the defense scientific-research institutes and design offices to civil R&D. The state influences on this process by retraining of specialists, preferential taxes, credits and other preferences for those organizations, which carry out R&D in the field of raising technological level and achieving of competitiveness of the civil machine-building.

Variant 5 is based on the expansion of the export of armaments. This variant is envisages conservation of even increase of financing of R&D of MIG by using of currency receipts from the export of armaments.
This variant can be realized only for those kinds of production which meet the demands of world markets. Spot analysis of negotiations between 50 Soviet enterprises and their western partners shows, that some of defense enterprises of air-space industry, shipbuilding, metallurgy and others have change to appear at world markets\(^1\). However, in reality the world market tends to reduction. Russia is reducing its export of armaments faster than other countries.

Each of examined variants has its own limits of realization. Hence, the choice between five analyzed variants of the conversion of defense R&D can't be based only on the comparison of their efficiency and influence on retaining of R&D, it should take into consideration the limits for spreading of the variants. This choice, naturally, should be made at each enterprise taking into account its concrete conditions.

But with all this, the state would make total mistake, if it rejected a financial defense science in the period of crisis and sharp reduction of military expenditures (see Table 7).

---

\(^1\) Izvestiya, 11.07.91, p.6
Table 7

<table>
<thead>
<tr>
<th>Factors</th>
<th>Losses in financing(-)</th>
<th>Additional financing(+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Collapse of the USSR, reduction of the Russian budget in comparison with the union budget with conservation of the share of expenditures for science in the national income at the level of 4-5%.</td>
<td>5 - 9</td>
<td>-</td>
</tr>
<tr>
<td>2. Recession of production by 30-40%.</td>
<td></td>
<td>8 - 10</td>
</tr>
<tr>
<td>3. Reduction of the demand of enterprises for the scientific production and non-budgetary financing by 50%.</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>4. Creation of special funds of financing of science by assignments of 15% of the Cost price</td>
<td>-</td>
<td>+11</td>
</tr>
<tr>
<td>5. Tax preferences</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>6. Export of scientific production</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

The first three factors of the Table 7 determine the losses in financing of science. In the case of unfavorable development of events (as they can be considered at the end of 1992) the financing of the Russian science may be reduced by 22 billion rubles (prices of 1990) because of the influence of these factors. As the volume of financing of science in Russian Federation in 1990 was 26.6 billion rubles, such a reduction would mean its total liquidation.

Hence the President's edict envisages certain measures for creation of additional sources of financing of science in form of a special indirect tax on production in favor of science, some tax preferences for scientific organizations and for users of the
scientific production as well, creation of conditions of the export of scientific production. These factors of additional financing are presented in three last lines of the Table 7.

The first of these factors is able to provide additional 11 billion rubles of financing of science. It's enough for total compensation of the decline of production because of the crisis. However, realization of this chance is limited by "the war of budgets" and low level of the "tax obedience".

That's way reduction of the scientific potential of Russia and its MIG seems inevitable. But with all this the government can't permit self destruction of science. It should control the process of its reforming, financing not as much traditional scientific-research institutes, as new research projects and scientific-research collectives that carry them out.

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23. The Forecast of Production of the Main Types of Industrial


THE EXPERIENCE AND PROSPECTS OF REMODELLING
THE DEFENSE INDUSTRIES IN RUSSIA

by

Yuri V. Yarymenko and Victor N. Rassadin

The experience from remodelling and restructuring the defense industries this country has accumulated proves that conversion in Russia can follow three drastically different lines.

First, the bureaucratic conversion. Under this script, the top echelons of the state decree the output of civilian goods. The production process is oriented at old system of management and administered distribution of resources.

Second, the technocratic conversion (in evidence in the past five years.) It implies a restructuring from below with a view to the existing technological specialization.

Third, the economic conversion which means a profound regearing of the narrowly specialized industries and a coordination of single-plant, regional and national programmes within a common economic space.

Let us have a look at all the three approaches.

THE BUREAUCRATIC CONVERSION

The bureaucratic tendency was most boldly demonstrated in 1987. That year, the defense plants took an order to turn out equipment for the light and food industries, with a minimum account to their production profile. This decision sprung from the long-standing practice of imposing a "tax in kind" on the defense plants, i.e. the orders to produce diverse long-service goods. The administrative measures to expand subsidiary production at defense facilities ran in parallel to the then operational system of direct supplies of raw materials and special-purpose investment into the building of new production premises. Above all, the state subsidized the necessary research and design works.

The underlying idea of the bureaucratic conversion was to make use of the existing industrial reserves of the defense complex and its organizational and scientific potential without any impact on the manufacturing of weaponry and defense research.

Was it a conversion? In a sense yes. The military-industrial complex with its unprecedented capability to organize the output of advanced goods could, in the context of the planned economy, gradually shift its efforts to the area of civilian production. The first step to it had been made before perestroika when the mass release of long-service goods had begun. The second step was to hand over to the defense complex the manufacturing of all equipment for the light and food industries. The third step along the same line was the State Programme of Conversion, designed in 1988 and insignificantly changed by several adjustments in 1989/1990. It envisioned the promotion of civilian manufacturing in the three previously commanded directions, including consumer goods and the
above said equipment. Besides, the programme prescribed the
enterprises, of which the diversification did not demand big investment,
to produce civilian goods. This was the case with aircraft/shipbuilding
and some other industrial branches.

The ways of boosting civilian production came in handy—the activation
of reserve facilities, of the arms manufacturing disposals, of the
organization, research and design reserves, direct investments in the
new production premises and budgetary subsidies to new scientific
projects.

Although the required figures of the civilian goods output were not met,
the growth rate in 1989-1991, at least in terms of costs, was high. On
the other hand, the actual number of produced items was far behind. At
the last stage of the bureaucratic conversion, the very environment that
bore out this form of employing defense facilities for the purposes of
civilian consumption began to decay. The system of state orders got
looser month by month. It all ended up in a sharp curtailment of
subsidies for defense programmes which told on the indirect financing of
civilian manufacturing schemes.

At present, there are fewer opportunities for a purely administered
conversion, yet they exist to the extent to which the defense facilities
are kept under the administrative control. The six priority directions
of the conversion the government has put forward are chiefly implemented
along the old patterns. This especially concerns the branches with a
long record of administrative regulating, like the manufacturing of
agro-equipment. Besides, inherited from the bureaucratic conversion is
a vast number of secluded and technologically isolated facilities with
the aid of which the defense industries payed their "tax in kind".
Under present-day conditions, they have found themselves in the vacuum.
On the one hand, many of the previous administrative pillars are gone.
In the past, material supplies to the defense plants were top priority,
the so-called "red line" on their request blanks being a symbol of it.
The civilian production sections of the defense complex were no
exception. The financial basis of defense orders has compressed. What
is more, many enterprises are debt-ridden as the previously ordered
material is not purchased and the production costs are not covered. On
the other hand, a great many such facilities have no appropriate status
to freely operate on the market and the degree of their vitality is far
from allowing all of them to opt for independent operations.

The clumsy system of civilian production—a result of the iron curtain,
so to speak, which separated the defense complex from other sectors of
the economy—is in a critical condition. It has almost collapsed.

An apportoning to the civilian manufacturing units of part of the
excesses, incurred after the state had stopped financing the defense
order, dealt the heaviest blow to them. For instance, a sharp
curtailment of the naval ships and spacecraft modernization programmes
put brake on the development of naval and space surveillance systems.

The Ministry of Foreign Economic Ties alone placed an order to the tune
of 37.1 bn rubles (in 1991 prices). It embraced MiG-29s (7 million
rubles each), anti-aircraft complexes S-300 (1.5 million rubles, etc.
The prices at the time were relatively low while the number of ordered
items was big. Less than 1/4 of the order has been payed while hundreds
of tanks and aircraft and dozens of antiaircraft complexes have remained
unwanted. In the wake of it, the defense facilities re-wrote a part of the unnot expenses, especially in wages, to the prime costs of civilian products.

That was the reason why the growth of prices of civilian goods, manufactured by the defense industries, outpaced in some cases the inflation rates. Another weighty factor added to the hike of the prices of metals and energy resources. One can assert the repayment of the outstanding debts of military and non-military customers was a catalyst of inflation. In fact, the customers who obtained goods at inordinately high prices payed off the state debt. In the meantime, the manufacturers turned up at bay as they faced the necessity of selling their products at these same prices.

There are three groups of defense facilities that have gone through the bureaucratic conversion. The aftermaths of the civilian goods price leap are notably different for them.

The first group are the defense enterprises whose civilian production units are structurally developed and have competitors in the non-military economic sectors. The steeply climbing prices of their produce against the background of dwindling invest demand put up sales barriers. A typical instance of it is the Kirov plant in St.Petersburg that builds the K-series tractors. The presence of powerful competitors who can build tractors at lower costs creates considerable marketing difficulties. Even the industrial diversification does not always lead to success. While the Kirov plant is testing the pilot samples of mini-tractors, the tractor plant in Chelyabinsk has streamlined them.

The second group includes the facilities that have lost all clientele or have the customers whose demand has drastically fallen. This is the case with the bulk of ship-building yards. The volume of the state order for naval ships is undecided as is the fate of the ships the construction of which was suspended by the government this year. The vast majority of the enterprises are insolvent and about 30 state-run shipyards have cut down the workweek. In 1992 and 1993 the branch has been and will be experiencing difficulties in the sales of civilian produce since the major customers, the transport marine and the fish fleet, are short of money to buy the vessels they need.

Foreign customers could improve the position of 200 enterprises, research and design institutions subordinate to the ship-building department which is scrutinizing the possibility of selling Russian ships to China. Earlier, the same department held talks with American commissions on the participation of his country’s plants in the development of the Sakhalin shelf, specifically, in the construction of floating derricks and docks. But on the whole, the international buyers have yet far from compensated for the drop in the domestic demand.

The third group of plants have retained their positions on the market, mainly because of their monopoly in specific fields of production and a fairly big purchasing power of their customers. Referred to this category are the producers of mine compressors, oil pumps, etc. Their orientation toward the fuels industry and power engineering has fetched them a minimum vulnerability status as the fuels and energy industries are practically invulnerable.
By and large, the defense sector manufacturers of civilian goods belong to the first two groups. Their positions become shakier as the reserves they had at the beginning of the year thin out. The government-promised reimbursement of debts for the 1991-1992 defense orders will hardly remedy the situation.

The data on an abrupt slow-down in the release of the principal types of produce prove the civil-orientation facilities are running out of reserves. Here are some figures of the production decline in the first half of 1992 (as compared to the first half of 1991) and in September 1992 (as compared to September 1991):

<table>
<thead>
<tr>
<th></th>
<th>September 1992/September 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV-sets</td>
<td>78.1%</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>86.9%</td>
</tr>
<tr>
<td>Radio-sets</td>
<td>42.9%</td>
</tr>
<tr>
<td>Tape-recorders</td>
<td>48.8%</td>
</tr>
<tr>
<td>Photo cameras</td>
<td>74.8%</td>
</tr>
<tr>
<td>Washing machines</td>
<td>54.3%</td>
</tr>
</tbody>
</table>

Coupled with the data on the sharp decline in the light industry and in the subsidized machine-building, this table shows that the economically weakest industrial branches were able to resist the crisis for no longer than six months. The production of long-service goods at defense plants have turned up among the feeble sections. The conclusion is that the former bureaucratic efforts to re-focus the defense compound on civilian manufacturing—whether or not that was a conversion remains an open question—have brought into existence a lifeless formation which, alongside the light and food industries, is rapidly going to ruins.

What mostly matters in the conversion process these days is not the absence of new gains but, rather, the fact that old achievements have proved short-lived.

On the all-Russia economic scale, that means that the consumer goods production potential has failed to reach even the low level it was planned to. Much more will have to be created than was expected before. In all appearance, the goal of the forthcoming conversion stages will be to fill the blanks the economy showed up in the second half of 1992.

The ways of preserving the vitality of or revitalizing the civilian manufacturing divisions at defense plants will largely depend on the overall course of reforms. Widely spreading is the viewpoint that only emergency measures, like the freeze of prices of basic commodities, raw materials and energy resources can avert the destruction of the economy. Special effort should be made to restore economic ties throughout the Commonwealth of Independent States.

Many managers say to support industrial vitality it is necessary to make easier the access to the world market. In the first place, it implies changes in the order of export licences. Only producers are entitled to receive them. As for foreign trade associations, they can only act as
mediators for a separate pay or for a special rate on deals, but not as monopoly exporters who dictate their will to enterprises.

More or less viable facilities can benefit from favorable conditions of credits for their modernization. Low-interest special-project credits could help diversify civilian manufacturing at defense plants so as to lower the costs and enable the output of competitive products. The divisions whose produce has been made uncompetitive by big prices can gain from a financial adaptation programme, the central elements in which are privileged taxation and special crediting of the customers.

In many cases, a divorce from the head enterprise, privatization and stockholding schemes could serve as a way-out for the loss-making facilities. However, the process is extremely slow, chiefly because the defense departments and defense plants remain largely disengaged from the rest of the economy and from the new economic legislation which is gaining ground in the civilian sectors.

On the whole, the left-overs of a bureaucratic reorientation of the defense facilities are in a critical condition these days and the only salvation can come from comprehensive national conversion programmes. The measures to that effect should include investment programmes, credit and financial support and a reasonable re-modelling on the basis of privatization and stockholding. In the meantime, the new tide of conversionist measures has far from rectified the situation. In its present-day form, the conversion can be tentatively called technocratic, as we have said above.

So far, it follows the traditional pattern of restructuring and reorganization but without the customary one-hundred-percent financing from the state budget. The principles of resource distribution for the conversion projects have seen no change and the state policy in the field is not systemic. The weakness of that political line lies, first and foremost, in the fact it does not allow to work out a strategic concept of an economic re-modelling.

Enterprises and their structural units are now elaborating a survival tactic. But this variant is quickly exhaustible, although for brief periods it can bring commercial benefits, largely through the current dollar-to-ruble rate.

Yet, separately undertaken feasible projects are not bad. Far worse are pseudo-projects, very instrumental in squeezing out financial support which is squandered on current affairs and whips up inflation.

THE TECHNOCRATIC CONVERSION

The technocratic approach to conversion as a method of adapting the process to the existing technological capabilities, research and design reserves of the defense complex was for the first time felt in the State Programme of Conversion. Alongside the administering civilian goods production, it featured a number of provisions to relate the orders to the mainstream activities of the converted plants. In the first turn, this concerned ship/aircraft-building, the production of telecommunications and a group of other branches.
The distinctive trait of these orders was the attempt to find acceptable ways of a subsidiary output of civilian products and at the same time preserve the mobilizational and military potential. The authors of the idea focused on purely technological criteria rather than the needs of the economy or on market research.

Such plans bore signs of narrow departmental interests. The ministries and enterprises likewise bore in mind a strong military programme. An all-round re-gearing of production was outside their calculus.

In parallel to the planned diversification, at the end of the 1980’s defense plants began to set up commercial subsidiaries on their own initiative. As a rule, those were small production units that used advanced technology and high-grade materials, still available to the defense sector. Their supreme goal was to put out competitive export products to earn hard currency for the flagging defense industries. They played the role of “H/C floats” that kept the sector afloat in the conditions when the defense order was declining and plant managements made vigorous efforts to postpone the beginning of a full-scale conversion.

Despite a showy advertising campaign—for instance, lists of new goods from aerospace plants contained dozens of items—that initiative was, by and large, an attempt to avert a comprehensive change. “The lesser conversion” made use of scattered technological achievements and did not resolve the strategic problem of preserving the labour staffs and the production potential. It merely postponed the terms of the “greater conversion”. The public at large was constantly deceived when the moves to keep up the whole state of things were passed off as serious steps to demilitarize the economy.

By the superficial results, the technocratic conversion was more successful than the administrative conversion, but its gains could not be lasting. In many a case, they relied on the unique position of defense plants as regards the supplies of materials and assembly units, the strong budgetary support and other privileges.

In the same period, a group of aerospace and aircraft builders showed another side of the technocratic approach by seeking financial support to ambitious super-projects like the commercialization of space platforms and horizontal launching, a range of schemes in aircraft-building, etc. Their authors tried to find a formula of civilian existence that would be equivalent to the former economic conditions under which the military production giants used to perform big-size defense orders. But the utopian nature of the super-projects along with their inconsistence with the resources the state had was quick to surface. It should be said their appearance was made possible as the government had not mapped out either the economic restructuring priorities or an all-embracing conversion programme to enact the potential of the entire defense complex. In the absence of clear prospects, many large defense amalgamations chose the wrong alley of putting to use their capabilities and took to unrealistic or wasteful programmes.

Finally, one more technocratic scenario should be recalled—an attempt to independently find a way out of the deadlock by an entire department. The programme in question was drafted by the former Ministry of Medium Machine-Building that began to employ the results of completed nuclear-
fuel research in the mass production of super-pure materials for the radioelectronics chips and ensured subsistence to the related departmental structures. The concept was grounded in the experience of autarky that in the course of several decades helped to build up a gigantic super-reliable insular network of machine-building, construction and research facilities.

In the face of the need to tackle new goals, this method of survival implied an inter-departmental solution of a wide scope of problems, from the manufacturing of production equipment to the release of the end products.

Completeness of design and a broad re-modelling of production were, beyond doubt, the strongest points of the conversion programme for the nuclear industry. But its isolation from other sectors of the economy and the lack of concerted strategy (without which the still largely centralized economy loses dynamism) bred numerous difficulties in the implementation of the primary project.

It should be noted the consequences of this stage of the conversion have not found unanimous assessment. On the one hand, new subsidiary industries and big projects could keep the defense sector going. On the other, the absence of coordination may give birth to the measures that would contravene the national strategy of conversion, provided the government prepares it and sets it into motion.

The tendency toward a disintegration of the economy, apparently instigated by many results of a purely technocratic utilization of the defense complex reserves, is alarming. This country’s economy has been considerably disintegrated in the past. It was cut into separate scarcely communicating blocks. Signs of it are most plainly visible in the gap between the defense and civilian sectors. A major task of our economic development is to pull down the wall between them, float the technology, establish cooperation ties, re-gear the defense plants, and relieve them of the burden of defense departments. Conversion has attained none of this. At the same time, the loosened conversion process has given birth to new forms of the advanced defense manufacturing’s isolation from the civilian economy. New enclaves, detached from the traditional civilian branches, have appeared where the production of export items and research projects for foreign customers has made progress.

Naturally, we have interest in fostering the export capacity and H/C revenues. However, this should not run at the expense of the technological and defense reserves which are potentially applicable to the internal structural changes. The spawning of enclaves, wholly oriented toward the foreign clientele and shaping their strategy with only the external demand in view, can make Russia’s economy resemble a raisin cake with all raisins pinched out and only tasteless dough remaining.

This trend is especially dangerous in what concerns science and research. Orders from abroad undoubtedly bring in hard currency, but, maybe, at the cost of losing the internal development sources.

After some conclusions about the outcome of the first stage of the technocratic conversion, let us have an overview of the forms the
Having found themselves in tight grips, and with minimal wage resources, the defense plants have stepped up their efforts to streamline civilian goods. But a whole set of circumstances obstructs their change-over to a reasonable economic conversion.

Firstly, there is no rational plan of the defense order. It can be compiled only on the grounds of a finished defense doctrine. The old pattern of orders stays in place and nothing has been done to straighten out the system by placing such orders at one group of plants while relieving the other groups plants of them. The old principles forming the mobilizational capabilities also tie up the hands of plant managements.

Secondly, the state does not have the resources to implement an all-embracing conversion programme. The government has no such a programme even on paper, but even if it had, the macroeconomic situation would allow of implementing it only in small portions.

Thirdly, the state maintains the administrative control over the defense plants that are separated from the rest of the industries by a big barrier. Tough supervision impedes economic independence and privatization.

Enterprises could not but launch civilian production in these conditions but they had to do it in forms that reminded them of their former sporadic conversion actions. This means that when it comes to conversion decisions, the final say is still with engineers rather than with businessmen or traditional economy planners. The technocratic conversion variant used in an emergency (a crisis of payments, an unaccessible credit and budget restrictions) has its own specific features. They are as follows:

1. Conversion has grown more spontaneous. Lack of government coordination was in no way made up for by an analysis of market capacity or the solvency of buyers. Hence the numerous duplications of conversion programs and the difficulty of selling new products.

2. Resources being in tight supply, the technical level of projects markedly declined. Advanced technologies attract those enterprises in the first place that enjoy a comparatively favorable economic position thanks to a high level of defense order. Enterprises that have lost military orders and failed to receive sufficient conversion funds have to launch production of simple technical things at their own risk.

3. And the curtailment of the general production potential and the pressure of time inject more problems in export productions. The latest wave of sporadic conversion is less targeted on the external market.

Since many enterprises have been late with restructuring, more conversion programs have been coming out. The 46 billion rubles allotted this year to support the enterprises undergoing conversion serve as some kind of contributing factor. An easy-term credit of 77
billion with 3 percent interest must be added to this sum. Still the
two figures can by no means meet the financial requirements of even the
current conversion, the declining. The worth of only the conversion
proposals that have to do with equipment for the agro-industrial complex
runs into several hundred billion rubles. Even if we assume that the
proposals in this field are surplus and unreasonable, the financial
requirements of only one conversion trend will all the same turn out
several times greater than the money allotted.

It is obvious that a considerable part of the conversion programs being
outlined for enterprises will fail to get action. The Nizhny Novgorod
Region example is quite typical in this respect. The orders that were
fulfilled last year have not been fully paid for to date. Defense
complex enterprises have a total debt of more than 8 billion rubles and
the soft credit to replenish circulating funds is cut. Government
special-project credits to back conversion programs will go only to 16
enterprises in the region, or one-fifth. V. Luzanin, president of the
Association of Nizhny Novgorod Region Industrial Facilities, has stated
in public that the greater part of the conversion programs cannot be
carried out at all. All this will ultimately whip up the defense
complex crisis. Last month (October, 1992,) more than 400 defense
enterprises had a three to four-day working week, about 130 were on the
brink of standstill and 21 were idling.

The defense enterprises denied government backing have to multiply and
export some models of military equipment—a powerful mechanism for
restoring their economic position. Understandably, the latest models
are not exported.

The argument they use is the necessity to amass funds for conversion but
regarding some elements of the defense geared economy this virtually
means a long-term arms sales specialization. True, such a decision can
prove reasonable for defense enterprises in the short-term perspective
but for the national economy as a whole this may mean mothballing
defense structures and reducing the defense potential, which can be used
for economic restructuring. Besides, we must take into account the
trend toward narrowing world weaponry markets.

The conversion pattern taking shape at a governmental level is about as
follows:

1. To energetically sell military equipment and weapons systems to
other countries.

2. Where Russian-made military equipment complexes fail to command
demand in full, to comprehensively build up foreign trade in parts.

3. Without special restructuring to step up the production and export
of a modification of military equipment (submarines to examine the
shelf, satellite delivery vehicles, aircraft and so on.)

4. To carry out direct and full-scale conversion only where nothing
but simple consumer goods can be produced or if the enterprises
have neither economic nor technical value. A swoop privatization
is a possibility to save government spending.

Although the production isolation of some workshops and sections during
conversion creates favorable conditions for their economic isolation and
privatization, this comes about too slowly. At present, the direct
privatization applications initiated by MIC leaders account for less
than 1 percent of the total.

The Ministry of Industry has approved lists of enterprises that require
permission by corresponding departments to go private. As a result, the
managers and work collectives of defense enterprises have found their
choice opportunity heavily undercut.

Still, references to the constraining character of the Program for
Privatization and to the prohibiting instructions issued by
corresponding departments, instructions that ostensibly stand in the way
of a privatization of MIC enterprises, are far from always grounded.
Most defense enterprises have units that cannot be put on the
restrictive list in terms of their products and, so, are not liable to
privatization. They can be withdrawn from subordination to
corresponding departments and turned to regional property committees to
denationalize later. Under the Law of Conversion, when the workshops,
sections and other enterprise structures and units are fully converted,
they can become independent civilian enterprises with juridical person
rights.

In practice the privatization that is based on concrete economic changes
is increasingly replaced by departmental privatization. This pseudo-
privatization under the guidance of military-industrial departments and
concerns draws in more defense plants and fairly quickly turns them into
joint-stock companies and the administrative structures into holdings,
associations, foundations and so on. But this does not change the
essence of ownership, which remains in the government's hands.
Enterprises are still following instructions from the top administrators
of the defense complex.

Take the central administrative boards and sections of the department
that replaced the Ministry of Electrical Engineering,
MINELEKTROTEKHPRIBOR. They have been turning into associations and
concerns and taking on former ministry officials. Here is a list, far
from complete, of this ministry's concerns and associations: the
ROSALPROM concern, the ELEKTROPRIVOD concern, the ELEKTROSVETOTEKNIKA
association, the ELEKTROZARYAD concern and the ELEKTROTERMOVARKA
concern. Each has a great many enterprises. Industrial branch exchange
tenders have shown that enterprises under the patronage of new entities
of this kind suffer great losses. The president of this exchange is a
former deputy minister and the executive director is a former deputy
chief of the same ministry's production section. All the brokers of the
exchange represent the associations and concerns of departments. The
ex-minister himself does not head the exchange but he does link the
concerns and associations.

With the obsolete industrial structures preserved under a new look, a
defense complex regional conversion becomes impossible as a road to a
common market space or to complexes and systems of machines and
mechanisms for the fundamental branches of industry rather than some
titles of civilian goods.

No legal, organizational or information problem of demilitarizing the
national economy can be solved if this applies, in fact, to the State
structures alone.
AN ECONOMIC APPROACH TO CONVERSION PROSPECTS

If at one time special conditions, prohibited zones, and economic and legal "lacunae" were built for the military-industrial complex alone to enjoy, demilitarization cannot be carried out without a common economic space for all enterprises to share.

This common economic area based on free deals to purchase and sell military and other commodities and services requires the following:

- A codified private economic right, including the right to trade, ownership and investment.
- Freedom to build various economic structures, regardless of their branch, departmental or territorial belonging.
- Market-targeted exchange of commercial and economic information among economic partners, including MIC associations, with honoring the universally recognized norms of upholding the rights to ownership of information.

The military-industrial complex in its present form (its legal uniqueness, organizational isolation and informational seclusion) rules out the idea of a common economic area and, consequently, a of common market infra-structure. At the same time, the spontaneous disintegration of military-industrial structures has negative effect on the preservation and re-orientation of the Russian economy's scientific and technical potential. Lack of a defense sufficiency doctrine and program for arms that would be backed by State order special funding not only makes any global economic reform act unreal but will jeopardize the very existence of the Russian machine-building complex, especially large industrial centers, in the near future.

Government budget support alone cannot avert a situation of this kind. Business interests--banks, exchanges, joint-stock companies and investment foundations--must help solve conversion problems. A multi-channel system to finance conversion through an institutional market infra-structure will commercialize this process and make it paying. The rate of decollectivizing farming and demonopolizing the industrial and building complex will depend on, first, how quickly--technically or economically--conversion can be carried out and, second, who will do it.

The military-industrial complex has an organizational isolation. No wonder, it includes control structures--the ministry, departments and concerns--that are free from economic realities. They use budget defense allocations the way they see fit. Besides, Russia has neither a clear-cut doctrine of mobilization preparedness nor a system of competitive orders for military products.

This being the situation, it is a short-sighted attempt to create a separate department of defense machine-engineering in the Russian MIC control system in the making. Based on obsolete control principles, it is fraught with an economic breakdown even if separate conversion technical projects are thrashed out.
It would be more fruitful to set up a Committee on Conversion or a similar body to lean on the research and production structures that have been preserved by the Russian Academy of Sciences and MIC. A committee of this kind should have as permanent members (more than 50 percent) to represent the civilian branches.

All economic resolutions by the Government and Parliament of Russia must include the economic, legal and informational introduction of the MIC into a common market area. It is necessary to establish under the committee a State foundation to invest in and finance government conversion programs. The foundation could lean on the demand loans and credits of the State Bank of Russia, for instance.

Foundations of this kind must bear a multi-channel character and their uses must be multi-functional. They could depend for replenishment on the national budget, deductions from the profit gained by enterprises undergoing conversion (to offset tax allowances,) the shares of commercial and enterprising groups, foreign investment, money from non-budget funds, loan interest and credit.

To get the MIC under control, the committee and foundation must have a ramified regional structure. It would be reasonable for the foundation to open regional branches under the executive authorities to enable the now separated civilian and military sectors of the national economy to cooperate.

If a conversion foundation is set up under either the Ministry of Industry or any association of MIC subjects and objects, this will produce (in fact, already has produced) a mechanism of distributing investment resources, rather than an economic mechanism.

A further economic isolation of MIC structures and the lack of a concrete conversion program and regional structures to carry out both such a program and separate projects will:

- increase the social costs of reform because the negative consequences of MIC enterprise job reduction and capacity freeze will destabilize society;

- make it useless to correct economic legislation and adopt more laws of ownership of land, bankruptcy, etc., because the difference of land-tenure conditions and the efficiency of the military-industrial complex with its present dimensions is capable of killing any positive legal innovation in the civilian sector of the national economy;

- make it impossible to build a mixed (and more stable) economy if the economic and industrial policy continues to place the military-industrial complex on the borderline between the public and private sectors;

- the same is true of separating enterprise finance from the national financial system. The whole of the military budget, including production costs, must be with the Ministry of Defense. Direct budget and credit support to MIC enterprises must be limited.

We believe the approach to the national conversion program will prove fruitful if it steers clear of a technocratic trend. In our economic
conditions, restructuring the defense complex means converting its economic resources (it is no problem using its technologies,) primarily its human capital (the skilled personnel with their technological discipline) and also the research and designing potential, the transport and energy infrastructure, and the advanced social infrastructure. The specific production patterns and the technologies of small-scale military production can far from always be used for launching civilian production. The same is true of special equipment. But the investment to replace equipment makes not more than 10-15 percent of the capital resources that have already been invested in a defense enterprise and the whole of its periphery. If a broader approach is used and human capital taken into account, the comparative figures of more investment will be even smaller.

Understandably, it is hard to attract more capital, purchase equipment, convert production, retrain personnel and adopt new technologies.

Do not forget that the labor and material resources of the defense complex are still able to function. MIC enterprises have lost not more than 10 percent of their skilled workers. It is clear why: small towns may have no industrial facilities but 2 or 3 defense plants and in large cities the reserve of well-paid jobs in civilian branches and commercial structures has nearly been used up.

In machine-engineering the machines, machine-tools and equipment meeting world standards have never gone higher than 16 percent but at least 60 percent of the defense enterprise equipment is the best that this country has. True, it is below world standards in design and electronics but quite fit for making quality and competitive goods. The greatest threat to a reasonable conversion program comes from a repetition of technocratic mistakes. The very first experience of drawing up the 1988 short program is quite didactic. That year the government was offered a set of measures which the defense industry with its “capabilities” was to carry out. Some were costly, indeed (laser rail treatment, for instance.)

Under that program the conversion potential boiled down to a certain sum of high tech, the volume and quality of research and designing units, and the strength of the production machinery of corresponding enterprises. Some believed that a technical and production conversion variant could be prepared by merely drawing a number of diagrams of cooperation among the above-mentioned elements.

Supporters of this kind of conversion refer to the much the same processes that took place in United States and other Western countries. But the United States, for one, was building its military-industrial potential back in the 30s on its sufficiently powerful civilian machine-engineering. That is why its purely technical conversion was worked into the American multi-structural market economy. Besides, civilian industrial facilities always had surplus capacities and the banks had a reserve investment capital to set them in motion by committing vacant labor resources. Mobilization equipment was reserved and the government itself met all the expenses of keeping the military production machinery workable.

The situation in Russia is quite different. Many of the skilled workers, technologists and designers who are capable of not only carrying out some projects but--the main thing--doing this at top
production discipline level are out of it. And we must add the modern production infra-structure with its quality and durability similar to the main production. Economic conversion alone--this sum of solutions geared to the existing economic reserves rather than the productions in operation--is capable of preserving and committing a potential of this kind. After all, the national economy does not need any new, let alone exotic, productions. Some equipment models that can be found in private conversion projects can easily strike your imagination--they have no analogue in the arsenal of world discoveries or inventions. But unfortunately, no combination of these projects has produced any machine system in the basic civilian branches, they can only meet the world market's exotic but limited requirements.

The principal goal for national conversion should be retooling civilian machine-engineering, building up its capabilities by converting defense enterprises and renewing the machinery of the key branches of the national economy in this way. The program's nationwide character should lay a foundation for conversion efforts to result in integral machine systems rather than an uncoordinated production of some equipment models. It is still a pressing necessity to coordinate private conversion projects in this country, which had an overly centralized economy a short time ago.

Regrettably, Russia's new conversion program will have to do with both the old machinery and the outgrowths of the bureaucratic and technocratic approach to conversion. This is true of engineering development in the first place.

An analysis has shown that a considerable part of the machines either adopted under the former conversion program or to go into production fail to form any integral systems. Moreover, in their technical and economic characteristics they can hardly command demand in real terms. But take this example: of the 586 titles of equipment that were developed under the former government program for the fuel complex only 195 were prepared for production.

In this respect, the farming machinery situation is much simpler. The new national conversion program will have to do with a more or less clean space without too many by-products of the past, where defense enterprises are concerned. Farming machines failed to win priority from the former program.

The problems that the new national conversion program is to solve are as follows:

1. To build up consumer goods production and improve its technology in the civilian branch of the national economy by notably advancing production and object cooperation with the defense industry (economically independent corporations with a network of small subsidiaries to assemble intensive R&D consumer goods.)

2. To step up the production and expand the range of equipment that ensures support to social programs and research development, the purchase of medical and ecological equipments, the advancement of the social infra-structure, etc.

3. To use the defense complex's potential for overcoming the structural and production crisis that has hit civilian machine-
engineering. For this purpose, to establish at defense enterprises independent associations that would offer services to heavy machine-engineering enterprises and the related network of small enterprises turning out electrical equipment, instruments, etc.

Against the backdrop of bitter currency restrictions and the poor technical retooling opportunities available, the defense complex's innovation potential will help overcome the structural crisis that the nation's civilian machine-engineering faces. Primarily, it is the designing potential, the capacities of experimental production and the broad range of intensive R&D services to launch production of instruments, machine-tool attachments, component parts, intensive R&D finish operations, control means, etc.

To retool civilian machine-engineering, it is necessary to withdraw the defense complex's special productions of machine-tools of its own from MIC subordination. At present these productions account for a considerable part, or even the great majority, of the more progressive models of metal-working equipment: transfer machines (75%), machining centers (45%), automatic and semi-automatic machine-tool lines (50%) and flexible production systems (85%). The output of special machine-tool productions meets the requirements of the defense complex alone today. Its entry into the Russian market of metal-working equipment will build more resources for retooling civilian machine-engineering.

The government must make every effort to develop and carry out a truly national conversion concept aimed at strategic results.

The national economy cannot hope to win a production core without integrating the defense industry into the civilian. To keep the defense industry unchanged means not only to deny the country economic prospects but also to undermine national security in the long run. We are convinced that no material foundation can be laid for a developed, productive and socially-targeted market economy without action on a national conversion program that will lean on defense enterprises' economic independence in real terms.
Discussant comments by James Steiner on Dr. Yaremenko’s and Dr. Rassadin’s paper:

**General:** Very well done paper

- many areas of agreement
- but not as sanguine about current situation and prospects for stabilization
- along the way pose some questions for further discussion

**Areas of Agreement**

- USSR was a centralized, militarized economy with weak consumer and service sector. Defense sector 3-5 times larger share of economy than in U.S./Western Europe
- Gorbachev's era of half-measures substantially worsened fiscal and economic base for reform but not surprising that "consensus" programs must be tried—and fail—before politically feasible to attempt revolutionary change
- Yeltsin government moved quickly and dramatically to implement basis elements of reform and make them irreversible—prices, budgets, privatization

Question: Is reform “irreversible” and what does this mean?

- excellent job of outlining the economics of the current policy debate—whether to focus on controlling inflation at the expense of employment or vice versa
- this debate reflects a crisis of major proportions and one not as susceptible to a “middle” course as recommended by Dr. Yasin. Rather, a continuing crisis at best

**Current Policy Debate**

- well over a hundred huge state industrial and defense industrial enterprises (15,000 workers or more) and most are technically bankrupt
  -- in defense industry, major customer (domestic military) has slashed weapons orders
  -- in civil machinery sector demand for investment goods way down
- little or no unemployment but massive underemployment—work 2 or 3 days per week or stay home for a month or two
- how do enterprises survive?
  -- unpaid bills (until July)
-- bank credits--easy money

-- direct subsidies--most "conversion" monies being used for consumption rather than re-tooling

* but now seeing impact of loose credit policy in double-digit monthly inflation rates and de-valuated ruble

* why not "fire" redundant employees

-- obvious political fallout and humanitarian concerns

-- large defense firms provide not only jobs but also entire social infrastructure, housing, schools, clinics, food stores, vacation complexes--and banks

Question: How to prepare these huge enterprises and associations for conversion: how to strip off social infrastructure?

* until these massive defense industrial, metallurgy, and machine-building enterprises are dealt with, the inflation/employment issue cannot be resolved

* inflation will continue at an unacceptable high rate
MARKET REFORM AND THE FUTURE OF RUSSIAN ECONOMY

by

Evgeny G. Yasin

Domination of command economy and totalitarian regime in Russia for almost three quarters of a century has led the country into an impasse and caused its growing lag behind developed industrial countries. The militarization of economy to support the status of a superpower, political and ideological ambitions, low efficiency of the economic system have preconditioned already as of the late 1960s the inevitability of the future crisis. Attempts to prevent it by way of cosmetic treatment within the framework of the existing system, i.e., its repair instead of its elimination, have not given any positive results.

Moreover, the command economy after many years of mutual adaptation of all its elements acquired its own internal logic and integrity, completely differing from the market economy. This is a matter of principle, as it explains that the transition from command to market economy, particularly in Russia where the process of institutionalization of the communist system went further than in any other former socialist country, could not be evolutionary. The integrity of the system means that any attempt to modify any part of it leads to crisis situations because of the destruction of the well-established mechanism of internal ties.

In Russia the gravity of the imminent crisis was intensified by the fact that in addition to problems caused by the transition itself, disturbances in the functioning of the old institutions, and impossibility to organize off-hand the work of new ones, there appeared even more severe problems of depletion of resources, degradation of the human capital and the environment, growing inefficiency and general weakening of the economy. The longer solutions to these problems were postponed, the more severe the crisis had to be.

The denouement happened sooner than expected by most people who believed the communist empire to be unshakable. But much too late for the minimization of expenses and losses. The deep economic, social and political crisis in which Russia finds itself and which exposes the majority of the population of the country to severe ordeals is at the same time the starting point of the way out of the impasse. This is proved by the mere fact that the totalitarian regime in Russia and all its dependent states has collapsed and the new leadership has declared its adherence to market economy and democracy values.

At the same time it is not clear what would be the outcome of these historical events, what would be the future of Russia, whether it would be able this time in deed to take the road of civilized development approved by other countries' experience, or being burdened by many problems and incapable to make the necessary efforts and sacrifices for their solution it would be doomed to long lasting decay and poverty. Various scenarios are possible.
I. PROBLEMS OF TRANSITION

Problems, which Russia faces today after having decided to transit to market economy, remind a diabolic knot. No matter which problem one takes up it turns out to be intervened with practically all other problems. Any attempt to solve it disregarding the other causes a chain of consequences which are unpredictable and incomprehensible for the human mind.

At present the Russian government is being criticized from all sides though it should be clear to an objective observer that all mistakes it is in fact guilty of only one thing: it had sharply accelerated the process of reforms having caused some negative results as well. But no government would be able to cope in a similar situation with the growing flow of difficulties and problems which are still causing deterioration of the economy and the society.

Institutional Problems

Institutional problems are the basic cause of all difficulties. The type of economic relations which dominated in the socialist system was based on subordination and the government administration hierarchy of subordination covering the whole economy and society. Total subordination to the state domination of bureaucracy oppressed initiative and economic motivation. Entrepreneurship in general was considered illegal though it did covertly exist but only in ugly forms.

Under state controlled economy and economic activity regulated by way of plans, trade was substituted by natural distribution and money played the role of an instrument of registration and calculation. Prices were completely disorienting and gave producers and consumers wrong signals, the negative impact of which was suppressed by practically total redistribution of enterprises' financial resources. The degree of demonetization of economy was so high that when the government tried to use standard money regulators the outcome was complete inadequate.

State paternalism and social parasitism in addition to domination of boss's word over law lead to the development of a certain type of personality and social behavior. The main type of behavior was characterized by passiveness, apathy, obedience, combined with attempts to avoid control and execution of orders. Typically active behavior consisted in aspirations for the highest possible position in the administrative hierarchy, use of official powers in personal interests and attempts to avoid any responsibility. Corruption became a standard of life. Official relations are sufficient only in a limited sphere, and in most cases the adoption of a project—and a project always demands state capital investments—is preconditioned by informal and, as a rule, illegal relations. These mechanisms could be rendered efficient only with the help of severe punishments and even repressions. But in the last years before perestroika the state machinery was incapable to apply them.

Degradation came to the point when in fact not the higher leaderships controlled the administrated mechanism subordinated to it, but on the contrary the latter controlled it by allowing only what was advantageous to it.
The present difficulties are to a great extent due to the fact that though conditions have significantly changed, types of behavior, which are in general quite inert, remain the same and hinder reforms.

*Structural Deformations*

The established institution and administrative structures have led with the course of time to large scale deformations in the structure of production which have constantly affected the efficiency of economy and with the beginning of reforms have created a series of additional and probably most complicated problems.

First, hypertrophied development of the military-industrial complex which in 1985 accounted for 25 percent of the GNP. The most highly skilled personnel and the best technology and equipment are concentrated in this sector. As to the quality of products and technology, there appears to be a gap between this sector and civil economy, and thus the transfer of its achievements to other sectors also appears problematic.

Second, emphasis on excessive development of the mining industry and production of raw materials which not only formed the basis of export but were to compensate also for the inefficient use of resources in other sectors. Its cause lies not only in the obsolescence of processing technologies but primarily in the absence of economic incentives which in fact created demand and resource intensive technologies. It is important to keep this in mind because the present low adaptiveness of Russian economy and its weak response to market incentives is to a large extent due to the technologies and equipment which are in use and difficult to replace quickly.

Third, the highly labor and resource intensive but extremely low efficient agriculture. In this case institutional deformations and degradation of normal economic motivations have gone so far that even large investments cannot remedy the situation over a short period of time. The type of worker who is owner of his land and without whom it is impossible to return agriculture to a normal condition quickly is almost lost. The entire structure of agriculture, including collective and state farms, the system of state purchases and supplies is organized in such a way, that any attempt to transform it along market lines primarily leads to a drop in production and a serious deterioration of food supply, this traditionally dramatic sphere of Russian economy.

Occasionally appeals are made to solve first problems of the agrarian sector as had been done in Russia in 1921 or later in China. But this is not possible for a very simple reason: both China and in Russia in the 1920s rural population amounted to 80 percent of the total population and had to feed 20 percent of city dwellers which did not demand high productivity of agriculture. In contemporary Russia this correlation is inverse, and the level of productivity of agriculture should be immeasurably higher, which cannot be attained by primitive methods acceptable in the case of small peasant farms. The process of rehabilitation of agriculture in Russia would thus be very long and it would follow its own ways in order to avoid a significant drop in food production, as possibilities to compensate it with imports are quite limited in view of the large population and severe lack of foreign currency income.
Fourth, extreme weakness of the consumer goods sector which accounted for only 26-27 percent of the GNP in 1985, as well as of the service sector, particularly trade within the whole productive infrastructure. Since the early 1970s the lack of domestic consumer goods production has been compensated by imports, mainly from countries of Central and Eastern Europe, in return for supply of sources of energy. But the crisis in the oil industry and reduction of foreign currency income combined with the elimination of the CMEA system of clearing payments have closed the Russian market for these goods.

Fifth, a very high degree of concentration of industrial production and narrow detailed specialization along with the peculiarity of the established organizational structures of production and products' distribution management have led to an extremely high level of monopolization of the Russian economy. The share of small and medium enterprises in Russia is many times less than in other countries. It is practically impossible to create conditions for competition remaining within the limits of a closed economy.

Such an economic structure, resembling a machine in which every part is unique, renders it very inflexible and vulnerable to disruptions of established economic ties.

For the above mentioned reasons, for the disintegration of the CMEA, within which a high degree of integration of national economies was achieved, and then the disintegration of the USSR where ties between enterprises in different republics were even more close, have inflicted significant damage to Russian industry.

Social and State Policy Problems

Under the communist regime a quite stable structure of social and political relations was formed, which in the course of market reforms and the establishment of a democratic society underwent drastic modifications.

These relations were characterized by:

- formal egalitarianism, relatively minor income differences between various strata of the population, while unofficially the highest nomenclature enjoyed many fringe benefits;

- relatively high level of social security of the population and accordingly high social strain on the economy: the state and enterprises accepted to guarantee employment and payment of major social security costs. Pensions and free education, medical care and housing removed the need for the population to save, leaving it only to its current concerns. Low wages corresponded to low stable state prices for many articles and services;

- social stratification distinguished itself by high stability and depended mainly from the position of a given person in the administrative hierarchy. Low social and territorial mobility was typical to the population, inter alia due to dependency from enterprises, place of living, passport registration requirements, availability of dwellings, etc. Employment guarantees in the case of
the majority of the population essentially provided for employment only at a given workplace;

- uniformity of the political system and a uniform official ideology: a huge multinational country was governed on the basis of a uniform and relatively simple scheme which established in detail the powers, spheres of influence and rules of the game. The power of the party and central authorities was based on management of information and the generally accepted ideas of the right to use force against dissidents without any concern for the law or on the grounds of adopting the law itself to the needs of using state force.

Until the very beginning of perestroika the majority of the USSR population believed that this order is stable and just.

In the course of reforms, which have lately begun to reach the lowest strata, all these relations were disrupted or are under a blow. Social and property differentiation develops against the background of general worsening of quality of life, while the original low level of well-being leaves no room for other ways of income differentiation but redistribution which often happens for the benefit of well-to-do and to the detriment of the poor. The state found itself unable to support the growing social burden and the majority of the population has felt the threat of losing habitual guarantees.

Many, including the elderly population, run the risk of losing their jobs and having their lifestyle and even place of living changed. The whole microenvironment in which people felt themselves well protected and confident suddenly turned out to be exposed to changes. The feeling of uncertainty, the necessity to change one's habits, type of labor and way of life have become at present widespread and are already influencing the mood and behavior of a significant part of the population, particularly in regions where reforms are more rapid and consequences of the crisis more acute.

The state system is being radically changed. The disintegration of the USSR, which is uncontestedly perceived as a blow to Russia, is a historical drama deeply affecting the national dignity of the Russian people. No matter what is said of the priority of human rights and values of freedom and democracy, these are notions that Russians still have to learn. The failure of the superpower for the grandeur of which people have made sacrifices for centuries is a real fact and is very painfully endured by the Russian society.

Meanwhile, the collapse of the totalitarian system in the absence of a political culture and democratic traditions has led to the weakening of government authority and its main institutions. The Soviet system of representation proposed in its time by V. Lenin in opposition to bourgeois democracy turned out to be very inefficient. As soon as being liberated from communist party control it had to solve the practical tasks of government administration. The new political system is only being formed and is not quite clear what it is going to be like. Interrelations between the legislative, executive and judicial authorities are not yet established. In the meantime, the state finds itself in a situation when its institutions are unable to provide for accurate execution of laws and government decrees.
Finally, the process of disintegration of the USSR is not over yet. There are already fifteen governments, parliaments and central banks, but the division of the army is still underway. Only the common frontier is being guarded. Frontiers between CIS countries are practically absent, and this also limits the powers of each government, including that of Russia. The process of settling relations between countries of the Commonwealth will continue for a long period yet.

Financial Crisis

In a certain sense all the problems of the transitional period in Russia are reflected in financial problems. Institutional peculiarities of the planned economy have constantly created a surplus of money supply and, accordingly, scarcity of goods. In the absence of a clear budget deficit there was constant abundance of credit emission. Structural deformations were also a constant cause of suppressed inflation.

Until 1985 “petrodollars” represented a significant source of support for public financial resources. However, since 1986 this source got depleted and Gorbachev’s administration began to bury itself in debt. External debt grew to over 70 billion dollars by 1991. Simultaneously a populist policy accompanied by incapacity to reduce the appetite of the military-industrial complex and key industrial sectors, and inefficiency of agriculture have led to a huge growth of the budget deficit which exceeded 20 percent of GDP in 1991. All this happened against the background of the already commenced overt drop in production, disruption of the monetary system, uncontrolled growth of income, and price freeze. During 1991 the financial system also turned into a battlefield between the communist center and the democratic leadership of the Russian Federation. Disorganization of the financial system furthermore manifested itself in the fact that the Center which previously concentrated in its hands practically all foreign currency income could not more collect foreign currency receipts to serve the external debt and import the most necessary commodities. By the end of 1991 Vnesheconombank (Bank of external commerce) had to discontinue payments and in fact became bankrupt which significantly jeopardized trust to Russia from international financial circles.

A strict fiscal and monetary policy which the communist leadership never dared to adopt turned out to be a vital necessity, and the related losses inevitably became higher than they would have been had this policy been adopted earlier, at least since 1988 when the first measures to increase independence of enterprises were accepted.

Since the beginning of 1992 Gaidar’s government liberalized the majority of prices and switched to a policy of budget austerity. The Central Bank had cut down crediting and significantly increased interest rates on credits. The ruble exchange rate had been liberalized even earlier though there still remained special rates for state purchases of foreign currency and centralized imports.

The outcome of these measures is still a cause for heated disputes.

First, the government is being blamed for liberalizing prices without previously adopting measures on privatization and demonopolization of the economy. It may be ascertained, however, that liberalization of
prices was a forced step in many ways only legalizing the existing situation. It was also the only radical step the government could make to escape the vicious circle of problems and to attempt to establish a new economic framework. Demands concerning prior privatization and demonopolization are absolutely baseless as these are complicated and lengthy processes, and to adopt them in fact was tantamount to postponing liberalization for an uncertain period while without it the economy was suffocating.

Second, the government is being criticized for excessive severity of the stabilization policy, and not without reason. The task of eliminating within one quarter the huge budget deficit was unrealistic from the very beginning, or its successive solution for a short period was bound to be counterproductive in the longer run. And that is exactly what happened.

However, one should remember that there was also the task of avoiding hyperinflation after price liberalization, and who could say for sure how and at what level it was necessary to cut off money supply in order not to allow prices to go out of control? It was not in the best possible way that this task was achieved. As a result a kind of a deflatory shock happened, but hyperinflation was avoided and goods which practically disappeared earlier found their way back to the market. In February prices on some goods even began to go down. But soon enough expenses delayed previously to eliminate the budget deficit had to be made. Pressure exerted by industrialists, agrarians, industrial and special service workers, who recovered their senses after the January-February shock, began to grow. The pendulum swept back: the threat of deflatory shock anew gave way to the threat of hyperinflation. Prices and incomes catching up with each other began to unwind the inflation spring.

Also unsuccessful was the introduction of the value-added tax with the extremely high rate of 28 percent. The idea was correct in principle: against the background of inflation, which was to be expected under any circumstances, the VAT, as the main source of budget revenues, ensured their growth to the extent allowed by price increases. That ruled out the Oliveira-Tanzu effect. A mechanism for slowing down the inflation was fit in into the budget system thereby. To make it workable there was a need to hold back the expenses so that the budget deficit could be cut down.

Yet the novelty of the VAT for Russia, its relatively high technical complexity, the unpreparedness of the taxation service, the excessively high tax rate and other unconsidered factors led to the situation when the introduction of the VAT along with the price liberalization proved a very risky move apprehended by many experts. Budget revenues from the VAT turned out to be much lower than expected, especially, during the first months of 1992. In January they amounted to meager 9 percent. Only in September they started showing a rapid growth yet mostly owing to the use of uncivilized methods such as advance tax deductions prior to the sale of products and also the immediate transfer of money to the budget after offsetting counter non-payment claims.

Because of the failure with the VAT the government had to sequester expenses in a very tough way.

Third, measures adapted by the government to liberalize prices and to stabilize financial resources have caused an unprecedented widespread
crisis of non-payments, which still cannot be curbed. The money deficit which unexpectedly appeared within the economy has led to a situation when enterprises stopped paying for supplies but continued themselves to supply their products on credit. Over due mutual debts grew over the period of January-July 1992 from 43 billion rubles to 3.3 trillion rubles. The non-payment crisis which is deepening the recession more and more has become the most serious problem for the government.

It is generally believed that similar phenomena occurred practically in all countries which had conducted liberalization and market economy transition policies. Within the Soviet economy this was a persistent problem: 25 percent of enterprises’ requirements in current capital were covered in 1985 by creditor debt, i.e., mainly non-formal and forced commercial credit.

Such was the direct result of flexible budget limitations for state enterprises, on-binding requirements to pay in time for supplies, return credits and inquire into solvency of buyers.

Now the government has attempted to introduce more strict budget limitations for state enterprises and to relieve state from its responsibilities to these enterprises by using standard measures of macroeconomic policy. The non-payment crisis was a reaction to these attempts. It did thus reveal, however, the institutional obstacles to a fast stabilization of financial resources. There appeared to be no relation between the generally accepted instruments of stabilization policy and enterprises’ behavior. Or more precisely their reaction to these instruments turned out to be inadequate.

"According to rules" the limitation of money supply and higher credit cost should have caused stabilization or reduction of prices, production recession, growth of unemployment. In Russia, however, after January 1992 prices, particularly wholesale prices, following a short period of confusion, continue to grow significantly exceeding retail prices. Though many products being overpriced cannot be sold, prices are not reduced and shipments continue without being paid for. A recession in fact exists but it continues for approximately 30 months and its rates practically did not grow in 1992, i.e., lower demand has not yet become a main factor, excluding livestock and some other sectors’ products.

The non-payment crisis also revealed some structural limits to the rate of reform, and particularly financial stabilization.

The heavy and inflexible production structure did not yield. Recession grew stronger in sectors of final consumption, the defense industry, but the main sectors and the main part of industry stand fast. It can be said that the non-payments crisis saved the Russian industry, cumbersome and inefficient, but still giving people a job and means of living. Henceforth, the government would have to take this lesson into account.

Fourth, the cash crisis has become the most difficult ordeal for the population and the government: a technical problem has turned by mid-1992 into a social and political problem of prior importance.

As a result of the extremely low state of development of the financial infrastructure, cheques and credit cards are not in use in Russia. The population uses cash for practically all payments. The lack of cash which appeared last year as a result of inflation became irreversible in
1992 after the price liberalization and relaxation of the fiscal and monetary policy. Objections of the Chairman of the Supreme Soviet early in the year against preparations for new large bank notes emission became inevitable. By July delayed salary payments amounted to 220 billion rubles. At many enterprises workers did not receive their salary for 3-4 months. For this reason discontent with the government reached a crucial point.

At present, however, the necessary measures have been adopted and if inflation can be held back, there should be no repetition of the cash crisis.

**Concept of Medium-Term Program**

In these circumstances, the development of a medium-term program of intensification of economic reforms in Russia was initiated in April 1992. Taking in consideration the whole complex of problems, its task was to identify ways of their consistent solution and overcoming the economic crisis.

The measures, taken up to now, were aimed at tackling more limited tasks of prices liberalization and financial stabilization although the quick solution of the second task have not been reached. But even in case of its successful solution the crisis would not have been overcome. Quite contrary, it would have inevitably aggravated and the main difficulty was in drafting a plan of further actions.

The political struggle of the last few months, which Gaidar has finally fallen victim to, has brought numerous programs to life. More of them will obviously be offered in the future. However, the medium-term program for intensifying economic reforms in Russia drawn up in the summer of 1992 on the government’s instruction and constantly updated ever since seems to be the most serious document of its kind. It may possibly be a subjective opinion of one of its authors. At any rate one of the main tasks of this program—to determine areas of permissible solutions to all major processes of the transitional period (macroeconomy, institutional changes, social and structural policies)—was set out and resolved, though partially, only with its framework.

The logic of the program’s concept determined by its final goal is founded on four key words: investment - motivation - coordination - inflation.

**Investment**

Investment is necessary to provide progress in economy and its restructuring. For this purpose incentives for saving from all sources should be created, as well as mechanisms of their effective transformation into investment. The structural transformation itself will release resources for accumulation later on.

Meanwhile, presently the sources of domestic savings are practically non-existent. The state is burdened with budget deficits and up to now
it can increase investments only at the expense of emission, enhancing inflation which undermines propensity to save. Besides, the governmental investments are the most ineffective. Enterprises have lost their money accumulations after the liberalization of prices and they are burdened with debts. If any of them even have some investment potential, it is very limited, and the investment is highly risky in this unstable situation.

In the conditions of inflation banks avoid long-term investment. Other institutionalized investors practically do not exist: they were not needed in planned economy.

The population, poor before the crisis as well, lost in the beginning of 1992 the most part of its savings as a result of their devaluation. Moreover, these savings in their larger part were forced, determined by scarcity of goods. Impossibility to buy housing and other durable goods, freely, to make foreign trips. And there was no need in voluntary savings: the state assumed responsibility for everything, for what such savings are made, i.e., housing, education, health, security in old age. Family budgets were mainly spent for current needs. And now after the price hike majority of families spend more than 50 percent income for food-stuffs purchases.

Under the current conditions foreign investments for Russia is a very important factor which would permit to begin the reconstruction of economy earlier and would give a starting impulse to the rise of domestic savings. But one cannot account on a powerful inflow of foreign investments in the nearest future primarily because the conditions for them in Russia are still less favorable than in other countries.

True, the economy can hardly do without a certain minimum of investments needed among other things, to maintain certain major life-sustaining systems of the country such as, say, power. The conversion of the defense industry that has acute social problems behind is unthinkable without investments. The State therefore will be compelled to finance investments or resort to special measures that would stimulate the inflow of private investments (to introduce profit tax allowances or lower reserve requirements for commercial banks crediting investments) even if the price of a certain rise in the inflationary trend. it is obvious however that these opportunities provide a very modest basis for boosting investments.

Consequently, at the first stages of the program’s realization it is unreal to plan large-scale investments, reconstruction and acceleration of economic growth. First of all prerequisites for that should be created.

Motivations

Motivations is one of such preconditions. Strong motivations for economic and labor activities should be created to provide both savings and effective use of resources, and consequent economic growth. Such motivations are created by liberalization of economy and development of entrepreneurship. But the activity of the latter is determined by the success of the privatization and other institutional changes. The very
circumstances of the crisis add certain impetus to entrepreneurship and initiative if businessmen, managers of state enterprises, workers and peasants who find themselves in a difficult position search for their chance to get out of it. The task of the State is to offer such a chance to everybody without giving any hope of getting gratuitous help to those who can and must rely on their own might. Attractive conditions for foreign investors should be created, too.

Privatization is the key factor of establishing new system of motivations. However, one should keep in mind its real potential and period of implementation in the conditions of Russia. The government privatization program, approved by the Supreme Soviet in 1992, sees its main task in creating an efficient proprietor and seeks to reflect the balance of interests of different social strata.

It provides substantial privileges to workers and employees of privatized enterprises but avoids to transfer these enterprises into their possessions, offering in most cases preferred stock without a right of vote. It attempts to create incentives for directors of enterprises, either giving them up to 5 percent of stocks at discount prices, or offering them a right to acquire a controlling block of stocks, provided a consent of the working collective is obtained.

To buy 51 percent of the shares is possibility for work staffs, thought this can be done on much tougher conditions. Since the launching of an active process of the transfer to share-holding schemes and privatization in Russia in the autumn last year, this form of privatization has been prevailing so far.

The privatization program also expects a favorable attitude of the population to the privatization suggesting gratuitous assignment of privatization cheques (vouchers) amount up to 80 percent of privatized state assets to each citizen of Russia. Privatization vouchers should form the bulk of investment demand which would be counterbalanced by the stocks offered by government enterprises in the comparable amount.

Since October 1, 1992, the issue of privatization checks and trade in them have begun. From the very beginning, the market price of privatization checks turned out be much lower than their announced nominal price, 10,000 rubles, as no shares of privatized enterprises had yet appeared on the stock market. That threatened to abort the entire privatization program, its proclaimed social aims in any case. The government had to expand considerably the range of assets offered in exchange for privatization checks: housing, land holdings and municipal property. For this particular reason the shares of privatized enterprises will cover now up to 80 percent of the state assets subject to privatization instead of the originally planned 35 percent.

All this allowed to boost the price of the privatization check but not to the point when most Russian citizens could be sure that no dishonest trick is played on them.

And finally, the privatization program attracts new businessmen offering them an opportunity to acquire stocks at auctions or investment tenders, as well as to buy out the privatization vouchers from other citizens.
At the same time the realization of this program involves multiple unresolved problems, both as regards mechanisms of its implementation and its final targets—creation of strong economic motivations.

But it appears that the main stimulus to the growth of production and investment under the present conditions remains not so much private property as market competition. That is why the antitrust policy and consistent opening of the Russian economy will play first fiddle. Cooperative property created as a result of mutual exchange with privatized companies might also be involved.

Large-scale agrarian reform including transfer of land to peasants, successive transformation of collective and state farms into private companies and cooperatives, development of market infrastructure in agrarian sector will take place for the purposes of transformation of agriculture.

Coordination

Coordination of motives and efforts of all agents of economic life is an indispensable precondition for both their proper orientation to the purposes of economic improvement and minimizing expenses and losses of the transition period. The point is who—market or state—will implement coordinating functions and by what means.

The concept of the medium-term program is based on the presumption that the coordination functions should be chiefly fulfilled by the market. For this purpose the development of market infrastructure and corresponding institutions which still exist in embryo in Russia should be speed up.

However, during their establishment the State will significant coordination role, including the support of the market infrastructure development. That is why special attention should be paid to the commerce, to the network of competing firms, to commodity exchanges; the latter have special importance in Russia creating poles of attraction for goods, buyers and salesmen, providing stabilization of market prices.

Exceptionally difficult problem is the formation of labor and capital markets. The former requires considerably enhanced mobility of the manpower and setting up conditions for its free movement including inter-regional one. It presupposes not only introduction of the developed system of additional training of personnel and employment services, but also market progress in solution of the housing problem and creation of housing market, and that requires considerable investment.

Even more important is the formation of the capital market, just because its institutions should provide accumulation of savings and their most effective use. In other words, it is incumbent on them to find ultimate solution to the problem of investment. Thus the priority tasks include urgent establishment of a contemporary banking system and a network of non-bank financial institutions—investment funds, insurance companies, stock exchanges, etc.
For encouragement of population's savings and modification of its conduct transition to paid housing and commercialization of a larger part of social services are required, which, as a matter of fact, are the main incentives to saving. In this connection creation of savings banks for housing, private pension funds and medical care insurance funds is planned. Taking in consideration the poverty of the population all the citizens would be given task social vouchers, the value of which would amount to budget appropriations for these purposes.

The issuance of social vouchers pursues the following purpose: If the government decides to change the structure of people's spending gradually so as to avoid major social tensions, much too numerous already, this process will last for decades and so will the process of the creation of systems that would help accumulate private investments. If, on the contrary, market price payments for most of the communal services are introduced at once and people's incomes are raised accordingly, this apart from causing a rampant inflation, will compel the population to spend their additional income on food and other primary needs and, consequently, turn once again, sooner or later, to the government for help.

In short, social vouchers are not money but a way of resolving the above-mentioned problem relatively quickly and painlessly. By issuing them in the form of checks payable to persons named and to the sum amounting go budget appropriations for corresponding purposes the government would delegate the right of option and the responsibility to consumers of social services themselves, yet only partially, without the right to use them for other purposes and also use them within the limits of minimal norms. The social services, housing, education and health care, extended above these norms will be bought for money. The concept of social vouchers is now under review and its stage-by-stage realization is scheduled for 1994.

Thus without excessive delay the process and spurring inflation by direct increase of cash incomes, it is possible comparatively rapidly change the structure of household expenditures and contribute to the growth of savings transformed later into investments. It would be also feasible at least partly, compensate devaluation of earlier savings by enhanced of interest on deposits, according to inflation.

Taken together, all the measures directed to setting up new mechanisms of motivation and coordination will form the critical mass of institutional changes, which is called to provide a transition to a new model of economic growth.

Inflation

Inflation is a factor which will be eliminated; otherwise it will nullify all other efforts. Explanation is simple: with high inflation there will be no savings and investments, and the development of entrepreneurship, privatization and other institutional changes will acquire pathological forms oriented neither to the growth of production, nor to the efficiency rise, but to the financial speculations.

Hence is the role the policy of macroeconomic stabilization should play. Analysis suggests four main options of such policy.
1. Extremely tight variant: the figure of the budget deficit is reduced to no more than 3 percent, while inflation rate to 3 percent a month as soon as by the end of 1992. This kind of option was proposed by IMF. Analysis shows that it will provoke deflation shock, pretty harmful for the Russian economy, or it will result in a sort of non-payment crisis, accompanied by inevitable resignation of the government of reforms. Afterwards inflation will aggravate and it will be next to impossible to stop it.

2. Soft variant oriented to salvation of all Russian industry with help of budgetary subsidies and cheap credits. The result is hyperinflation, on the threshold of which Russia is. And it is characteristic that the probability of such outcome is close to 100 percent already by the time when the budget deficit reaches 10-12 percent of GDP: concessions to some result in concessions to everybody, and persistent inflationary expectations are finally formed.

3. A variant of administrative control supposes a return to wide use of state prices, increase of state orders, rationing of consumption.

One can agree to such measures in specific cases and for a short time but their massive use is senseless since, not solving any problem and not yielding noticeable results, as experience of Mr. Ryzhkov's government proved, this variant only delays the recovery from the recession and results in waste of increasingly limited resources of the sick economy and reanimates old outdated structures.

4. It seems that the only reasonable option is moderate deflationary policy combining in itself principal tightness with flexibility and maneuverability, envisaging gradual, without jerks, reduction of inflation rate (to 3 percent a month by the end of 1993) and budget deficit (to 8-10 percent by the end of 1992 and 3-5 percent in the second half of 1993), attainment of a positive discount rate within this period of time.

A premature transition to positive discount rates may lead to the consequences opposite to the expected ones: a wave of naturalization, the rejection of the services offered by banks and others. As a matter of fact, the choice of the fourth option is nothing more than a conclusion drawn from the analysis which indicates an extremely narrow range for maneuver in the macroeconomic policy for any Russian government in the prevailing circumstances, if of course its aim is to minimize losses and extra costs on the way out of the crisis. This variant is difficult since it does not allow act quickly and resolutely, confronting economic agents with a fait accompli. The government should act systematically, all the time under pressure of different lobbies. But any other option is worse.

II. STRUCTURAL AND INVESTMENT POLICIES

The scale of structural deformations in the Russian economy presupposes active structural transformation during all the transition period. At
the first stage however the activity of the goal-oriented structural
policy will be limited by the lack of investments until the financial
stabilization is completed and institutional changes reach critical
mass. Structural shifts will take place under dominant influence of
macroeconomic policy, structure of demand transformation and
liberalization of external economic ties. These factors are exerting
destructive influence on the established industrial structures while
they do not build up new structures themselves.

*Phases and Scenarios of the Structural Reorganisation*

Thus at the first stage of structural reorganization, named adaptation
phase, the task is to support production, to restrain the destructive
influence upon it of the above-mentioned factors, until it becomes
possible to substitute new industries for inefficient ones and to create
new jobs, while the process of adaptation of the bulk of enterprises and
their workers to market conditions is under way.

Only after the necessary prerequisites are created the Russian economy
will enter an active stage—a phase of reconstruction. Only then
essentially new tasks of enhancing production efficiency, building up
strong export potential, conquest world markets will arise. Naturally
solution of these strategic tasks should be prepared today.

As it is for the present, one should proceed from the assumption that
the Russian economy has to pass three stages of crisis:

1. monetary crisis which it goes through today;

2. institution crisis—it has already begun, but the main conflicts
   with which it is associated will emerge during mass privatization;

3. structural crisis that actually has not happened yet and that will
   break out when shutting up of inefficient enterprises will begin,
   unemployment will grow and new jobs will appear with delay and in
   other regions, provoking manpower migration. The last crisis can
   prove to be the most severe one.

Three scenarios of the structural reorganisation can be conceived.
According to the first one tight stabilisation policy is pursued and the
economy opens rapidly. In this case enterprises lack the time for
adaptation. Imported goods saturate the market to the extent allowed by
hard currency revenues, external debt and exchange rate of ruble.
Large-scale curtailment of production takes place in consumer sector due
to limited popular demand; in engineering and construction industries—
due to lack of investments, in defence industry—due to reduction of
defence orders. Considerable part of scientific and technological
potential and highly qualified personnel is lost. Mainly upstream
branches of economy turning out competitive production survive; not part
of manufacturing industry perishes. Consequently the pattern of
remaining production and export structure is typical of the former
Russian economy.

A hypothesis that a similar scenario means clearing of land before
building up new efficient production facilities and rapid economic
development in future seems to be more than doubtful. The substantial
slump of production and mass unemployment mean shrink of taxation base, accompanied by growth of social insurance spending and additional substantial drop of investment. The most probable result is a long depression, protracted period of social and political instability period of social and political instability.

The second scenario supposes that the main task of the structural policy in the phase of adaptation is considered to be revival of production on the basis of existing production facilities, maintenance of demand for their products, protection of domestic industry against foreign competition. In this case prolonged conservation of obsolete inefficient structures takes place and waste of resources continues. Runaway inflation is imminent both due to the structural factors and the need to back up industrial enterprises with substantial credits. And that reduces real investment as well. Besides such scenario is fraught with attempts to restore administrative control over economy, since grounds for administrative interference remain, as well as social forces interested in it.

Two proposed scenarios present extreme alternatives, outlining the range of acceptable solutions. Consequently the third scenario offers mixed strategy: moderate rate of structural changes; regulated opening of economy; backing of production at the existing facilities; motivations for saving and investments into highly efficient projects; systematic phase-out of inefficient industrial enterprises, proportionate to dynamic of investment and new jobs created; formation of centers of future growth. According to this scenario adaptation process will continue approximately for 4-5 years, while inflation rate might stick to the level of 20-40 percent a year.

Opening of economy should first of all be regulated by customs policy. While excessively undervalued exchange rate of ruble persists it protects domestic industry and allows use of low import tariffs. But later on, after stabilization of the exchange rate, rise and differentiation of import tariffs rates will be needed, followed by their later constant fall, so as to make the competition of imported goods increasingly felt on the domestic market. Simultaneously export should be stimulated in the first place of manufactured articles with high value added.

**Priorities**

In the present situation it is exceptionally difficult to identify priorities of the structural policy. Today little could be said with certainty as regards the branches and industrial enterprises which have guaranteed prospects of future development. Besides is characteristic of the Russian economy that literally all industries have bottle-necks, elimination of which requiring comparatively small investments and short period of time secures very high efficiency. With the profitability of such projects, equal to 100 percent, it is possible to repatriate profits (in case of foreign investment) with the same rate of return which exists in the international market, or higher. The problem is to find such objects for investment and draw up projects, which meet international standards.
There are plans to establish a number of publicly supported institutes to deal specifically with such projects and to assist enterprises. Taking in consideration unfavorable investment climate, they even now could grant preferential investment credits and state credit guarantees for efficient projects.

For this purpose a medium-term program envisages establishment of industrial development fund, State investment agency and also the Russian bank of reconstruction and development. The latter will function on purely commercial basis, using as resources a part of foreign credits granted through state mechanisms. Establishment of similar private organizations will be encouraged. In the end their work will permit better identification of the structural policy’s priorities.

As for the time being, the program identifies with due regard to all difficulties the following priorities:

1. Fuel and energy is one of life-support systems of the country and the basis of its export potential for the nearest future. According to forecasts, Russia can secure stable natural gas production. As for oil, recession in oil industry continues, and the stabilization of the situation cannot be expected before 1994. Here serious technological and institutional constraints play their part. Electric power production has not suffered considerable reduction yet, but crisis becomes imminent in this branch, too, due to freezing of construction of nuclear power plants and other objects in connection with ecological movement and lack of investment.

This complex attracts foreign investment, and if favorable terms for them are offered, one can expect that this investment will play an important part in its development.

2. Food is a chronic crisis area of the Russian economy and at the same time it has vital social importance in social sphere. It is assumed that the program aimed at the fool problem solution for the nearest future will not pursue ambitious targets, but will concentrate on reduction of harvest losses, development of food-stuffs transportation, storage and distribution systems, and infrastructure of agricultural produce market: on reduction of the food-stuffs import.

3. Demilitarization of economy and conversion of defence industry. A twin task should be tackled in this area: systematic curtailment of armaments and military hardware production, protection of people there employed now, as well as organization of civil production and use of defence industry potential for creating centers of future growth.

The character of the Russian economy in the nearest future either it will be a raw material supplier, or it will conquer a position in the world market of sophisticated technology—it will mainly depend on the progress in solution of this task. Presently Russia disposes of assets, important enough to count on a prominent place in the world aircraft and space industry, in production of microelectronic circuits, optoelectronics, accessories for radio electronic devices, in new super-pure materials, in software systems and programming automation facilities, etc.
4. Housing--development of housing construction is regarded as a key problem, capable to improve living conditions of the population in the most accessible and at the same time essentially important social area; to create stimuli for savings, to preserve in the conditions of the crisis the potential of the construction and allied industries, to enhance mobility of manpower. A program of the housing construction is called to become a king of locomotive for the Russian economy, a starting point for renewal of economic growth.

5. Communications--transport, telecommunication, informatics--are exceptionally important branches from the standpoint of accelerated formation of the market economy and its development in civilized forms, which are now among the most backward and which hamper the development of other industries. The efforts will be focused on the development of the main transport junctions, servicing the external trade of Russia, the elimination of bottle-necks in the network of railways and roads, the improvement of quality of communication and information services.

The said priorities will be realized through different forms of State’s support, including public investments, low interest credits, guarantees, encouragement of private, inter alia foreign investment. Besides the commerce should have also be named a priority branch. But it has already become one of the most profitable branches for private investments and if it needs any help from the State, this help would concern only completion of liberalization, demonopolization and elimination of all restrictions to the freedom of trade.

The path Russia has taken in the nearest future will run through a zone of high danger. New severe trials are in store for the people whose patience is on the brink of exasperation. It is in the interests of the West and of all the world to support Russia on the arduous path, to support not with words and sops, but with significant inflow of investment, technologies, management experience on a mutually advantageous basis, with lifting trade restrictions, providing access to those world markets where Russia can become a real competitor.
THE AUGUST COUP D'ÉTAT AND ITS CONSEQUENCES

by

Vladimir Selezev

One year elapsed since the attempt of coup d'état in Russia. Such a short period of time is insignificant even in any human life, and from the point of view of history it is just nothing. But even though the time has been so short, we can draw certain conclusions.

First of all, we should note that the year after the attempt of coup d'état has been marked by such an avalanche of events, that no year throughout the whole of the period of stagnation could boast of.

But what has actually happened during this year in our country?

To say that Russia took a new road would mean both everything and nothing.

The first and most important event was the withdrawal of the Communist Party from the office. The Communist Party had been in power for 74 years and now it is over.

What is there to rejoice at?

The Communist Party, while calling itself the party of the working people, did not represent any interests of these working people and, strange as it might seem, was not a party at all. It was a Mafia-type organization looming over the state, over the people, over everything. Its criminal character is easily proved by the mere fact that within it there existed a special squad for staging terrorist acts. The squad was formed under a special resolution of the Political Bureau of the Party's Central Committee. In the workshops of the Central Committee they forged money and documents and trained terrorists for "brotherly" communist parties. This organization shamelessly drew money from the state budget, spenddrifting it for the sake of the World Revolution, for financing civil wars in the countries where, as was judged by the theoreticians from the Central Committee, "conditions for socialist revolutions" were ripe.

In every corner of the world where the Bolsheviks interfered, brother fought brother, children fought parents, neighbor fought neighbor. Hungary, Germany, Czechoslovakia, Yemen, Ethiopia, Somalia, Angola, China, Korea, Vietnam, and Nicaragua are just several examples of it. This list could go on and the countries of the so-called "socialist orientation" will enter it. The Communist Party subdued everything which did not correspond to the laws of the socialist development and everything which contradicted the theory of class struggle.

The Soviet Union, declared as the most democratic country of the world, was, in reality, one large concentration camp. The universal equality, proclaimed in the Party's programs, was the equality of everybody in poverty, equality before lawlessness. Everybody was equal to everybody but the Party officials who, though originating from the mass of equal people, forgot about it the next day after their nomination to a post. Tyranny and illegality reigned in the great country. The supreme law
was the Program of the Communist Party in which social inequality was declared openly. The supreme judgment was the Party's judgment. When a person was expelled from the Party ranks, he was moved to the outskirts of our society and destroyed socially.

Judges in courts were nominated after their candidatures had been confirmed suitable by a Party organ. The same concerned directors, deputies, even preachers. The leading role of the Communist Part was total and overpowering.

But our national economy suffered from the leadership of the Communist Party the most. The State or, to be more exact, the Communist Party ordered the peasants when to sow and pick the harvest, robbed profitable enterprises and paid the debts of bankrupt ones. Negation of economic laws resulted in a situation where banks became sheer cash-desks for giving away the money. Enterprises producing goods never corresponded their quantity with the demands of our society. Contracts between enterprises were concluded by orders and, sometimes, by force. Material values were wasted; natural resources were savagely destroyed.

The people were tired of the degenerates from the Central Committee which led the country to a catastrophe.

New hopes sprang when Mikhail Gorbachev came into office. But after a year it became clear that he would not go further than talking about democracy.

The people stirred again during the general elections of the People's Deputies of the USSR. The sittings of the Supreme Soviet, however, soon became a circus show.

The attempt at coup d'état in August 1991 was the suicide of the regime. The people took fresh heart expecting quick changes for the better. Everybody though that in a month or two a new life would begin.

But wonders are scarce in this world. The removal of the Communist Party from power was only the first step. The Party did not step down from the political stage completely. The victory of democratically minded people in August 1991 did not immediately mean the victory of new democracy in general.

The distribution of political forces in Russia is characterized by a very complicated pattern of interests of various political parties and movements. I will hardly be mistaken if I say that no political party has any definitely pronounced social basis in the Russian society. The majority of the Russian population does not even begin to guess about the existence of these parties. Most of the primary organizations of these new parties exist only in Moscow. Away from the capital these organizations are either not numerous or do not exist at all. All this can be explained by the fact that there are no multi-party traditions in Russia. The initials of a multi-party system were laid in 1905, but after the revolt of 1917 parties were banned and propaganda introduced the idea of viciousness of any multi-party system.

Second, in our modern Russian society the word “party” is connected with the Communist Party by the majority of the people which, in its turn, is attributed with all the troubles of our people.
Third, the Russian society is tired of politics. A Russian does not wish to hear that "bread is a political issue" any more, or to see that in a party's hands sausages become a political weapon.

Interparty struggle is noticeable only with the Supreme Soviet. There are representatives of various democratic movements (Democratic Russia, Radical Democrats, the Left Centre, the Republican Party), as well as representatives of pro-communist forces (the Communists of Russia, Motherland, New Generation Russia, etc.). There are rather strong groups, uniting various representatives of various professions (the Agricultural Union, the Industrial Union).

Since the elections of the peoples' deputies took place in the times of one-party systems, nearly half of them are in opposition to the President. That is why there are no laws inducing the development of the state based on law or helping business activities to develop.

Moreover, the Supreme Soviet blocks every move of the President or the government and the laws adopted by it often resemble the slogan "All power to the Soviets!"

But it is not the Supreme Soviet which present the major threat to the reforms of Boris Yeltsin. It is the absence of social basis for these reforms. There is no, what you call, "middle class" in Russia, which could be interested in the stability of the state. In all countries of the world this class is represented by the people of the property who live on the results of their labor.

There is only one proprietor in Russia--the state itself. Therefore, the reforms should reflect personal interests of each member of our society, i.e., the reform socially means formation of the class of proprietors.

There is much criticism of Boris Yeltsin on the part of the democrats who find him guilty because the measures of the government are ruthless towards the people, and his reforms are inconsistent.

You hardly can accept the blame. The laws adopted by the Supreme Soviet on the President's initiative and aimed at the development of private business, his decrees and government acts, all serve the purpose of forming of this class of proprietors, which would mean appearance of the social basis for these reforms.

Simultaneously, they work to create a democratic state. Several decrees of the President were aimed to strengthen legislative offices. The courts of justice literally started to come out of the basements and move to new headquarters. The officials are responsible for fulfilling the law and various decrees.

The executive power also changes. The government is free now not only from the tutelage of the Communist Party but also from the Supreme Soviet who often makes the government blunder. Examples of it are numerous.

The executive power changes in the regions, cities and districts too. The executive power used to be presented by the Chairman of an Executive Committee. This Chairman was elected at a session of a Soviet. Thus, the executive committee was always under the thumb of the Soviet.
After the coup d'état the President dismissed executive committees and formed administrations in the regions, cities, and districts. The head of an administration is no longer elected by the Soviet anymore, but nominated by the President in agreement with the Soviet. The administration is under the jurisdiction of the President and reports before the Soviet. The forming of new executive bodies became a counter-balance to the Soviets, which are still full of former party officials.

Additionally, the President nominated his representatives in the region. The main task of these representatives is to control the development of reforms and efficiency of administration. We now witness the process of dividing authority between administration and representatives of the President. The latest decree of the President prescribes his representative to coordinate the activities of the federal bodies, i.e., to guard federal interests in the region. The administration, in its turn, has more possibilities to stick to solving local problems.

I. SITUATION IN THE CHELYABINSK REGION

The Chelyabinsk region has the territory of 88,000 square kilometers. Its population is about 3.6 million people. The region holds the fifth place in Russia in annual industrial output. Only Moscow, St. Petersburg, the Moscow and Sverdlovsk regions produce more. The leading role in the economy of the region belongs to ferrous industry and machine-building.

The region is rich in unique natural resources (multi-component ores, rare metals, half precious stones, etc.). It has a highly developed transport system, and is conveniently located in the center of Russia.

There are 27 towns and more than 300 settlements in our region. Eighty-five percent of the population reside in the towns and cities.

The Chelyabinsk Region, if we take the whole volume of production of the Commonwealth of Independent States, produces:

• 15% pig iron
• 18% steel
• 20% rolled metals
• 40% alloyed steel
• 30% steel pipes
• 35% bulldozers, etc.

These statistics show that the Chelyabinsk region takes a very important place in the Russian economy and is a serious support for the President in reforming the country. During the President’s elections more than 80 percent of the population voted for him.

At the same time, reactionists are perfectly aware of that and instability in the region would guarantee their revenge. The political
situation in the region reflects exactly the situation in the supreme corridors of power.

The regional Soviet represents legislative power in the region. Its Chairman is Peter Sumin, 47, the former Second Secretary of the Regional Communist Party Committee. During the coup d’état he supported the State Committee for Emergency. During the convents of the people’s deputies he voted against Yeltsin’s election to the post of the Chairman of the Supreme Soviet and against private property on land. This summer the regional Soviet staged the so-called “budget war” with the government refusing to pay taxes to the state budget. P. Sumin still sabotages the President’s decree on transferring the Communist Party’s property under the authority of local administration. The regional Soviet often violates the constitution of Russia.

The executive power in the Administration is headed by V. Solovyov, of the City Communist Party Committee. He is 45 and is democratically minded. He left the Party on his own accord because he did not agree with the methods it used to manage the life in the city. During the coup d’état, he voted against it.

Mr. Solovyov and his team are new people, but very professional. They are all supporters of the President. Their average age is between 35 and 45.

The President’s representative in the region is V. Selezniov. He is 43. Before that he worked as head of the Chair of Marxism-Leninism of a military school. He is a Candidate of History. His military rank is General-Major. He is a people’s deputy and in the Supreme Soviet, where he is Vice-Chairman of the Security Committee. During the coup d’état he was among the defenders of the Russian White House.

The political struggle in the region is concentrated mainly between the Regional Soviet and the Regional Administration. The chairman of the Regional Soviet does not give up hopes to remove the head of the Administration, nominated by the President, from the office.

Mr. Sumin, before nomination of Mr. Solovyov, the head of the Administration, held two posts: that of the chairman of the Regional Soviet and the chairman of the Regional Executive Committee. But reforms were slack—there was lagging behind all the lines.

The picture has now changed. For instance, last November there were only 300 private farms in the region—now there are more than 3,500. V. Solovyov did away with the obstacles. Collective and state farms have also changed. They have been transformed into cooperatives of proprietors.

Commercialization of trade, public canteens and civil services was his next step. This was a dramatic process because the old, corrupted guard would not give up their positions and trade administration denied the shops their independence. Procurator’s Office had to interfere.

Nowadays 1,644 shops, 357 public canteens, and 777 enterprises of civil services are given this independence.
But this was just the first move in the economic reform because privatization of the state property and the forming of private businesses remains the main task.

The Chelyabinsk Region is characterized by the existence of many enterprises which are monopolists in their categories. There are more than 150 of them. But they are also being privatized now. There are 1,715 enterprises in the region which are to be privatize. One thousand twenty-three of them, or 59.6 percent, have already been privatized. The methods of privatization are:

- 3% sold at open auctions
- 25% sold at closed auctions
- 11% shares issued
- 61% rented out with the right to buy out

The Chelyabinsk Tractor Works may serve as an example of this. The personnel of the enterprise is over 50,000 people. The annual output is 30,000 tractors. This power amalgamation issues its shares now to be sold in the open market.

Private businesses in the region, though not yet strong, are beginning to play a significant role in the economy of the region. There are more than 40,000 enterprises now which do not belong to the state. Among them are:

- 2,500 private enterprises
- 5,000 companies
- 2,000 share-holding societies
- 30,000 cooperative enterprises
- 5 exchanges

The Chelyabinsk Universal Exchange is second in Russia in the volume of everyday sales.

These enterprises act in construction and construction material production (46%), in trade (15%), and in science and research (10%). They produce 10 percent of all products in the region which does not seem to be a very large figure, but they show better efficiency than the state-owned enterprises.

There is a pronounced interest by foreign businessmen. There are more than 30 joint ventures and representative offices. The most active are business people from France, Switzerland, Germany, Austria, Bulgaria, Hungary and Israel. A new airline, Chelyabinsk-Tel-Avive, has been recently opened.

The Chelyabinsk Industrial Bank is one of the 20 largest banks in Russia and has the general license for all export-import operations.
II. POLITICAL AMBITIONS AND REALITIES

As we have already mentioned, the center of opposition to reform is the Regional Soviet. It is supported by some of the directors of military enterprises, collective and state farms, and the Regional Federation of Independent Trade Unions.¹

Political groups can be subdivided into three main categories:

1. Democratic Russia Movement This section supports Boris Yeltsin and his reforms. This group has its fractions in the Regional and City Soviets, but does not have the majority. Among the most known parties we can list the Socialist Party, the Workers Party, the Liberal Union, the Republican Party, the Democratic Party, Social-Democratic Party, and some others. Many of the leaders of these parties are people's deputies, but only in the City and Regional Soviets.

2. The Great Russia Among the parties entering this group are the Green Party, the Russian National Party, the Republican People's Party, the Cossacks Union, etc. These parties do not have any definite political programs and their slogans are very contradictory. They do not support the government.

3. The Communist Movement There are five parties within it: The Labor Chelyabinsk, the Russian Communist Workers Party, the Russian Party of Communists, the Socialist Party of the Workers, and the All-Union Communist Party of Bolsheviks.

Each of these parties are united in one thing: their leaders are former Communist Party officials. Their strategic line is also unite-restoration of the communist rule in the country and the restoration of the USSR. The only differences are in their tactics. The leaders of these parties have great influence on directors of collective and state farms. The Regional Soviet forms blocks with these pro-communist parties. Their political strategy is to impeach the administrations of cities and districts at the sessions of corresponding Soviets and to substitute the executive authorities to block the President and his reforms. But the majority of our population do not wish the restoration of the communist regime.

Democratic parties are in crisis. Their leaders gained popularity through street rallies. They are, as a rule, people of not very high social standing and without any administrative experience. They failed to enter the new government structures. Hence, a very strange situation occurred: democracy won, but there are not many in authority. For the most part the authorities are former communists—but only those who did not play significant parts in the party work and who entered the party ranks only to support their careers. These people are professionals and good experts. Their attitude to those who stick to street manifestations and rallies is an ironical one and they think that those who come out into the streets either do not want or cannot work properly.
All these parties are not numerous and none of them has gained any serious support among the people. All the struggle around the regional policy is concentrated at the sessions of the Regional Soviet. The indifference of people in what concerns the resolutions of the Soviet is so great that no one even reads them.

Thus, all political parties and movements do not influence the political situation in the region much. All important problems are settled between the higher officials, the Chairman of the Regional Soviet and the head of the Administration.

The attitude of directors of major enterprises is of utmost importance. The political battles of recent months have shown everyone that the majority of these industrial generals do not support the Chairman of the Regional Soviet. The only exception are directors of military plants and factories. They have their own opinion about the proceedings. They seem to be the last resort for the reactionaries and forces of political revenge.

III. ECONOMIC PROBLEMS OF THE REGION

The economic situation in the region is a very complicated one. It is defined by the fall of production in almost all branches, energy crisis, monetary crisis and the threat of bankruptcy and unemployment.

If we compare the first six months of this year with the same period of time of last year, we shall see that the average level of production is only 86.8 percent of the previous one. We see that production decreased in:

- fuel and energy by 6.2%
- ferrous and non-ferrous industry by 15.6%
- machine-building by 1.6%
- chemistry and lumber production by 13.5%
- construction by 5.4%
- agriculture by 16.3%

Machine-building enterprises cut down the production of tractors, automobiles, road construction equipment, consumer goods due to irregular supplies of metal, and metal constructions. For instance, the production of tractors fell by 28.6 percent of trucks, and lorries by 25.1 percent.

With prices growth and shortages of financial means, the clients cancel contracts. Since many of the producers are monopolists they do not try to cut down their production expenses and prices, but cut down their production instead.

Though the reasons for this fall in production are numerous, the gravest problem is the structural distortion of the regional economy. That is
why technical updating of industry and optimization of its structure and investment policy to accelerate its development are the main concern of the Regional Administration. There are great problems in agriculture. Milk production decreased this year by almost 30 percent, meat production by 40 percent, cheese by 40 percent, and macaroni by 7 percent.

One of the main reasons for that was the price-rise for raw materials and energy resources which resulted in the price-rise of the final product. To increase agricultural production, serious investments are needed.

After the prices were liberated, the consumer market in the region changed considerably. The assortment of goods is better now and there is almost no deficit and no distributive methods used. But all this, however, is not the result of the increase of consumer goods production but of the decrease in clients’ capacities to buy this or that due to sky-high prices. The sales of consumer goods fell down:

- meat and fowl by 30%
- fish by 40%
- eggs by 50%
- cotton stuffs by 30%
- clothing by 45%
- shoes by 32%

People now spend more money for food and not for other products. The fraction of food sales within the overall volume of sales is 59.5 percent, whereas other products are only 40.5 percent.

During the eight months of this year fuel and energy production decreased by 6.6 percent.

The situation with finance is also a very complicated one. The profits received by enterprises after eight months are 50 million rubles. The profitability increased fourteen-fold and was due mainly to the price-rise and a considerable rise in wages. The bulk of the profits belongs to industrial enterprises (45 billion rubles).

The financial results in all branches is positive. However, 10 percent of the enterprises bear losses (170 million rubles).

The standard of life, which was the lowest in January, has started to rise slowly. The growth of the level of wages in May and June was almost equal to the price-rise. The average wages of workers are 5,750 rubles; industry - 7,116.6 rubles; construction - 6,756.5; transport - 6,792.2 rubles; health service - 3,3691.1 rubles; and accommodation services - 2,854.1 rubles.

Wage growth differs in various branches of the economy since different forms of management are used.
One of the biggest problems, which excites the people in the region, in particular, and in Russia in general, is unemployment. This problem has not existed for 60 years due to the artificial increase in the number of places of work in the 1930s. This, however, proved not to be good for the country. The labor market disappeared together with the right of an employer to choose. There has been no dependency of an employee on his employer and the situation resembled a distorted mirror. Now is the time to put things straight.

The enterprises practice the same as in all other countries—the lazy and the non-qualified were the first to go. Today the number of officially unemployed exceeds 10,000 people. Within eight months of this year, 47,700 people addressed the Regional Employment Service and about 8,000 of these have been given jobs.

But the situation is the hardest for the families and people with low income—invalids, pensioners, and large families. These people are on the dole now and there are more than 810,000 of them in the region. Of them, 220,300 people need constant social aid.

This social aid goes, in the first place, to invalids of the I and II categories, single low-paid pensioners, invalid children and large families. There are 139,400 of them.

But the social tension in the region is at its minimum. This is the result of activities of the Regional Administration, which was the first in Russia to stop paying off limitlessly and switched to addressed payments.

To draw a conclusion we might say that the Russian economy is seriously ill, but the crisis can be overcome. The Chelyabinsk Region and the whole of Russia is living through hard times now, but our region has everything to fall down the precipice and to be among the first to pull through.

Even in these hard times they build new roads and restore the old ones, reconstruct and restore old houses and historical monuments, and build new production sites. The Chelyabinsk Region is the only one in Russia which managed to reconstruct its transport. It has bought numerous tram-cars and trolley-buses. Hungary has supplied buses to the city. Our local ice hockey team, "Tractor," is among the best in the country, playing in the Super League.

Such is the political and economical background in our region.

V. SITUATION AND DIFFICULTIES OF CONVERSION

If we use the language understandable for Americans, the situation in Russia can be compared to:

* your Civil War between the northern and southern states between reaction and progress, and the struggle with the forces wishing to separate;
Your complicated and contradictory process of adopting your Constitution;

and, finally, your economic crisis of the 1930s.

And if we just imagine that all these happened simultaneously, then you will have a distinct picture of our situation in Russia.

But, this is not all. Russia has to convert its military industry and we shall now try to imagine what it is and what is the range of conversion.

The military potential of the USSR was enormous. The bulk of this potential has been inherited by Russia.

To begin with, the army of the Soviet Union became the Russian army after the disintegration of the Union. The Baltic States have started to form their own armies, in which only their citizens are admitted. The republics of the Caucasus are doing the same. The republics of central Asia would like to have troops in their territories but in reality they have no means to support them. And again, the military burden is Russia's. Ukraine tried to annex the army, located on its territory, but after several months it decided to cut down its number considerably. Besides, there is a problem with our troops leaving the Eastern Europe countries and Baltic States, which are to be returned to Russia for the most part.

The problem will be partially solved when other former Soviet Republics call back their citizens from the Russian army. But 90 percent of the officers are of Slavonic origin and, naturally, they do not wish to serve outside of Russia.

That is why Russia has recently become one large field camp. The soldiers and officers have come back home, which is not yet ready to accept them, and there are no living accommodations or jobs for retired officers and their families. On the one hand the five million army is an unbearable burden for the Russian budget. On the other hand if the reduction of the army is too quick, it might result in a social outburst.

The other side of this problem is even more complicated.

The economical basis of Russia somewhat different from the economy of non-socialist countries.

The first difference is that the ideology for forming this economical does not resemble the ideology of non-socialist countries.

Whereas in the Western world an enterprise is being built only when there is a demand for its products, in the USSR it was military contracts which defined the construction of enterprises. It is not accidental that such an industrial giant, like the Chelyabinsk Tractor Works, produced 30,000 tractors annually while its capacities allow for the production of at least 50,000. The whole world does not produce more than 10,000 tractors of this type. This means that the main task of the Tractor Works is to produce tanks in war time.
The second difference is that research and scientific potential is more powerful in the military industry. If we compare the number of Academicians, Doctors and Candidates of Science, Heroes of Socialist Labor, and Laureates of State Prizes in the military industry with that of the other branches of the economy, we shall easily see that there number is greater multi-fold.

This was what helped the USSR to keep up military parity. In other countries an invention is used in many fields. In our country it can be used only after the military complex no longer needs it. Our researchers first created a bomber and only afterwards tried to accommodate it to civil needs. A heavy truck, like "URAL" for instance, is produced for the army and is then rebuilt to meet the demands of the national economy. That is why almost all the trucks and lorries are painted dark green. Their wheels and bumpers are black and their cabins lack convenience.

Russia seems to be the only country where almost all workers and civil servants are either soldiers or officers of the reserve. The regular armed forces number 4 million people. There are more than 200 military schools and about 15 military academies. Almost all higher educational institutions have military chairs. In every school there is a teacher of elementary military training.

These are some peculiarities of the Russian economy. The military industry had always been Task #1 for the Communist Party, hence its influence in the army today.

Conversion in Russia is a political issue. Reduction of military contracts will result in the reduction in the standard of living of thousands of workers and unemployment. It will result in disappointment of the people in the President's policy and demands to dismiss the government. To wrap conversion up would mean to aggravate the economic situation.

Those who oppose the reforms (pro-communist forces mainly) follow the process of conversion very closely, trying to force the government to blunder. Their main stake is to stir discontent in the regions with highly developed military industry. The Chelyabinsk Region is one of them.

Theoretically everybody is in favor of conversion, but in reality everything is much more complicated.

There is still no developed legal basis for the conversion. Unfortunately, the Supreme Soviet of Russia, wasting much time for the struggle against the government, has adopted numerous laws which are of minor importance and, at the same time, have not provided legislative basis for economic reforms and conversion, which is an integral part of them.

Only the "Law on the Conversion of Military Industry" of the Russian Federation has been adopted and was confirmed by the Supreme Soviet on March 20, 1992.

But this law is not enough, however. The Russian Parliament has not yet worked out the Russian military doctrine. Its versions are still being discussed in committees and commissions. The people's deputies, who
were elected in the times of the Communist rule, are not professional
are hardly capable of working out a document so serious and important.

There were hopes connected with the Law on Defense. But it turned out
to be unacceptable since this law reduced the authority of the President
in military matters considerably. Boris Yeltsin vetoed it. As a result
of activities of the Supreme Soviet, the government cannot work out a
long-term program of development of new military techniques, ammunition,
or define the degree of conversion in the Russian military industry.

However, the government did not stay idle. It issued several
resolutions and decrees concerning the procedure of conversion without
waiting for the Supreme Soviet to provide the necessary laws. A
collegial organ was formed, presided by Ye. Gaidar and his Vice, V.
Shumeiko. Its task is to manage the conversion.

In the regions committees on conversion are formed. The basis for their
activities are the principles of conversion stated in the Law on
Conversion:

• the usage of high technologies for producing goods capable of
  competing with foreign markets;

• the usage of freed scientific and production potential for the state
  programs of utmost priority.

As for high technologies, military enterprises are capable of producing
things which are no worse than German, Japanese or American goods. The
U.S. State Secretary, who visited Chelyabinsk-70, spoke highly of the
technical level achieved in these enterprises. The military enterprises
of our region produce rockets, tanks, ammunition, nuclear weapons, etc.

The enterprises of military complex in the region have formed their own
conversion programs aimed to switch from military production to the
production of consumer goods.

The situation at these enterprises is a very difficult one. Most of the
government contracts were canceled. Some of them stopped military
production completely. The tempo of production grew:

• in radio industry by 72.7%

• in general machine building by 102%

• in military production by 95.3%

• in ammunition and special techniques production by 71.1%

• in aviation by 70.4%

The reduction of military production in some cases, unfortunately, is
accompanied by reduction of output of civil production, including
consumer goods:

• fridges by 84.2%

• washing machines by 52.7%
• galvanic elements by 80.2%
• tape recorders by 45%
• radar receivers by 80%
• tram-cars by 42%

This is explained by irregular cooperation supplies and forced rise of prices, which are higher than the clients' capacities.

Of course the finance and resource deficit and mutual failure of payments are an obstacle for conversion; they prolong the time limit for creating new working places. The personnel lose qualifications or are used in jobs which do not fit with their experience. To preserve the jobs, the managers introduce part-time working weeks or dismiss personnel on unlimited vacations without pay.

The Regional Administrator, the representative of Russia in the Region, and directors of military enterprises work along the following two lines:

• they take part in a close auction for the government contracts for military production (Russia refuses to cooperate with other republics of the Commonwealth of Independent States, considering them to be unreliable partners and making their own military policy); and

• there is a program of priorities in consumer goods production.

Some extracts from this program are given below. Ten enterprises are listed as an example of conversion to the production of civil goods.
DIRECTIONS FOR POSSIBLE BUSINESS COOPERATION WITH FOREIGN PARTNERS ON SOME ENTERPRISES OF MILITARY COMPLEX WITHIN THE PROGRAM OF CONVERSION

<table>
<thead>
<tr>
<th>Name of Enterprise</th>
<th>Main Directions of Conversion</th>
<th>Prognosis Financial Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &quot;Stankomash-Plant,&quot; Chelyabinsk</td>
<td>Furniture from steel sheets for kitchens, halls, parlors, offices, etc.</td>
<td>1.5 million USD</td>
</tr>
<tr>
<td></td>
<td>Increase of cutting-machines production</td>
<td>480 million rubles</td>
</tr>
<tr>
<td>2. Aggregate-Production Combined Works, Sim</td>
<td>Domestic appliances (sewing machines of the &quot;Jaguar&quot; type)</td>
<td>4 million rubles</td>
</tr>
<tr>
<td>3. Design and Construction Bureau named after academician V. P. Makeev, Minsk</td>
<td>Sophisticated domestic appliances and their parts production (cableless multi-channel telephones, microwave ovens, electric irons)</td>
<td>120 million rubles</td>
</tr>
<tr>
<td></td>
<td>Agricultural equipment (dough, canned meat, spaghetti production equipment)</td>
<td>100 million rubles</td>
</tr>
<tr>
<td></td>
<td>Satellite communications</td>
<td>300 million rubles</td>
</tr>
<tr>
<td></td>
<td>Medical equipment and appliances</td>
<td>75 million rubles</td>
</tr>
<tr>
<td></td>
<td>Design and introduction of equipment for intensifying of oil and gas wells</td>
<td>90,000 USD</td>
</tr>
<tr>
<td></td>
<td>Development of alternatives to usual power sources</td>
<td>200,000 USD</td>
</tr>
<tr>
<td></td>
<td>Medical equipment (x-ray, computerized tomographs, informational systems for diagnostics)</td>
<td>550,000 USD</td>
</tr>
<tr>
<td>7. &quot;Electromashina&quot; State Enterprise, Chelyabinsk</td>
<td>Electric motors for domestic appliances</td>
<td>650 million rubles</td>
</tr>
<tr>
<td>8. The Zlatoust Machine Building Works &quot;Bulat,&quot; Zlatoust</td>
<td>Production of electromagnetic clutches for machines (E11M Series)</td>
<td>100 million rubles (inc. hard currency)</td>
</tr>
<tr>
<td></td>
<td>Electric motors for electric tools, audio and video equipment</td>
<td>40 million rubles</td>
</tr>
<tr>
<td>10. The Kopiesk &quot;Plastmass&quot; Plant</td>
<td>Disposable syringes</td>
<td>32 million rubles</td>
</tr>
</tbody>
</table>
This program might be interesting for the Western investors. The third column outlines possible investments in Russian rubles and American dollars.

Naturally, this list of military enterprises and their capacities is not complete. A close acquaintance is possible if you come to see for yourselves.

VI. CONCLUSION

Russia is on the verge of historical changes which would mean its coming back into the world's community. Democracy, economic reforms and consistent social policy are absolutely necessary here. Conversion is a necessary part of the Russian reforms. Its results will influence the development democracy in our society and the outcome of economic reforms and efficiency of social programs. Its success will result in the outcome of our home political struggle.

The Chelyabinsk Region is one of the most highly developed in what concerns military production. Conversion of these enterprises is an integral part of the conversion process in the whole country.

The success of conversion in the Chelyabinsk Region will provide thousands of jobs for people, higher wages consumer goods, and possibilities for investors.

1The latter is an organization of the old type which was called "the school of communism."
CONVERSION OF THE MILITARY INDUSTRIES IN UKRAINE

by

Victor I. Antonov

1. THE POLITICAL AND ECONOMIC SITUATION IN UKRAINE

On August 24, 1991, the Republican Parliament almost unanimously adopted the Act on Independence of Ukraine. This event signified the end of the whole historic period—the period of non-statehood and limited possibilities to control social and economic processes in Ukraine. Today Ukraine is getting a full value statehood, taking control over its destiny into its own hands and entering as a recognized member into the family of civilized countries of the world.

But having attained political independence, Ukraine at the same time inherited problems which had hardly been encountered by any of the European states.

The first group of problems is related to the setting up of the state power structures. The President’s staff to govern the country is being created, a new Constitution is being discussed, and the next task, a new, professional parliament is being created. After that, the establishment of banking and monetary systems, the National Army, etc. Fulfillment of these tasks requires immense organizational efforts and financial resources.

The second group of problems is connected with the extremely complicated situation in the national economy. The reason for it can be explained first by the transition from one political system to another and from the administrative principles of management of the national economy to a market economy. Today there is still no logical and complete concept of this transition.

As a result of the state monopoly on property of the means of production and budgetary financing of economical unviable enterprises, centralized management of production in Ukraine has emerged an economy with an archaic structure. Production of raw materials and fuel was making up 48 percent of the industrial output, military-related products 28 percent, and 24 percent of its industrial facilities were producing consumer goods. Basic funds were worn out in general by a half and in some branches by 70 percent. Two-thirds of capital investments require renewal.

The economic crises in Ukraine can be compared only with the situation in the USA from 1929–1933, with the period of the “great depression” characterized by a sharp fall in production and mass unemployment. But all that was happening under conditions of formed institutes of power which had an existence of centennial experience. The experience of President F. Roosevelt and the adoption of the so-called “new course,” and fulfillment in 1933–1938, is extremely useful for Ukraine in terms of contribution of measures aimed at strengthening the state regulation of the economy and measures in a social field. However, it has to be pointed out that despite the fact that the reasons of the crises are different, their consequences are similar.
Today the deformed Ukrainian economy has the following characteristic features due to a strict taxation policy increase on production costs, as well as prices: monopoly of production; decrease in motivation to productive activity; and sharp deterioration in material-technical resource supplies.

As a result, a stable trend in terms of reduction of production with simultaneous increase in deficit in practically all types of products, goods and services, has emerged. Reduction or production negatively influences finance and monetary systems. Today the price of many raw and other materials has attained the world level. At the same time an average salary in industry accounts for 0.5-1.0 of this level.

The major solution to problem would be forming a new economic system on the basis of a wide-scale privatization, adoption of anti-monopoly laws and etc., and entrance into a market economy as soon as possible. Achievement of this goal is connected with reorientation of investments, targeting, first of all, industries producing consumer goods and maximum utilization of the military-industrial complex potential for civilian purposes.

Judging from the above it becomes clear that the investments needed by the Ukrainian economy are immense. In this connection I would like to say a few words about political conditions for economic reforms. Without a stable state power as a form of national interclass agreement, it is hard to imagine a normal development, not speaking about reforms, of any economy. If under regular conditions in an evolutionary development the structure and the nature of the political power is defined by the structure and the nature of the economy, then under conditions of collapse and crises in the productive forces the political power can become a real basis and a guarantor of stabilization. Unlike other republics of the Union, such conditions in Ukraine exist.

The third group of problems of the independent Ukraine is the conversion in a broad sense of this word.

First of all about the conversion in the Army. Today in the Ukrainian territory there are military forces comprising 750,000. Besides that, Ukrainian citizens serve beyond its borders—in groups in the former USSR in Eastern Europe, in the Baltic States, and Russia—comprising 150,000-200,000 men.

It is a task to create a national Army with 200,000-220,000 men. To fulfill this task it is necessary to give pensions and benefits to the demobilized personnel and 200,000 free apartments, organize their reorientation, create additional jobs, and create conditions for various types of public-useful activities including farming and private business; in other words, to create a completely new infrastructure and develop the existing one.

The second problem is the conversion of the defense industry. On the one hand this is a problem. On the other, however, it is one of the real resources of economic revival in Ukraine—by pulling a section of the economic chain it will be possible to save the national economy from falling into the economic abyss.

Before about 700 industrial enterprises, 1,200,000 Ukrainians were partially or fully working on orders from the Ministry of Defense.
Today there are no orders from the Ukrainian Army, the Russian Defense Ministry, or from the other CIS countries!

The "snowslide" conversion began January 1, 1992. In order to avoid serious causal shocks we have chosen the way of transforming production changes in connection with the conversion. There is a very sharp question concerning the maintenance of technical and intellectual potential of the military-industrial complex. This potential represents thousands of highly qualified specialists, and modern and unique equipment capable of solving the most complicated production tasks. At the same time the extremely labor-consuming technical-economic problems related to the definition of priorities in the development of the enterprises under conversion emerged. We are talking no only about marketing defined by the market, but about assessment of the plants potential, evaluation of their readiness to switch to other products without a catastrophic crack in their technological specialization, and development not only of new product designs but strategy of development of sub-branches of economy to produce these products, including plans of technical re-equipment and reconstruction.

The next problem is the conversion of the whole social life. It is time to start paying rent, taking into account the real cost of electricity, gas and etc., to switch to a paid medical services and insured medicine, and education. At the same time it is necessary to avoid the social shocks which could delay economic development for many decades. It is also necessary to provide free movement of labor between the branches of the economy and increase labor productivity by at least three to five times.

Without exaggeration, for Ukraine the conversion is the most important national task which is connected with its future—both economically independent and socially—welfare state.

2. POTENTIAL CAPABILITIES OF UKRAINE

As a result of democratic changes and creation of the independent Ukraine, there is genuine interest in the world to our state's growth. Ukraine is one of the biggest states in Europe with territory of 600,000 square kilometers and a population of more than 52 million people. Ukraine has borders with seven European countries. Through the unfrozen seas washing the territory of Ukraine, there are routes to the Northern Caucasus and Transcaucasia.

In the comfortable passages of the Ukrainian Carpathian Mountains, there are railroads, roads and pipelines going through Hungary, Czech, Slovakia, Romania and other countries. Numerous transit oil and gas pipelines, which are going to western Europe, have to be considered as an integral part of country's potential.

God, creating Ukrainians, was eager to see them happy and rich. He gave them immense mineral wealth. Eighty types of them—practically all table of Mendeleev—are concentrated in more than 7,000 depositories! There are billions of m/t coal and iron ore, magnesium ore, oil, gas, uranium, sulfur, titanium ore, graphite and gold. Recently in Ukraine the largest deposits of scandium, valuable raw material used to improve aluminum alloys, were found. The possibilities to use materials
containing scandium in aircraft and missiles building are very promising. It is worth it to say that Ukraine possesses more than 30 percent of iron deposits found, about 80 percent of magnesium ore, 30 percent of coal, mineral paints and kaolin, more than 50 percent of deokerite and graphite, and considerable portions of sulfur, salt, titanium and mercury found in the former Soviet Union. But destiny decided on this wealth differently. Initially the Tsar’s empire and then during the 75 years of the Soviet Union common interests, before going to Ural or Siberia, drained Ukraine’s deposits. Nevertheless, Ukraine’s natural resources are still huge and they will last for many decades and centuries. A characteristic feature of the minerals and raw material resources in Ukraine is the convenient territorial combination of all of their major groups: fuels, ores, non-ores and hydrominerals. The territorial structure and high level of exploitation of deposits serve an important prerequisite for creation of territorial-industrial complexes of various levels and specialization. Broad utilization of the mineral resources of Ukraine contributed to a great extent a high level of development of such important branches of its economy as energy, fuel, metallurgy, chemistry and building materials. Among the independent states Ukraine has emerged second after Russia in economic potential. By its per capita production of coal, 3.7 m/t, cast iron, steel, 0.75 m/t, Ukraine is first among the CIS countries! Ukraine satisfies its needs with 19 out of 30 types of minerals and fuels.

The same can be said about the agriculture and food industry. In the total economic output of the USSR, favorable climate and fertile (black) soil provided Ukraine with 22 percent of its grain crop, 63 percent of its sugar, 33 percent of its vegetable oil, 23 percent of its meat, and 20 percent of its milk.

In terms of sugar and grain, today Ukraine is keeping first place in the CIS!

As a whole, 82 percent of Ukraine’s needs is met by its own production. The Deutche Bank, a recognized expert, gave the country 8 grades, using a 10-grade scale, while evaluating Ukraine’s economic potential.

Having proceeded with the copying and introduction resources, and energy saving and environmentally safe technologies, our state has already, by the beginning of the third centennial, compensated losses inflicted by the extensive economy, practically fully satisfying its own needs. All this allows us to forecast Ukraine’s integration in a visible future in the European Commonwealth to the world economic structures. In the background of the west European integration, Ukraine looks even more promising than Russia.

3. ROLE OF THE MILITARY

Transition to a market economy is connected also with functional changes in the state bodies of management, including ministries. In this connection we consider the unconditional dropping of the total state directive regulation of production to be a strategic venue of economic reform in Ukraine. But a complete abolition of the direct state regulation is possible only after the experience of so-called “free enterprise” is acquired.
That is why the ministry's activity is focusing on encouraging market mechanisms of motivation in public production, organization of new forms of economic relations, creation from fragments of former branches of full value scientific technical and economic complexes, capabilities to become a major section in the chain of Ukraine's economy, and solving the most important scientific-technical national economy and military-political tasks.

We have already passed the first stage of abolition of the old system. The "Law on Independent Economic Activity of Enterprises" and the Supreme Soviet of Ukraine resolution on "Management of Property of Enterprises, Establishments and Organizations Which are Property of the State," which considerably increased property rights of enterprises, were the first steps in changing property forms.

Today enterprises can independently create associations, national concerns, and even international concerns, of course, if they do not violate Ukrainian laws. This is instead of the direct, rigid administration on the part of the former ministries whose functions were:

- to define lists of products;
- to control planning and economic activities of enterprises; and
- to distribute material and technical resources and ready products.

Minmashprom of Ukraine considers its major tasks as the following. First of all, to assist in restructuring the multi-branch complex by introducing finance-economic regulators; studying and defining the future direction of development and perfecting of science and technology; balancing the needs of the most important types of engineering products with simultaneous evaluation of the existing industrial capacities; and innovating influential development of production of individual sorts on the basis of the chosen priorities.

Another group of tasks is connected with forming with Minekonombka, Minoboroua, Minfin and Goskomresurs of Ukraine orders on military and civil products, preparing proposals on their distribution among the enterprises of the Ministry, and taking into account their production capabilities on a competitive basis.

Third direction of the Ministry's activity consists of developing a special purpose branch and national state programs on exploitation and production of equipment, technological complexes, and items in accordance with the priority directions chosen earlier.

Among the measures stipulated by these programs is the use of scientific-technical achievements of the defense complex for civilian production—equipment for agro-industry, health care, transport engineering and consumer goods.

Also among the major functions of the Ministry is the conversion of excessive capacities of the military industries, coordination of effective foreign economic activity of enterprises, drafting of legislative and normative acts related to safety techniques and the environment, and methodological guidance in regards to implementation.
In the future the regulatory functions of the Ministry related to economic activity of enterprises will be qualitatively and quantitatively changed and transformed.

After some time branch ministries will be united into one complex—Minekonprom—which will carry out the economic regulation of the enterprises activity only, proceeding from the national interests of Ukraine. This is connected with inevitable and necessary privatization, their transfer into a collective and private property, and creation of various stock companies, etc. Today Minmashprom directs its efforts toward creating conditions for speedy entry of the enterprises into the market.

It is enough to say that of the 3,594 enterprises whose activity is coordinated by the Ministry, 3,000 will be subject to privatization.

4. CONVERSION

The Military-Industrial Complex (MIC) of Ukraine is comprised of 700 enterprises whose output is 18 percent of the total industrial production. The MIC embraces considerable intellectual potential, i.e., 150 scientific research institutes and design bureaux and 50,000 highly qualified specialists are working.

Ukrainian defense plants have produced modern missile complexes, including ballistic missiles, aerospace devices, various ships, tanks, radio-electronic detection systems, ammunition, and many other kinds of armament and military hardware.

When there are no orders from the Ministry of Defense of Ukraine, United Armed Forces of the CIS, and in some cases due to refusal to prolong earlier concluded agreements with respect to shipyards, the MIC plants find themselves in a catastrophic situation.

Only one way out can be seen in these situations—to carry out conversion and diversification of military products to solve this state task on a priority basis—that would allow economic stabilization, stop the recession of production and, after that, ensure effective work. The large potential of the MIC would be used to take the economy of Ukraine out of crisis.

Taking into account the economic situation in Ukraine and in the world, there are two ways of conversion. The first way, a broad conversion, is, in our opinion, preferable. This requires using converted capacities for production of science capacious, competitive, and needed by the national economy civil products.

Long-term credits by our banks and foreign investors for technical reequipment and reconstruction of enterprises for production would guarantee to the creditors enormous profits and place them in the national market. Although this would happen after some time. However, to our regret, there has not been much investment to date.

This option we consider as more civilized and more corresponding to the peace-loving policy of our State.
The second way, so-called "Russian variant," calls for the continuous sale of military hardware. In other words, to maintain the MIC’s size which would allow us not only to meet the needs of the national Armed Forces but also to export certain types of weapons and equipment to the CIS countries and to traditional world markets. Funds received from the sale would be used for conversion, including social security for workers.

There is also the third variant, so-called "shock conversion," connected with the complete reorientation of defense industries to produce civilian items with minimum budgetary support from the State. This variant is fraught with unreimbursable losses in intellectual and technical industry potential, as well as social constraints. We try to avoid this situation.

What is the situation today? What has the Ministry done in connection with the conversion?

Almost immediately after the establishment of the Ministry the "main directions of the conversion" were drafted and approved by Cabinet of Ministers on December 28, 1991. Their goal is to maintain the defense industry potential as a basis, utilizing its capabilities as man ground for restructuring and for technical re-equipment of the industrial sector of the Ukrainian economy, and for development of agriculture and processing branches.

It was intended to stabilize the situation in order to reduce it to a minimum economic recession, to avoid social conflicts caused by unemployment, and to provide social security for workers at defense plants.

All that corresponds to the way the conversion can be considered as the most real and acceptable; as it was indicated above.

On November 1, 1992, the State Program on the Conversion of the Military Production was created to make this process a manageable, controllable and irreversible process. On this basis we are working for development and implementation of the conversion mechanism.

Minmashprom inspected 208 plants and 116 scientific organizations of the MIC which were subject to deep conversion. In 1991 43.4 percent of their workers were involved in the development and production of military hardware. The inspection revealed that in order to convert the above entities it was necessary to reorientate the activity of 400,000 people. It was expected that the drop in production would be between 70-80 percent.

Taking into account the grave situation, the Ministry suggested to the government that urgent measures be taken to help the MIC plants and organizations. Thanks to the President’s decree on “Measures on Stabilization of Scientific Research Work and R&D Organizations and Industries of Defense and Engineering Complexes of Ukraine in 1992,” practical help was given to the enterprises and scientific organizations which were subject to deep conversion.

Financial assistance allowed the preservation of unique scientific, technical and industrial potential concentrated in Ukraine’s major enterprises, such as SPA and Design Bureau, Yuzhnoe and
Dnepropetrovskiy, a scientific and technical aviation complex named after O. A. Antonov of Kiev, a production association plant named after Malyshlev, and two design bureaus, a production association "Black Sea Shipyards," and Nikolaev and Kharkov Physics and Techniques Institute.

Together with the industries and their proposals there were 500 special purpose complexes developed for scientific-technical program development and production for industrial-technical items (about 5,000 items). Taking into account the mobile character of the market after a thorough analysis, we proceeded with development of multi-level "pyramids" of priorities. Building up of the pyramid orders was carried out on the basis of evaluation of nomenclature of products depending on their demand, including not only final products but their components, engines, and spare parts. The upper part was made up of technological complexes for agriculture and food processing industries (48 programs), medical equipment devices and equipment for medical production (42 programs), consumer goods and high tech home appliances (83 programs), equipment for light industry, trade, restaurants and service (13 programs), communication systems and informatics (77 programs), modern industrial materials (10 programs), etc. A group of 31 environmentally safe and energy-saving technologies are making up a separate direction connected with environmental protection, processing and utilization of industrial waste.

As can be seen from the above, instead of producing items finally aimed against the existence of a human being, we are moving on to production of what is need for sustaining life.

Filling the market with these product priorities will be replaced by new ones. The plants which produce this equipment has to be financed in order to be able to carry out R&D. Therefore, soft loans have to be provided to them. The total production value in accordance with these programs in 1992-1996 will be more than 1.3 billion rubles (1992 price).

In sum, it is possible to say that the conversion mechanism, to a great extent having been formed by now, consists of special purpose programs, multi-level independent expertise, and structures which are handling finance, credit, and foreign investments.

World experience shows that the conversion of military production equal to $1 million requires resources of $1.12 thousand. It is obvious that the conversion requires involvement of considerable resources.

The cost of the special purpose programs, which in fact are the instruments of restructuring the MIC and key branches of the national economy, is estimated at about 550 billion rubles, including 145 billion rubles for 1992.

Today a major portion of the financial resources is used for special purpose appropriations, such as soft credits by the National Bank of Ukraine for production preparation, introduction of new sorts of products, and modern technologies. For 1992, 50 billion rubles were planned for these purposes. In connection with this, it is necessary to say that in our view it is in principle unacceptable to be oriented solely toward one source of financing, i.e., the State budget. During the transition period the Ministry is trying to acquire financing from several sources: giving a greater role to non-budgetary means for the plants under conversion, to commercial credits, and foreign investments.
This position corresponds to the multifactor character of the conversion which is acting on the conditions of emergence of a finance and credit system, crises of the price formulation process, and State budget deficit.

On the proposal of the Ministry, the Cabinet of Ministers of Ukraine adopted on February 22, 1992, a resolution on the establishment of the State Foundation of Promotion of Conversion. This Foundation was created to finance measures related to the military conversion production in the defense and engineering complex of Ukraine. One of the contributing sources of this Foundation is a three percent deduction in the cost of production being released by the defense industries. Another source was the 50 percent profit received from the sale of unfinished construction projects which were planned for military hardware production and which could not be used for civilian production.

Nevertheless, today the situation, in terms of conversion financing, cannot be considered as satisfactory. It can be explained by a huge budget deficit, unstable price policies, difficult financial situations with the converted industries, and galloping inflation.

One of the solutions to this could be foreign investments.

5. The Foreign Investments Program

A reverse in the recession trends in production, maintenance of the scientific and technical potential of the leading branches of the economy during the conversion, organization of production and an increase of volume in the necessary industrial products and consumer goods with simultaneous structural changes in the sector of the economy, raise before the Ministry a task of launching aggressive foreign economic activity aimed at attraction foreign credits and investments.

Adopted on March 31, 1992, the Ukrainian "Law on Foreign Investments" guarantees protection and assistance to foreign investors. Foreign investments cannot be subject to nationalization. Moreover, foreign investor losses have to be compensated. The Law stipulates that the compensation is to be quick, adequate, effective and defined at the moment of the factual implementation of the decision.

The necessity to attract foreign capital to Ukraine is defined, on the one hand, by a lack of internal currency resources which could be used for credit and, on the other, by a sharp deficit on some types of raw materials and equipment which were imported earlier.

Without these funds it is not possible to start the needed production of those items not made in Ukraine earlier, such as sewing machines, watches, videos, etc., and which would solve the problems related to the use of scientific potential and new technologies developed by the MIC.

Cooperation with Western companies and the creation of joint ventures and stock companies, with 100 percent foreign capital, opens good perspectives for meeting the needs of the defense sector. It is possible to produce modern tankers with a capacity of 300,000 m³, cargo ships, vessels for car transportation, fish factories, refrigerators, floating hotels, truck and car transportation, planes for 100-400
passengers, agriculture, medical equipment, home appliances, and many, many other things. All this corresponds to the social needs of Ukraine and is connected with reorienting the internal structure of the MIC on increased production of consumer goods, and implementation of the conversion programs. The program foresees an increase in production of consumer goods in four years, by almost two times. Among them are color TV sets, videos, freezers, automatic washing machines, vacuum cleaners and other home appliances.

There has been 416 joint ventures in Ukraine since 1986. Of the 416, 349 are producing goods.

On September 1, 1992, the Ministry of Finance of Ukraine officially registered 752 foreign investors. The most active partners of the Ukrainian enterprises are U.S. companies (80 joint ventures), Germany (63), Austria (32), Italy (25), Switzerland (24), Great Britain and France (18 and 17 respectively). Companies and individuals of the former COMECON countries are very active in Ukraine and account for up to 1/3 of all joint ventures.

The Ukrainian-German joint ventures in Donetsk and Kharkov with the Varex and Kaiser firms serve as good examples of a mutually beneficial cooperation. They process prospective color metal waste and 30 percent of their profit is spent on purchases from the firm “Simeus” of technology, equipment and components for medical equipment production, which is in accordance with the state program on the “Health of Ukraine,” and into production at the Kiev SPA “Relay and Automation.”

The other way of getting foreign investments is through interaction with Western banks and firms on a compensation basis.

The existing branch economy management structures of Ukraine already have some experience in international cooperation on compensation projects (building of the mining refinery plant in Krivoy Rog and the switching of the former COMECON countries into Ukraine’s power system, etc.). Western investors, in exchange for their technology and equipment, could get their ready-made product produced on their basis and also raw material components. For example, cracking devices which allow deep refining, up to 85 percent, of oil which could pay for cracking products. For rolling mills designed for cold rolled metal sheets and stainless steel. We could give the respective share of increased output to this product.

The same can be done with plastics, agricultural products, fertilizers, etc., where compensation can account for up to a half of the increased output. On a compensation basis there can be an exchange of a limited number of scientific ideas at the world level.

Ukrainian scientists made a substantial contribution into the development of physics, plasma and low temperatures, optical quantum electronics, and non-line optics and dynamic golography. The scientists were the first to propose the use of chemical lasers in electrode photopassages.

A significant potential is accumulated in the applied and branch science of Ukraine. This concerns science on materials, physics-chemical processing, powder metallurgy, etc. Among these technologies are methods of putting metallic covers on the surface of diamond crystals.
and hard-melting materials, development of the scientific direction connected with the use of plasma, plasma induction and electronic rays, heating for fusion of high quality steel, and gamma technologies for getting construction materials of various qualities.

Work on modern systems of automatic management of complicated and dynamic processes, high effect vapor-gas devices for the energy sector, pipelines and many others can also be of a considerable interest to foreign partners.

We are in need of scientific-technical investments in such fields as informatics, radio-electronics, power supply, and environmentally safe technologies in many spheres of production. Such cooperation deserves permanent attention and support.

At the same as a compensation basis on the part of Western investors, there can be sold questions of transfer to a concession of enterprises which, due to the economic situation, cannot be used by the State or privatized.

One of the hard currency sources is exportation of competitive products of Ukrainian industries. In the first part of 1992, 958 plants and organizations took part in export deals on more than 60,000 million rubles. Today exportation is dominated by raw materials, materials, and consumer goods, but the share of engineering products is growing. There are ferroalloyed dynamic head and microchips, tools and cars, excavators, ship and port equipment, and planes. During the first part of 1992 exportation of Minmashprom industries made up about $20 million.

Ukraine is becoming well known in business circles as an exporter of these products. For example, P. A. Zar'in from Nikolaev signed contracts with the Indian side for supply to India's gas turbines for $100 million. Ten percent of this sum will be paid in advance.

Funds received from export will be used for purchase of new technologies and equipment which would allow modernization of our production, and a broader list of competitive goods in the world market.

Ukraine today become a member of the IMF, EBRD. Naturally, taking into account the economic situation in the country, we would like to hope that there will be credits from these financial institutions, as well as from foreign states, banks and individual companies.

It is known that some credit lines are open for Ukraine (Italian, German, others), but that is not enough. In accordance with estimates by specialists of Minskombi on the Italian credit line, for each credit unit there are 50 units of declared requests.

We understand that only well placed work on investment projects can, taking into account international requirements, implementation, and independent expertise, serve as a basis for long-term credits. There are already 200 developed special purpose branches and sub-branch programs and individual work on enterprise business plans. This can be used as a basis for implementation of these projects.

Enterprisers who receive credits can assume obligations of guarantee on such payments by their property.
Inspite of the stable dynamics of activity growth in cooperation by foreign companies with Ukrainian partners, today we cannot say that all problems related to such a cooperation are resolved. The work on privatization law is not finished yet, and there is no law on land property. Some forms of joint activity do not have proper mechanisms and sometimes agreements on joint ventures are canceled due to the incapacity of one of the parties to act actively.

The Ukrainian Parliamentary Commission Cabinet of Ministers is permanently working on these problems.

6. PRIVATIZATION OF ENTERPRISES

On July 7, 1992, the Supreme Soviet of Ukraine approved the State program on privatization of state enterprises. This program was developed in accordance with the concept of privatization of enterprises and land and housing fund, and is considered an integral part of the program of creation of a market economy.

The main goal of the program is to change property forms by means of production for their effective use and forming a stratum of non-governmental owners as a basis for a formalized, socially oriented economy.

As it was already mentioned, we consider privatization as a basis for restructuring the economy, stabilizing the economic situation, and developing competitiveness and restricting monopolies in production—one of the prerequisites for foreign investments.

The Ministry is consistently taking measures to deepen the economic reforms and, first of all, to change property forms and introduce market principles.

From 1990–1992, 380 enterprises changed their property form. There are plans to privatize and make stock companies 1992–1994: 1,100 small state enterprises, 370 medium-sized and 416 big enterprises, which are subordinate to the Ministry. By the end of 1995 2,500 enterprises will change their property form.

There are problems connected with insufficient development of a financial market and corresponding legal basis, imperfection of credit mechanisms, and bond investments. All this compels us to take care of enterprises under privatization. First of all, we will help find a future partner stipulated by the legislation benefits. Besides that, the Ministry will participate in developing programs aimed at improvement of economic viability of enterprises through giving them credits on certain special purpose programs. It will be done with the agreement of the future owner. We think it is possible to get established under the auspices of the Ministry a stock company which would assume functions of an investor, hold holding operation, insure privatized enterprises, etc.
7. MANAGEMENT STRUCTURE

The Ministry of Engineering, Military-Industrial Complex and Conversion was established in an economic crisis.

In creating a new management structure we took into account that the economic crisis, to a great extent, was the result of the old management system which proved incapable of providing a transition to new economic forms in the emerging market.

That is why, from the beginning, it was decided to make the Ministry one of the main sections in the chain of a flexible, democratic, and complex branch management system. As it was said earlier, the major task of this system is to assist quick adaptation of defense industries and market economy, and to stop economic recession, which was the result of non-economic management methods in a highly centralized system and monopoly of producers, non-effective taxation policy of the State, and absence of a scientifically proved credit system.

Creation of a principally new organizational management structure of the Ministry, their work was directed to implement this long-term policy. Among other things within the framework of a directorate of economic analysis and forecast and science development in market conditions, departments of introduction of market mechanisms and branch restructuring, of new property forms, and economy and demonopolization of production were created.

The main management method adopted by the Ministry's structures was finance and economic regulation of reforming the branch structures.

As an effective instrument of restructuring, as it was said before, it was chosen as the principle of development of special purpose complex scientific-technical programs. Their financing from the State budget is implemented after multi-tier scientific-technical and organization and economic expertise is carried out by the Directorate of the Ministry with participation of highly qualified specialists.

Such a policy allowed to begin the process of curtailment of non-effective industries, redistribution of resources, and replacement of some military by civilian production.

The measures taken by the structural units of the Ministry do not contradict regional interests and possibilities; they are coordinated with the representatives of the State administration on the places.

Thanks to application of the new management methods and economic instruments today, we are able to control the situation and during the initial stage of reform we are able to maintain science-consuming working places, life support of the branch, stop non-effective investments, and save industrial-technical and scientific potential.

We were among the first to be against increasing taxation pressure on enterprises, seriously impeding the innovation process. Accumulation of investments is, in our opinion, the most important factor of technical re-equipment and reorientation of the MIC enterprises.
The intention of the management structures of the Ministry to actively participate in forming the economic and scientific-technical policies of Ukraine at the initial stage looks promising.

If we manage to supplement it with active investments and combine it with stabilizing and anticrisis measures of the Government, economic restructuring will become an irreversible process.
INTRODUCTION

It is a pleasure to be asked to comment on Minister Antonov’s discussion of Ukraine’s defense conversion efforts. Minister Antonov’s visit to Washington is just one of several times in which he and I have met to discuss the issue of defense conversion and the broader challenges of economic transformation in Ukraine. I first met Minister Antonov in Kiev over a year ago, in November of 1991, when Deputy Secretary of Defense Donald Atwood led a delegation of industrialists to Ukraine to learn more about Ukraine’s defense conversion challenges.

On this trip, we were impressed by Minister Antonov’s dedication and energy. He described the main objectives for defense conversion and economic change in Ukraine, outlining five key areas for meeting the needs of the Ukrainian people: providing better health care, improving food processing, developing reliable communications and transportation networks, and improving access to consumer goods. In addition, Minister Antonov emphasized the need for outside involvement and interest in the problem of transforming Ukraine’s economy.

We at the Defense Department agree with these priorities and with the need for an active Western role. We continue to have a strong interest in the success of democracy and free markets in Ukraine. We share Minister Antonov’s sense of urgency. To this end, we have met many times in the past year with Ukrainian officials. I most recently returned to Kiev in October 1992, and Minister Antonov has been to the Department of Defense and met Secretary Atwood as well as other DOD officials this fall.

THE END OF AN EMPIRE: AN INCOMPLETE VICTORY

The world has undergone remarkable changes with the dramatic collapse of the Soviet Union. It is an enormous pleasure to receive in the Department of Defense the representative of an independent Ukraine. But the end of the Soviet Empire left the world with only a partial victory. The transformation to stable, prosperous democratic societies is only just underway. In many respects we are now faced with a difficult, unsatisfactory situation: the continued impoverishment of people by floundering economies that have one foot still in the command model. The most important development yet to come will be the development of free market economies and the solidifying of strong democratic institutions in these newly independent states.

In Ukraine, Russia, and Central Europe, the last half of the 20th century can be viewed in two phases. The first phase was marked by a battle between competing ideologies, alliances and defense investments. The second phase has been characterized by democratization, destatization and privatization. That is, in many senses, a more complex battle—one which will be won only with the consolidation of democratic institutions, the establishment of property rights and the development of balance sheets and commercial investments.
The West won the cold war because its vision of man was closer to reality than the communist ideal. That is the good news. The bad news is that in this Western vision man is greedy, otherwise lazy, and incapable of self-governance without legal restraints. The battle of privatization in the next few years will be won by nations with institutions that allow man’s true competitive spirit to flourish, and which contain the legal restraints to curb his darker sides. This is not mere fashionable cynicism: it lies at the heart of democratic political and economic thought.

The West’s ultimate economic strength is that it has created structures that enshrine man’s right to pursue his personal success, and this has been the key to economic prosperity for society as a whole. The proper functioning of the market requires freedom, privatization and flexible, mobile investments. Variations to these processes—such as subsidizing one part of society—can only be at the expense of another and is a drag on the whole economy.

**SCALING DOWN**

A number of participants in the RAND conference to date have spoken about the scale of the challenges faced by Ukraine, as well as other newly independent states. It is true that the scale of the challenge is difficult to quantify, given the weakness of current statistical measures. But it is also true that the scale, taken more broadly, is clearly enormous.

Despite our best wishes, the West has little experience and, until recently at least, limited literature on assisting the large scale transition from communism to capitalism. In addition to this handicap, the current U.S. defense conversion experience is different from that which Ukraine is now undergoing. While the United States is also faced with the economic dislocation caused by reductions in defense spending and in defense restructuring, we have an existing private sector and a much smaller scale problem to tackle. Perhaps our closest experience came in the years immediately following World War II. During the War, military sector spending approached fifty percent of our gross national product. In the immediate post cold-war period, U.S. military spending dropped to approximately six percent of our GNP. Of course, these changes came in a free market economy with a previous pattern of success.

It may be useful to compare the current situation in Ukraine to the rough scale of the challenges faced elsewhere in Central and Eastern Europe. Soviet Union Cold War military spending approached thirty percent of its GNP. Since achieving independence, Ukrainian military spending is still quite high (some estimate 10-15 percent of its GNP), but is decreasing. Ukraine’s intention, in the long term, is to decrease spending to 4-6 percent of its GNP, an amount comparable to that in NATO nations.

As Minister Antonov has noted, in the recent past the number of those employed in Ukraine in production of defense items was roughly 1.2 million. This is approximately 2.5 percent of Ukraine’s total work force. In the former Czechoslovakia 2.4 percent of the labor force was employed in defense-related areas, in Poland 1.5 percent, while in Russia the number was approximately 10 percent. The dimensions of the
problem which Ukraine faces may thus in some ways be closer to that of Poland and Czechoslovakia, and Ukraine may be able to profit from lessons learned in those states in Central Europe. If so, Ukraine may take heart from recent positive economic accomplishments in Poland, for example, following the imposition of a number of economic reforms.

THE CHALLENGE FOR GOVERNMENT

Ukraine’s overall defense conversion challenge is to convert its state-owned, military-oriented command economy, to a privately-owned and commercially-oriented market economy. Ukraine must greatly shrink its military sector, while spurring rapid growth in private enterprise. The solution is the same for both small enterprises and large, state-owned industries: the creation of a full-fledged market economy. Yet the implications of market reform present somewhat different problems for large and small enterprises. Given Ukraine’s situation, the special problems likely to be associated with the conversion of larger industries—particularly those in the defense area—should be noted. These problems are likely to include:

- **Political Sensitivities.** Due to the very nature of larger defense enterprises, change will likely be controversial. Large defense enterprises were often the leading elements of industry and in particular areas formed an important part of the local economy. They often employed the most skilled and best-paid workers and were dominated by the more powerful members of the old nomenklatura.

- **Social Safety Nets.** Converting larger enterprises will likely cause many immediate social dislocations. These industries provided many social services and functions for their workers and their families.

- **Capital Requirements.** Any long-term conversion will require a significant infusion of foreign capital.

- **Shrinking Markets/Proliferation.** Large defense enterprises will be hard hit by shrinking defense-related markets and stiffer international competition. Shrinking markets will force industries to completely retool and develop products with civilian applications. In addition, shrinking arms markets could increase the danger of proliferation, as the temptation to sell to more troublesome countries could grow.

FINDING SOLUTIONS

How can solutions be found to the difficult challenge of conversion? How can Ukraine begin to convert the large defense enterprises it inherited with the breakup of the Soviet Union? Ukraine’s government has an important role to play in creating the framework and parameters for such a large-scale transformation. Yet the government’s role should be clearly circumscribed and limited to two main functions: creating and preserving an economic framework and a security framework.
Ukraine's government has a central role to play in establishing the framework and institutions which will allow the mechanism of "self-interest" to function. As I noted earlier, men must be able to pursue their self-interest so that a true free market can develop and flourish. Key features of a function free market economy will be:

- **A Legal, Financial, and Monetary Framework.** Government must work to fully legalize and protect private property—including land, personal property and the means of production, and the ownership of large corporate entities. Individuals must be able to use property that they own as they wish, draw income from it, and sell it at market price for a profit. In addition, contract laws must be further developed and enforced. A dependable monetary and banking system must be in place. While some laws addressing these issues have been passed, few are in place and functioning well.

- **Free Capital Flows.** Government should facilitate capital investments and low transaction costs. Information flows should be encouraged and simplified.

- **Social Functions/Infrastructure.** Government will have to play a role in replacing the role of enterprises which formerly provided many social goods to workers and their families.

- **Education.** Government has an important role to play in education. Management needs to be education in ways of the free market. The dynamics of the free market must be understood by all participants. Demand and supply concepts need to be explained; the role of government needs to be discussed and reassessed.

- **Setting Priorities.** Within its proper, limited role, government may assist the development of priority areas. Minister Antonov has already recognized the importance of several. These include the improvement of health care; the provision of food and consumer goods to the people, a solid transportation system and a reliable communications network.

The most important, guiding principle which government should keep in mind through this transition period is that, when possible, "move out of the way." Government, as the United States has experienced, cannot "pick winners" among private enterprises; the free market picks winners.

At the same time, it is critical that the Ukrainian government lead in this transition period so that the public understands both the structural changes essential to success and the true causes of past failures. The public must recognize that the economic pain of transition is not inflicted by free markets, but as the final curse of a command economy. It would be ironic indeed if the command economy that so bankrupted these societies was portrayed not as the source of the continued impoverishments of the people, but somehow as the solution to such disruption.

In the end, the Ukrainian government must convince its people that they must persevere through this time of great social trauma and transition. In the end, no other solution than the establishment of a free and full function market economy will bring the prosperity and leading role in the world the Ukrainian people deserve. The main role of government
will be to implant, as early as possible, public support and the basic structure which will permit such a transformation.

The second aspect of government’s role in defense conversion is to provide an overall climate of stability. Ukraine’s government must continue its long-term planning and articulate its strategic concept so that rational business decisions can be made by the defense industrial complex. These industrial managers need to know what, in the future, Ukraine’s armed forces will most likely need—and what they will not. Much of Ukraine’s existing defense industries produce equipment such as strategic missiles and large surface combatants which are probably not suited to Ukraine’s new emerging defense concepts. Compounding these difficulties is the fact that defense industries that Ukraine decides it will need may have to be restructure themselves.

Equally important is the government’s role in providing a climate of stability and security for Ukraine. Thus far the Ukrainian government has made it a distinct priority to establish strong and stable relationships with all neighboring states. Ukraine will need to be clear in its concept for its own defense, one consistent with international norms and declared obligations.

THE U.S. GOVERNMENT’S ROLE

The United States has a role in assisting Ukraine as it transforms its economy and develops more stable internal and external relationships. The United States and NATO continues to cast a shadow of stability over Central and Eastern Europe. Our involvement in NATO—and Ukraine’s participation with the Alliance through the NACC—is an important part of this objective. It is an irony of the last half of this century that NOT, which helped to defeat communism and is now a primary guardian of the freedom of those who suffered under communism.

The United States is also committed to directly helping Ukraine restructure and downsize its defense establishment. We are working to educate Ukrainian forces about Western concepts of civil-military relations, as well as about our military education and training methods. One important program we have begun with Ukraine is the International Military Education and Training program (IMET), which brings Ukrainian military officers and civilian defense officials to the U.S. for training. In addition, the United States has appropriated funds to facilitate defense conversion and to assist private investment by U.S. firms in Ukraine.

All of these contacts will be strengthened as Ukraine integrates further into the Western community of nations and as its role in the NACC, the CSCE and other institutions grows. A crucial element to Ukraine’s ability to become an integral part of this Western community will be its adherence to its commitments, in particular, Kiev’s commitment to ratify START and to become a non-nuclear signatory to the Non Proliferation Treaty (NPT). Failure to do so will endanger not only the rapid progress of this cooperative defense relationship, but also the growth of a wide range of economic and political ties.
CONCLUDING THOUGHTS

There will be no single point of entry in the United States government for addressing Ukraine's defense conversion challenges. Ukraine's difficulties will be resolved only through a variety of interrelated approaches: from the establishment of a basic legal framework that will allow a complete restructuring of its economy, to the growth of private investment, to the influx of U.S. and other Western funds, to the development of a long-term defense and strategic doctrine for Ukraine. The United States government can assist, particularly through the provision of technical advice and limited assistance funds, but its primary role will be as a catalyst of the more powerful forces of Western investment through the workings of a free market. The opportunities are plentiful. Before Ukraine stretches a future of prosperity and a leading role in the democratic community of nations.
SESSION III: DEFENSE CONCEPTS, PLANNING, AND BUDGETING
UKRAINE'S NATIONAL SECURITY AND PERSPECTIVES OF MILITARY BUILD-UP

by

Alexander Honcharenko

INTRODUCTION

Less than one year passed since Ukraine's landslide move toward independence. Thus this former Soviet Republic and Russian colony in reality was transformed into sovereign European state full-fledged and equal subject of international law.

A lot of events happened since then. Disintegration of former Soviet Union and emergence of entire spectrum of independent, semi-independent and totally dependent states in the region, growing move to the right, continuing political chaos and rising imperialistic ambitions in Russia have resulted in the formation of uniquely unstable and unpredictable international environment in this part of Europe. If we add here some signals that show quite clearly Moscow desire to elaborate and implement some kind of Russian version of Monroe doctrine and thus create a legal basis for possible intervention on territories of other countries under the pretext of “conserving stability and security” (What kind of stability? and Whose Security?), we inevitably come to conclusion that situation on 1/6 of the Earth is very dangerous and ready to get out of the control.

Ukraine has therefore been compelled to structure its state system and its national security system in an extremely unstable environment with the practical absence of any allies whatsoever in the outside world. It is quite clear now that the most vital, urgent task of Ukraine is to create as soon as possible an adequate system of national security--political, military, economic, ecological, socio-cultural, etc. Without such a system in view of enormous threats of internal and external nature Ukraine as a sovereign state is doomed.1

UKRAINIAN NATIONAL SECURITY ISSUES: PROBLEMS AND ALTERNATIVES

Elaboration and implementation of National Security Strategy as well as National Military Strategy of Ukraine is impossible without preliminary answering on questions like this:

- What are the vital national interests and priorities of Ukraine as sovereign European state for the decades ahead?2

- What are the basic factors of internal and external security of republic? From there derives the primary threats to national security of Ukraine and in particular to Ukraine's sovereignty and territorial integrity?

- What forces, structures and programs inside as well as outside of the republic could serve as guarantors for independence and further development of Ukraine?
* What minimal level of deterrence (political, military, economic, legal, etc.) is required to defend national interests of Ukraine against potential threats or potential aggressor?

The answer on these and other questions is impossible without in-depth examination of the vitally important national interests and the whole spectrum of internal and external threats to the young Ukrainian state.¹

**VITALY IMPORTANT NATIONAL INTERESTS:**

1. Maintenance and preservation of the national sovereignty and the republics territorial integrity. Defence of its borders, population and national state system. Defeat any aggression that could threaten the security and national interests of Ukraine using all means at its disposal (military, if necessary).

2. Creation of an adequate national security system--political, military, economic, legal, socio-cultural and others. This is understood to be further consolidation of national state system, the national armed forces, national guard and border troops, creation of the gold and national currency funds, modern banking, financial and communication custom services, internal security structures, strategic planning systems: military, foreign policy and scientific technical intelligence, etc.

3. Promotion of stability and security in the region by pursuing balanced and non-aggressive military and foreign policy. Step-by-step and in perspective total nuclear disarmament with the international aid and under the international control. Ukraine’s comprehensive integration into regional and global security structures.

4. The most rapid transition of the republic’s economy to full independence through mobilization and development of national capabilities, market structures and radical economic reforms. Denationalization and gradual privatization of the majority of industrial facilities (including military industrial complex enterprises).

5. Integration of Ukraine into the world economic and political community. Creation of conditions to attract foreign investors, preserve old and create new access channels to foreign markets and strategically important resources for the republic’s economy--oil and energy as a whole, rubber, ferrows metals, lumber, cotton, etc.

6. A fundamental review of the existing practice of economic ties, price formation and delivery systems with the other CIS countries. As economic independence is attained and national reserves of strategic raw material and energy resources are created, shift to the accounting for export-import transactions based on international market prices and in hard currency. Total cessation of the financing of CIS troops from the territory of Ukraine. Cessation the membership is CIS as in Russian dominated political formation that did not respond to the interests of Ukrainian people.
7. Development and maintenance of the process of socio-cultural and spiritual revival as the foundations of national state system of Ukrainian people.

AMONG THE UKRAINIAN STATE’S OTHER PRIORITY INTERESTS ARE THE FOLLOWING:

- comprehensive expansion of Ukraine’s direct participation in the activities of international institutions and organizations and in the global level system of economic and political processes, specifically the Helsinki process, CSCE, NATO Cooperation Council, other European economic and political structures;

- development of transportation lines (sea, land and air), information and telecommunication systems needed for normal development of economy, society in whole and protection of the republic’s interests. Creation of a national ocean fleet, modern air carrier companies and transport corporations;

- promotion of economic and cultural contacts with 20 mln -strong Ukrainian Diaspora, with the countries that have significant portion of the population of Ukrainian ancestry (the United States, Canada, Australia, Argentina, Israel and others);

- unconditional fulfilment of all international treaties and obligations both in the sphere of disarmament and security and in the sphere of human rights and freedoms, free immigration and emigration, individual contacts and interpreneurship;

- formation of flexible and balanced policy in the sphere of interethnic relations and relations with the CIS countries. Organization and conduct under international control with UN involvement (if necessary the International Court at the Hague) of comprehensive negotiations of the division of the property of the former USSR, including the issue on gold and hard currency reserves, CPSU accounts, property abroad, etc.

Finally, let’s point that the development of national security and military strategy requires not only the study of fundamental national interests and goals but also comprehensive analysis and classifications of existing threats to the state both of an external and an internal nature. Let’s mention also that the primary threats to Ukrainian national security are extremely multifaced in their structure and can be devied into internal and external threats only with well-known fraction of conventionality.

INTERNAL THREATS

1. The collapse of economic reforms, social instability and disorders.

2. Ethnic and regional conflict and civil war.
3. The "Old nomenclature" coup with possible participation of the armed forces.

4. Ecological degeneration.

EXTERNAL THREATS

1. Russian expansionism and Russia's military machine.

2. Externally stimulated interethnic conflicts and territorial break-up of Ukraine.

3. Economic blockade and economic (nuclear) blackmail.

4. Territorial claims and Ukrainian involvement in interstate conflicts.

5. Pan-Slavic ideology and Russian socio-cultural domination.

Wide spectrum of internal and external threats to the Ukrainian state, as well as clear necessity to create a principal forum for consideration of national security issues led to establishing in June 1992 of the National Security Council of Ukraine.

Statutory (permanent) members of NSC that has been created in accordance with Presidential Decree of July 1 1992 are the President (Chairman of the Council), Prime Minister, Minister of Defence, Minister of Foreign Affairs, National Security Advisor to the President (Secretary of the Council).4

The main task of the Council is to advise the President on all aspects of National Security Policy, to make more efficient the process of elaboration and adoption of decisions on questions of national security, to determine and implement state policy in this sphere, which is vitally important to the young and sovereign state. Another important role of NSC as a principal inter-departmental body of the system of executive power is to integrate and coordinate all aspects of national security policy—foreign, military, domestic, intelligence, economic and ecological and therefore exercising control over the policy of defence, foreign affairs, intelligence, economic and ecological policy.

This function of NSC is especially essential taking into account the absence in Ukraine (as well as in other CIS countries) of proper mechanisms of direct civilian control over military and intelligence community. To some degree this control carried out today by Parliament (which traditionally plays a much more important role than in the USA) and to some degree by President as Commander in Chief. But additional mechanism that can stabilize civil-military relations in the absence of civilian Minister of Defence is still desirable.

Another important issue (difference between the national security system of the USA and Ukraine) concerns the role and powers of National Security Advisor. In the NSC of the United States National Security Advisor have enormous influence over the President practically without any control from other legislative and executive bodies.5
But what is good for the country with old democratic traditions can be counterproductive and potentially harmful for the young state in post-communist stage, which only build its democratic institutions. That is why it was decided to limit the role and powers of the National Security Advisor. The last should function mainly as Secretary of NSC and run its everyday activity. It is especially important in the current bitter power struggle between Parliament and the President, that revealed itself in open on the October 1992 session of the Supreme Rada of Ukraine.

Potentially NSC could develop not only as coordinator but as a principal creator of the national policy, and in this way could play a decisive role in shifting power back into the President’s hands. But for better or for worse, such flow of events will be, taking into account the cadre policy of the President and his partiality to various unconstitutional structures, remains to be seen.

PRIORITIES OF UKRAINE’S DEFENSE POLICY
AND PERSPECTIVES OF MILITARY BUILD-UP

The primary priority of Ukraine’s military strategy is to deter possible aggression and to defend, if necessary, vital national interests by military means. From the very beginning Ukraine’s military strategy was developed as defensive by its nature and was regionally oriented. Military policy of Ukraine has three main objectives. The first and the central objective is to create military and political conditions for strategic balance with the states whose interests intersect with corresponding interests of Ukraine or might seek regional dominance. The final result of such a balance should be minimization of the threat of the military aggression.

The second objective of the military policy of Ukraine is to promote the creation and strengthening of the regional and global system of collective security; military-political assistance to such process, trends and tendencies on European and global level that favour to the stable, unconflict development and social progress of all nations.

The third objective of the military policy is to create an atmosphere of trust, good-neighbourliness and cooperation (in military-political spheres), with all neighbours and regional powers and structures. This atmosphere as well as good relations and cooperation is all other fields could be one of the main factors and best guarantors of peace, security and stable development of Ukraine.

Today we can speak mainly about regional interests of Ukraine. Foreign and military policy of Ukraine also determined primarily by situation in European and partly Middle Asia regions. Regional factors along with vital national interests lay basis for the military doctrine of Ukraine and general concept of military forces build-up. Ukraine’s military doctrine now is practically worked out and should be finally adopted on the current session of the parliament. This doctrine as was stressed earlier has completely defensive character. That imply that Ukraine does not consider the war (use of force) as a mean for achieving political, military, economic or other goals and suppose that all disputable issues should not be solved by military means but only negotiations.
Ukraine also called to all her neighbours to sign bilateral non-aggression treaties and take an obligation to create a military forces that is completely defensive by its structure and nature.

The composition of military forces of Ukraine include in itself: Army (Land Force), Air Force and Navy (see Fig. 1). The military forces of Ukraine are formed on mixed base which include in itself voluntary, contract and conscription principles of recruitment. Today on the territory of Ukraine are disposed:

- National Military Forces of Ukraine
- Regiments of strategic Forces of CIS
- Black Sea Fleet

Formation of Army and Air Force will be practically completed by the end of the year. Air Defence Forces were included into composition of Air Force. Total strength of national military forces now is close to 500,000.

Alignments of Strategic Forces disposed on the Ukraine's territory are nominally subordinated to the Joint Military Command of CIS (General Y. Macksimov) but practically they are under operative and administrative control of the Russia's Military Defense. This situation is completely unacceptable to Ukraine and contradict the proclaimed desire of the Parliament of Ukraine to have not any foreign troops on the territory of republic. That is why on the top-level meeting of CIS in Moskow in June 1992, Ukraine declared its desire to extend administrative control over all alignments of Strategic Forces on the territory of republic.
Fig. 1—Military Forces of Ukraine
From above-mentioned stand of Ukrainian Parliament and people of republic in a whole derives two other questions that are now the subject of dispute between Ukraine and Russia.

First concerns the role and status of Joint Military Forces of CIS. Moscow's desire to promote united military policy (with full Russian domination), to form so-called "joint strategic space" and to create the legal basis for presence of Russian troops on territory of other CIS countries contradict to Ukrainian interests and undermine the basic principles of Ukrainian national security. In August 1992 Foreign Ministry of Ukraine officially stressed that any attempt to create a legal basis for presence of foreign troops, or for participation of republic in Joint Military Forces of CIS in unacceptable to Ukraine in principle.

The second one concerns the problem of Strategic Forces. Inspite of the first agreement between CIS countries in Minsk (December 1991) which stressed this composition of Strategic Forces on the territory of concrete state is determined exclusively by this state itself Moscow still trying to impose upon other CIS countries unreasonably broad approach to the function and status of Strategic Forces. This approach inevitably leads to massive presence of Russia's controlled troops on the territory of other countries and thus under no circumstances are acceptable to Ukraine.

The quantitative structure of Ukrainian military forces derives mainly from the Treaty on Conventional Armed Forces in Europe (CFE) and from the Agreement on Principles and Procedures of Implementation of CFE Treaty that has been signed in Tashkent in May 1992. According to these two documents Supreme Rada of Ukraine in June 1992 ratified CFE Treaty and automatically determined the quotas on different types of armaments. [See Table 1]

<table>
<thead>
<tr>
<th>Main Indices</th>
<th>Maximum Level, Pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank</td>
<td>4,080</td>
</tr>
<tr>
<td>Armoured Vehicle</td>
<td>5,050</td>
</tr>
<tr>
<td>Artillery</td>
<td>4,040</td>
</tr>
<tr>
<td>Combat Aircraft</td>
<td>1,080</td>
</tr>
<tr>
<td>Attack Helicopter</td>
<td>330</td>
</tr>
<tr>
<td>Land Base Marine Aircraft</td>
<td>80</td>
</tr>
</tbody>
</table>

Table 1. Maximum Levels of Armaments for Ukrainian Military Forces according to the Paris Treaty (19 Nov., 1992). This quota should be reached in 1995 (40 months after ratification procedure).

More complex is the question of strategic nuclear weapons on the territory of Ukraine.
All most destabilizing tactical nuclear weapons (more than 70 percent of total Ukrainian nuclear potential), which cost billions of dollars and which has been created with direct participation (intellectual, economic, technical, etc.) of Ukrainian people in shortest possible terms has been transferred to Russia.

And what Ukraine receives in return? Almost all foreign aid and credits are going to Russia. America, England and now Japan, are ready to pay Moscow huge money for enriched uranium and plutonium, including ones from northwest Ukraine.

At the same time Ukraine should buy for the hard currency nuclear fuel for its own atomic power stations (that is more than 1.5 billions US dollars in a year) in Russia. But what is the most interesting that in this situation and growing imperialistic ambitions and general more to the right to the Russian Federation. West still thinks that it can expect Ukraine to get rid of strategic NW without massive economic and technical aid and any kind of guarantees to Ukrainian national security.

It is the very time to understand that the Ukrainian decision to move toward nuclear free status (proclaimed in 1990) was completely voluntary, without any external pressure and without presedent in this world. And in result of this action who did it was severely punished (economically and politically) for its genuine and peaceful intentions. One should not be very surprised if other nuclear or potentially nuclear countries will think twice before do the same.

In this situation it is difficult to explain to the Ukrainian people (as well as any other rationally thinking human being) the necessary and the usefulness to the Ukrainian national interests of any further quick steps toward nuclear disarmament. Especially taking into account that dismantling of strategic nuclear weapons according to the START Treaty requires multibillion splendings and raises very serious technical and environmental problems (just mention here the problem of extremely toxic liquid fuel of SS 19 rockets). Public opinion polls shows quite clearly growing opposition of the population toward the unconditioned nuclear disarmament.

Any quick move toward elimination of strategic NW without massive international financial and technical aid in present political and economic situation inevitably will be suicidal operation with catastrophic consequences to Ukraine's economy and national security.

The last minute attempt to Bush-Baker team to ensure for themselves a place in history on exchange for the unilateral and unjustified concessions easily and very soon turn into one of the gravest mistake of American diplomacy.

Unjustified pressure on Ukraine for quick and unconditional ratification of START I (after United Stated considered the same issue during the several years) leads not only to rise anti-Americanism or clear understanding by the world community that “chicken-Kiev speech” of President Bush in August 1991 was not “political misunderstanding” (as used to call it American press) but simple-minded explanation of true priorities of American policy in Eastern Europe and toward nations fighting for their understanding in general.
Fall of Ukraine as independent state (without proper international help and security guarantees this is still highly probable) according to well-known “domino principle” will lead to quick and impetuous restoration of a new Russian Empire with renewed political and economic structures and technological base, biggest army in the world, nuclear monopoly in the region and good old expansionist traditions and mentality.

Who can predict benefits and losses of the West in this situation? History and geopolitics should never be forgotten.

There is no doubt that Ukrainian Parliament, after long and heated debates, will ratify START Treaty. But it is highly probable that a set of reservations will be made that exclude (or at least limit) its possible harmful consequences to the Ukrainian national security and make this Treaty (that had been elaborated long before Ukraine’s emergence as sovereign state) more corresponding to the vital national interests of Ukraine.

Speaking about START II Treaty one should remember that Ukraine never recognized Russia as sole inheritor of the former USSR (and not only in the nuclear issue). All four nuclear republics de jure et de facto are legitimate inheritors of NW on their territories, as well, as of all other property of the former USSR. President Kravchuk in his present statement about the START II stressed quite clearly that this agreement was concluded between Russia and USA and put over no obligation on Ukraine.

From the general analytical point of view any further step toward expeditions nuclear disarmament of Ukraine should be conditioned by:

- massive western economic and technical aid to make possible destruction of NW mainly on Ukrainian territory and under international control (including specialists from Russia);
- clear guarantees from the international community to the Ukrainian sovereignty and national security after Ukraine get rid of NW;
- adequate compensation for nuclear materials and components of NW (including tactical NW) as well as quick withdrawal of all foreign troops from Ukrainian territory.

All this conditions are quite realistic and compose a modest price for security in this part of Europe.

To conclude this issue it is necessary to emphasize again, that question of NW on Ukraine territory can be solved only in the more broad context of Ukraine’s national security problems. Let us understand better each other position. The problem of Ukrainian NW to the West is only the problem of non-proliferation. To Ukraine it is the problem of national survival and sovereignty.

Another serious problem that complicated the process of Ukrainian armed forces building in the dispute with Russia about the fate of the Black Sea Fleet.
First of all it is necessary to mention that the overall cost of the Black Sea Fleet is only 8 per cent of the total cost of all “navy inheritance” of the former USSR and thus it is considerably less that the “legitimate share” of Ukraine in this inheritance (16 percent).

The second and the main factor to be considered in this dispute concerning the problem of imperialistic ambitions of Russia, her desire to retain military presence in the Black Sea and Mediterranean and in this way as was stressed in Russian Parliament “to counterbalance the American Navy in this area”. From here derives the territorial claims on Crimea, open and clandestine support of separatist movements and so-called “Russian speaking population” in Ukraine, general thick-headed policy of Russian government and military in this issue. The Yalta Agreement on Black Sea Fleet (Aug. 3, 1992) in some way cooled the overall atmosphere in Russia and Ukraine on this affair. But this Agreement is too vague and contradictory for clear dichotomic consideration.

One can discover positive as well as negative (from Ukrainian point of view) sides of this Agreement. Positive ones are as follows:

- Russia officially recognized the rights and means of creation of the Ukrainian National Navy on the base of the Black Sea Fleet.

- A specified term was established from solving the problem of the Black Sea Fleet.

- Official decision has been taken about political and economic rights and social guarantees for servicemen.

- Common approach to the Black Sea Region as to the nuclear-free zone of peace and cooperation has been developed.

- An agreement on sharing the maintenance cost of the Black Sea Fleet has been reached.

Negative sides:

- The final decision on Ukrainian Navy and question about the presence of Russian Fleet on the territory of Ukraine was postponed till 1995. In this way the decision on definitive size of Ukrainian Armed Forces was postponed as well, and territorial dispute about Crimea remained unresolved.

- The precedent of creation of a joint Russian-Ukrainian alignment has been created in a clear contradiction with decree of Ukrainian Parliament.

- The precedent of violation of the Declaration of Independence of Ukraine which proclaimed that all property of the former USSR on the Ukrainian territory belongs exclusively to Ukraine has been created.

Most of the analysts estimated Agreement in a whole as more favorable to the Russian interests and the general Russian strategy toward Ukraine which presuppose to leave everything open, to postpone all crucial decisions for the future, considering of independent Ukraine as an historical aberration, that can and should be corrected.
The negative factors as well as almost uncritical signing by Mr. Kravchuk of the Russian version of Agreement led to the sharp criticism of the President by the members of Parliament and by opposition press.

In many aspects this criticism promoted the defeat of the President in his crash with Parliament in October 1992 and determined the firm stand of Ukraine in Bishkek especially in the issue of creation of centralized executive bodies and on the question of Strategic Forces of CIS.

Above mentioned problem seriously complicated the process of building of Ukrainian National Army and proposed cuts in conventional army forces. For example if the question of withdrawal of Moscow-control alignments (Strategic Forces, Russian Fleet in the Crimea) will not be solved in near future it will become impossible to speak about further deep cuts in Ukrainian Armed Forces.

Original concept for military build-up in Ukraine foresaw the total amount of national military forces about 400,000-420,000. This figure includes in itself 200,000 man strong Army, 90,000 man strong Air Forces and 50,000-60,000 man strong Navy. That makes up 0.6 percent from the total population of Ukraine and correspond to the average internationally accepted standard. For comparison for France this index is equal to 0.9 and for Greece 1.9.

Further plans that have been based on the more realistic estimations of economic possibilities and limits and presupposed the stable and secure international environment stipulated more deep cuts of the Armed Forces up to 255-230 thousand men to the fall of 1993. [See Fig. 2]

In the distant future (in the end of millenium), Armed Forces of Ukraine should stabilize on the level of 180,000 men. But again, it is necessary to stress that all this plans as well as the process of nuclear disarmament of Ukraine will be directly conditioned by stable and secure international environment, withdrawal of all foreign troops from the republic's territory and clear and unequivocal guarantees from the West to the Ukraine's sovereignty and independence.
Fig. 2. Reductions dynamics of the Ukrainian Armed Forces to the year 1999 (Forecast).

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army</td>
<td>180,000</td>
<td>94,000 - 96,000</td>
</tr>
<tr>
<td>Air Forces</td>
<td>100,000</td>
<td>50,000 - 52,000</td>
</tr>
<tr>
<td>Navy</td>
<td>40,000</td>
<td>35,000 - 37,000</td>
</tr>
<tr>
<td>Others</td>
<td>100,000</td>
<td>44,000 - 46,000</td>
</tr>
<tr>
<td>Total</td>
<td>420,000</td>
<td>225,000 - 230,000</td>
</tr>
</tbody>
</table>

1On the Seminar on National Security at the Atlantic Council of the United States on September 14-16, 1992, Zb. Brzezinski stressed that from his point of view Ukraine has only 3-5 years to solve its national security problems. Author agrees with this in principle but considers the term as “too optimistic.” Ukraine will be lucky to have 1.5-2.0 years for this purpose.


3These and some other issues of national security of Ukraine are scrutinized in series of articles by Alexander Honcharenko, Oleg Bodruk and Eduard Lisitsyn. See:

Here we present only a limited list of vitally important interest of Ukraine and primary threats to Ukrainian national security.

4Current non-permanent members of the Council are:
- President of Ukraine’s Academy of Sciences (B. Paton)
- Minister of Internal Affairs (A. Vasylyshyn)
- Minister of Health (Yu. Spizenko)
- Minister of Environment (Yu. Kostenko)
- Head of State Committee on Border Guard (V. Gubenko)
- Head of National Bank (B. Markov)

5Absolutely necessary, stressed for example by Zb. Brzezinsky on the abovementioned Seminar at the Atlantic Council that National Security Advisor have unlimited everyday access to the President, but he should never abuse his power and position. “The entire national security system,” as one of the former NSC staff noted, “must have confidence that National Security Advisor will present alternative views fairly and will not take advantage propriety in the coordination of papers and positions. He must be able to present bad news to the President and to sniff out and squelch misbehavior before it becomes a problem. He must be scrupulously honest in presenting presidential decisions and in monitoring the implementation process. Perhaps more important, he must impart the same sense of ethical behavior to the staff he leads.” Shoemaker Ch., The NSC Staff, Boulder, CO: 1991, p.115.
SIZING AN ADEQUATE DEFENSE ESTABLISHMENT FOR RUSSIA

by

Alexei G. Arbatov

The term "adequate" in relation to defense requirements of a state, its armed forces and their supporting industrial base always has a peculiar meaning. There is no such a thing as "adequate" defense requirements, calculated in absolute and ultimate sense. These requirements are always dependent on arbitrary scenarios and assumptions of various military contingencies and warfighting missions and goals. Requirements are often open-ended and largely self-generated, by way of provoking defense countermeasures of potential opponents and creating new assumptions and threats, to be answered by additional defense efforts.

On the other hand, economic and social resources to satisfy defense requirements are always final—whatever the size of GNP, the level of defense expenditures and concern about security of a given nation. Surely, this upper level is not absolute either. It depends on the character of economic and political system of a nation, its historic traditions and mentality, as well as current state of its life (i.e., peacetime vs. wartime and general mobilization, postwar recovery, a phase of economic reforms, etc.). Nonetheless, if this limit is being exceeded for a long time and the state's political system is lacking the backfeed mechanisms to signal the danger, the overpressure will inevitably take its toll through economic and social crisis or even collapse of a state. That is exactly what happened in the former Soviet Union, although the sources of its disintegration had been, of course, much more complex than just excessive defense outlays.

Hence, the military requirements and corresponding industrial base are universally the result of a compromise between desirable and possible, and this compromise is defined for each nation (whether successfully or not) by way of functioning of its peculiar economic, political and decisionmaking systems.

1. Multiple Facets of the Russian Defense Requirements Defining Russian (or for that matter Ukrainian) defense requirements and adequate industrial base is a problem of enormous complexity indeed, which certainly doesn't have a neat, single or finite resolution. It depends on too many unclear and debatable technical, strategic, economic, foreign and domestic political assumptions. Difficult as it is, this problem is exacerbated by a number of unprecedented circumstances of the present time.

Russia is a product of disintegration of the Soviet empire. It never existed within its present borders before and it never had its present neighbors in the past. Russian Federation (RF) has inherited about sixty percent of the USSR GNP and population, but the qualitative parameters of its defense industry and military requirements have been affected much more profoundly.

The process of this disintegration is far from being completed, and still less defined is the entity and relationships of the successor states to the USSR. The economic, military and ethnic legacy of the USSR is in and of itself the major controversial issue in relations
among the republics, greatly affecting their security perceptions and defense requirements.

Russia is undergoing one of the deepest economic, social and political crises in its thousand-year history. This crisis is both the cause and the result of the collapse of the Soviet Union. Apart from severance of economic ties among defense production partners in separate republics, this crisis is greatly affecting the military industries in Russia and other CIS states directly since the military sector has acquired uniquely large shares of the Soviet economy since the end of the 1920s.

Moreover, the ill-conceived program of economic reform of E. Gaidar government in 1992 produced a strong negative impact on this crisis, including the state of defense industries. The latter was put on the brink of total collapse (together with the rest of the economy), undercutting hopes for reasonable and beneficial conversion. The current attempts to correct the course of reforms will further affect in unpredictable ways the economy as a whole, military production capacity and conversation. Actually, the space for maneuvers by V. Chernomyrdin’s cabinet is severely limited after the “achievements” of his predecessors. It has to pass through a narrow straight between hyperinflation, which would be fatal for the economy, and decline of production, getting below irreversible level, bringing the economy to the same end.

The world at large is changing rapidly from the Cold War bipolarity to multipolarity, decentralization of policies and conflicts, creating highly volatile and uncertain environment around the former Soviet republics and affecting their security perceptions and defense requirements.

Existing implemented and planned arms control agreements provide some useful guidelines for defense requirement and their industrial base (especially in cases of nuclear and particularly of strategic forces), but in no way do they suggest clear-cut solutions to numerous practical problems.

The military reform, planned in the former USSR in the end of the 1980s, is much more needed for Russia due to geopolitical, strategic, economic and political changes since that time. It cannot but affect Russian defense requirements and industrial base.

At present there is no consensus in Russia even on the broadest parameters of domestic and foreign policy, economic development and security issues. In fact, increasingly acute internal struggle is taking place on all of these subjects. its evolution will have major influence on the future shape of the Russian defense-industrial base.

Last, but not the least, Russian defense policy will depend on the decision making mechanism of the new state, the degree of political control of the President and the Parliament over the key decisions and programs. The present disarray and confusion result in virtual lack of any political guidance in this area and in the absence of any consistent course of the government, even compared to the dubious and controversial policy under the former Soviet leadership. If this is not corrected in the nearest future, the range of alternatives will be between very bad developments and complete disaster.
This paper does not claim to address all of these facets of the problem. Each of them may be a legitimate subject of a special study for a group of strategic, economic and political experts. Instead this paper will present general comments on the Russian defense requirements and industrial capacities in the area of strategic forces, keeping in mind wherever appropriate some of the above considerations.

Strategic requirements and capabilities of the Commonwealth and Russia, as its predominant and legally recognized nuclear successor, are affected by three major considerations.

First, there are quite complicated and confusing agreements among Russia, Ukraine, and Byelarus and Kazakhstan addressing the problems of the present and future deployment, command-control arrangements of strategic offensive forces (SOF) and implementation of the treaties on strategic and nuclear weapons (START-1, START-2, NPT and PTB). Political and military interactions of the four republics in general, and on the strategic forces in particular, will influence their strategic requirements and industrial base to support them.

Second, the treaties on strategic arms reduction and limitation between the four “nuclear” successor-republics and the United States, which set the guidelines for strategic relationships of Moscow and Washington for the next 15-20 years. CIS and Russian defense requirements at the level of strategic offensive and defensive forces and programs will be defined within those guidelines.

Third, evolution of the economic situation in CIS and economic relations among the republics, primarily between Russia and Ukraine, will directly affect the choices of programs and budget allocations to support strategic requirements, as well as arms control politics of CIS governments.

2. Strategic Nuclear Legacy of the USSR and Political Relations in CIS

The pressure of national coalitions in all four republics create great obstacles to rearranging their relations in mutually acceptable ways. This is true among other things, for the nuclear issue. Even the initial CIS agreements reflected subsurface contradictions and misperceptions on that problem.

By Alma-Ata Agreement (Dec. 22, 1992) the four republics created joint strategic armed forces (later called strategic forces) to ensure collective security of all CIS states. Byelarus and Ukraine, but not Kazakhstan, committed themselves to complete elimination of nuclear weapons on their territories (Art. 4) and to joining the Non-Proliferation Treaty (NPT) as non-nuclear states (Art. 5, p. 1). At the same time all four pledged no-first-use of nuclear weapons (Art. 2) and accepted non-transfer obligations of NPT (Art. 5, p. 2) which should have been relevant only to nuclear states.

There were some other dubious provisions in that short document, which were not corrected, but further exacerbated in Minsk Agreement one week later (Dec. 30, 1991). The parties recognized the need for joint command of strategic forces and for maintaining unified control of nuclear weapons (Art. 3). For that purpose Combined Strategic Forces Command was created. It was agreed that the decision on the use of nuclear forces is to be taken by the President of Russia upon consensus
of three other Presidents and in consultation with the heads of the rest of the CIS states (Art. 4).

After numerous unsuccessful attempts to sort out nuclear issues at CIS sessions, Presidents of Ukraine and Kazakhstan in May 1992 visited the United States and committed themselves to elimination of strategic weapons on their territories by the end of 1994 and by the end of START-1 implementation period (that is hopefully by the year 2000) respectively.

Soon afterward in Lisbon (May 23, 1992) the leaders of the four states and of the U.S. signed a protocol to START-1, which committed CIS states to "Make such arrangements among themselves as are required to implement the Treaty’s limits and restrictions; to allow functioning of the verification provisions of the Treaty... and to allocate costs." In addition, the three smaller republics presented official letters to U.S. President, taking obligations to adhere to the Non-Proliferation Treaty and to guarantee the elimination of nuclear weapons on their soil.

For all the political significance of these commitments, from the legal point of view they created some new uncertainties. The dates of joining NPT were not defined and some additional reservations were made (for instance Kiev’s demand that “nuclear charge components” are not used for repeated production of weapons which is irrelevant to START-1).

Moreover the date of missiles elimination in Ukraine was tied to the 7-year Treaty implementation period, making the previous commitment to do it by the end of 1994 mute.

There exists now a strategic-political and legal puzzle of CIS nuclear arms. Russian President upon Alma-Ata and Minsk Agreements was the only CIS leader provided with the “nuclear button,” that is with the technical control over the capability to launch strategic forces of the former Soviet Union, regardless of their deployment geography. But Russian state is not recognized by other republics to be the owner of weapons located outside Russia. Neither Russia nor CIS Combined Strategic Forces Command (CSPFC), responsible for their maintenance and launch, are capable of deploying, withdrawing, dismantling or modernizing them with new systems without permission of governments of three other republics. Ukraine is capable of imposing this rule physically, while Byelarus and Kazakhstan—only politically.

The three smaller states actually claim property and in some respects disposition rights over SOF on their territory, but they are incapable of controlling their use or their maintenance and safety. Their major concern is that being recognized as sovereign states and not considering strategic forces on their territory to be foreign, they have no capability to prevent ICBM launch without their sanction.

The republics’ attitude towards arms control is far from being unanimous, consistent or clear. Ukraine from the very beginning agreed to eliminate its 130 older SS-19 missiles under START-1 provisions. The rest 46 newer SS-24 silo-based ICBMs were to be eliminated by the end of 1994, according to Kiev’s commitment in Alma-Ata and Minsk Agreements, but without regards to either START-1 or follow-on reductions. After many conflicting declarations that was reconfirmed by President L. Kravchuk during his visit to the U.S. in May 1992, but in Lisbon elimination of all missiles was linked to 7-year START-1 implementation.
June 1992 Washington agreement implies elimination of all MIRVed ICBMs, including deploying in Ukraine, but Kiev declined to be bound by it.

Byelorussia by the same two initial CIS agreements was committed to elimination of its 54 (now 81) new road-mobile SS-25 missiles, but with unspecified date and with no relation to START-1 or follow-on treaty. In Lisbon it promised to allow withdrawal of missiles to Russia within START-1 framework, although this is not required by the terms of either START-1 or new treaty.

Kazakhstan initially refused to eliminate 104 heavy SS-18 ICBMs on its soil until Russia retained nuclear weapons, and didn’t take any commitment to denuclearize under CIS agreements. In May 1992 President N. Nazarbayev made a sharp turn and promised (also during his visit to the U.S.) to eliminate all the missiles within START-1 context during 7 years of its implementation, that is about the year 2000. This was confirmed by Lisbon Protocol. Later he went even further by suggesting that Alma-Ata would not object if the missiles on its territory were overtly put under Russian control. Elimination of all of those missiles is not required by either START-1 or first phase of START-1, but is envisioned by its second stage.

In May 1992 Kazakhstan signed a treaty on collective security with Russia and four other republics, accepting Russian security guarantees and “nuclear umbrella” (although formally Russia doesn’t have nuclear weapons in its disposal). Ukraine didn’t join that collective security system.

Nuclear weapons are to remain on their territory for many years to come. The future of CIS is very uncertain and the nuclear issue, if not resolved quickly and finally, is almost certain to reappear at the crossroads of republics’ conflicting interests.

Of particular importance are relations between Russia and Ukraine on strategic forces and arms control agreements with the U.S.. They will be crucial indeed for the future of arms control and strategic stability in the world at large.

3. Ukraine - a new nuclear state? Ukraine--as by far the largest of all CIS states beside Russia and most closely tied to Russia ethnically, economically and culturally--is most sensitive on the question of sovereignty and independence. Russian respect for and recognition of these rights of Ukraine are far from being wholehearted and consistent. This comes to the surface constantly on economic and financial issues, on the status and splitting of armed forces on Ukrainian territory (in particular of the Black Sea Fleet), and on the territorial issues and the rights of national minorities (foremost on Crimean peninsula). This is provoking counterpressure of Ukrainian nationalists of the Rukh movement, which among other things claim for Ukraine the right to have its own nuclear weapons.

For Ukrainian political elite the CIS armed forces are unequivocally Russian forces and may be used to suppress Ukrainian independence. That’s why Kiev hurried with nationalizing the general purpose forces on its territory and pressing the issue of nuclear weapons starting in early 1992. Only the unique strategic and technical nature of nuclear forces and tough Western position has helped up to now to contain the controversies from leading to a major conflict. Prevention of
withdrawal of strategic missiles from Ukrainian soil for as long as possible to important for Kiev fro a number of reasons.

Deployed ICBMs are a guarantee of continuous political attention of the West and its involvement in moderating Ukrainian relations with Russia. The missiles are the pass to great power politics and strategic arms control process. They are in a certain sense a “hostage” for the contingency of armed conflict, and bargaining chip in normal relations with Russia, tacitly implying a possibility of nationalizing them or making the personnel take the oath to Ukraine, like the rest of armed forces there.

For the worst case they may serve as a technical foundation for building Ukrainian national nuclear deterrent as an ultimate insurance of security and sovereignty. In more benign circumstances giving them up may be used as a way of getting more tangible Western security commitments as a pay-off for non-nuclear status.

The troops serving at the ICBM sites and guarding them have special procedures and capabilities to make missiles completely inoperable and unusable, if threatened of being overrun by hostile forces. Moreover in Kazakhstan and Byelarus that threat is highly improbable in a military sense. So the real issue is predicated on the strategic forces personnel changing loyalty and voluntarily accepting republican authority. This is hardly possible in Kazakhstan or, for different reasons, in Byelarus.

That leaves Ukraine as the only potential probable, although the threat of ICBMs becoming one of the subjects of political conflict and even violence between Russia and Kazakhstan is dire enough to be taken into consideration.

Ukraine is the only state that is capable, with initially cooperative troops, to put the missiles under its operational control. That is why “administrative” control of the personnel (the oath, recruitment, promotion, housing, supplies, etc.), which Kiev is claiming and gradually acquiring, is so important. Additionally resubordination would require substantial investments, technical programs and time of at least many months. In particular that would imply:

- changing all the software and possibly parts of hardware at the ICBMs, their launch control bunkers and divisional command centers;
- building and equipping national command centers and their cable and radio-communication links to missile sites, providing codes and to ensure positive and negative control;
- rearranging all the maintenance and support infrastructure, supplementing its major elements presently located in other republics or supplied by them (many spare parts may be available for SS-24 missiles from their Pavlograd production plant and for SS-19 from Dnepropetrovsk facilities);
- solving the problem of SS-19 extremely volatile and toxic liquid fuel—“reptil,” that has to be regularly refined at special facilities if they remain in service, or stored and eventually reprocessed in case of the missiles’ elimination;
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- creating facilities for checking and serving nuclear warheads (in particular changing deuterium every several years);

- developing new targeting lists, plans and computer flight programs for the missiles;

- technically modifying ICBMs to virtually transform them into medium-range missiles;

- providing air-defenses of ICBM sites, which would be highly vulnerable even to conventional air-strikes with extremely short warning time (missile attack warning systems would be completely lacking);

- expanding training and simulation facilities, colleges for officers and technicians, etc.

All the above and other requirements would be relevant for maintenance of the presently deployed 176 missiles during the next decade or so. Much greater resources would be needed to modernize them. The greatest problem would be the maintenance of nuclear warheads and liquid-fueled missiles.

Still if strongly motivated, Ukraine would probably be capable with substantial sacrifices to resubordinate and support all or at least some of ICBMs for a number of years. It has sufficient economic resources, part of SOF production and maintenance infrastructure, numerous technical and military cadres, main electronics and programming centers of the former USSR.

One of available options might also be to modify ICBM nuclear warheads for employment as gravity bombs delivered by aircraft (fighter-bombers, medium and heavy bombers, including 13 already resubordinated Tu-160 Blackjack aircraft). But in any case its possible SOF would remain unstable and vulnerable, and in this sense strategically provocative.

The major conclusion, relevant to the subject of this paper, is that Ukrainian industrial and R&D base might be sufficient to support and maintain a force of 176 ICBMs, already deployed on its territory, and a small bomber unit with the weapons, remodeled from nuclear warheads.

Most probably in a decade it will be left only with 46 SS-24 missiles, armed with 460 warheads of declining reliability. On the other hand, for at least two decades Ukraine will be lacking industrial base and economic resources to develop, test, produce and ensure modernization program of its own new nuclear force, composed of Ukrainian delivery systems and nuclear munitions. In this sense Ukraine would remain inferior to France, Britain and China, although initially, in case of resubordination of the missiles, it might acquire greater nuclear power, than those three combined.

The only sound way to remove the dichotomy between the deployment of SOF on the territories of the four republics and their centralized control by Russia, which is the source of permanent political tensions in the CIS and a dire threat to strategic arms control and nuclear non-proliferation, is to bring the deployment in correspondence with control by eliminating or redeploying forces outside Russia. In this sense arms control agreements with the U.S. are of utmost importance both for sorting out nuclear issues within CIS and for satisfying Russian
strategic requirements in a new political, economic and strategic situation.

4. Arms Control and Russian Strategic Requirements After disintegration of the Soviet Union, the split among republics and economic crisis, would make it infeasible for the RF on its own to maintain and modernize the strategic forces of the former USSR to ensure strategic parity with the U.S. and adequate retaliatory capabilities. Even START-1 Treaty of 1991 would place too heavy a burden on Russia if it were implemented in parallel with the modernization program, planned in Moscow in the end of 1980s.

Indeed, due to political considerations and START-1 prohibition on the deployment of forces outside of national territory (which corresponds to the Lisbon agreements), Moscow’s strategic forces will be deprived of bases for 25 percent of its ICBMs and 38 percent of its bombers, with all the established expensive maintenance, support and control infrastructure. Only part of those forces (about 10 percent of all ICBM force) was slated for elimination under START, while missile and bomber units on some bases were to be modernized with new weapon systems. In particular, those were SS-24 and Tu-160 in Ukraine, new mode of SS-18 in Kazakhstan, and ground-mobile SS-25 in Byelarus.

Additionally, two largest missile production plants for new mode of SS-18 and new SS-24 ICBMs in Ukrainian Dnepropetrovsk (UZHMASH) and Pavlograd were cut off from the integrated missile-production complex. A number of important repair, conversion and storage facilities for missiles and bombers in the three republics can no longer be counted on either. The same is true about the main combat missile test range in Leninsk (Tyuratam) and nuclear test range in Semipalatinsk, both in Kazakhstan.

A large number of R&D centers and component production facilities, in particular dealing with command-control and communication systems, stay out of RF. Still worse is the problem with early warning facilities. Large missile attack early warning radars remain in Ukraine (Mukachevo, Sebastopol), Kazakhstan (Saryshagan), Byelarus (Baranovich), Azerbaydzhan (Lyakh) and Latvia (Skrunda). Together with the actual dismantling of the notorious Krasnoyarsk radar the loss of the above sites opens wide gaps in the former Soviet and now Russian early warning perimeter in the North-West, West, South-West and South. Also big holes were created in satellite communication, submarine navigation and communication site network, as well as in air-defense echelons, defending strategic forces from nuclear and conventional air strikes.

The possibility of agreements between Russia and other republics on the use of some C-cubed-I facilities and even missile stage production (particularly with UZHMASH) is possible in future. But such contracts would be sensitive to fluctuations in relations among republics, their economic ties and thus hardly reliable. Besides, they would be quite expensive for Russia and probably not worth the effort.

Much lower levels of the strategic balance and much smaller scale of modernization are appropriate for Russia in the new environment. Arms control with the U.S. is essential to provide this without undermining Russian national security. Ironically some agreements on strategic arms reduction and limitation, due to a complicated nature of the subject, may turn out to be too expensive to implement for the RF. Arms control
parameters must be carefully crated in all details to meet all strategic, political and economic goals, which sometimes may contradict each other.

The new START-2 treaty signed by B. Yeltsin and G. Bush in January 1993 will affect Russian defense requirements and industrial capabilities in a controversial way. In two phases the sides will reduce their present SOF by about two-thirds by nuclear warheads. After the first phase (7 years after ratification) strategic warheads will be cut to 3800-4250 ceilings for each side, including MIRVed ICBMs warheads to about 1200 and heavy ICBM warheads to 650. SLBM warheads will be limited by 2160 level.

After the second phase, by 2003 the aggregate ceilings will be reduced to 3000-3500, MIRVed ICBMs will be banned altogether and SLBM warheads will be limited by 1750 level. Heavy bomber weapons will be allegedly limited by actual loading and no more than 100 bombers will be permitted as converted for non-nuclear missions.

Although the agreement is to deeply cut forces of both sides, President Yeltsin’s concessions on the road to compromise have been much greater, which is certainly opening him to fierce attacks of conservatives and nationalists at home. The major point is Moscow's agreement to drastic cuts and eventually total elimination of MIRVed ICBMs—traditionally the backbone of Soviet strategic offensive power.

At the first phase Russia will probably retain 65 heavy SS-18 MIRVed ICBMs (instead of 154 under START-1) and 70 (instead of probably 120-130 under START-1) fixed/mobile SS-24 and silo-based SS-19 missiles. About 500 single warhead road-mobile SS-25 ICBMs may be deployed by 1999. Then the share of ICBMs will be 43-48 percent by warheads, which is not much different from what was envisioned under START-1 (53 percent).

But at the second stage of reductions Russia would face a hard dilemma, in view of required total elimination of MIRVed ICBMs under relatively high aggregate ceilings. The essence of the dilemma will be: either to radically restructure traditional composition of strategic triad at substantial strategic, administration and political costs—or to deploy single warhead ICBMs on large scale with great economic expenditures.

The first option would be to go for radical restructuring of strategic forces and reduce the share of ICBMs by warheads from 53 percent under START-1 (65 percent now) to only about 15 percent. This calculation is based on the assumption that by the year 2003 about 500 mobile SS-25 missiles and a new generation of single warhead ICBMs may be deployed at reasonable economic costs. Depending on counting rules that would constitute 14-17 percent out of 3000-3500 overall ceilings.

This option certainly will not be supported by Strategic Rocket Forces (RVSN). After cancellation of most of its modernization programs and asymmetrical deep reductions envisioned in its forces under START, this radial restructuring would be too much for the defense establishment to accept.

Besides, RVSN concepts of strategic stability and various problems with maintaining, operating and communicating with sea-based missile forces make too great reliance on SLBMs quite dubious on strategic grounds.
The resulting balance, by strategic capabilities of SOF if not by their numbers, would be far shifted in U.S. favor, even compared to START-1.

The other alternative would be to retain the predominant role of ICBMs, which would mean at least 40 percent by warheads. Under 3000-3500 ceilings and with ban on MIRVed ICBMs, that would entail deployment of at least 1200-1400 single-warhead missiles. This would be prohibitively expensive (about 500 bin.rub. in 1992 prices) and unacceptable in the projected economic situation in the 1990s, especially if about 70 percent of the missiles for the sake of survivability are mobile. Still greater concern is caused by the prospects of unprecedented efforts at weapons elimination, conversion and relocation in a compressed time, which may greatly exceed Russian economic and technical capacities (which would be highly taxed even under START-1 reduction measures).

For the U.S. it will be much easier to adopt to agreed ceilings. It will have to eliminate 50 Peacekeeper missiles, down 500 Minuteman-3 to 1 warhead, and download from 8 to 4 warheads a mix of 432 Trident-1 and Trident-2 SLCMs on 18 submarines (to have 1728 SLBM warheads). That would leave it with 2228 missile warheads and 1200 weapons may be allocated to bombers.

President Yeltsin, by signing START-1, will certainly get under heavy fire for “selling out Russian security.” There is a high probability that the treaty will not be ratified in Russian Supreme Soviet with a great setback to arms control, U.S.-Russian relations and domestic positions of Yeltsin himself.

As for CIS nuclear controversies, the new agreement would hardly make things much easier. At worst it might create even greater confusion in the process of parallel implementation of START-1 and follow-on arms reductions. President Kravchuk on the eve of U.S.-Russian summit renounced Moscow’s right to negotiate on behalf of the other three republics, stating that the latter were now full parties to START. Afterwards he approved of the agreement but pointed out that it applied to Russia alone. From the point of view of non-proliferation the time is a problem, just like with Ukrainian and Kazakh commitments to permit missile elimination in 1999 or even in 1994.

In order to make those commitments and the whole process of deep cuts irreversible, one solution might be to implement downloading to zero (in fact decapitating) during one year (that is in 1992-1993) all SS-19, SS-24 and SS-18 stationed in Ukraine and Kazakhstan, just like most of SS-19 missiles remaining in Russia. By way of reciprocity all U.S. Minuteman-2 ICBMs should be decapitated as well and the schedule of decommissioning Poseidon SSBNs and B-52 bombers may be accelerated. It’s obvious that the most important element of the above plan is to take off all nuclear warheads from 176 missiles in Ukraine and 104 in Kazakhstan as early as 1993 within broader context of START plus the follow-on agreement.

Besides, accelerating deep cuts by way of full unloading of most of the missiles and placing their warheads in central storage under mutual control, would greatly alleviate economic and technical burden of SOF reductions for Russia, which on top of all lost two missile and one bomber conversion and elimination facilities in Ukraine and Byelarus.
5. Industrial Base for Strategic Forces and Prospects for Conversion Till the Year 2003. Russian industrial base would be sufficient for its strategic requirements under three conditions:

- That under START-2 treaty additional single-warhead ICBM deployment doesn’t exceed 400-500 new missiles with sufficient portion placed in silos.

- That conversion and elimination methods and schedule are not too expensive and technically difficult.

- That modernization programs are largely curtailed without undermining RF security and strategic balance, to permit reductions of budget allocations and full conversion of many defense enterprises.

In particular, elimination of SS-18 missiles and discontinuation of deployment SS-24 ICBMs (with the prospect of partial elimination and partial downloading of this missile type) make Dneprpetrovsk and Pavlograd plants in Ukraine no longer necessary. Russia would not need to build new plants or enlarge and modify existing ones for production of these missile types, which might be prohibitively costly and time-consuming. Some cooperation with Ukraine on production of stages for a new single-warhead ICBM is possible, but not necessary, just like co-production of space boosters for peaceful purposes.

Production of SS-25 Topol ICBMs will continue at Russian Votkin plant, while mobile launchers for them will be produced at Volgograd enterprise. The new modification of SS-25 for universal mobile and silo basing may be produced at the same plants. All the rest of Russian ICBM production facilities (including Moscow Khruinichev plant for SS-19 and Yurga plant for SS-24 rail-mobile launchers production) may be converted or mothballed with concurrent retraining of their labor.

Since production of Tu-95 and Tu-160 heavy bombers is discontinued, aircraft production enterprises in Samara and Kazan may be completely converted for commercial airliners production with substantial defense savings and commercial profits. Investments for conversion in these cases will be quite modest.

Shipbuilding program will be seriously affected by discontinuation of construction of Typhoon and Kalmor (Delta-4) SSBNs. One of the two largest strategic submarine shipyards in Komsomolsk may be safely converted for commercial shipbuilding. Another in Severodvinsk may be preserved for modest scale construction of attack submarines and for the new generation of SSBNs, which may enter production stage after the year 2003. Accordingly, two of the three other nuclear attack submarines shipyards (two at St. Petersburg and one at Nizhniy Novgorod) should be converted for civilian production with some facilities preserved for dismantling and safe mothballing of retiring submarines.

As for SLBM production plants, three out of four (at Zlatoust, Krasnoyarsk, Biyak and Mias) may be converted for civilian production. One has to be preserved for the follow-on to SS-N-20 production to reequip Typhoon submarines.

In view of the loss of the southern rim of early warning radars, Russia will have to start construction of several new sites along its borders facing Middle East and Central Asia. For the time being Moscow ABM
radar will have to perform the circular monitoring, including Western azimuth. Agreements with other republics to use sites on their territories would be expedient, but it would be risky to rely on them in the long run. Greater reliance on satellite monitoring and cooperation with the U.S. may alleviate the immediate problem.

Nonetheless, large investments in restructuring command and control systems to back off from launch-on-warning strategy will be necessary from the point of view of strategic stability and due to the envisioned restructuring of Russian SOF in line with the Framework Agreement. Industrial and R&D resources of RF are sufficient for this job, but it will take at least 10-15 years to fully reconstitute early warning perimeter.

Quite a different subject is proposed expansion of the ABM system. Relations with other CIS republics, economic situation in Russia, and the need of large investment in SOF and command-control and early warning systems would make it hardly feasible for Russia to engage simultaneously in costly expansion in space and land-based strategic ABM systems. Besides, the logic of such a program is dubious at present time. Hence, Moscow will be interested in preservation of limitations on ABM systems, contained in the ABM Treaty of 1972.

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1Some parts of this paper borrowed on the project “Sorting Out Soviet Nuclear Legacy,” done by Alexei G. Arbatov for RAND in April–June 1992.
4Protocol to the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms
Conversion of Russia's military-industrial complex is a very complicated social phenomenon extending over literally all branches of national economy. And it is not accidental. According to foreign estimations, each dollar invested in the end military product manufacturing (covered at the expense of military budget) corresponds to not less than a dollar and a half expended by co-operating branches. Even a superficial calculation shows that the "economic stability sphere" guaranteed by the US federal budget item "national defense" makes up approximately 25% of the GNP. If other US budget items are added, the "economic stability sphere" will cover more than 50% of the GNP.

In order to evaluate the problems and consequences of conversion, the latter should be considered at two levels, first, within the framework of a single defense enterprise, and second, within the framework of the whole society, i.e. on a macroeconomic level.

1. Conversion of a defense enterprise: problems and consequences

Being a primary element of the country's defense-industrial complex (however, a primary independent element in the socialist system of national economy as well), a defense enterprise reflects, to a certain extent, the character and level of the production forces development, as well as corresponding to them economic relations. This is why conversion
i.e. transformation of a military establishment into a civilian one, includes also the problems of re-organization of the production forces elements involved into the given specific production, and problems of re-organization of the economic relations elements corresponding to the production forces.

Realization of the first group of problems is targeted in the long run at the re-orientation of the entire production organization system from military toward civilian production. It requires, first of all, to adapt means and objects of labour to the manufacturing of a new product, or to replace old production means by utterly new ones. For these purposes the technological cycle will have to be radically re-organized in functional, as well as spacial and time aspects. The new production must be as propotional, continuous, rhythmic and reliable as before. Second, a convertible enterprise will be faced with an urgent need of retraining and adapting the fabrication personnel to a new production, including nonproduction and production workers in equal measure.

In this connection administration and work collective are inevitably faced with difficulties. The first of them is associated with the fact that though the scientific and technological revolution in the last 30-40 years "shared" its achievements with military industry in the first place, more than half of its capital funds is made up by functional production systems (and not by flexible ones), re-organization of which requires considerable material and technical, financial and labour expenses for a long period of time. (*)

The second difficulty results directly from the characteris-

(*) According to foreign estimations, for about two years
tic features of raw materials used in the production of modern weapons and military equipment. There are generally used rare sorts of steel, plastics and composites (**), which make military products lightweight, reliable, extremely durable, etc; as well as expensive and labour-intensive in production. In connection with the aforesaid the process of conversion is faced with the problem of effective use of unique raw goods and materials for civilian production in all its magnitude. It is quite possible to manufacture titanium spades or channels made of a tank armour, but then one may produce golden spikes and silver cramps.

The third difficulty of re-organization of the production process at defense enterprises for civilian purposes is that modern civilian production in our country adapts extremely little to the newest scientific and technical achievements. Although the law of machine usage under socialism: сквозь at first sight gives more space for introduction of new production means as compared to the law of machine usage under capitalism: сквозь, in fact, enterprises belonging to US, West-European and Japanese commercial firms turn out to be better technically equipped than our civilian enterprises. It is provided, first, by a higher labour productivity in the developed capitalist countries' industry, allowing their firms to produce less expensive and more effective types of machines and equipment; second, higher than in Russia wages which make the usage of even extremely expensive flexible production systems, computer-aided design systems and industrial robots.

(**) E.g.: Production of the F-100 aircraft engine, initially installed on the US F-15, F-16 fighters, requires 2434 kg titanium, 2360 kg nickel, 751 kg chrome, 413 kg cobalt, 327 kg aluminium, 78 kg niobium and 1,4 kg tantalum
undoubtedly effective. If military production in Russia is compared with military production in the USA in such a way, the differences between the two formulas of the law of machine usage will evidently become less striking. Besides, the principle of priority in solving military strategic tasks has always been the dominating one in military economy sphere (and it will stay the dominating one), as compared to the aimed increase in production efficiency. Under these conditions conversion, so to speak, comes to a standstill.

And finally, the fourth difficulty in realizing conversion of the production forces within the framework of a defense enterprise includes the re-orientation of the enterprise's personnel toward civilian production. This difficulty is connected with a considerable deterioration in the welfare of the convertible enterprises' workers resulting from a slump in wages and possible dismissals, rather than with re-qualification of the personnel (more than half of production and nonproduction workers need not be trained for a new profession). All this will be accompanied by the growth of dissatisfaction in a certain part of the working class - its most qualified part.

It follows from the aforesaid that re-organization of production process within the conversion framework at a single enterprise only will inevitably cause a whole scale of problems difficult to solve and thus may become an objective basis of economic and social tension.

However production process re-organization does not mean conversion as a whole. Conversion foresees re-organization of the enterprise's economic relations system, i.e. achievement
by the enterprise of full economic independence.

It is a known fact that economic organization of a defense enterprise has the following features, not characteristic of a civilian economy sector:

considerable narrowing of the enterprises' economic and operative independence limits, which is directly connected with a large-scale production activity and management centralization, with a more strict regulation of the enterprises' domestic procedures;

interrelations between defense enterprises are settled by the head organizations' orders;

any defense enterprise is entitled to put forward to its suppliers higher demands (both defense and civilian suppliers) and apply harsh sanctions for any infringement of delivery terms. In its turn The Ministry of Defense supervises through its military representatives staff the observance by defense enterprises of tactical and technical tasks or specifications;

financial control over defense enterprises' activities is simultaneously exercised by banks and by the Ministry of Defense (as for the Ministry of Defense enterprises, control over their productive and financial activities is exercised as a rule by financial organs of the military department itself);

and finally, the Ministry of Defense enterprises are provided with internal circulating funds on a higher level, as compared to enterprises belonging to other ministries.

All this requires that conversion of the country's defense-industrial complex is organic to the national economic complex on the one hand, which, in its turn, must be adapted to the conditions change in the defense enterprises' activities
In this connection it is expedient to analyse the influence of conversion of the country's defense-industrial complex on the process of extended reproduction.

2. Influence of conversion of the country's defense-industrial complex on extended reproduction

The country's defense-industrial complex is a complicated socio-economic organism, an aggregate of closely interconnected military and military-oriented branches of economy having ties with the civilian sector of economy.

Proceeding from the functional purpose of products manufactured by civilian and defense enterprises, its place in the socialist public reproduction system can be depicted on the following scheme:

**Scheme 1**

The place of military production in the socialist public reproduction system

<table>
<thead>
<tr>
<th>Subdivisions of social production</th>
<th>Civilian sector of national economy</th>
<th>Military sector of national economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Production of means of production for production of means of production</td>
<td>Production of means of production for production of means of production for production of weapon products</td>
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1 2 3
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<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of civilian consumption objects</td>
<td>Production of consumption objects for military production workers</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>Production of end military product:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) manufacturing of military production proper</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) production of &quot;double usage&quot; products</td>
<td></td>
</tr>
</tbody>
</table>

End military product includes: all products directly consumed by the armed forces of the country producing these products and also by some countries importing these products (armament and military equipment in the first place).

The process of conversion in any defense enterprise will directly affect the second and the third levels. It will be demonstrated, first of all, by the fact that the order system strictly regulating the nomenclature of produced goods will give way to the system of direct agreements between enterprises, and fiscal and technological control exercised on part of the military establishment will be weakened or disappears completely.

Conversion of a defense enterprise presupposes conducting a whole complex of measures on adaption to the civilian production conditions and to such a form of economic accounting as intrafactory cost accounting. In this connection the most expedient measures would be: introduction of the second model
of cost accounting, vast development of leasing relations
between enterprises' subdivisions (shops, sections, brigades),
inside subdivisions, between separate workers; organic inclu-
sion of both production and nonproduction cooperatives (trading,
supply-and-sellers', housing etc.) into the basic production
structure.

Partial or complete transformation of defense enterprises
toward civilian applications is impossible without re-organi-
zation of cost accounting as a method of planned economy. Such
re-organization in its turn presupposes:

first of all, achievement of full self-repayment of the
convertible enterprise and providing it with such a level of
profitability, which would allow to realize self-finance of
all production programmes under extended reproduction condi-
tions without government subsidies. It will be possible only
when the enterprise starts to manufacture products having great
demand in domestic and international markets;

second, in order to produce such products though, the
enterprise should enjoy full operative and economic indepen-
dence, i.e. study market conditions and build up contractual
relations with co-operating and commercial enterprises and
organizations on this basis. Unfortunately, many domestic
civilian enterprises – let alone defense establishments –
have insufficient (for the present level of production and
exchange) experience of such activity.

The latter is not homogeneous in its structure. According to the
author, the entire mass of goods and services of the end mili-
tary product category may be divided into two large groups:

* military production proper, which may be used by the armed
forces only (armament, military equipment, means of personnel
protection, results of military RDT&E etc.), and "double usage"
production, i.e. products used in equal measure by the armed forces and for civilian applications as well. The second group of products includes: a major part of vital means for servicemen, cars, construction equipment, fuel and lubricants, many means of communications and etc.

The necessity of singling out military production proper within the end military product structure is caused by the following circumstances. First, historical experience indicates that the share of military production proper within the structure of end military product sharply aggravates during war and arms race periods. Second, unlike "double usage" production, military production proper is mainly manufactured by specialized military enterprises, conversion of which requires high expenses and a long period of time. Moreover, re-orientation of a specialized defense plant toward civilian production stipulates in its turn certain (sometimes considerable) changes in production technology and organization at the enterprises supplying the appointed plant with specific raw goods, specialized equipment and spare parts.

How perceptible are these changes? How the volume of military production proper makes up in Russia about 60% of the country's gross defense industry production. As a result of conversion this share will be decreased to 40%. Proceeding from the fact that material input per unit of production in Russia's national income is approximately twice as high as in the USA. So it is not difficult to calculate that each ruble invested in military production proper corresponds to about three rubles we have to invest in co-operating branches.

The essence of relations between the Ministry of Defense and its contractors will also be revised in a radical way.
3. Relationship between the Ministry of Defense and national economic enterprises, organizations and institutions in the process of weapons and military equipment development and production

While determining the character of relations between the Ministry of Defense and enterprises, organizations and institutions of the country’s national economy in terms of market relations, one should take into account the fact that the process of transformation of state-owned property into other forms and the process of privatization will lead to the formation of at least two sectors of economy: a state-owned sector on the basis of state economic power with large-scale industrial enterprises, organizations and institutions; and a non-state-owned sector on the basis of enterprises, organizations and institutions with various forms of property.

Besides in the course of the change-over to market economy its infrastructure will be developed in full measure and it will include associations, commercial and innovation banks, commercial and commodity exchanges, leasing, holding, broker and other companies, various joint stock societies.

Relations between the Ministry of Defense and its partners must be established in accordance with the fact who the future partner will be. State order announced by Russian Federation government acts must remain the basis of relationship between the Ministry of Defense and state enterprises, organizations and institutions. Relations with the rest of enterprises, organizations and institutions must be built up on a contractual basis providing priority of defense orders.

While executing the Ministry of Defense orders state enterprises may conclude contracts with other enterprises and
organizations (including enterprises of the non-state-owned sector, provided state and military secrets are kept) - within the limits of allocated appropriations - for performing certain operations and services.

During the transition period the state order is retained for the entire military production, military transportation and basic material means providing for combat readiness and logistic support, production activity of the Ministry of Defense enterprises; as well as for public utilities and capital construction of objects assembling weapons and military equipment, with priority of state procurement with material and technical resources and guaranteed supply.

Units accomplishing planning, accommodation and control of deliveries in accordance with the Ministry of Defense orders stay operative in the centre and in the provinces within the structure of Ministries and Departments. Later on the functions of the organs will be assigned to the state contract system.

As market relations will be expanded the state order structure will be revised and state order will be decreased. Contracts for deliveries of basic systems and weapons and military equipment models, some scarce materials for logistic support and for military transportation must remain under the state order. The rest of the production is ordered by way of direct agreements (contracts) with suppliers on a competition basis.

Any contract for development and delivery of military production and logistic support means under the Ministry of Defense orders must foresee the benefits of the orders' execution for the producers. For that purpose contracted price should be fixed on a level, providing profitability not lower than the average one in the branch, but not higher than maximum, and
credit and profit tax relaxations should also be made.

In order to stimulate enterprises-suppliers the Ministry of Defense will additionally give them in lawful order the right to accelerated amortization of basic production funds, priority in supply with technological equipment and machines, raw materials, labour and energy resources, priority of acquisition of surplus material means being realized by the Ministry of Defense, and will also implement gratuitous transfer of technologies, scientific and technological developments at the expense of centralized funds.

The application of the above mentioned methods to stimulate the economic incentive of manufacturers producing, the Ministry of Defense production will facilitate the accommodation of orders on a competition basis, and that will provide in future a higher quality of produced weapons and military equipment, as well as cost reduction of the latter and stabilization of prices.

Price formation for delivered weapons and military equipment must be practised under state control. The state sets up a list of production to be realized at fixed prices and of appropriate compensations to enterprises and organizations for their expenses connected with acquisition of fuel, energy, some kinds of materials and spare parts at contract prices. When necessary and according to market conditions the state sets up a limit of profit margins for the production to be realized-at contract prices.

The Ministry of Defense departments and military representatives at industrial enterprises ordering military production must be charged with direct control over the dynamics of military production prices. At the same time the principle of material
responsibility of partners in case of any breach of contract terms remains in force.

The proprietary right to scientific and technical production (STP) under state order, which is received at the expense of the Ministry of Defense, must belong to the customer, including the right to sale the STP in the country and abroad. Part of means, achieved after the sale must be used by the customer for the development of experimental and informational base of scientific studies, for financing new developments and also for material encouragement of military and scientific personnel participating in the work.

This system will be especially effective during the transition to complex RDT&E usage in the sphere of "double technologies".

4. Problems and experience of conversion of the U.S. military scientific and technical potential

Nowadays at least two most important circumstances put on the agenda the problem of further rational utilization of military scientific and technical potential, the problem of its conversion or even an irreversible reduction.

The first circumstance is concerned with the deep changes in the world military political situation, which have originally taken place in result of the USSR's change-over to the concept of defense sufficiency and a sharp relaxation in this connection of Soviet-American competition in military sphere, and later on in result of disintegration of the Soviet Union - the main U.S. potential enemy, traditional
object of "deterrence". At the same time the basic successors of the former USSR's military power—Russia, the Ukraine, Byelorussia and Kazakhstan—judging from their leaders' statements, do not intend to pursue the policy of military and technical competition with the USA either in the whole weapons spectrum, or in separate kinds and types of weapons.

The second circumstance bringing the problem of further utilization of the military scientific and technical potential on the agenda is the idea more and more distinctly taking shape in the US official circles and among the public, that "national security" protection does not mean defense of the country only or use of the armed forces in some other regions called zones of the US "vital interests". The modern US "national security" concept includes also the questions of a guaranteed retention of political and scientific and technical leadership in the world arena, provision of a high living standard in the country, maintainance of competitiveness of the US goods and services on the world market, environmental protection, struggle against organized criminality, and the spreading of drugs. As the level of military confrontation is lowering, the problems of providing the USA "national security", which have remained in the background, are coming to the foreground. In this connection the evaluation of the decrease in the USA industry competitiveness level as compared to Japan and West Europe, economic expansion is especially painful for the USA. According to the US and international statistic data, it is evident that the US production is gradually excluded from the world and even home market, first and foremost in the high-tech production sphere. For example,
15 years ago 95% of all telephone sets and 80% of TV sets sold in the USA were produced by American enterprises, while nowadays the figures are 25 and 10% correspondingly. It is basically connected with the fact that the US scientific and technical potential is militarized to a larger extent than in the other highly developed countries (the DoD expenditures for R&D amount in the USA 60%, while in Japan they make up 0.8% of the entire volume of state research and development financing).

Taking into account the above mentioned circumstances being principally not new to the experts in the international armament and disarmament sphere, coming however recently more and more to the limelight, the USA public opinion is inclined to consider the use of national military scientific and technical potential necessary not only for producing war means, but also for solving other top-priority problems of "national security" in the wide sense of the concept adopted in the USA. Deep conversion of the military scientific and technical potential may serve as a traditional means of realizing the above conclusion. According to the results of a number of studies made recently in the USA, deep conversion presupposes as a minimum: formation of planning organs to re-orientate the organizations engaged in the military R&D sphere, toward civilian research and development. At the same time it is considered that not only highest state and local authorities, but every scientific enterprise having on its staff more than 100 employees, must set up a commission (committee) responsible for making out a programme of activity in case of reduction or even full suspension of military orders;
elaboration of perspective conversion plans which form variants of utilization of material and technical, intellectual, informative and organization resources forming the base of military scientific and technical potential, however not aimed at producing weapons and other military equipment;

organization of a state network for professional retraining and employment of scientists, engineers and technicians, as well as administrative and management personnel, released in the process of military R&D reductions;

creation of purpose-oriented funds for the economic adaptation of scientific research firms and organizations under new conditions, a measure which would allow to maintain the employees' income during the transition period, to subsidize intra-branch, inter-branch and geographic re-deployment of staff, to facilitate creation of new jobs and sales markets, to finance the process of personnel retraining.

Despite a sufficiently thorough theoretical analysis and broad discussion in the press the process of reduction and conversion of military scientific and technical potential has not reached an essential scale in the USA. In order to confirm the fact suffice it to say that the DoD R&D appropriations for 1992 FY make up 39.4 billion doll., i.e. there is an increase in terms of fixed prices by more than 9% as compared to the previous year. Two main arguments are adduced by the USA as a reason of the fact that the conversion process of military scientific and technical potential is not being developed in accordance with the changed political, military and economic situation in the world.

The first argument concerns the fact that the internal political development in the former USSR is hardly to be pre-
dicted and there allegedly remains a possibility for the newly formed Commonwealth to resume the policy of military confrontation with the USA and the NATO. Hence the thesis frequently repeated by American political and military leaders about the need "to be insured against any uncertainties in the future", "to be ready for any possible strategic consequences of the USSR's return to totalitarian policy". Conducting wide-scale military R&D programmes is considered in the USA to be the best method for this purpose. "Changing situation in Europe and the USSR can not be an excuse for the reduction of military R&D expenditures", believes A. Bromly, President Bush's assistant and director of the Scientific and Technical Policy Office.

The second argument is emergence of new centres of military power in the world, spreading of advanced military technology and military-applied technologies in the "third world" countries, including those countries which are hostile toward the USA and pursue the policy of "state terrorism" and threaten the United States' "vital interests". There is an apprehension that this process can be intensified in result of a large-scale arms reduction in the countries of the former WP and the NATO, as well as resulting from the loss of control over the spreading of weapons and military-applied technologies in the former USSR overwhelmed by a crisis.

Thus the analysis of the present American military and technical policy shows that the USA do not plan to sharply reduce its military scientific and technical potential in the near future, in spite of broad discussion of the problem in special literature and in the mass media. However, neither is it true that there are no changes in the theory and practice of US military research and development under the in-
fluence of modern international and inland processes. On the contrary, the analysis shows the appearance and development of a whole row of new trends in the realization of the military scientific and technical production, which are consequences of the basic changes in the world military strategic situation and of the actualization of the new US "national security" problems.

Though in total these tendencies do not mean conversion of military scientific and technical potential in the generally adopted and above-stated sense, they are a new phenomenon which may be characterized as the use of the USA military scientific and technical potential for solving a wide scope of national tasks, than the mere development of war means.

In fact such a version of the military and technical policy has been found, according to which the military scientific and technical potential is not practically destroyed either in the organization or qualitative respect, on the one hand, and on the other hand, it is actively used for national purposes. This variant forsees a gradual shift of the accent from war systems and means development towards the development of a scientific and technical base, and within the latter's structure - towards the developments of "double technologies".

The following facts confirm the conclusion concerning the growing importance of the US DoD scientific and technical programme within the aggregate complex of military and technical preparations.

The management of a scientific and technical programme as a relatively independent military task has taken shape. A special division is set up in the staff of the US Defense Minister Deputy for Procurement. It is headed by the Deputy
Director for R&D.

Second, the share of the scientific and technical programme in the total volume of the DoD R&D expenditures is steadily growing.

The third, and perhaps the most important fact is that realization of such a scientific and technical programme, which could be not only the base for weapons development, but an independent lever of political and economic pressure on potential enemies, has taken in the USA the shape of a state policy goal, which has become one of the most important goals within the structure of the country's national priorities. The goal is to be achieved with the help of the new US DoD acquisition strategy, announced by the Pentagon's head in his report to the Senate Armed Services committee on the 31 of January, 1992. It implies a sharp reduction of systems, which continue to be developed after their prototype tests, without any reduction of the scientific and technical programme (the 1993 FY request amounts 12.0 billion doll.). Thus it is presupposed to demonstrate to the whole world the growing break-off of the USA from the other countries as far as weapons quality is concerned, without expensive full-scale development, production and deployment stages.

However, there is the second trend - the shifting of the accent from exclusive developments of military technologies proper within the framework of a scientific and technical programme toward "double technologies" developments. It is sufficient to analyse the so-called "Critical technologies plan", annually submitted by the DoD to the Congress. It includes a list of scientific and technical branches of the highest priority within the framework of the US DoD scientific and tech-
nical programme. The recent plan prepared in May, 1991, includes 27 items. Among the "double technologies" there are the following ones: semiconductor and microelectronic circuits, programming technologies, high-efficiency computers, artificial intelligence and robotics, simulation and modeling, photonics, signal and image processing, aerohydrodynamics, computing, composites, superconductivity, biotechnology, flexible automated production.

The "double" nature of semiconductor and microelectronic circuits technology is more than obvious, as it is difficult to name a sphere of science and technics, economy, industry which had not been influenced directly or indirectly by the achievements in the microelectronics sphere. Besides there is a successful experience of the use of the DoD developments in this sphere for national purposes. For example, the programme of superspeed integrated circuits development, conducted by the USA at the beginning of the 80's, gave a powerful impulse to the development of microelectronics in the civilian sphere.

Achievements of "programming technology" may have non-military application. They include the development of operational systems and technologies to serve large-scale distributed computer systems, as well as algorithms and programming languages for the realization of advanced computing architectures potential. The same may be said about the development of means and techniques of artificial intelligence within the framework of a given critical technology, including expert systems, data processing correlation systems, robotics software, as well as pattern recognition means. According to American specialists, the development programme of the standard programming language ADA, conducted as an element of a given critical technology,
may lead to the creation of a not only national, but international market of software in this language, and a corresponding service in it.

"High-efficiency computers" as another double technology do not require any special commentaries, as high-efficiency computers developed within the framework of a given critical technology will be used in equal measure for military-applied and civilian computations. Now the DoD finances a considerable part of the work aimed at the development of the fifth generation computers.

The American press and scientific literature repeatedly underline that the problem of double technologies is not limited by their development. There is a need of purposeful state efforts to transfer the technologies to the civilian sector. In order to provide it there must be established a normative and legal base for the processes of technologies transfer to the civilian sector and appropriate organization structures, responsible for the process.

The process of forming a normative and legal base for technologies transfer from the US DoD to the civilian sector of economy started in the 80's and it still goes on. Now as its basis serve: the Stevenson-Widler act about technological innovations, 1980 (Public Law 96-480); the Federal act about technology transfer, 1986 (Public Law); the Domenicci act about the transfer of competitive technologies on the national scale, 1989; Executive Order 12591 of the President and some other documents. In accordance with the documents the process of technology transfer from military to civilian industry is regulated on a commercial basis, general principles regulating the intellectual property transfer from state departments (military, in
particular) to the private sector of economy are formulated. Divisions responsible for the realization of scientific and technical achievements are set up in all US basic state laboratories, including the DoD laboratories and centres. Their aim is to discover double technologies and to provide their commercialization. These documents also establish and regulate the procedure of work in the Center for the Utilization of Federal Technology on the basis of the National Technical Information Service. The Centre's task is to register and inform potential users (mainly from the private sector) of new technologies developments made by government laboratories and scientific research centres (the DoD's, first of all) with the purpose of their introduction on a commercial basis. There is an automatic new technologies database capable of giving on-line information. The Centre publishes monthly NTIS Tech Notes and annual catalogue.

Many American specialists do not deny the wholesome effect of technology transfer from the military to the civilian sector of economy. But at the same time they point out that the most perspective way to secure a leading position in the world in the sphere of qualitative weapons characteristics, as well as to provide competitiveness of the US industry, is the arrangement of a joint technological base, which could feed both military and civilian developments with innovations. The USA consider the following ways as the basic ways for the development of a national technology base:

- to set up joint military and civilian bodies to manage and realize the double technologies R&D projects;
- to elaborate major national scientific and technical projects, using the DoD organizations to realize them.
Thus the analysis shows that the US military scientific and technical potential conversion is not of a universal character, it follows the path of expansion of "double technologies" developments, creating the normative and legal basis for the technology transfer from the military to the civilian sector of economy, establishing organs responsible for the transfer, as well as setting up by military and civilian departments joint bodies to manage and develop "double technologies" and to conduct nation-wide projects in order to create a common technology base.

Nowadays, in terms of the country's defense expenditures reduction, increase in prices for power sources, materials and spare parts, as well as in the course of transfer to market economy the process of planning weapons and military equipment R&D has become complicated and significant.

Now defense industry production is the most science intensive of all branches of national economy (science intensity of military production is 20 times as high as that of civilian production).

The production volume in defense industry branches makes up ca. one sixth of the country's total production volume and the volume of defense complex R&D makes up 45% of the country's total R&D volume. In this connection the question of a more effective use of the country's budget appropriations for R&D, including R&D of civilian production and non-food consumer goods, becomes especially acute under conversion conditions and in the course of transition to market economy.

Under these conditions it is expedient to re-organize the country's R&D management system (both in military and in civilian
spheres), aimed at a more economical use of the allocated means and effective use of the so-called "double technologies".

For this purpose it is required to join the efforts of all major R&D organizations of the defense complex within the framework of a joint programme and charge a special body with the coordination of their activity. A special division of industrial technologies must be set up within the framework of the above mentioned body, the aim of which will be to ensure the introduction of the latest technological processes and technologies into the military and civilian production spheres.

In order to coordinate R&D in the sphere of "critical technologies" it is also expedient to set up on a government level a special office subordinate to the President for the realization of the national policy in the sphere of newest industrial technologies (by analogy with the USA).

In the long run it will allow to ensure the possibility of producing competitive consumer goods of the world level, as well as access to the world market.
Discussant comments by Michael Rich on General Demontev's paper:

General Demontev’s paper addresses conversion from several perspectives.

- Others are more qualified to discuss the elements dealing with Russian enterprises
- Let me comment on his lengthy section dealing with American experience

Such a comparison involves numerous pitfalls. Although there are some similarities between the American and Russian situations, the differences are quite important. Let me mention four.

- U.S. conversion efforts take place against the backdrop of a well-developed private sector, which in turn has large civil aerospace, electronics, automotive, and propulsion segments
- U.S. defense sector is relatively small: it represents just under 5 percent of the U.S. GNP and that is getting smaller
- Our most recent drawdown, while deep, has been fairly gradual elongated
- There are fewer instances of regional concentration in the U.S. We have some towns that are dominated by a single defense industry or firm, but not nearly as many as Russia does.

All of these factors and others make drawing lessons from U.S. experience problematic.

That fact may be good because while U.S. experience in reducing its defense industry is surprisingly good, experience with actually converting specific enterprises--design teams, production facilities--has not been good.

Norm Augustine, Chairman of Martin Marietta, has said it best: “The U.S. record at defense conversion has been unblemished by success.”

This phenomenon is not well-understood, but there is no shortage of explanations. The most common ones are:

- Defense firms are generally geared to low-volume production and lack the flexible manufacturing systems necessary for adapting efficiently to production-rate changes
- On account of the historical focus on very advanced technology, they have little tradition of confronting quality/price trade-offs
- They lack marketing and distribution skills that are so important in the civil sector
- They typically have large overhead cost structures as a result of government and military supervision and the need in the past to maintain surge capability, and
Defense industry diversification in the past has frequently pursued some lines of endeavors, such as steel and ships, where profitability stymied even more specialized firms.

It is true that there have been some flashy success stories and companies are still trying to convert, in spite of the bleak record of the past.

A company that makes voice recognition equipment for the Navy is applying that technology to home-security systems, automated bank teller machines, and personal computers.

One company that makes rocket propellant is making automobile airbags.

In California, one company has used its substantial computer capability to go into the business of automating the records of traffic tickets in small counties and towns. The company is Lockheed.

These successes have come about primarily from individual creative and entrepreneurial efforts instead of top-down corporate strategy decisions.

Nevertheless, there has never been widespread, easy conversion in the U.S. of defense factories.

The U.S. defense industry has, however, weathered many build-ups and reductions—much better than even it admits.

It has done so by frequent restructuring.

Some defense firms have merged.

Some have been taken over by other kinds of firms from different industries.

Some have narrowed their product lines.

Some have simply gone out of business entirely.

Overall, industry employment has both grown and contracted, with workers going to—or drawn from—industries in other sectors.

Are there any general principles arising out of this experience? I think so.

First, government policy should focus on the demand side of the equation, instead of trying to engineer new arrangements of producers.

For Russia and Ukraine, I think this lesson reinforces the primacy of privatization as a necessary requirement for eventual transformation of the defense sector. (Putting R&D on a contract basis is a good first step.)
• In the United States, this means doing things like:

-- Reducing to the bare minimum the special requirements of military design and production, so that firms can more easily shift to and from defense business

-- Increasing the stability of defense programs so that firms invest more readily in production-plant modernization and generalized worker training

. . . and NOT doing things like:

-- Blocking firms who wish to consolidate, restructure, merge, or cease operations

Whether explicit government investment in dual-use technology, because it is dual-use technology, is desirable is still an open question in the U.S. In fact, RAND’s new Critical Technologies Institute is intended in part to address that question and others like it.

Second, assistance during an extraordinary transition period, when defense cuts are sudden and deep, should focus on individual workers, not enterprises.

• If aid to enterprises is considered, firms in successful business areas with expansion possibilities should get precedence over troubled defense firms with uncertain prospects

• Bolstering current defense enterprises should not be the preferred course.

With these remarks, let me return the discussion to the chair.
Disintegration of the Soviet Union and formation in its territory of sovereign states, downfall of socialist system in the countries of Eastern Europe have resulted in radical changes of geopolitical situation in the world. Under these conditions, young Ukrainian State has started to form its own armed forces and develop its doctrine on ensuring of the national security.

It is quite a new problem for Ukrainian political science, for in the former USSR, they traditionally considered defence capability of the State, its military power and its integral parts: economic, moral and political, and military potentials. That well-composed - as it seemed to be - concept, though, has shown its insolvency. The fundamental provisions of the concept - war as extreme form of settlement of class conflicts, historical inevitability of victory of socialism - have not been approved by reality. The idea of moral and political unity of the Soviet people as a new historical community failed to work; the Communist Party of the USSR - "directing and leading power of Soviet military construction" - has left political stage. Even today, the term "national security" is associated in minds of majority of researchers with State security. The "all-State" approach to the problem of national security, especially under conditions of transition from totalitarian to democratic state, gives rise to quite a lot of problems of both theoretical and practical character. It is not a secret anymore, that in the former USSR, slogans of ensuring of state security covered mass repressions against peoples, let alone individuals. More over, any attempt to criticize state structures existed and policies implemented by those structures
could be easily recognized as encroachment upon state security. In such a way, bringing of national security to state security under conditions of absence of institutes of democracy, gives rise to appropriate system servicing state security. Such system is aimed, in the first place, to ensure security of existing state structures, shows trends towards totalitarianism and fundamentally is not able to promptly respond to changes in domestic and international circumstances. This problem can be settled by means of incorporation into system of national security of various non-state formations (mass public organizations, movements, independent politological centers, associations) and ensuring of their actual impact upon the system of national security.

Particular emphasis should be placed on the principal characteristics of national security. National security represents organic composition of two elements - internal and external - each of them having its own specific features. On the one hand, national security is presumed to preserve internal stability of State, prevent anarchy in political, economic and social spheres. From existing experience, it can be seen that acute worsening of economic situation in a state, nonconstitutional seizure of power, social instability, conflicts arisen on national grounds may lead to self-disintegration without any influence from outside. On the other hand, ensuring of territorial integrity, economic sovereignty, existing political system, national interests of people requires formation of effective system of external security. Interconnection of both internal and external aspects of national security in all instances should remain central link of a concept being formed.

The national security system existed in the former USSR had been initially directed towards priority of external security. The central component of that system was not economic, political or informational security, but, in the first place, military security. Such military security was understood in a very peculiar way. The Armed Forces of the USSR had been initially instructed to accomplish unreal task - to oppose any enemy, any coalition in any theatre of war operations using any types of arms and war
Finally, in the former USSR, there was sampled variant of ensuring of national security, when achievement of certain military-political targets received prior importance in comparison with economic capabilities of State, its abilities to fulfil such targets and objectives actually. It resulted in the fact, that the state during last 60 years was transformed into a "single military camp", military-industrial complex took up main share of GNP while level of security of the state was determined by quantity of produced tanks, aircrafts, warships, nuclear missiles, etc. According to estimates of some foreign experts, the former USSR spent for military purposes from 25 to 60 % (various sources give variable figures) of GNP, while the USA allocated for these purposes 5.7 % of its GNP, at the conditions, when national income of the former USSR did not — at the most optimistic estimates — exceed 50 % of national income of the USA.*/) Political leaders of the USSR having posed impracticable tasks for the national economy (some experts consider that only in state of war a state is able in relatively short period of time, which should not exceed 4-6 years, allocate for military purposes up to 40 % of its GNP), obtained the largest army in the world (data are as of January 1, 1990, declared overall strength of the army was 3,993 thousand), which was armed with incredible number of arms: 2,322 launchers of intercontinental ballistic missiles and ballistic missiles on board of submarines, 3,207 combat aircrafts of air-force; 4,014 combat helicopters, including Navy, 260 nuclear submarines, 157 large above water warships of more than 1200 t displacement; 63,900 tanks; 76,52 armoured troop-carriers, 66,880 various rocket and artillery systems (caliber of 100 mm and more) etc.

Piles of arms, though, could not ensure security and stability of the former USSR; they only intensified economic collapse and aggravation of social conflicts, because every year planned state subsidies for social purposes had been disastrously decreased.

*) Igor Birman in his researches repeatedly pointed out, that the former USSR GNP did not exceed 20 % of that of the USA; from our point of view, such findings corresponded to actual state of things.
Calculations made by Western politologists S. Hannington and S. certifies that decrease in per capita national income below the level of $US 2,000 leads to aggravation of social conflicts and significantly weakens internal stability of any state.

Recognizing economic capabilities of state as initial component of national security, it is not without interest to analyze the state of the Ukrainian economy in general and capabilities of its defence complex in particular. It is especially important because of the transition process - which now is going on - from the economy, integrated within the borders of the former USSR, to creation of own economic structures, aimed at ensuring of interests of the Ukrainian people. Achievement by Ukraine of political independence, though, did not automatically resulted in solving of such bad problems as to avert disastrous recession, stabilize finances, ensure social guarantees of strengthening of political stability.

In 1991, national income of Ukraine, as it is estimated by experts, reduced by more than 10%. In the beginning of 1992, in comparison with the correspondent period of previous year, national income reduced by almost 20%. The most significant recession in production is taking place at enterprises of food industry - by 30%; petrol processing industry - by 28%; metallurgical industry - by 22%; chemical industry - by 18%. Production of almost all types of industrial goods has reduced. Electric power production in the Q1 of 1992 reduced (in comparison with the correspondent period of 1991) by 15%; such production by steam electric power plants - by 20%. Machine building enterprises operate in conditions of short supply of metal, that has already led to reduction in output by 12%. The same processes are taking place in agroindustrial complex. Agricultural production outputs have decreased by one-third (decrease in production of meat - 26%, eggs - by 14%, milk - by 24%). Significant reduction shows capital construction. Despite of some expanding of foreign trade relations, output of export products for sale in freely convertible currency is insignificant. Export products amounted in 15,4 bln. rubles, basic element of such export products remaining raw materials, materials and consumer goods which report for 90% of the total volume of export.
At the same time, production of means of production in Ukraine is 70% to compare with production of consumer goods - 30%.

Despite of bad demand of the state for freely convertible currency: short deliveries to foreign partners equalled to 349 mln. rbl. because of short supply of raw materials, materials, packing materials, containers and transport means. Characterizing general state of the national economy of Ukraine, leading expert in this field, Valery Popovkin considers this state of the economy as critical. His findings are very uncomforiting: curtail of production by 20 - 30% during a couple of years leads to state of collapse in economy. Inflation on the background of significant recession in production, to his mind, is a structural crisis, connected with long in time out-of-economical burden upon the national economy and state budget from the military-industrial complex, in the first place, and unproportionally grown in the former USSR military structures. Such conclusions fully correspond to reality. Ukraine inherited from the former USSR the economy with "cancer tumour" of surplus military production. According to some calculations, about 1,200 enterprises, research institutes, design offices, etc, with the total, number of about 3 mln. employees engaged in the sphere of military production to various degree (including 700 plants and design offices with total of 1,200 thousand employees).

Practically 40% of total of able-bodied population of Ukraine and about 60% of its industry worked "for war". In contrast to Russia, though, military production in Ukraine has its own significant distinctions.

In the first place, here can be related absence of full cycle of production of many the most important types of military production. Though manufacturing the most modern warships, missiles, tanks, etc, Ukraine does not have pants manufacturing small arms; many completing parts and units previously were delivered from other republics of the former USSR. In conditions of infringement by Russia of signed within the frames of CIS agreements on deliveried of completing and spare parts for ensuring of normal functioning both military production and army organism, Ukraine now faces the problem of recreation of production of components for military production in short supply.
Complicated life-support system of the military-industrial complex which allowed to cover actual expenditures for defence purposes by means of distribution and posting of the expenditures on estimates of civil ministries and departments, is now ruined by the process of formation of sovereign states. Extremely and top secret system of placing of military orders, which was centralized, has now stopped its functioning. All these factors facilitate transition to principally new system of economic ensuring of national security based on the principle of reasonable sufficiency, competitiveness of military products, flexible "feedback" providing possibility of prompt resopnd to changes in foreign political circumstances, the threats that could arise (or disappear) on the borders of the state.

Another economical peculiarity of Ukraine, which is going to impact the realization of programs in military sphere, is dependence of the economy on supplies of some strategically important kinds of raw materials and energy carriers on the background of the fact that previously Ukraine was one of the republic of the former USSR that exported fuel and energy resources to other republics. In 1970, for example, demand of Ukraine in fuel and energy resources at the account of its own production was satisfied completely (100 %), then this percentage has gradually decreased: 1975 - 98 %; 1980 - 75 %; 1985 - 61 %; 1988 - 58 %.

Today, oil and gas supplied from Russia and Turkmenistan cover 75 % of total of demand of Ukraine in these resources. Consideration must be given to the fact, that share of natural gas in total of energy carriers is up to 41 %, Ukrainian own oil production does not exceed 3 mln. tons at total capacity of oil refining plants - 62 mln. tons per year. In addition to that, we must note absence of fuel material for nuclear power plants (14 units of NPPs are under operation in Ukraine; loading of fuel material for them costs 2,1 bln. US dollars), wood products and timber supplies, supplies of paper, etc. Total import of main component is about $US 2,000,000,000, while its overall amount equals to $US 22 bln. But, in the first place, it will be orientation to import of some
raw material resources from Russia, that is going to influence economical basis of Ukraine rather than their absence. Monopolistic position in supplies of energy carriers allows government of Russia to make significant pressure on economic stability of the Ukrainian State, while in the event of conflicts - to effect the national security as a whole.

It should be remembered, that the fact of mainly orientation of the Ukrainian economy to market and consumers within the borders of the former USSR significantly decreases possibilities of swift adaptation to international economic relations because of low competitiveness of produced goods and services provided. Outdated technological level of production and overwhelming share of mining and processing industries in the production is only deepening the problem.

It can not be excluded, that absence of appropriate material and technical base and significant financial obstacles can provoke government to give up to representatives of the military-industrial complex. In pursue of military-technical policy it will lead to dictation of military industry in production of already developed patterns of arms and military equipment and machinery in the volumes and prices favourable not to nation and state in general, but to producers of military products. Such situation has already taken place in Russia, where the process of consolidation of defence enterprises' managers is in progress. This group, having sufficient representation in top power structures, is able to significantly influence the policy of the Parliament, President and the Government of Russia, and can defeat any economic program effecting interests of the military-industrial complex.

The most important peculiarity in economic state of Ukraine today is heavy financial crisis. Analysis of execution of the budget of Ukraine for the first six months of 1992 shows, that excess of expenses over receipts now constitutes 42.6 bln. rbl.

According to estimates of the Director of the Chief Budgetary Department of the Ministry of Finances of Ukraine S. Moroz (interview to the newspaper "National Army", 11.08.1992), lack of financial resources for execution of the state budget that now equals to
11.3 bln. rbl., which inevitably result in surplus of budget deficit fixed by the Supreme Council of Ukraine on the level of 54 bln. rbl. It is unclear, where the figure of 54 bln. rbl. originated from: in the Law of Ukraine "On State Budget of Ukraine in 1992", article 17, it is laid down:"to fix limit amount of the State budget deficit in 1992 by the amount of 26,718.9 mln. rbl.".

Financial situation is aggravated by significant indebtedness of Ukraine to Western countries and to republics of the former USSR and Russia, in the first place. Participation of Ukraine in the "single ruble area" has led to growth of its debt to Russia. At present time, the debt amount is 550 bln. rbl. Ukraine has recognized debts of the former USSR and has bound itself to cover 16.7 % of the total amount. Besides, Ukraine will pay 20 % of the amount of debts of the republics that refused to cover them. The amount of such payments equals to 2,200,000,000 SUS annually. Naturally, without appropriate financial assistance, without credits extended, it would be practically impossible to find way out of this financial "blind alley". The situation is worsened by rigid position of foreign investors on credits extension, in particular, by requirement to curtail deficit of the state budget on the level of 10 %, and inflation - 5 %.

This practically deprives Ukraine of all the hopes for international financial assistance. Complicated financial situation of Ukraine requires especially elaborated use and management of budget allocations for needs of defence.

Not calculating budget allocations for execution of established programs of conversion, then total amount of expenditures on defence (counting expenses on the Ministry of Defence, the National Guards, frontier troops, Head Quarters of Civil Defence, training organizations of the Association of Defence Promotion of Ukraine, pension for military and members of their families and appropriate compensations, expenses on mobilization preparations for branches of the national economy) will be on the level of 135,540,000 or 19.8 % of all the budget expenditures from the state budget of Ukraine for 1992.
Are those subsidies for sufficient enough to support appropriate level of the national security of Ukraine?

The answer is ambiguous. If to consider correspondent grouping of troops regarding their organizational structure, number and possession of arms (according to data provided by the newspaper "Moscow News", 1992, such possession of arms is: about 600 thousand in number of servicemen, more than 13 thousand of tanks and combat armoured troop-carriers, about 1500 combat aircrafts (helicopters including), 645 warships, including 145 combat above-water ships and 21 submarines), then we can note, that the budget subsidies for 1992 are sufficient enough for only maintenance of military organism on the level of stability. But, any perspective designing of arms and machinery, conduct of significant manoeuvres and trainings can not be even considered.

Some perspective in reforming of armed forces is now formed by the Agreement on Conventional Armed Forces in Europe, signed by Ukraine on May, 15 in Tashkent and ratified by the Supreme Council of Ukraine on July 1, 1992. According to fixed quotas the following will be disposed in the territory of Ukraine: 4080 combat tanks; 5050 combat armoured troop-carriers; 4040 artillery systems; 1090 combat aircrafts and 330 shock helicopters. Significant reduction of conventional arms with simultaneous gradual reduction of the number of servicemen in the Armed Forces (projected number for 1995 - 400-450 thousand) and curtailing of expenditures on strategic forces dislocated in the territory of Ukraine allow to significantly ease the burden of military expenditures.

Thus, ensuring of the national security for Ukraine will be linked with its ability to effectively use available economic opportunities. On the first stages of fulfilment of this task, the following actions should be undertaken:

- determination and constant correction of amount of subsidies for military needs pursuant to evaluation of existing war threats;

- implementation of tenders for placing orders for military products and formation of appropriate system of financing;
transition from discussing and approval of the military budget as a whole in the Parliament to consideration and approval of specific military programs;

development of a long-term program of conversion of the military-industrial complex with due regards to to interests of ensuring of the national security;

seek of foreign partners able to ensure supplies of energy-carriers, raw materials, completing units, spare parts and separate samples for the armed forces previously oriented to Russia.

One of the most important trends in activities is conversion of the military-industrial complex. Successful accomplishment of the problems of conversion and diversification of military products will have decisive character for construction of framework of future market economy, structural reconstruction of the national economy of free and independent Ukraine. Liquidation of surplus military production will strengthen economic stability of the state provide normal conditions of development of production and, thus, will promote creation of better standards of the national security in general.

Generally speaking, the process of conversion in hyper-militarized state will include complex of political, economic and technological decisions.

Political integral part of the conversion program should, in the first place, determine on the level of political decisions necessary volumes of military production for nearest and long-term perspectives, clearly determine priorities in trends of production of arms and military equipment and machinery, coming out of established concept of the national security and military doctrine of the state. So, in this connection, uncertainty in concept of national security and military doctrine of the state is a subject of great concern. Here can be added uncertainty with a conversion program itself. Until now, there has been no clear position on the problem of nuclear weapon located in the territory of Ukraine. On the one hand, intention to build up Ukraine as nonnuclear state is declared in the Declaration on State Sovereignty of Ukraine.
(dated July 16, 1990) and Statement of the Supreme Council of Ukraine (October 24, 1991) "On Nonnuclear Status of Ukraine". But in the Resolution of the Supreme Council of Ukraine (April 9, 1992) "On Additional Measures on Ensuring by Ukraine of "Non-nuclear" Status", it was proposed to consider the whole set of matters on destruction of nuclear weapons from the point of guarantees of security and foreign political interests of Ukraine, and only after such a comprehensive analysis to establish competitive timetable of the weapon destruction. Tendencies towards creation of Ukrainian own nuclear technologies and full control over the strategic nuclear weapons, located in the territory of Ukraine, are now clearly exposing themselves, originating from the radical wing in the Supreme Council of Ukraine. Possessing of nuclear weapons is considered by certain deputies of the Supreme Council as the only reliable guarantee of the national security of Ukraine. On this matter, positions of radicals has much in common with that of representatives of administrative-managing apparatus of the military-industrial complex, which has absolutely negative approach to accomplishment of conversion program and stands for maintenance and further increase in military budget. According to preliminary estimates, the cost of only one enterprise reprocessing nuclear wastes reaches $US 5,000,000 and its construction can be accomplished in 5 years. Thus, the whole process of conversion will depend on radical political decisions. Ability of the government to ensure social stability in society should be also considered in that very context.

At the same time, unreasonable conversion program not having been sufficiently elaborated, or attempts to accomplish the program in short terms by means of curtailing funds and orders placed, can lead to sharp deepening of economical crisis and further aggravation of social tension. It is impossible to easily make unemployment more than 3 mln. of the most qualified employees and to stop enterprises possessing the most advanced machinery and technologies. And this is the way that is clearly seen by many Deputies of the Supreme Council of Ukraine, and the one they are ready to proceed. Unfortunately, they do not consider economic and social consequences of "total" reduction of military production for the society and the state in general.
Given all the complication of political and social matters, the most difficult problems for conversion program can be expected in the sphere of economic decisions. Many of Western experts in their attempts to get clear picture of state of things in the republics of the former USSR and provide assistance in accomplishment of conversion, usually do not take into consideration certain circumstances which can nullify any recommendations and financial assistance. It relates, in the first place, to qualitative distinctions between administrative-managerial and market economies. Increasing of administrative function of states with market economies in conditions of war or threat of war is basically different from rigidly regulated, so-called "plan" economy. Corporations and firms producing arms and weapons, in circumstances of decreasing of war danger, reduction in military orders, independently seek ways of conversion of military production. Their problems, in the first place, are connected with search of funds sufficient for conversion, and appropriate technologies, allowing to maximally use available equipment for civil products output. Moreover, well-developed diversification of production allows corporation and firms to execute prompt "manoeuvres" with finances, labour and material resources, to fully use the principle of production of double-destination products (military and civil). Market economy is principally not able to maintain unprofitable or outdated enterprises: bankruptcy is their only destiny.

Absolutely different picture can be seen in conditions of administrative managerial economy. The military-industrial complex of the USSR had been initially created exceptionally for output of military products and any possibility to actually reoriented enterprises of the military-industrial complex for manufacturing of civil products simply did not exist, as a rule. Appropriate attempts have been made without any obvious results. Besides, contrary to the West, where allocations for defence, as a rule are executed against specific expenditure items and certain military programs, and military orders of governments are placed among the firms on competitive basis, in the former USSR was adopted the system of covered budget financing of all enterprises of military-industrial complex independently on quality of the products they manufactured. Absence of competition and competitive basis
for enterprises for production of weapons and military equipment and machinery very often led to duplicating of analogous systems, while effective in that time system of financing led, in its turn, to excessive production of arms. For example, in the former USSR there existed and were produced three types of armoured troop-carriers and three types of tanks, while in the USA at that very time, they were quite satisfied with only one type of tanks and armoured troop-carriers. In nonstrategic and marine aviation in the USSR there were created 7 makes of fighters, attack planes, bomberdiers, while in the USA - only 3 analogous makes. In the USSR they developed and produced 5 different classes of above water warships and three types of many-purpose submarines, while in the USA - 4 and 1, relatively.

For the decade, from 1977 to 1986, USSR comparatively to the USA produced 2 times more fighters and submarines, 3 times more tanks and combat helicopters, 9 times more artillery and anti-aircraft missiles. In building of large above-water ships the USSR had advantage in output by 10 %. Analogous picture formed in nuclear weapons and carriers: USSR had produced 4 times more ballistic missiles and 13 times more - heavy and medium bombarders.

On disintegration of the USSR and formation of sovereign states this principle has not been radically changed. Market-oriented laws adopted by the Parliaments effect enterprises of the military industrial complex very slightly. Moreover, the program of privatization proposed by the Ukrainian Government stipulates 52 % of property that will remain under centralized management in state ownership. Up to the present time the practice of financing of all enterprises of military-industrial complex remains unchanged, independently on whether the state really needs the products of the enterprises. The only one distinction of the present stage is total reduction of budget allocations to the enterprises of the industrial-military complex. One more peculiarity of "socialist" economy reflected in this process. Absolutization of plan principles created illusion of absolute power of distribution functions of state. This illusion is constantly exposing in conscience of people, in economic concepts and in decisions of the Parliament. There is no other explanation to the fact, that only 30 bln.rbl.
were allocated for the needs of conversion at request of certain FMs from 140 bln. rbl. allocated under request of the Ministry of Machinebuilding, military-industrial complex. This all goes on on the background of the fact, that the products of the military-industrial complex covers up to 30% of GNP. Sharp reduction will inevitably provoke secondary wave of recession and lead to hyperinflation on a state scale. In any case, in accomplishment of the conversion program, there should made clear distinction between, excessive military production and production in conditions of military reform.

In the first case, it goes about undermining of internal basis of the national security, and in the second - it is solution of problem of providing a med forces with everything they need at simultaneous gradual reduction of military production. The world practices show that in any country the process of conversion is not accomplished by means of curtailing of military production financing. Moreover, in the first stage there were allocated for the requirements of conversion significant funds both from national reserves and from international currency funds. Industrial-military complex is able to independently earn necessary money for conversion at the account of sales of arms in the international arms markets. There is nothing wrong about it. Practically all countries of the world having sufficiently well-developed military production carry on sales of arms. Another aspect is, how fully such transactions fit the frames of international norms and correspond to international embargoes for sales of arms and technologies to certain countries and regions. Recently, the USSR and the USA shared 1st and 2nd places in the world in total amounts of arms sold abroad. The basic difference was that the USA firms received tremendous profit while the former USSR carried out bogus transactions, providing arms in credit to its "loyal" friends - first to China, then to North Korea, and then - to Egypt, Syria, Vietnam, Mozambique, Angola, Cuba, Nicaragua, South Yemen, etc. Annual supplies from the USSR of arms were on the level of at least $US 12,000,000,000. Practically up to 25% of all arms and weapons produced in the USSR by the military-industrial complex was exported abroad. During 1980s, the military-industrial complex of the former
USSR supplied to the countries of the "third world" 7,925 tanks and self-propelled guns, 20,470 artillery guns, 17 submarines, 2,620 aircrafts, 1,705 helicopters, 32,210 "ground-air" type missiles. It can be stated, that, obviously, they sold not the last tanks, guns and aircrafts. Military supplies constituted the principal part of foreign countries' indebtedness to the USSR. Thus, for example, summary debt of the countries of Eastern Europe is 43.8 bln. rbl., Cuba - 15.5 bln. rbl., Mongolia - 9.5 bln. rbl., Vietnam - 9.1 bln. rbl., Poland - 5 bln. rbl., North Korea - 2.2 bln. rbl. Indebtedness of the countries of the "third world" exceeds $US 67.5 bln. The question on covering of the debts either was not even considered because of insolvency of the debtors or separate countries declare their readiness to cover debts to Russia (like India already did) completely ignoring interests of other republics of the former USSR.

At present time, Russia works over other variant and looks for potential partners for concluding transactions with on sales of arms lots. Enterprises of the military-industrial complex of Ukraine are able to compete on separate types of military products in the international arms markets.

Rational spends of military budget organically include question on structure of military expenditure. In the former USSR expenditures of the Ministry of Defence for purchase of arms and military equipment and machinery equaled to 31 bln. rbl. or 43 % of the total defence budget. Expenses on maintenance of arms and military equipment and machinery and combat training - 10 bln. rbl. Ratio was 3:1. In the USA, relatively: 78.7 bln. $US or 26.8 and 88.7 bln. $US or 30 % of the total of military expenses. Ratio was 0.9:1.

The indices show that given excessive military production, it was necessary to form guaranteed sales market for the military products inside the country (domestic market) on the state level. Tendencies to significant surplus of expenses on purchasing of military machinery and weaponry over expenses on their maintenance take place in the modern armed forces of Ukraine. (More than 18 % of the total of military budget is planned to be allocated for purchasing of weaponry and machinery, while only about 8 % - on their maintenance and combat training of troops).
One of the most important direction in conversion is in its technological component.

Scientifically embased model of conversion should guarantee development of production on the basis of modern achievements of science and technology progress with accomplishment of certain criteria, namely:

- strengthening of defence capability and bringing on the higher level of mobilization readiness of enterprises of defence complex;
- maintaining and further development of update technologies;
- preservation of accumulated technological experience of enterprises of defence complex;
- exchange of advanced technologies among enterprises of defence complex and adjacent branches for the purpose of the utmost effective use of achievements of scientific and technological progress in the national economy in general;
- redirection of competitive enterprises (productions) to output of products having no analogy in the world market;
- intensification of cooperation of defence and civil enterprises for the purpose of economizing of initial product-raw material resources;
- choice of product priorities in development of economy with including into the system of international division of labour, etc.

In concept, conversion should become an organic element of structural reorganization of the whole industrial complex of Ukraine. In this case, problem of conversion is subordinated to the program of structural reorganization.

The essence of the structural reorganization of machine-building on the basis of achievements of science and technology progress, where problems of conversion are organically built in, is proposed to be considered from the following positions:

1. The diversity of system of material world for the purpose of their further summarizing is seen in the form of the following integral parts:
2. Significant part of parts, elements, joints, units and, in separate cases, devices as well as materials can be components of double destination.

3. Notion of secrecy of military products should be reserved for products from the "device" level to the system in general (excluding separate devices, joints, parts, elements).

4. New designs having double destination, should come through preliminary probation in consumer goods production for the purpose of clarification of peculiarities of their practical use and then, after additional adjustment, they are recommended for use in systems of military destination.

5. Mass production of above pointed components is much easier to be organized in conditions of narrow-profile production in comparison with enterprises where output of certain systems suggests organization of technologically closed cycle of production - from initial components of certain level to the system in general.

6. Bringing to the higher level of mobilization readiness of defence complex enterprises is achieved by means of production of above indicated components of the system not only at enterprises of defence complex, but also at enterprises of civil destination.

7. Existing organization and technological structure of production in civil and military sectors of economy does not possess required level of specialization. By separate products and their completing parts as well as by technological limits, multiple duplication takes place on the background of absence of competition and competition basis for receiving of state orders.

8. Structures of enterprises are not adjusted to work in conditions of market because intentions of many producers to secure technologically closed production cycle from element = part or unit, joint to the system in general. Such "specialization" covers excessive overall expenses and, in result, low level of wages at transition to world prices.
9. Subject and part specialization of production from part to unit should be accomplished basing on the principal of "How To Be Done", not on the principal of "That To Be Done".

10. Desingning-technological accomplishment of structural integral systems from part to device should be adequate to requirements of the international unification and standartization system.

11. The model of economic development of the country oriented to increasing of competitiveness of economy on the basis of the most recent achievements of science and technology progress, is adopted as basic. (For Ukraine it is the only possible direction).

Within the frames of such model it is necessary to determine products priority with which Ukraine can be integrated into the system of international labour division, and by which the second strategy of marketing could be implemented (i.e. "To Maintain Market").

12. Within the frames of the model chosen on economic development, there should be conducted single state scientific and technological policy of managing the science and technology progress, including:

- registration of highest scientific-technological level technologies in State Register;

- promulgation of advanced technologies among all the interested parties;

- state financing of designing and development of advanced technologies with their further promulgation among all interested parties;

financing of developments in the first place of state technologies oriented to solving of fundamental tasks in the national economy.

In concept, organizational and technological structure of industry complying with the requirements of intensive development of economy on the basis of achievements of science and technology progress, in which the problems of conversion are organically integrated.
In the structure there are separated products and technological sectors of economy. In each sector, there are separated subsectors oriented to products (technologies of civil and military destination, as well as subsectors of interbranch destination) by products and technologies.

In technological sector, it is important to secure unconditional conduct of the state policy, including:

1. Analysis of existing technological limits of enterprises of civil and military sectors of economy for the purpose of determination of their correspondence to scientific and technological level of technologies applied to that in the world practices.

2. Certification of technologies adequate to international level in formed Center on control of distribution of technologies applied.

3. Determination of list of basic technological organizations possessing at given time technologies on the international level.

4. Development and accomplishment of set of measures by the state for the purpose of compulsory and unconditional promulgation of the international level technologies among all interested parties in product sector and in the first place, on interbranch level of wideprofile technological limits of interbranch destination for accomplishment of the principal: "How To Be Done".

5. Development of recommendations of regional-branch character on respecialization of enterprises of defence and civil sectors of economy, basing on depth of conversion, structure of regional requirements, state product priorities on meeting the demands of the utmost wide circle of consumers.

Product sector of machine-building should come through significant modifications. The essence of the modifications is, that branch specialization gave birth to distorted forms of regional organization of production. It is beyond normal understanding, that many enterprises at the same time in the same region have their subsidiaries producing fittings, cast, printed-circuit cards, galvanic articles, nonunified mechanic processing, etc.
In this connection, there should be conducted regional respecialization of production on the basis of modern technological limits, allowing to secure the utmost possible level of production automatization.

The whole lower part of the systems, from the level of parts elements to devices should be produced at interbranch enterprises of double destination with separation, if required, of production of military sector. Technologies for such productions - it goes about basic technologies - should be secured by by technological sector of machine-building.

In this direction there should be conducted gradual, on the basis of purposeful complex programs, technological respecialization of enterprises of each region in such a way that accomplishment of criteria of development of economic and technological basis of market and criteria of internal organization of production are ensured.

Summarizing index of accomplishment of structural-technological reformations of industrial structure of certain region may be such technological structure which secures functioning of enterprises, production and small enterprises as "normally operating" with the level of costs adequate to that in international practices.

Coming out of the fact, that it is proposed to reorganize productions on the basis of the principle "How To Be Done" at conditions of achieving of minimal costs, the utmost possible level of quality, of utmost ecological protection, etc., then it becomes obvious, that program of conversion should not be absolutely independent program. It should be included to the program of reorganization of machine-building complex.

It is clear, that the proposed by us "total" conversion is a largest diversion, because having lost sales markets for our military products, we provide our competitors with possibility to saturate the markets with their analogous products. Still, the move has been done and we are to find out adequate respond.
For the managers and directors of the industrial-military complex enterprises such respond should be considered in the following aspects:

1. To produce or not to produce weaponry?

2. If produce, then to what extend to reduce the production and how to ensure normal work load for free capacities?

3. If not to produce, then what to do with the given enterprise in general?

That is the way the questions have been put, because for those enterprises, as much as for civil ones, the exceptionally high level of monopolization, excluding the way of flexible diversification of production, is very typical.

That is why, the conversion program should be flexible.

In concept, the program should be constructed in such a way, that the volumes of production of military machinery are maintained and increased and, simultaneously, the volumes of civil destination products output is increased.
CONTEMPORARY MILITARY EDUCATION IN UKRAINE: REFORM AND OUTLOOK

by

Yuri Prokofiev

INTRODUCTION

The humanity's historical experience indicates that status and position of any country in the world community as well as viability of the country always depends on a state of education in this country.

The main reasons of successful development and superiority of industrially developed countries over the other ones are not the well-organized management system and the high quality of production goods, but initially the most effective and thorough character of a permanent education system, stipulating the great importance of the educational average level for everybody in the country, the same one for elite as for any other section of the population. That provides the high average standard of professional qualification, which offers ample opportunity to create, exploit and improve high technologies with the high degree of reliability. The education makes so called "distinctive human capital," which creates a highly developed and civilized country, being combined with "material capital."

The present political situation in the world still requires maintenance of the armed forces from every independent country. Their fighting efficiency, quality and power, undauntedly, is a practical result of development of the military education system.

Nowadays American military education system could be considered as a most effective and useful and the particular example of this was a famous Desert Storm operation in 1991. Figure 1 shows you the structure of the military education system operating in USA. The preliminary officers training of 30 percent of required personnel number is conducted at three military academies (one for each US Armed Forces service) and the other 70 percent at other educational institutions of the Armed Forces and at civilian colleges which maintain ROTC (Reserve Officers Training Corps) units, as well as at Officer Candidate Schools. Upon their graduation Commissioned Officers are to continue their education, especially before the forthcoming appointment as best qualified selected, at various courses and in Military Colleges up to ten months in duration. All-levels training is based on the principles of modern educational concept and up-to-date achievements of psychological-educational studies and modern educational methods. Also the well-deserved distinguishing feature is a wide democracy of american science in general, and of the military educational system as an integral part of national Education and Scientific Program in USA.

Unfortunately, speaking about the educational system in our country, one should certify the fact of its non-correspondence with even yesterdays international development level. And a special proof of this is a low skill of the graduates from higher educational institutions in general, therefore only few of them were able to launch the first satellites and create their own scientific schools on the international level, but the biggest rest became "carriers of inadmissible commanding voluntaristic methods" of the administration and weak labour management, that brought the country to the bad-quality productions preponderance. That was a
result of professional illiteracy, ignorance of Design, Mastering, 
Exploiting of the modern technologies. The "Chernobyl" disaster, 
several gas-pipe-lines accidents, some submarines catastrophes prove 
this fact. The most important reason of today crisis is a non-ability 
of new-comig specialists to master the new technologies because of low 
educational background.

At the same time there are several unique military educational 
institutions at the territory of Ukraine, which were the only 
institutions of their kind in the Armed Forces of former USSR. The 
unique educational and training possibilities and a major part of highly 
educated faculty staff are concentrated in the institutions like Air 
Defence Military Radio Engineering College and Missile Branch Military 
Commanding Engineering Academy (both located in Kharkov) and Navy 
Engineering Academy in Sebastopol etc. The relocation or complete 
disband of these institutions will cause a considerable damage not only 
to the Military Education and Science System, but to the whole Science 
of Ukraine in general. From the other side there are plenty military 
educational institutions, which do not correspond with the modern 
requirements in training of highly qualified specialists because of weak 
Scientific and Educational potential of the faculty staff as it is at 
Combined Arms Commanding Academy in Kiev and Armor Guardian Commanding 
Academy in Kharkov etc.

The total number of military educational institutions in Ukraine is 34, 
which considerably exceeds the need of Ukraininan Armed Forces in 
military specialists, more than that, it requires heavy financial and 
material support. Moreover the structure of present military 
educational institutions, located in Ukraine, is extremely irrational 
and the personnel training system has low effectiveness. One of the 
reasons is low number of trainees per institution, which is about 1000, 
quite different from internationally desirable number of trainees 
between 3.5 and 7.0 thousand, to provide a highly effective functioning 
of military educational institution. Otherwise the training cost per 
one trainee sharply rises up.

That big number of military educational institutions causes the 
scattering and dissipation of financial, technical and material 
resources, therefore each small-size institution cannot provide itself 
with necessary material, technical and logistical support, thereby it 
has to involve the trainees in such activities as self-providence, 
reconstruction, repairing etc., instead of the training (estimated 
training-off time per a trainee reaches 1 year, i.e., 20-25 percent from 
total training time).

Another drawback of a small-size educational institution is a necessity 
to keep a full-size faculty staff, that leads to a dissipation of the 
scientific-educational potential, but does not provide the required 
quota of scientific degree holders personnel of the institutions. That 
is why a great part of our present military educational institutions are 
not authorized to issue the internationally recognized diplomas for 
their graduates.

Thus, the above mentioned shortcomings both in organizational structure 
and faculty staff qualifications of our military educational 
institutions, being combined with other disadvantages, finally reduce 
the efficiency of training-educational process, and being supported by 
old technologies and old training methods, cause low professional
personnel skills absolutely inadequate to the modern technologies and modern weapons potential.

I. MODERN MILITARY EDUCATION SYSTEM ANALYSIS

The system of preliminary training, retraining and improvement of professional skill of Military Officers hereinafter called Military Education System, has been developed in the Armed Forces of former USSR. It is still functioning on the territory of Ukraine with all its elements, including the following levels: pre-enlistment, pre-recruitment and pre-drafting military training of young people; preliminary education and training of the Officers Corps; professional development of the Scientific-Educational Personnel and Military Scientists; and retraining and educational development of professional skill of the Military Officers at between-tuition time.

A. The pre-enlistment, pre-recruitment and pre-drafting education and military training is conducted at Kiev militarized secondary school traditionally named after Suvorov and at two specialized boarding-schools with advanced military and physical training as well as at ordinary secondary schools maintained by the Ministry of Education, other ministries and departments within the bounds of initial military training syllabus.

Besides the direct pre-drafting military training is exercised in 204 special training centers belonging to Ukrainian Defence Assistance Society (former Army, Aviation and Fleet Voluntary Assistance Society of USSR).

B. The preliminary training and education of the Officers Corps is conducted at the Military Educational Institutions considered the Basic Level of Military Education System. There are 30 Military Academies for training Commissioned Officers and two Military Secondary Education Schools for Military specialized education and 73 civilian colleges which maintain Military Training Chairs. Ministry of Defence refunds military weapons/equipment supply, operation and maintenance expenses and Ministry of Education reimburses the rest costs. The students can be trained in all registered military specialities except Helicopters, Logistics, Autotransportation. Besides that the Midshipmen of Sebastopol and Black Sea Naval Academies are trained in the unique specialities not existing nowhere else.

The regiment/brigade and upper levels staff can be trained at Air Defence and Army War Colleges. Unfortunately there are no equal colleges for the rest services as well as for the operational-strategic level staff.

C. Professional development of Scientific & Educational Personnel and Military Scientists is conducted within the bounds of special Scientific Education and Working (both full-time or correspondence) organized at both Colleges or 10 Engineering Academies in order to obtain a Scientific Degree of Doctor or Doctor Candidate of Sciences.
D. Retraining and educational development of professional skill of Military Officers at between-tuition time is conducted at some institutions and special courses but it’s level is not the best one.

So far, the Military Education System in use generally envelopes almost all levels of the Military Education. Like the National Education System of Ukraine it is characterized by the same shortcomings such as inflexibility, torpidity, unprofitability and a low qualification of the specialists educated by it, thereby only 15-20 percent from the total graduates number are eligible to their diplomas qualifications. The situation like this first of all is reflected at the fighting efficiency of the National Armed Forces, the deficiency of which should be compensated by the quantitative approaches while manning them. According to the appraisals of the International Experts and even of the National Education Committee of former USSR, the National Education System is backward behind developed countries. More than that, the Educational System in use with all its structures does not permit to apply practically the modern Educational concepts and technologies distinctive to them.

On the other side, the existing educational and material base and a great Scientific & Educational Potential (about 97 percent of all Military Scientists are concentrated at the Military Educational Institutions) offers the opportunity to transform the present System and to rise it up to the modern level. The all above mentioned convinces of inevitability of the Military Education System Reform, the qualitative implementation of which requires operation of the necessary concept and a systematic scientific approach to realize the Reform at the whole scale from the very lower to the very upper levels.

II. THE CONCEPT OF MILITARY EDUCATION SYSTEM REORGANIZATION

Determining the approaches to elaboration the purposes and the contents of the Concept based on a Scientific Analysis of Historical Aspect of development the Education in Ukraine as well as abroad and using the Scientific Prediction of the Present Civilization Evolution, the System of Education must develop more dynamically in order to provide a successful progressive forward movement either of Ukraine or the International Community. The made prognostication and analyses causes the deduction, that the Human Civilization again has reached to the next critical point in the Development and is facing the famous question: "To be or not to be?" which means if we have come to the End or weather we can make a new Qualitative Leap of Development. The History convicts those countries, which have been supporting the conservative development forms while the Life required their improvement and researching. The logical result was rather equal: a backwardness or decay.

Therefore, one of the ways to avoid such fortune is to raise the Educational System to the next qualitative level, which could provide the Development of Human Knowledge and to lead to a Harmony of all aspects of the nowadays life and social activities in order to extol the Spiritual Needs and the Moral Ideals over material and social problems. This approach will cause enough Human Potential accumulation to be able
to predict the Human Development influence to the Environment as well as Human Society in order to provide a lucky overpassing of this critical stage of the Civilization Development.

The goal of the Concept is to create on the base of previously reorganized Military Education System such as Educational System Scientifically grounded, didactical and Complex, which could provide a permanent fruitful education of a functionally qualified specialists for manning the Ukrainian Armed Forces, who are able to predict their activities and to understand their responsibilities to the Environment and Society. This goal could be accomplished, organizing the Military Education System integrated to the National Educational System of Ukraine based on the economical structure of its financing by Ministry of Defence, Ministry of Education and also a selffinancing on the base of Country profitable activities and training the specialists for other countries on contractual basis.

As a basis the Problematic Activation Educational Concept specially adapted for training Military specialists is undertaken, the essence of which is creation of a didactical model of a multistage education exposed by the modern achievements of the Systematic Approach studies, Simulating Modelling of the Activity Theory and the Psychological Mechanism of the Creating Thinking functioning (refer to Chart).

The Educational and Training Process is constructed on the modern educational technologies, wide realization of the schemes of orientated basis of actions, Active Educational Methods in accordance with the educational level (refer to Chart). The modeling syllabus construction grounded by subjects passing algorithms and stimulating rating marks-system will be used also. Implementation the knowledge of the psychological and social-psychological means of optimisation the development of the Creating Thinking offers a good opportunity to realize the whole Educational-Training Process prospects and will assist to development of the Educational Technologies and the Educational System in general.

Hence the Structure of specialist training system includes all the levels of the Military Education System it maximally integrates to the National Educational System in Ukraine and provides an equal standardized qualifications training.

The preliminary officers training by main registered military specialities is conducted at the Military Educational Institutions of Ministry of Defence and the rest specialities and Reserve Officers are trained at the Military Training Chairs maintained by civilian educational institutions.

The Commanding and Engineering Officers Training will be conducted at the Military Educational Institutions on a multilevel and multistage basis representing a common, permanent, complex and didactical system. The candidates selection for the training at the Institution is conducted on the base of professional testing and candidates secondary educational level estimation (refer to chart).

At the first stage the Activating-motivating level is realized with using the educational technologies corresponding to Exposing and Reproduction Educational Strategies. The stage of a Junior Specialist Training completes by the qualification test, thereafter the eligible
trainees are offered to sign the Contract in the Regular Army on Officers Grades for 5-10 years in duration upon the graduation.

Those, who have not overpassed the test or have not signed the Contract, upon the first stage termination, will be enlisted in Regular Army for one year service.

At the second stage the Semantic-Informational training level is achieved using the educational technologies corresponding to Reproduction and Producing Educational Strategies.

The graduates from this stage obtain qualification of bachelor meanwhile certain distinguished graduates obtain the Scientific Degree of Bachelor. All the graduates are commissioned second lieutenants and assigned to Regular Forces except 5-10 percent from those, who have obtained the Scientific Degree of Bachelor and overpassed the qualification test and thus can continue the Educational Development at the third stage. The rest officers carry out their military service by officers grades in Regular Forces.

At the third stage the Regulating training level is realized using the educational technologies corresponding to Producing and Complexing Educational Strategies. Upon termination the graduates obtain the qualification of Master or the Scientific Degree of Master.

On termination the third stage education the graduates are assigned to Regular Forces by Junior Officers Grades paid extra-salary compliance with their qualifications.

While being trained and educated the trainees are regularly selected in order to provide a high quality and efficiency of Military Specialists Training at all levels of the Common System and to rotate the personnel serving within the troops. Moreover the cadets of Military Academies and the students of civilian institutions trained at the second and third stages before graduation have to overpass "Troops probation" in Armed Forces Services Military Training Centers in order to provide an equality of Active and Reserve Officers training skills.

Besides that during the education at the third stage the most clever and talented individuals can be selected with the purpose to continue educational development after a one year troops service along with the officers coming from Regular Forces for advanced tuition at the Scientific Centers of Military Educational Institutions or Military Training Chairs.

At the forth and fifth stages is conducted the educational development of the officers, who came from Regular Forces being selected as best qualified for regiment/brigade and upper levels, as a rule directly before their appointments to make the development more effective and economic.

The Military Specialists Educational Development of major Divisional and Operational and Strategic levels is conducted at Armed Forces War College of Ukraine, where the faculty staff from Leading Educational Institutions of Ukraine should be invited on contractual basis along with the Senior Commanding Staff of Ukrainian Armed Forces.
At the fifth Educational Level both at Military Educational Institutions and Armed Forces War College special groups are organized with the purpose of Educational Development of Civilian Administrations Leaders of district/region/state levels in order to provide a successful cooperation between Civilian Authorities and Armed Forces of Ukraine in peacetime, transition and national war state periods and also to involve them in National Armed Forces building.

In accordance with rather full deficiency of Military Education, Psychology and Sociology Specialists of all directions (their quota is only 0.5 percent from all Military Scientists meanwhile in USA it is more than 30 percent and in Japan more than 35 percent) there is a dire straits to create Military Humanitarian Institute, where the Social-Psychological Service and Psychological-Educational Specialists Development as well as Military Commanding and Educational Staff Development should be organized.

The Civilian Institutions students military education and training is organized at equal stages. The students who will study at the Military Training Chair have to overpass a professional selecting and upon termination the first training year they have to sign one of the two types contracts. The first one stipulates Active Military Officer Service during 4 years and the other, Reserve Officer Military Service, during 10 years. Students trained at Military Training Chair are additionally paid by Ministry of Defence according to the type of Contract.

The pre-enlistment military training is conducted on the basis of organization of Military Lucemuns Network constructed by mutual efforts with Ministry of Education of Ukraine. During manning the Lucema a privilege is given to orphans and low-provided families’ children and children, whose parents were involved in Afghanistan and Chernobyl events. The Lucemuns graduates, who have overpassed professional testing and selecting, are directed to the next educational level at Military Educational Institutions.

According to the International Experience 80 percent of Scientific Researches have been carried out by the Scientists from Educational Institutions where the biggest part of Scientific Potential is concentrated. Thereby it is desirable to organize Scientific Centers at all Military Educational Institutions like Armed Forces Services Scientific Center and Problematic Scientific Researches Centers on the base of a profitability and selfrepayment causing a successful development of Educational-Material and Scientific base and effective stimulating the faculty and Scientific Staff activities.

The Military Education System cannot function effectively without its democratization. In order to realize this all appointments for permanent organizational structures grades of Military Education System are fulfilled on qualifications selecting basis supported by scientifically grounded criteria.

III. CONCEPT IMPLEMENTATION DIRECTIONS

The Military Education System Reform is aimed to the cardinal military personnel professional improvement, full integration into the
Educational System in Ukraine, adjusting the System Structures in accordance with the elaborated Concept. The Military Education System development stipulates making it more flexible, enables to react immediately to current and prospect Armed Forces needs in the terms of high dynamism, fast Military Science and Equipment development and social and economic changes in Ukraine.

The Military Education System Development during reforming is exposed in following main directions:

- organization of subsystem for pre-enlistment, pre-recruitment and pre-drafting military training of youth;

- foundation the System of a permanent Military Education for Commissioned Officers;

- reorganization of Structure and Educational-Training Process at Military Educational Institutions and Military Training Chairs of Civilian Institutions in accordance with Psychological-Educational Science achievements and modern Educational Technologies;

- creating the subsystem for selecting, distribution and preparation of the Scientific-Educational Personnel and development of Military Institutions Science;

- providing the Military Education integration within the troops training purposes, National Science and Education Development in Ukraine;

- improvement the centralized Administration and Supervision of Military Education, abolishing its multistage structure and improvement democracy of Administration principles, selfdetermining and creating initiative.

A. Organization of subsystem for pre-enlistment, pre-recruitment and pre-drafting military training of youth.

The above mentioned military training will be conducted at 9 Military Luceums and 105 military training centers of Ukrainian Defence Assistance Society (UDAS). The Military Luceums are organized instead of some eliminated Military Educational Institutions and existing special boarding-schools. The UDAS training centers system in its turn is reorganized on the base of existing system leading it to the state meeting Ukrainian Armed Forces needs.

B. Foundation the System of a permanent Military Education of Commissioned Officers.

The Commissioned Officers Military Education and Training by main registered Military Specialities is conducted at Military Educational Institutions and by the rest registered specialities at Military Training Chairs of civilian institutions as well as Reserve Officers.

The Military Educational Institutions Structure will consist of three Multiservices Institutions (Military University, Military
Signal and Control Institute, Military Humanitarian Institute) and 5 Armed Forces Services Institute (Air Force Institute, Air Force Pilots Institute, two Army Institutes, Navy Institute).

The above mentioned Institutes will be established on basis of now-existing Institutions due to their expansion and transferring to new organizational structures. The Military Training Chairs System Structure maintained by civilian institutions will include 45 Military Training Chairs organized on basis of now existing Chairs and instead of some eliminated Military Educational Institutions.

C. Laying the System for advanced tuition and preparation of Scientific faculty staff and Development the Educational Institutions Science and Research activities.

It is stipulated to create the Scientific Research Centers at every Military Educational Institution, which will conduct research studies by requests from Ministry of Defence and other parties concerned. All Scientific Research Centers have to possess suitable structures for preparing Doctors and Doctors Candidates personnel. They also are assigned to develop the profitable activities by all means, to provide Educational Material and Scientific Base development, to stimulate the Scientific Educational Staff activities as well as to develop initiative Educational forms, to support scientific work of Scientific Degrees holders, to give the opportunity of corresponding tuition at civilian institutions for Military Servicemen in order to obtain another higher education and to defend their works. The other responsibilities are as follows:

* by mutual efforts with the Customer to improve the Methodology of elaboration of qualifications characteristics like the Government Request for Officers Training to provide its long suitability;

* to strengthen the influence of Science to the Educational-Training Process;

* to optimize the Educational Contents, basing on Scientific Prediction of Military Science, Weapons and Equipment Development and to develop and improve the modern Educational Technologies grounded by Psychological-Educational Science;

* to extend the size of Scientific studies including the theoretical ones, especially concerning the Military Education Development Problems and Military Psychologic and Educational Art.

D. Administration and Military Education Supervisor

The multistage structure of Subordination and Administration of Military Educational System should be eliminated, thereafter the Administration and Supervision on Military Education System will be conducted by Military Education Department, which will be accompanied by an elected civilian body: the Military Education Committee.
The Military Education Department is tasked by the following responsibilities:

- conducting analyses, prediction and reforming and scientifically grounded development of Military Education as a part of National Educational and Scientific System of Ukraine;

- elaboration of organizing structures of Military Education System and conducting a supervision of them;

- integration the Military education within the requirements of troops activities and also into General Education and Scientific System in Ukraine;

- a Scientific grounding of educational development efficiency of Military Specialists Training based on optimisation of Educational-Training Process, an economical grounding of implementation of modern technologies and creation the Common Information Exchange System;

- organization of preparation and development of Scientific-Educational and Commanding Staff at the modern psychological-educational level and selecting eligible candidates for this staff;

- rising up the self-determination of Military Educational Institutions on democratic principles.

IV. MILITARY EDUCATION CONCEPT REALIZATION

According to the Concept the Military Education System Reform will by carried out in three stages stipulated for foundation of Ukrainian Armed Forces.

The Supervision and Control of Reforming of the existing System is provided by Special Commission and Military Education Department.

CONCLUSION

The above suggested Concept of Military Education System in principle corresponds to the approved Concept of National Educational System in Ukraine. It enables to establish a flexible complex system enveloping all levels and stages of training in order to provide an effective implementation of Military Education Reform aimed to bring it to a new qualitative level, which offers an ample possibility of preparation of well qualified specialists for manning now developing Armed Forces of Ukraine. The concept has a complete legal basis and it has been approved by permanent Supreme Soviet Boards as well as by Defence Council of Ukraine and thereby it has already performed by Ukrainian Law and certain Government Decrees on the way of its real implementation.
### Chart: Training Officers Corp in US Armed Forces (USAF)

<table>
<thead>
<tr>
<th>Years of Service by Officer Positions</th>
<th>Military Education</th>
<th>Special Education</th>
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<tbody>
<tr>
<td>30</td>
<td>CAPSTONE</td>
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<td>23</td>
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<td>Level of Division, Corp. USAF Services HQ</td>
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<td>21</td>
<td>COLLEGE OF NAVAL WARFARE</td>
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<td>AIR WAR COLLEGE</td>
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<td>ARMY WAR COLLEGE</td>
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<td>15</td>
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<td>Level of Battalion-Regiment-Brigade</td>
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<td>14</td>
<td>MARINE CORPS COMMAND AND STAFF COLLEGE</td>
<td>Tuition with purpose to get a Scientific Degree</td>
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<td>13</td>
<td>NAVY COMMAND AND STAFF COLLEGE</td>
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<td>12</td>
<td>AIR COMMAND AND STAFF COLLEGE</td>
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<td>ARMY COMMAND AND STAFF COLLEGE</td>
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<td>ARMED FORCES STAFF COLLEGE</td>
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<td>7</td>
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<td>Level of Company</td>
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<tr>
<td>6</td>
<td>MARINE CORPS AMPHIBIOUS SCHOOLS</td>
<td>Additional classes by civilian institutions curricula</td>
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<td>5</td>
<td>NAVY SCHOOLS FOR SURFACE SUBMARINE OR AVIATION AIR FORCE SQUADRON OFFICER SCHOOL</td>
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<tr>
<td>4</td>
<td>ARMY SCHOOL</td>
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<tr>
<td>3</td>
<td>TRANSITION COURSES</td>
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<td>2</td>
<td>BRANCHES AND SERVICES SCHOOL</td>
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**General Sources of Manning Officers Corps**

- **West Point Military Academy**: 4 years
- **Officers Selecting Schools (Promoted Surgeons)**: 14 weeks
- **ROTC (4 years)**: 4 years (496 hours) out-of-troops officers reserve training
The main stages of Educational Process and corresponding Educational Strategies

Pure Contemplating --> Abstract Thinking --> Practice

Stages

Educational Strategies

Exposing Reproducing Problematic Complex

Fig. 2
Fig. 3
Fig. 4

Correcting return connection

Developing tuition
(creative thinking)

Motivation —— Purpose ——— Contents of studied material

Initial level of knowledge

Teacher, Trainer, Instructor

methods

result

pupil (trainee)

ways or manners

methods

teaching forms

Correcting return connection
SESSION IV: FOREIGN ASSISTANCE AND THE REFORM PROCESS
FOREIGN AID AND THE ROLE OF THE IMF AND THE WORLD BANK
IN THE REFORM PROCESS

by

Professor Oleg T. Bogomolov

Having engaged in a market reform after the abortive coup d’état in August 1991, Russia expected moral and political support, as well as significant economic aid from leading Western countries. Without much zeal, the West said it would help, since the comeback of Russia and other vestiges of the wrecked USSR to the mainstream of civilisation with its democratic and market institutions indicated an end to the military threat from the East and new vistas for cooperation. Moreover, the failure of democratic and market reforms in Russia would lead to an economic and social collapse of a vast region and the loss of billions of dollars in credits granted by Western nations to the USSR. However, the transition of the ex-USSR to a democratic system and market economy proved far more difficult, lengthy and costly, than expected. The painstaking process of reform changed the original idea of the Western latitude to accelerate and facilitate this process. The issue of Western aid has assumed new dimensions and compelled both the donor and recipient countries to recalculate its potential effects.

The most desperate effort, which set the ball of reform in Russia rolling, came in the early 1992, when state control was lifted from most prices and wages. Though several US and European experts gave the nod to that move, special aid from the West was never asked for.

Sort of bargaining started under Gorbachev, when large-scale Western aid was solicited in exchange for reform. At the 1991 G-7 summit, Gorbachev received certain promises of further assistance and debt re-scheduling in exchange for his stabilisation and market transition plan. In the period of uncertainty, which followed the attempted coup d’état and the collapse of the USSR, many previously granted credits were put on ice. Other Western promises hung fire too. By the time Yeltsin announced his market plan in the late 1991, there was no preliminary agreement on aid or defrosting the credits. This didn’t mean, obviously, that reform engineers never expected aid from abroad. However, all previous projects firmly linking market reform, disarmament and Western involvement in them to aid were clearly thwarted. Developments in this vast territory assumed a chaotic and unpredictable bent.

Food shortages in the early 1992 compelled Russia to seek humanitarian aid from the West. Its quest was successful, and Russia did receive relief aid, especially from the European Community. After that, the Russian President and members of the cabinet made a series of visits to developed countries in a bid to defrost credits granted to the former USSR. In February 1992 Russia applied to the International Monetary Fund for membership, submitting a standard stabilisation plan. This was a logical step, which stemmed from Russia’s efforts to overcome its isolation from the international community and world economy. Russia aimed at greater involvement in the international cooperation, financial and trade organisations. This step was also explained by Russia’s wish to expand the sources of funds. The IMF approved the Russian government’s reform plan, encapsulated in a memorandum, and tried to speed up the admission of Russia and other successors to the USSR.
Shortly after followed the initiative of the US President to allocate a large aid package to Russia and other former Soviet republics. Russia was promised 24 billion dollars, while other republics became entitled to circa USD 22 billion.

It became evident by that time that the shock therapy chosen as a tool of the market reform had failed to become a radical remedy for the ailing economy, and that Russia would hardly be able to cope with the stabilisation task by itself. It was also increasingly evident that Russian policies were placed in dependence of the Western generosity. This premise became Yeltsin's and Gaidar's base point in their talks with the G-7 in summer 1992.

At the talks, the West received once again a package of Gorbachevian arguments about the West needing aid as much as Russia itself. Mr. Yeltsin and his allies asserted that the economic crunch, hunger, riots, social unrest and mass emigration in Russia would cost much dearer to the West, than an package of urgent aid. The Russian leaders also displayed their willingness to accept the conditions of the IMF and the World Bank for large-scale aid. Nonetheless, this submissiveness did not prevent them from occasionally declaring that no foreign diktat of the Russian policy would be tolerated.

The active quest for foreign aid was accompanied by consistent warnings of the domestic opposition, which included several notable economists and politicians. Even Prime Minister Nikolai Ryzhkov pointed to Gorbachev and the parliament that the debt burden was becoming too heavy for the Soviet economy to withstand. He urged Gorbachev to solicit investments, rather than new credits. Since that time, the foreign debt has augmented tremendously, while debt servicing has become a truly intractable problem.

This is why opponents appealed to the government to keep its head as far from the debt noose as possible. Credits granted to the USSR and its successors were often recklessly spent on consumption or downright squandered. Even if new equipment was purchased for credits, it stayed idle gathering dust in warehouses. Eventually installed, it did not yield returns large enough to pay off the debt. In a nutshell, the critics asserted that foreign aid was not in the least a lifebelt that would keep the Russian economy afloat in the whirlpool of its predicaments. Moreover, the influx of unearned money only induced governmental and social complacency.

Scepticism over credits was voiced also because many other applicants had been waiting in line to obtain financial resources from Western governments, international financial organisations and commercial banks. The waiting list included other ex-Soviet republics, Eastern European nations and developing countries. The credit resources of the West are obviously limited. For instance, the US runs a sharp budget and payments deficit. Undated German resources are pumped into its Eastern lands. Only Japan apparently has considerable spare funds, but it has been less than eager to invest them in Russia. These investments would be far too risky for the West due to high political and economic uncertainty in the prospective recipient countries.

Despite all arguments above, Russian politicians persistently sought greater financial injections from developed countries, failing to cope with the plummeting economy. It became increasingly difficult for them
to stay in power and keep social tensions from spilling over without a helping hand from abroad. Fearing destabilisation in the former Soviet Union, the Group of Seven has been augmenting aid to Russia and other ex-Soviet states. The West provides aid, though it apparently lacks a common strategy in this area. Caution and domestic needs in the US and Europe have come in sharp conflict with the understanding that Russia, Ukraine and other republics are craving for aid. The US Administration has already been reproached for missing the opportunity to gain control over the developments in Russia by refusing to provide generous aid in support of its reform process. Apparently, this criticism compelled George Bush to come up with his initiative on behalf of the Western World on April 1, 1992.

The 24 billion dollars in aid offered by the US President for twelve months only are a truly impressive gesture. Yegor Gaidar even compared this aid package with the Marshall Plan for the post-war Europe. However, at a closer look, this package reveals a cautious approach of the West to helping the wrecked USSR out. This sum, however grand it may seem, will hardly help stabilize the economy, allay the pains of restructuring and check the downturn in living standards. Eleven billion out of the total USD 24 billion are credits previously granted to Gorbachev but subsequently moth balled or put aside. The donor countries made a condition that the money should be spent on their commodities--a provision not particularly attractive to the recipient, but giving a good fillip to the donor country’s business.

Another two and a half billion were earmarked for debt rescheduling. Of course, this move relieves the debt crisis somewhat, but has no direct influence on the pace of reform. Yet another 4.5 billion dollars may be obtained from international financial organizations as soon as Russia is admitted to the IMF and IBRD. There is little generosity in this particular move, since the membership of this organizations limits the access to credit resources in accordance with the share of a potential borrower in their capital and imposes several other requirements, which may be severe and not always justified, from the borrower’s viewpoint.

Finally, a large degree of uncertainty remains with respect to the six billion dollars left for the stabilization of the rouble’s exchange rate, which look more like a moral support, than a tangible financial assistance. It is not clear so far, who will open the corresponding credit line, what conditions will be imposed on its use and who will hold the purse strings. Probably, the money will be administered by the IMF leaders, rather than the Russian government itself.

In a nutshell, assistance to reform in Russia boils down to credit restructuring and not issuing new loans. We may note in parenthesis here, that the foreign aid promised to Mr. Gorbachev in 1990-1991 was worth circa 80 billion dollars. According to “Time” magazine (December 7, 1992) Europe, Japan, Canada and the US together have given or loaned 81 billion dollars to 10 members of the Commonwealth of Independent States since 1990. More than two-thirds comes from Germany. The U.S. share of 5.2 billion includes 5.5 billion in loans for Russian purchases of the American grain. In his statement on April 1, 1992, George Bush confirmed the news that new credits would be reduced to the minimum. Humanitarian aid to Russia in 1991 is estimated at 250,000-300,000 tons and approximately one million ton in 1992, while food aid to Russia’s Volga Region stricken with hunger in 1921-1922 amounted to some 800,000 tons. Opinion polls in Russia have failed to reveal any enthusiasm of
the populace with respect to the 24 billion-dollar aid package from the West. On the contrary, negative attitudes prevailed. (According to the Public Opinion Fund, 30 percent of respondents approved and 44 percent rejected foreign aid. The ratio among the employees of large factories is 25 and 52 percent respectively.)

These results may be explained by various motives. We may presume that the population denies the Western support of the shock therapy and the severe slashing of consumption rates it implies. The Russian government's subservience to the IMF and its standard demands may hurt national feelings and aggravate apprehensions for the government and the West in general, since all IMF recipes have failed to deliver so far.

Obviously, we can't expect the Group of Seven to grant tens of billions of dollars in credits and other aid to Russia and other ex-Soviet republics without imposing any economic and political conditions. The idea of rewarding the ex-USSR for its progress towards democracy and a market economy has long been accepted by all parties concerned.

Moreover, the injection of Western aid has been linked openly or implicitly to the progress in disarmament or defence conversion. Progressive social forces in Russia insisted on this linkage, in fact, obviously apprehending a possibility of old-time political structures and individuals using the aid for their own survival.

This linkage, however, proved a quite contradictory matter in its practical dimension. By imposing all demands and recommendations as a condition for credits, Western countries were apparently driven by a desire to get back the huge foreign debt of the USSR. Consequently, Western approaches to a market reform in Russia were reduced to ensuring its early solvency as an international debtor. In the meanwhile, transition to a market economy and democracy in the former Soviet Union cannot be carried by the IMF's standard pattern. Though there is little arguing on the package of essential economic reforms, which includes privatisation, deregulation of prices and foreign trade, financial and monetary recovery and creating a market infrastructure, sharp differences exist regarding the succession of these efforts, their content and pace.

The IMF approved the reform plan hammered out by the Russian government, especially since it leaned heavily on the recommendations of experts from the IMF itself, the OECD, European Community, etc. The IMF's policies in the Third World have long been based on the postulates of structural adaptation and austerity measures, since these efforts perfectly suit debt servicing purposes and produce the expected effect (industrialised nations received over 700 billion dollars in debt servicing from developing countries in 1982-1990). However, these measures have invariably aggravated the economic plight of those debtor countries that followed the IMF's instructions.

The IMF's approach to financial aid has caught severe flak from the recipient countries and even from the West. Thus the speech of a US economist, Susan George, at the 90th anniversary symposium of the Nobel prize-winners held in the late 1991 is highly illustrative in this context. Ms. George said that the elimination of consumer subsidies, even for staple goods, is recommended for the sake of the "true" level of prices, which is the cornerstone of the IMF policy. Consequently, prices go up through the roof at a time when people are in the worst
position to pay. The imports are set free, and all shop shelves are
crammed with goods nobody can buy. Unprotected, the fledgling domestic
industry agonizes. "Mrs. George asserts, proceeding from a solid analysis
of statistics, that the IMF policy in the developing world has failed.
It only brought about impoverishment, economic crunch and anti-IMF
revolts in more than two dozen countries, which cost thousands of
deaths, injuries and imprisonments."

Naturally, the severe criticism of the IMF meets counter-arguments, but
it is obviously well-grounded when it comes to the post-communist
countries struggling their way to a market economy. Thus the outcome of
the IMF's plan for Poland raises much doubts in its applicability. And
this plan is evidently even less applicable to Russia.

The recommendations issued to Russia by the Group of Seven in connection
with the allocation of 24 billion dollars are of a more general nature,
but they also indicate the lack of understanding of what is going on
there and what is needed to achieve improvements. These recommendations
legitimately urge Russia to reduce its budget deficit for the sake of
macroeconomic stabilisation, but appeals to deregulate the economy at a
time of its free fall are far less substantiated. We can fully agree
with the general advice to limit money supply in order to curb the
inflation and stop financial injections in stillborn factories. On the
other hand, no concrete recommendations on encouraging production and
private enterprise in a plummeting economy and hyperinflationary
environment have been issued. Legitimately, we are advised to set a
legal basis for market relations, carry out reforms in agriculture and
power engineering in order to augment production and soak up foreign
investments. It is also proposed that we create a system of attracting
foreign currency essential for paying off our foreign debt and set a
realistic exchange rate for the ruble. Alas, all these reasonable
recommendations produce little effect in today's Russia.

Though the Russian government strives to carry out these recommendations
and achieve financial stabilisation, the situation keeps getting worse.
This fact has caused heated debates about the path to a market economy.
It seems that the active population has realized the need of market and
democratic reforms, but remains split in its attitudes to the
government. The President and the government obviously demonstrate
their determination to pursue market reforms, but all their efforts
undertaken since the early 1992, especially setting the prices free,
have not met popular expectations. The country has plunged into
hyperinflation with a monthly price rise of 20-30 percent and the
corresponding decline of the ruble's exchange rate. Living standards
have dropped by at least 40 percent since January 1992. Ninety percent
of the people have been swept beyond the poverty line, and further
impovery is fraught with a social outburst. Popular sentiments
are gradually shifting to a belief that the nation was used once again
as a guinea pig in an enormous experiment, and that the originally
chosen shock therapy was a mistake. The expected decline of the GNP by
30 percent in 1992 and shrinking investments dash all chances for a
rapid improvement. Under severe pressure, the government was forced to
admit the need of readjusting its policies. Apparently, the IMF will
also realign some of its recommendations.

The transition to a market economy started painfully and chaotically.
Market mechanisms and the market psychology are acquiring uncivilised or
downright distorted forms. However, private companies mushroom in
trade, banking and services; to a lesser extent, they sprout in industry and transport. First todelling steps have been made in the privatisation of small and medium businesses and housing facilities. The privatisation of large factories and some land plots is in the pipeline. A new breed of businessmen is emerging, though many profiteers and swindlers are roaming around too. Private farms are popping up here and there. Serious reductions in defence spending and state subsidies nudge factories to switch over to civilian production and think more about the demand for their products. Certain economic restructuring has been in evidence lately. Businesses with a foreign interest or even owned by foreign companies emerge in Russia, ramming through the remaining bureaucratic and tax barricades blocking the way for foreign investments. Generally speaking, the country is already moving to a market economy, but domestic threats to the still inchoate changes are very serious.

The sources of threat are not only confined to political instability, continuous decline of production and living standards, as well as secessionist trends in various regions, but also the lack of a clear-cut comprehensive strategy of the market transition adapted to the specific Russian economic environment with its huge and ethnically heterogeneous dimensions, the predominance of military producers and monopolies, habitually administrative ways of economic regulation, adverse effects of collectivisation in the farming sector, egalitarian psychology, etc. Therefore, monetarist recipes produce little effect here, and Russia won't be possibly able to leap into the market economy.

The looming economic catastrophe compels authorities to resort to any actions, including direct interference, in order to revive production, check inflation rates and control economic crime. Adjustments in the reform plan will evidently be aimed at turning financial, tax, price and income policies into an engine of the production process, while they previously undermined it seriously. The shock therapy will be supplanted by phasing in market regulators, as market elements, like private ownership and banking system and competition, emerge. State regulation of the economy is likely to increase in the next year or two. During this period, no significant improvements should be expected, but the economic free-fall will be stopped.

It is true that the readjustments intended by the Congress of People's Deputies in the reform plan and Russia's new Prime Minister do not keep in line with the policy of G-7 and international financial organizations. Thus they should either admit that aid was promised for attaining unrealistic goals or reject their programmes, since Russian reforms have taken a different course. Granting credits on the old conditions would only mean squandering resources.

Clearly enough, six billion dollars won't help stabilise the ruble's exchange rate, even if granted to Russia soon. The money would vanish without a trace, if only because Russia doesn't control money emission in other ex-Soviet members of the ruble monetary union. Mechanisms regulating cash flows between the former Soviet republics do not exist. In particular, no payments treaties have been signed between them. Without defining the borders of the ruble union, coordinated terms and procedures of establishing new currency units in the ex-Soviet republics and the coordination of budgetary and credit policy of the members of the ruble union, Russia will hardly be able to stabilise its national
currency on its own. All efforts to stop the hyperinflation, which requires serious readjustments in Russia’s policy, will also be doomed.

All this is to say that though Western leaders and public may be prepared to give broad assistance to reform in the ex-USSR, they have yet failed to identify the right approaches to the terms of aid and its use in the economically unorthodox Russia. This failure threatens to discredit the idea of aid both in the eyes of recipient countries and Western taxpayers.

What should be done to make the Western aid a remedy for a drastic social split ripping the former Soviet Union apart? The devastating energy of this split can not only be placed under control, but may also be transformed into creative energy, if the rest of the world manages to channel it into a desired direction. It is not so much a matter of augmenting resources, especially since the West has apparently exhausted its reserves, but rather a strategy of concerted effort, methods and procedures for absorbing aid.

The disintegration of the Soviet Union and the aggravating economic and social chaos in Russia and other successors to the USSR, make the issue of debt servicing and the return of the 80 plus billion dollars borrowed from the West a genuinely intractable problem. The West could find a better solution, in my view, by allocating additional aid in various forms, including the transfer of know-how, equipment and foodstuffs to help Russia and other republics to avoid the looming catastrophe. However, Western leaders apparently have difficulty in choosing between the cautious and drastic approaches, especially since the latter option would ensure the revision of their former policy and admitting the mistakes the IMF and themselves may have committed.

The economic predicament in the former Soviet republics is explained by the following factors:

• the disintegration of the common economic and legal environment and severed trade links between individual regions and producers; distinct regionalism and separatism inside Russia often incited by central authorities, which may be fraught with economic disaster;

• underdeveloped agriculture and consumer-oriented industries, which keeps consumption rates at a level inadequate to the overall intellectual and economic potential of the country; pains and strains of switching the mammoth military production over to the civilian sector;

• inchoate market infrastructure (banking system, accounting and auditing; trade and distribution structure and a market system of food procurement); incompetence, corruption and lopsided nature of administration in the centre and provinces, together with an outright sabotage of democratic and market reform by old-timers in the government;

• underdeveloped and lopsided export sector mostly confined to fuel and raw materials.

It would seem that international efforts aimed at assisting change in the ex-USSR should be concentrated on these major weaknesses crucial for the market reform and democracy. Of course this is true only if we
presume that the West is sincerely interested in the success of reform—something that we don’t actually doubt. Nonetheless, Western aid is not well-adjusted to attaining the said objectives.

In this context, we can’t possibly say today that the current IMF and G-7 practice of providing aid encourages the newly independent states to develop economic integration vital for their stabilisation. We may, in fact, state the opposite. In the meanwhile, economic contradictions and trade wars between successor states to the USSR can gravely deteriorate the political situation in this region and undermine the entire system of European security.

The current practice of the Group of Seven clashes with the well-remembered European Recovery Programme, or the Marshall Plan, engineered for the post-war Europe. A central objective of that plan was to assist the economic unification of Europe, phasing out protectionism and isolationism in order to facilitate the flow of manpower, goods and capitals across borders. The outcome of that plan surpassed all expectations. Since that time, the European Economic Community has been turning into a kernel structure for the future system of European cooperation. Together with the US and Japan, it acts as a new international economic hub. Can we presume that these spectacular results of the US post-war policy might hold the present-day US Administration back from applying its positive experience once again? Why should the leaders of the seven most developed nations encourage regional integration in Africa and Latin America and overlook the need to attach equal priority to this task in the ex-USSR? I don’t have a ready answer for this one.

Western experts admit that the structure of Western financial aid is less than perfect at its current volume. They believe that the inadequate Western technical assistance in the rational use of allocated resources has become the most crucial problem in this area. With helpless and incompetent bureaucracy and the absence of a comprehensive strategy of reform, Russia cannot usefully absorb Western funds. Billions of dollars are running down through the fingers with little effect for the ailing economy. Experts and officials in Russia, Europe and the US share a common view that technical assistance in bolstering administration, developing market infrastructure and creating requisite legislation is needed by the ex-USSR much more than money. This is a delicate issue, actually. Russia and other ex-Soviet republics are flooded with Western advisers. These people require time and attention, but they often fail to acquire a deep understanding of the situation and thus offer correct solutions. Their advice often clash and sow confusion in the heads of Russia officials. This is why Grigory Yavlinsky in Russia (Grigory Yavlinsky, Alexei Mikhailov. G-7 and the EX-USSR: Progress in Solutions of Progress of the Problem? Nezavisimaya Gazeta, July 8, 1992) and several leading US experts (Joseph Fitchett. Among East’s Needs, a Corps of Experts. International Herald Tribune, June 22, 1992) have come forward with an idea of setting up an elite group of experts, both Russians and Western analysts sent to Russia for a long term, to assist administrations at various levels in governing their localities and fledgling businesses in organizing an efficient production process. Grigory Yavlinsky suggests that they should be independent experts, who can analyse the situation objectively and without pressure from their bosses and issue recommendations on the interaction of Russia and the West in transforming Russian society and economy.
These ideas obviously merit attention, since if the IMF and European Community remain the sole ideologues and coordinators of aid to the ex-Soviet states, bureaucratic mentality will persist and breed new mistakes. Obviously, export-oriented industries, especially in the fuel and energy sector, are the safest target for Western investments. However, for market forces in Russia to become engaged properly and in order to give a nudge to labour productivity and progressive structural shifts, drastic investments in agriculture, food-processing, light industry, defence conversion and infrastructure are badly needed. These investments may augment Russia's foreign exchange revenues indirectly and thus ensure the repayment of credits. Therefore, Western assistance to the said economic sectors requires unorthodox approaches. Credits granted to Russia by the international community and the World Bank in particular may only be of limited significance. A comprehensive programme, like the Marshall Plan is needed for these industries, as well as expanding and modernizing Russian export industries working for the ex-COMECON market. The Russian foreign debt has been piling up to an extent that is nearly breaking the spine of its economy. Consequently, it may be more preferable to the West, in a long-term perspective, to grant some equipment, materials and technical assistance free of charge or for an equivalent in rubles depositing on special accounts in Russia for future disposal of the donor countries. Of course, these assets should be marked for concrete projects and their use supervised by international organizations or an ad hoc international consultative, supervisory or coordination agency. Such plan may be designed to boost regional trade and economic cooperation both inside the former Soviet Union and in the Eastern or South-East Europe.

Russia will probably become more reluctant in drawing credits from the West due to its already enormous debt, heavy debt servicing burden and worse position to afford them (because of the artificially low ruble's exchange rate, and very high ruble's value of imported goods, among other things). We may expect Russia to prefer direct investments from abroad and grant concessions for the exploitation of resources or development of industrial and transport projects, rather than absorb new credits. Western governments could bolster this investment process by creating new and upgrading the already existing mechanisms of issuing guarantees for direct investments and involving Russian authorities in giving such guarantees.

Credits designed to settle the payments deficit rank second in their importance in Western aid to Russia and other ex-Soviet republics. Western governments have to issue such credits, though it is not obviously the best way of using loans. It would be far more expedient to facilitate Russian exports to the West by removing a whole barricade of restrictions, which block the way for the transfer of technologies and dual application materials. The West could also give a fillip to market reform in Russia by expanding its technical assistance, which so far amounts to a paltry two percent of the entire aid. This assistance should not only be confined to training managers, but administrative officials for central and local authorities, banking clerks and auditors. Consulting companies may be very important for streamlining production, reducing costs and optimizing transport operations. Technical assistance is needed for creating a modern banking system, upgrading the system of accounting, taxation, retail trade, local government, etc.
People in the former Soviet Union are grateful for the Western humanitarian assistance, which relieves the hardships of millions of people bashed by hyperinflation. But aid distribution should be perfected, and squandering of incoming resources reduced to the minimum. In the coming year or two, aid will remain a serious help for the ex-USSR's efforts to control diseases and undernourishment among large social groups.

Obviously, Western aid, irrespective of its form, cannot supplant Russia's own efforts to stabilize the economy and carry out market reforms. This aid, however, may facilitate these efforts and make them more effective. In this context, certain conditions may and even should be linked to the aid package, if they do not come into conflict with democratic change and economic progress.
LITERATURE


2. G. Yavlinsky and A. Mikhailov (EPICENTER). "G7 and the Region of the Former USSR: Progress in Solutions or Progress of the Problem?" Nezavisimaya gazeta, 8.07.92.


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1Source: Kuranty, October 23, 1992
Discussant comments by Charles Wolf on Dr. Bogomolov’s paper:

1. Paper severely critical of IMF/World Bank, European Community, U.S. advice, pressures, policies in general (toward LDCs), and in particular (toward Russia).
   - Their focus on monetary, macroeconomic stabilization and austerity measures has “invariably aggravated plight of those debtor countries” (5).
   - OB attributes motivation to enhancing prospects that creditors (who are providing this advice) will collect debt service payments from debtors.

2. Instead, paper urges Western aid should focus on technical assistance (specific fields), food, and equipment on grant basis, citing precedent of Marshall Plan (9).
   - Also, encouragement of FDI (concessions, guarantees) (10).
   - “Elite group of experts” (Russian and Western), long-term commitment (9).

3. Some disagreement with paper’s diagnosis, much agreement with prescriptions.
   A. Diagnosis: reforming command economies toward market basis is a systems problem
      - Several intersecting, mutually supporting elements: fiscal, monetary, privatization and demonopolization, price and wage decontrol, currency convertibility, social safety net.
      - In principle, elements should be simultaneous—why?
      - If simultaneity precluded for political, social, institutional reasons, then problem is to design appropriate combination and sequence of component elements.
      - Lack of good theory for solving this “second-best” problem.
      - Shortcoming of IMF/World Bank, etc. programs isn’t the inappropriateness or unimportance of macroeconomic stabilization, but insufficiency of emphasis on other interdependent reform elements.

   B. Prescriptions
      - Emphasis on TA in specific fields, food aid (e.g., Operation Provide Hope), FDI (and policies to accelerate it) sound and essential.
      - Precedent of Marshall Plan, large-scale grant aid dubious for reasons relating both to donors and recipients.
      - Propose easing of severe external debt problem ($70B, $9B/yr. servicing) through debt-equity swaps:
- Latin America precedent and results

- Use of 35-40 percent shares retained by government in present privatization plans can provide equities to swap for existing debt

- Difficulties, yet potential advantages to creditors

- Also, advantages to Russia and other republics through exchange of debts carrying fixed obligations for holdings whose servicing depends on assets' performance

- Potential stimulus to privatization and to additional FDI as well as debt relief
The New Strategic Context for Military Planning

by

Fred Charles Iklé

To serve the interest of each nation and its citizens, what is the right size of the military forces for Russia, for Ukraine, and for other Soviet republics? How large should the military forces be for the United States—the former principal adversary of the Soviet Union? Both in Washington and in Moscow, the main purpose and focus of military planning for some forty years has been the confrontation between American and Soviet forces, especially nuclear forces. This confrontation has dominated strategy, force planning, and the choice of armaments on both sides. Such a rationale was appropriate for the Cold War; but what is the appropriate rationale for planning military forces today?

We need to keep in mind that the motives for building and maintaining military forces vary a great deal among nations and among rulers. Five broad motivations are worth distinguishing:

1. To launch wars of conquest and territorial expansion. Saddam Hussein’s build-up of Iraq’s military might provides a recent example, but modern and ancient history is replete with other examples.

2. To fight a war brought about by enemy aggression. The enormous military build-up in the United States in 1942-44 was so motivated.

3. To deter, or to be prepared for, an attack by a feared adversary. The build-up of NATO forces during the Cold War was seen by all NATO governments in this light. And today, the Republic of South Korea maintains strong military forces mainly against possible attack from North Korea.

4. For “internal” reasons:

   • to maintain national cohesion and perhaps to educate generations of young men and convey to them a sense of discipline (Turkey’s and India’s relatively large armed forces, in part, serve this purpose);

   • to hold a nation or an empire together (this was the main rationale for the British navy in the latter part of the 19th century and appears to be a partial rationale for China’s forces today);

   • to control and oppress political opponents and maintain a military dictatorship (the military in Burma clearly exemplify this role; but in many other countries the motive of exercising political control provides at least a large part of the explanation for the size of military forces).

5. For reasons of inertia or to maintain some long-term insurance against newly emerging external threats; specifically to preserve the military “tradition” of a country, to avoid unemployment among
the military and protect trained cadres, and to maintain a production capability in the arms industry. Such reasons play a large role today both in the United States and Russia (the US Congress, in voting for certain items in the defense budget, has explicitly referred to such reasons). In several Latin American countries, the motivation of maintaining a military tradition is the key reason for the size of the military establishment (today's Argentina comes to mind).

In most countries and in most periods, the size of the military establishment is shaped by a combination of several of the above factors. Yet, since the end of World War II, the justification for military expenditures in public rhetoric and public parliamentary debates of practically all nations of the world has invariably been the need, actual or alleged, of "deterring" aggression, or of coping with aggression.

In fact, during the last two decades of the Cold War, the phrase "mutual deterrence" has become an excessively used cliche to characterize the strategic relationship between the United States and the Soviet Union, or between NATO and the Warsaw Pact. In reality, the size of forces on both sides and their relationship was shaped by factors that were far more complex than this cliche suggests, and also more variable over time. And the economic and psychological efforts required to build and maintain these forces had to come at the expense of other endeavors that the nations, or their citizens, could have engaged in; although the magnitude of this subtraction from national wealth and income is not easily established and agreed on.

In the United States, defense spending has been blamed for contributing significantly to the deficit. Some American scholars have also argued that research and development sponsored by the Defense Department has detracted from R&D in the consumer industry and from broad-gauged technological development and thus has contributed to the US industrial decline relative to Japan or Western Europe. This case is far from clear.

A clearer indictment can be made, however, regarding the damage done to the Soviet economy and consumer industries by the Soviet military establishment. While US defense spending, however measured, has stayed well below 10 percent of GNP ever since the 1950s, the Soviet military establishment has, in the same period, absorbed a quarter or more of the Soviet GNP.1 Except for North Korea and Israel, hardly any country has maintained so high a level of military expenditures for so long. Israel's economy survived because it has benefitted from a continuing, large inflow of US loans and grants. North Korea used to receive Soviet aid but its economy is now clearly in ruins.2

It is probably impossible to rank in importance all the factors that contributed to the collapse of the Soviet Union—the people losing faith in Communist ideology, the incompatibility of Communist centralism with economic reform and innovation, the tensions among ethnic groups, the unfavorable comparison with and intellectual isolation from the West, and so forth. But a factor that must clearly rank high in this list is the inordinately large proportion of national talent, income, and wealth that has been swallowed up by the Soviet military establishment. One might say, the Gods have punished the guilty. The constant quest for greater strength, pursued for decades by militaristic
circles in Moscow, is one of the principal reasons for the destruction of what these militarists cherished so much--the power and reach of the Soviet empire.

Today, the defense planners in Washington, Moscow, Kiev, etc. face a radically changed strategic context in light of the dissolution of the Warsaw Pact, the break-up of the Soviet Union, and the process of democratization in Russia. Many of the military leaders and planners, however, find it difficult to adjust, for intellectual, institutional, and material reasons.

The intellectual reasons impeding adjustment are Cold War concepts and old habits of mind that continue to influence military planners today. "Parity" between "East" and "West," or between the United States and Russia, is one such concept that has become obsolete with the end of the East-West, bipolar confrontation. Where would China fit into such bipolar parity; where would Ukraine fit in? Yet, the idea of parity keeps intruding into arms control policy and strategic planning. Another Cold War concept that badly needs to be replaced is "Mutual Deterrance", especially if focussed on a bipolar nuclear relationship. Elaborate theories of Deterrance were developed during the height of the Cold War, especially in the United States. At that time, these many-colored concepts of Deterrance were regarded as a benevolent. The good people were for Deterrance because Deterrance was meant to keep the peace, the bad people (as seen from the United States) were against it. In the 1950s and 1960s, Soviet officials sharply criticized the American theories of Deterrance. Paradoxically, as read today, some of this old Soviet criticism concerning the confrontational nature and intrinsic danger of nuclear Deterrance appears to have a great deal of merit, from the point of view of Washington as well as Moscow. (The Soviet criticism of some thirty years ago, of course, reflected a rejection of the Western policy of containment rather than a genuine concern about the East-West confrontation.)

The institutional reasons are the bureaucratic structures that the Soviet Union and the United States built up during the Cold War in their military establishments and that still persist--and continue to fight for their bureaucratic survival. For example, both the nuclear weapons establishments in the United States (divided between the Department of Energy and the Department of Defense) and in Russia (led by Victor Mikhailov) vigorously seek to prevent an end to nuclear testing. Continued weapons testing is seen by both these establishments as necessary to maintain their scientific and technological competence and to play a major role in national security affairs.

The material reasons that impede the adjustment of the military establishments to the post-Cold War era are the enormous weapons arsenals and the collections of electronic installations, naval ports, air bases, military laboratories, all designed for the old US-Soviet (or NATO-Warsaw Pact) confrontation. This detritus looks into concrete, literally, much of the adversarial confrontation of the Cold War. The impact of this Cold War inheritance, cast into cement and steel, is particularly serious for the nuclear relationship between the United States and Russia. It gives rise to a tragic paradox (which--somewhat immodestly--I have named the "Iklé paradox").
The American Russian nuclear paradox:

Our two nations continue to maintain large nuclear forces that had been designed against each other, because we both fear that a new, mortal enmity might arise between us; yet, our two nations fear such a new enmity because we both maintain these large nuclear forces designed against each other.

President Bush's nuclear initiative of September 1991 led to a significant reduction in the nuclear confrontation inherited from the Cold War, by bringing about the elimination or withdrawal of shorter-range land- and sea-based nuclear systems, the so-called "tactical" nuclear weapons. Yet, even with this elimination of "tactical" nuclear weapons, and even with the substantial reductions of strategic arms in accordance with START and the Bush-Yeltsin follow-on agreement, both the United States and Russia will retain thousands of nuclear missile warheads and bombs designed to destroy the other side—and capable, indeed, of totally destroying the other side.

In addition to these legacies from the Cold War, we have to be mindful of the broader dynamic in the military relationship between the United States, Russia, other former Soviet republics, and various military powers in other regions. Unfortunately, several forces might push toward a new military enmity. Of particular concern here, of course, is the American-Russian relationship.

One way in which the United States and Russia might be pushed into a new enmity is through the growing military strength of "third countries"; that is to say, emerging powers that will be seen as potential adversaries, either by Washington or by Moscow (or possibly by both). These potential adversaries will provide motivation and—importantly—a political rationale for maintaining or renewing military capabilities that could cause new security tensions and rekindle military competition between the United States and Russia.

The United States has strategic commitments to several nations that are located much closer to Russia than to North America; in particular South Korea and Israel. In addition, the United States, together with its traditional allies, has a strong economic interests in the Persian Gulf region. As a result, it is to be expected that the US Defense Department, for years to come, will seek to maintain strong military capabilities for possible intervention in the Middle East (or in Korea). These efforts might be misinterpreted in Moscow as posing a danger to Russia, a misinterpretation that those seeking to raise Russia's defense budget would find to their advantage.

The same shoe fits on the other foot. Later in this decade, Russia might again increase certain of its military forces. The motivating strategic rationale, however, might not be the same as during the Cold War. Instead it might be, for example, to preserve a clear military advantage over Ukraine, to protect Russia's territory against possible Chinese aggression, or to ward off some new nuclear threat from Iraq or Iran. Yet, Russia's new military preparations could well be construed by US military planners as indicating an emerging expansionist policy of Russia that poses a threat to US allies or to US interests, particularly in the Middle East.
The devilish dynamic that might drive Russia and the United States into a new military confrontation includes other potential conflicts with "third" countries. Particularly fraught with great danger are Russia's relations with other republics of the former Soviet Union. In Estonia, Latvia, Moldavia, Northern Kazakhstan, the Crimea and many other areas outside Russia's present borders, sizeable ethnically Russian populations are "left stranded" from the collapse of the Soviet Union. In several of these areas, these Russians have become increasingly dissatisfied with their loss of status, their new insecurity, and in some cases (such as Estonia) outright discrimination. Nationalists within Russia have hinted at, or even called for, military intervention for the ostensible reason of "protecting" fellow Russians, but perhaps with the afterthought of restoring part of Russia's imperial realm. Should such intervention occur, the political conditions for the new American-Russian partnership that Presidents Bush and Yeltsin agreed on would be totally shattered. In Western Europe, North America, and Japan, a climate of immense distrust and hostility toward Russia would instantly emerge.

Quite apart from the Russian diaspora as a source of conflict, purely military factors might also become a source of conflict between Russia and some of the other former Soviet republics. In particular, relations with two of these republics—Ukraine and Kazakhstan—are burdened by the nuclear dimension. (The fourth "nuclear republic", Byelarus, even though still the loci of nuclear weapons, is unlikely to come into conflict with Moscow.) It is to be hoped that the Ukraine-Russian and the Kazakh-Russian nuclear relationship will rapidly diminish in importance and fade away by the end of the century, in the context of peaceful political relations and further progress in implementing arms reductions agreed to with the United States.

Yet, it is also possible that as a result of political tensions, say between Kiev and Moscow, the relatively smaller nuclear arsenals left in Ukraine and Kazakhstan begin to acquire the role of a "minimum deterrent" or "ultimate deterrent" against Russia. If so, this would spoil Moscow's willingness to proceed with further nuclear reductions and controls in agreement with the United States. In short, the nuclear detritus from the Cold War would then be projected well into the twenty-first century—as a mortal, persistent, global threat.

There are further forces in the devilish dynamic that could recreate a conscious, direct, and hostile competition between the military establishments of the United States and Russia and thus drive the military's share of the national economy upward again. These forces are: deliberate mischief making by subordinates, human error and technical accidents, and the distorting effect of secrecy.

For example, President Yeltsin appears to have had difficulty in assuring that the biological weapons specialists within the Russian military establishment atop violating the Biological Weapons Convention which Moscow had ratified decades ago. Irresponsible mischief makers among Russia's military, who are hell-bent on producing biological weapons, have continued to do so, at least until March 1992 (according to the admission made by the Russian Foreign Ministry in September 1992). The highly complex provisions of the START treaty and its follow-on START II agreement provide ample opportunity for violations that could be carried out by technical personnel at lower levels, either deliberately or just carelessly. Naturally, when the other side
discovers these violations this will create distrust and might provoke countermeasures.

Other kinds of mishaps in the new American Russian partnership have occurred already. When American newspapers published excerpts from a preliminary draft of a Pentagon report on future US military strategy, some of the overly pugnacious treatment of hypothetical contingencies involving the Baltic republics were read in Moscow as if they meant that the US Secretary of Defense had approved plans for invading the Baltic region. in fact, the draft from which these examples had been published lacked higher level approval and besides, the discussion of the contingencies was purely hypothetical. Likewise, the collision of a US submarine with a Russian submarine near the Russian coastline in the Barent sea, early in 1992, caused a great deal of resentment and hostility among Russia's military. These incidents and similar ones illustrate how easy it is for accidents, mischief, and bad judgement to combine in creating new sources of tension between the former Cold War adversaries.

The cover of secrecy, of course, provides a fertile and sheltered breeding ground for mistakes and mischief. The Soviet-Communist obsession with secrecy has by no means been fully overcome in Russia's military establishment today. But in the United States there are also still many reports and projects classified as secret, some undoubtedly unnecessarily so. In these darkened interstices, mistakes are less likely to be noticed, parliamentary oversight is more difficult, and other nations--especially former adversaries--will find reasons to discern new threats.

Enormous security benefits as well as economic benefits could flow from the strategic partnership between the United States and Russia that Presidents Bush and Yeltsin endorsed at their summit meeting on June 17, 1992. In particular, the more solidly such a partnership can be established, the less will Russia's neighbors need to be concerned about a threat from Russia's military. Conversely, the more the United States and Russia slide into a new enmity, the greater the desire of the Russian military to reestablish control over such republics as Ukraine, Kazakhstan, Byelorussia, and the Baltics. Hence, Ukraine and the Baltic republics will be the more secure, the closer and the more solid the American-Russian strategic partnership; and for the same basic reasons, these republics will be the more endangered the greater the military tension between Moscow and Washington.

Moreover, the fate of the American-Russian security partnership will be the single-most important determinant for the role of the military sectors in the economies of the former Soviet republics (and of the United States as well). If the military threat that Moscow and Washington perceive from each other can fade away, and if Kiev, Alma Ata, etc. can feel secure as neighbors of Russia, external security needs will cease to demand--or justify--the present levels of military budgets.

But how can the American-Russian strategic partnership be more securely anchored, to achieve the full potential benefit for the economies of all the nations affected by it? How can this partnership be best protected from the "devilish dynamic" described above that could push the former two Cold War adversaries into a new enmity?
Shortly after the failed Moscow coup in 1991, I began to address this question and concluded the long-term solution should be an American-Russian Defense Community. The briefest way to describe this concept is to point to the analogy of the Coal and Steel Community that was launched after World War II between France and Germany (and other Western European nations), mainly for the purpose of overcoming the age-old Franco-German enmity. The Coal and Steel Community was strongly supported at that time by the United States and led to one of the most constructive and creative political developments in the twentieth century.

In contrast to the Coal and Steel Community, however, the American-Russian partnership cannot be based on economic cooperation because the two sides are too unequal in the economic sphere. The Russian-US economic relationship will, for a long time to come, be confined to relatively small flows of two-way trade plus sharply limited one-way flows of US grants, credits, and technical assistance. In the military sphere, by contrast, both partners can offer each other an enormous enhancement in security through effective cooperation.

The proposal for an American-Russian Defense Community has been well received by policy-planners in Washington and by defense experts and military leaders in Moscow. The Yeltsin-Bush summit in 1992 strengthened the improvement in the Washington-Moscow relationship that had begun in 1989 and added specific cooperative programs to it.

Specifically, for the military relationship the summit agreement states that the parties “intend to accelerate defense cooperation between their military establishments.” But the preparations for the US elections and certain weaknesses of the Yeltsin government have slowed down the follow-up on these good intentions. It remains to be seen what the US government will seek to accomplish in 1993.

A Defense Community would be a more structured and more purposeful enterprise than the programs agreed to so far for the American-Russian “partnership.” First, it would provide for a calendar of specific accomplishments, giving the two governments a sense of direction and deadlines for getting things done. Second, by far the most important mission of the Defense Community would be to overcome the Cold War legacy of nuclear confrontation. The nuclear agreements reached so far -- even after they will be fully implemented by the year 2000 or 2003 -- would leave a nuclear posture on both sides always poised for the total destruction of the other “partner;” a fact that introduces a severe pathology into this partnership. It is absolutely essential that these hair-triggered postures be abolished as fast as possible, by mutual de-activation of the missile forces.

Third, the implementation of the Defense Community must also bring about a radical reduction in secrecy between the two military establishments. The reduction in secrecy could be limited to the bilateral military relationship or, preferably, could also include certain allies and friends of the United States and Russia that do not pose a proliferation risk. But in any event, with the present level of secrecy the Community could not accomplish its full potential. Fourth, the Defense Community should gain strength and substance through serious planning and training for joint military operations in support of UN peace-keeping
and peace-making missions. Such cooperation, in turn, would greatly enhance the UN peace-keeping role.

Fifth, the Defense Community must become the leading bilateral structure capable of coping with the expanding and emerging threats from a variety of weapons of mass destruction (particularly biological and nuclear) that are inevitably becoming available to more and more countries and may also be acquired by non-governmental terrorist or extortionist organizations. Russia and the United States together could--and should--play a leading role in developing protective systems and procedures against this twenty-first century threat. The two countries have the greatest technical and scientific capability in this domain, plus a large part of the real estate for possible global warning or defensive systems. Moreover, they have built up over the last forty years--and are now saddled with--an immense accumulation of the extraordinarily toxic plutonium and the dangerous highly-enriched uranium. Some discussions have already begun between US and Russian scientists and officials on possible joint projects for transforming this Cold War legacy into something less dangerous. On the highly enriched uranium, in fact, a useful agreement has been reached in the fall of 1992.

One more aspect of the American-Russian military relationship needs to be addressed--the "super power" ambition. This ambition could block the road toward a fully effective Defense Community and could lead to a growing role of the military sectors in the economies of Russia and other former Soviet republics. A new expansion in the role of Russia's military would impose a heavier burden on the nation's economy and slow down the badly needed improvement of the civilian sector. The idea of "super-power" status evokes certain self-images, international goals, and ambitions among the body politic both in American and in Russia. One could point out that if the United states and Russia reverted to confronting each other militarily, their military superiority over other nations would largely be canceled out. Moreover, in a world where Russia's and America's military strength were focussed on their renewed, bilateral confrontation, the spread of weapons of mass destruction could bestow immense power on some irresponsible nations. By contrast, through an effective security partnership, the global role of each of the former Cold War superpowers would be enhanced. It is also important to keep in mind that early in the next century the world population will grow to at least ten times the size of the combined populations of Russia and the United States.

1The burden that the Soviet military establishment imposed on the economy has been addressed in previous conferences of this RAND-Hoover series. The participants in these conferences as well as other experts in the West and in Russia have estimated that the Soviet military establishment absorbed between 20 and 30 percent of GNP. (Some recent Russian estimates are even higher.) See Henry S. Rowen and Charles Wolf, Jr., The Impoverished Superpower (ICS Press, 1988), p. 153.

2Iraq under Saddam Hussein might have spent equally high levels of GNP on the military, but until the invasion of Kuwait its economy received a large inflow of oil revenue. During World War II, around 1944, U.S. spending on military forces peaked to 50 percent of GNP. After the war, U.S. defense spending was abruptly lowered to 4 percent of GNP; and the U.S. economy resumed its expansion and growth in industrial productivity with great vigor.

3This idea was developed in my article "Comrades in Arms," National Interest, winter 1991/92, pp 22-32.
4A Russian translation of my National Interest article appeared in Novoe Vremya, No. 7 and No. 8, 1992.
SUMMARY OF CONFERENCE DISCUSSION

by

Charles King Mallory and Christina Smith

A RAND-Hoover symposium on "The Role of the Military Sectors in the Economies of the Republics" took place under the joint sponsorship of the Under Secretary of Defense for Policy, RAND, and The Hoover Institution on November 16-17, 1992, at RAND's Washington Office. A number of prominent government and academic specialists on defense policy, economic policy, and economic conversion were invited. They included:

Anders Aslund
Stockholm Institute of Soviet and East European Economics

Viktor I. Antonov
Minister of Engineering, Military Complex and Conversion of Ukraine

Alexei Arbatsky
IMEEO

Igor Birman
Silver Spring, MD

Oleg Bodruck
Defense Minister Adviser, Defense Department of Ukraine

Oleg T. Bogomolov
Institute of International Economic and Political Studies, Russian Academy of Sciences

Valery A. Dement’ev
Ministry of Defense, Moscow

Eric S. Edelman
Assistant Deputy Under Secretary of Defense (Russian, Eurasian and East European Affairs), USDIP

David Epstein
Deputy Director, Net Assessment

Vladimir Fal’tsman
Institute of Economics, Russian Academy of Sciences

Rose Gottemoeller
International Policy Department, RAND

Gregory Grossman
Department of Economics, University of California, Berkeley

Donald P. Henry
International Policy Department, RAND

Alexander Honcharenko
Head, National and International Security Department, Institute of World Economy and International Relations, Academy of Sciences of Ukraine

Fred Iklé
Center for Strategic and International Studies

Grigorii I. Khanin
Institute of Economics, Moscow

Volodymyr Lanovoy
Former Vice Prime Minister and Minister of the Economy, Ukraine

Claire Mitchell Levy
International Policy Department, RAND

I. Lewis Libby
Principal Deputy Under Secretary of Defense (Strategy and Resources), USDIP

Andrew Marshall
Director, Net Assessment

Philip Merrill
The Washingtonian Magazine

Larissa Piyasheva
Dean, Moscow School of Economics and Law

Yuri Prokofiev
Chief, Military Education Department, Ministry of Defense of Ukraine

Victor N. Rassadin
Russian Academy of Sciences

Michael Rich
Vice President, National Security Research Division, and Director, National Defense Research Institute, RAND

Henry S. Rowen
Hoover Institution
Larry Seaquist, USN
Assistant to the Principal Deputy Under
Secretary of Defense (Strategy and
Resources), USDOD

Vladimir Selezev
Ministry of Defense, Moscow

James E. Steiner
Chief, Defense Programs Division, Central
Intelligence Agency

John E. Tedstrom
International Policy Department, RAND

Vladimir Treml
Department of Economics, Duke University

Charles Wolf, Jr.
Dean, RAND Graduate School, and Director,
International Economic Policy Program, RAND

Evgeny G. Yasin
Director, Russian League of the Industrialists
and Entrepreneurs, Expert Institute

Yury Yaremko
Director, Institute of Economic Forecasting,
Russian Academy of Sciences

Jeanne Zlotnick
Hoover Institution

The conference was divided into four working sessions. Their purpose
was, first, to set the scene in which the current economic reforms and
conversion process are taking place and to examine the economic reforms
and defense conversion in more detail. The conference continued with a
discussion of the reforms and the conversion process. Participants
assessed the reform measures in light of current defense concepts,
planning, and budgeting in Russia and Ukraine, and ultimately turned to
examine the role of foreign assistance to the reform process.

Session I: The Setting

Statistics

A number of participants broadly agreed that most of Western
Sovietologists had been mistaken in believing that Soviet statistical
data were reliable. Whereas they previously thought that information
was conscientiously gathered, that data were not falsified, and that
uncomplimentary data were merely suppressed, Western experts--they
claimed--are now learning that this was not the case. Instances of
falsification at both the enterprise and ministry levels have come to
light, as have cases in which it is believed the USSR's top leadership
was misled by poor statistics. A couple of participants noted that this
comes as little surprise to those who never accepted the veracity of
Soviet statistics in the first place. The conference criticized the
quality of statistics currently available in the former USSR; they noted
poor quality, huge gaps, poor methodology, and inadequately prepared and
recalcitrant republican statistical agencies. In addition, they
criticized the IMF for not having done enough to improve the situation.
Others noted that the IMF was one of the few agencies pushing for any
improvement in this sphere.

Participants not only called for better statistics, but also urged
better statistical methodologies and analyses; the accomplishments of
the Baltic countries were mentioned in this regard. The discussion next
turned to an assessment of the commercialization of statistics currently
underway in Russia. One speaker saw this as a positive phenomenon
because it provides resources to statisticians and introduces
competition and market relations into this sphere of activity. Other
speakers found it unacceptable that the state committee for statistics,
Goskomstat, should charge for its wares. They enumerated several
deleterious effects of commercialization, including the drain of skilled statisticians taking place out of the public sector, the existence of certain statistics such as national income accounts that only governments could compile, and the lack of documentation by private agencies of their statistical methodology. These speakers saw commercially gathered statistics as being particularly susceptible to falsification aimed at defrauding the government and noted that there has been a marked change in the incentives to falsify such data.

In addition to claiming that commercial organizations falsified statistics to mislead the government, one participant claimed that Goskomstat might well be producing statistics to discredit the sitting Russian government and curry favor with the Supreme Soviet. Another speaker claimed exactly the opposite to be the case. Yet another speaker pointed out that, whether they have been falsified or not, one should not overestimate the influence of statistics or assume that outcomes would have been different had better statistics been available. There was remarkable consensus that the influence of statistics is overestimated. The participants agreed that politicians in general don't care about facts and figures and do not use them to shape policy.

Disagreement continued throughout the conference on the accuracy and availability of the defense-spending data now available in the former Soviet Union. A number of speakers expressed frustration that credible, detailed figures on defense spending in the former USSR, such as its share of GNP, are still unavailable. Official Russian representatives who claimed personal responsibility for such data stated that a full set of statistics on the defense budget has been available since 1989. This riposte was not accepted. Discussants claimed that much data has still not been declassified and that the available data is unreliable because it is based on a questionable set of prices and foreign currency exchange rates, and they lamented that it gives a poor indication of how funds are spent. The poor quality of data was said to plague analysis of economic reform in general and of defense conversion in particular. In fact, this very point was highlighted at two subsequent stages in the conference when participants found it difficult to agree both on the share of Russian defense spending taken up by strategic weapons systems and on the cost of such systems relative to conventional weapons systems. Participants agreed that it was difficult to know which statistics to believe.

State of the Economy

Although the exact level of output was debated, discussants generally agreed that output was down in both Ukraine and Russia, that their fiscal and monetary systems are under severe pressure, and that hyperinflation is underway in Russia and other states. High levels of inter-enterprise debt have reduced Russian tax collection and have exacerbated a budget deficit that already represents circa 20 percent of GNP. Inevitably, Russian government spending will have to come down further, and these cuts will primarily come in the military sphere, further accelerating the decline in overall production. With 5-6 banks providing 90 percent of the credit in the economy, the Russian banking system is weak. No control is exercised over banks, and a lack of confidence in banks has led to a fall in investment. Citizens remain unattracted by relatively high nominal interest rates and prefer to hold
cash as real interest rates are negative. Although enterprises are beginning to be attracted by high nominal interest rates, almost all participants agreed that control over the monetary system and restoration of positive real interest rates should be matters of priority.

One speaker painted a particularly gloomy picture of the prospects for the economy. According to this speaker, Gorbachev, on the advice of academician Aganbegian, gave top priority to the funding of the development of the military sector. Yeltsin, having raised taxes from the people in order to balance the government budget, was said to be using these funds now to maintain the military industrial complex. By this move Yeltsin was said to be according the same priority to the military as Gorbachev had done. For this reason, the scholar alleged, there is no practical difference between the policies of Gorbachev and Yeltsin towards the military. The speaker bemoaned the fact that privatization, price liberalization, and land reform had been partial rather than total. The speaker saw no prospect of inflation declining, predicted the appearance of an even stronger black market, and forecast that there would be no exit from the economic crisis by spring. In closing, this participant predicted food shortages, an increasing loss of confidence in the government, and an eventual return to basic socialist priorities in directing the economy.

Session II: Economic Reform and Military Conversion

Economic Reforms

While many participants agreed that the economy would not stabilize before spring, numbers of speakers disagreed with the gloomy prognostications offered. Speakers noted that some progress has been made, particularly in the sphere of private enterprise, and questioned the equation of Yeltsin's and Gorbachev's policies toward the military sector of the economy. A long and lively debate followed on the subject of past mistakes and the proper sequencing of the reform process in general. A somewhat shorter series of exchanges on the military conversion process, in particular, also ensued.

Participants found it difficult to agree on an assessment of the recent shock therapy administered to the Russian economy. Some speakers stated that shock therapy was a bad idea. The Gaidar plan did not account for the special economic and social conditions prevailing in Russia (a point to which certain Russian speakers repeatedly returned). As prices have been liberalized without strict monetary control being imposed, the partial implementation of Sachs's program has caused cost-push inflation. Another discussant said that the therapy can be positively evaluated in as much as it has changed the people's expectations of continuing subventions from the government. Besides agreeing that somewhat onerous taxes had been introduced too hastily and that control had to be asserted over the monetary system now, the speakers also agreed that the government should have been more sensitive to the problems that monopolies pose in the liberalization process.

Opinions diverged markedly over the question of the proper sequencing of economic reforms in Russia. Certain discussants repeatedly called for privatization as a top economic reform priority; others, however, were
loathe to accept a hasty privatization, pointing to the colossal changes involved and asserting that Eastern European experience has shown privatization to be impossible without prior price liberalization.

Participants speaking in favor of the primacy of privatization asked Western experts not to lose sight of the fact that Russia is far from a market economy; according to these speakers, price "liberalization" is a misnomer when it takes place under conditions of prevailing state monopoly. Under such an economic regime, "liberalized" prices fail to send the proper supply and demand signals and cannot therefore be construed as essential prerequisites for a subsequent privatization process.

A Western specialist noted that, failing a complete reform in all areas of the economy, economic theory has little to say about the proper sequencing of partial reforms undertaken as part of a gradual transition to a market economy. Other speakers agreed and underlined the fact that Russia needs to undertake a speedy reform of the entire economy and argued that delay would only allow time for the construction of arguments to the effect that normal economic rules do not apply to "special cases" such as Russia. These speakers saw the construction of such arguments as the first step on the path back toward socialist priorities that was predicted earlier in the symposium.

These disagreements on sequencing having been voiced, some Western and Eastern representatives were able to agree that the appropriate social basis for private ownership was only just beginning to come into place in Russia and Ukraine. In recognition of this fact and of the limited indigenous supply of capable managers, a Ukrainian representative distinguished four differing approaches to privatization being considered in Kiev: leasing of enterprises to workers' collectives, management by farmers and those willing to build infrastructure in the agricultural sector, outright sale of smaller enterprises to workers, and searches for Western financial houses willing to invest and capable of providing good managers for those larger enterprises that could not be allowed to run the risk of failure through a hasty sale to the public. The Ukrainian side also criticized the method of privatization undertaken in Russia: the issue of share vouchers to the population. The population will not want to hold these vouchers and will sell them on the secondary market. Effectively, an increase in money supply will take place and inflation will continue to rise as a result.

After discussing the components required for privatization of the economy, discussants turned to other missing ingredients of a successful economic reform. A Western specialist pointed out that the reform process has been hindered by the lack of a clearly defined allocation of power between central and local government. The speaker urged the Russian central government to cede more economic control to regional authorities and to limit itself to macro management of the economy. The central government should set ground rules and let local government and the market take care of questions such as how best to integrate defense plants back into the civilian economy.
Military Conversion

Perhaps in justification of the greater time allotted to discussion of the process of general economic reform in Russia, numerous speakers noted that it is impossible to discuss military conversion in isolation from this subject. This was said to be particularly true given the highly militarized nature of the Soviet economy and the high level of integration that exists between its military and civilian sectors.

The discussion of defense conversion revolved around arguments about the precise size of the cutbacks in military production that have taken place to date and about the desirability, possibility, and consequences of deeper cuts in light of the impact of those cuts in defense spending that have already occurred.

A couple of participants asserted that, in contrast to the planned reductions in weapons stockpiles, military production has not been substantially reduced in the former USSR. Instead of concentrating on the destruction of existing weaponry (stipulated by the Conventional Forces in Europe treaty), authorities should concentrate on the continuing production of new equipment where further cuts were said to be possible and necessary. The Russian experts countered that the modernization of strategic nuclear weapons systems had been cut back by fully two-thirds, while spending on conventional weapons systems had been cut back by 60 percent. The cuts in spending were said to go even deeper in certain areas of their country. The experts pointed out that there would always have to be some base level of military production and argued that the economy could not shoulder the burden of deeper cuts in defense spending. This position was argued.

Currently, conversion is taking place through idling of plants, privatization, and by means of a reallocation of resources away from military production and towards civilian production within individual defense enterprises, the Russian side explained. Faster and deeper cuts in defense orders would disrupt this transition process and could unintentionally lead to a fall in civilian output.

At this point, one of the Russian participants pointed out to his colleagues that the "reallocation of resources to civilian production" simply represented a reapportionment of the costs of idled defense-side labor onto civilian production. Thanks to monopoly power, enterprises can pass these increased costs on to the consumer through higher prices, and thus they contribute to the inflationary process in the economy. At the same time, the rise in prices depresses consumer demand and contributes to the general fall in output in the economy. Consequently, the speaker implied, the value of the transition process just described is questionable, and the dangers of interrupting it are not so clear.

Another participant indicated that the Russian military industrial complex is not converting from military to civilian production as fast as it might otherwise have to because it is receiving a large state subsidy. This subsidy is a result of the fact that the Yeltsin government has redirected the taxes ostensibly raised to balance the budget to the military sector. The burden of such subsidies on both the Ukrainian and Russian state budgets was noted. Certain speakers claimed that insult was being added to injury in the defense conversion process. Not only was the public misled as to how the funds raised from them
would be put to use, but these funds were now also being used for payments to idle defense workers rather than for more legitimate conversion needs. To the extent that defense workers continue to be paid while output in general has fallen, these subsidies were said to provide a further contribution to the inflationary process.

A Western specialist pointed out that the cost reallocation and subsidy processes underway could well produce “white elephant” producers of civilian goods incapable of surviving on the unsubsidized, cost-conscious, competitive world market. Would it not be better to effect direct transfer payments to the workers in exchange for their remaining idle, rather than wasting resources on a venture that was not economically viable in the long term? This expert’s proposal met with little agreement or support from the Russian and Ukrainian sides and was characterized as demoralizing for the workers by one Ukrainian expert.

Another Western participant suggested that the most appropriate role for the defense establishment might be as part of a massive public works program designed to provide the infrastructure necessary for job creation in the private sector. The military and defense industries possess construction and other resources capable of being used to redress Russia’s and Ukraine’s well-known deficiencies in infrastructure. In addition to providing the infrastructure needed by private enterprise to create jobs, a public works program of this kind could create the new jobs that might substitute for those currently being lost in the defense sector. Large amounts of capital would be required, however, in order to effect conversion by such means. Both Ukrainian and Russian representatives agreed on the shortage of capital for conversion that exists in their countries.

While these Western suggestions may have met with a lukewarm reception, the countervailing role proposed for the defense sector by certain Russian experts, namely as exporter and hard currency earner, met with a uniformly negative appraisal from both the Western and Ukrainian sides. According to this argument, most vocally advanced in Russia by Malej, the Presidential Adviser on Defense Conversion, the defense sector is the only one in Russia capable of holding its own on world markets. For this reason defense exports should be promoted as a method of earning the hard currency with which to service and repay debt to the West and to finance the defense conversion process. The negative consequences such a policy would entail for Russia’s external relations, for Russia’s foreign aid prospects, and for international stability in general were pointed out by numerous symposium participants.

Session III: Defense Concepts, Planning and Budgeting

Several speakers agreed that the elaboration of defense concepts and the planning and budgeting to implement these concepts are necessary precursors of an orderly rationalization of the defense industry in either Russia or Ukraine. Threats must be identified and security policy goals agreed upon before defense doctrine can be delineated and military strategy drawn up. Only once these objectives and the set of economic constraints facing the nation have been defined can the best shape and size of the armed forces for the execution of these tasks be decided.
The discussion of defense conversion repeatedly returned to the question of what purpose continuing weapons production in Russia and Ukraine served. A group of discussants claimed that neither Russia nor Ukraine had defined their strategic goals, military doctrine, strategy, or force posture sufficiently well for reasonable forms of defense conversion to take place. This allegation was not accepted by the Russian side. A Russian defense expert stated that Russia's new defense doctrine is in an advanced stage of development and that Russian strategic goals are clearly defined, namely: 1

- Preserve Russia's role as a world power;
- Prevent the emergence of a hegemon in South Asia, the Far East, or Europe;
- Preserve the stability of the borders of the former USSR and defend the rights of minorities there;
- Maintain good relations with Ukraine in order to ensure stability.

The speaker noted that there is room for cooperation with the United States in the second regard, but that symposium participants should not allow themselves to be seduced into thinking only in terms of black and white. The United States and Russia have not moved to a relationship of total friendship after one of drawn out enmity. Consequently, it is understandable that Russia should not let down its guard towards the United States. The speaker criticized the START treaty in this connection for not having gone far enough in reducing the global ceiling for nuclear warheads. Specifically, the treaty allows the United States too much freedom in the sphere of naval weapons systems.

The speaker argued that, as a consequence of the introduction of the more accurate eight-warhead Trident D-3 missile into the armory of the US SSBN fleet, Russia will be forced to undertake an otherwise avoidable set of expenditures in order to improve the survivability of its strategic nuclear weapon systems and its command and control system. Russia may have to acquire offsetting numbers of single-warhead launchers and will have to place greater emphasis on sea-based systems, where the United States enjoys an advantage in counter-force measures such as anti-submarine warfare.

Western participants detected indications in the further course of this expert's presentation that the Russian side has retreated from the goal of parity with the United States in both counter-force and counter-value nuclear systems, has lowered the amount of damage it expects its nuclear force to be able to inflict on an opponent, and is possibly initiating a change in nuclear strategy away from immediate and towards delayed counterstrike. The Russian speaker closed with a proposal that Russia and the United States undertake even deeper cuts in nuclear weapons in the START II treaty, by agreeing on a global ceiling of three thousand warheads. In the course of this session, somewhat less time was devoted to the subject of Russia's conventional military forces, but other Russian participants did indicate that Moscow wants to build a smaller, more mobile and better equipped force in order to meet the aforementioned strategic goals.

The plans outlined above were criticized by Western representatives on a number of fronts. The primary front of attack was that of cost. One
expert specializing in Soviet defense expenditures suggested, in light of the presentation, that it might be better for Russia to stick with a large, relatively immobile and poorly equipped army than for Moscow to try such a change to the army’s force structure. This speaker was joined by others in stating that the Russian plan was unrealistic, given the resource constraints that the country currently faces.

Secondary criticisms were launched on the backward-looking nature of the speaker’s presentation and on the misplaced priorities that it revealed. One participant noted that the presentation revealed that the concept of nuclear parity, while clearly obsolete, is far from dead. Another, Russian, speaker indicated that continued adherence to the concept of parity could only lead to the impoverishment of his country. The original Russian speaker was further criticized for continued “old thinking” and was urged not to be distracted by the U.S.-Russian balance, but to concentrate instead on cooperation in the fight against the proliferation of nuclear, biological, and chemical weapons in the less developed countries.

The discussion was not restricted to Russian defense planning alone, but also included an examination of Ukrainian thinking in this area. A Ukrainian representative outlined Ukraine’s security policy goals for the symposium participants:

- Deter aggression against Ukraine;
- Defend Ukraine’s national interests;
- Develop and follow a defensively oriented military doctrine;
- Use political means in solving Ukraine’s security problems.

The speaker conceded that Ukraine needs to define its goals and defense policy more clearly before it can go about a rational conversion of its defense industry. Before such planning can be started, however, Ukraine needs to replace a national security decisionmaking apparatus. In the meantime, Ukraine continues to be worried both about maintaining its sovereignty and about possible Russian aggression against Ukraine, should more conservative political forces come to power in that country. The speaker declared that the third Russian strategic goal described above is tantamount to the announcement of a “Monroe Doctrine” for the area of the former Soviet Union. To support this point he noted that another Ukrainian speaker had, earlier in the symposium, described economic measures taken by Russia to “punish” Ukraine for its pursuit of independence: the withholding of ruble bank notes without notice, peremptory changes to procedures for inter-enterprise account settlement, and the imposition of arbitrary prices for the Russian oil upon which Ukraine is heavily dependent.

As a result of these measures, the unstable political situation in Russia, and the mistrust engendered by Russia over nuclear weapons policy, the Ukrainian speaker suggested that Ukraine needs to maintain a deterrent nuclear force until a functional army and a functioning national security decisionmaking process are in place in his country. In closing, the speaker outlined a series of conditions that might induce Ukraine to give up nuclear weapons more speedily: the total withdrawal of Russian troops from Ukrainian soil, Western security
guarantees to Ukraine's sovereignty, and Western economic aid to the Ukrainian economic reform process.

The discussants questioned the Ukrainian's position on the basis of three arguments: its disruptive effect, its overall credibility and cost-effectiveness, and the actual military utility to Ukraine of nuclear weapons.

First, several speakers agreed on the extremely negative consequences that the Ukrainian position would have for the Nuclear Non-Proliferation Treaty and for Ukraine's external political and economic relations in general. Another participant questioned the credibility of Ukraine's nuclear deterrent in view of Kiev's lack of operational control over the nuclear weapons on its territory. Ukraine can only prevent nuclear weapon launch by crude disconnection of land lines into the strategic missile bases in question. Ukraine's claim to be able to exercise a launch veto by virtue of the oath to Ukraine that servicemen at the missile bases have taken receives short shrift.

The second point was advanced by an American speaker who questioned whether the retention of SS-24 missiles was the most cost-effective means of deterring Russian aggression, given these systems' cost relative to that of conventional forces. A small side-debate then broke out on the cost effectiveness of nuclear weapons and the share of defense spending that they consume, with the basic point of agreement remaining that Ukraine could ill-afford the expenses involved.

In concluding the discussion, the third point was raised. One of the Russian participants pointed out that even if Ukraine were to gain operational control over the nuclear weapons on its soil, their utility should not be overestimated: there are a large number of deterrent missions whose execution cannot rely upon nuclear weapons alone, but requires significant conventional forces. This participant criticized the current conduct of Russian policy towards Ukraine and called both for greater concessions to Ukraine and for greater flexibility towards Kiev; he proposed that the dispute over nuclear weapons could be resolved by removing the warheads from the nuclear weapons stationed in Ukraine in the presence of international inspectors and storing the separated warheads on Ukrainian territory until their fate can be resolved. A Russian participant asked whether Russia should have nuclear weapons. Another participant responded "definitely not" and "imagine if Yugoslavia had them."

**Session IV: Foreign Aid and the Reform Process**

Ukrainian representatives stated that they could not understand the United States' desire that Ukraine should rid itself of nuclear weapons speedily and pointed out once again that the country needs guarantees, aid, and technical assistance in order to do so. They claimed that Russia is receiving the lion's share of such aid and (no doubt playing to the absence of a Ukrainian clientele) suggested that Western aid to Russia and Ukraine be conditioned upon the size of their respective military exports.

A Russian participant criticized Western policy, advice, and political suasion towards less developed countries in general and Russia in
particular. The focus by the IMF and the World Bank on austerity policies supporting monetary and macroeconomic stabilization—while improving creditors’ chances of repayment, as probably intended—aggravates the plight of debtor countries. The speaker noted the large burden imposed on Russia by the need to service and repay the external debt amassed by the Soviet Union; he recognized that large amounts of money for aid to Russia were most probably unavailable in the West, yet he pointed out that the success of the economic reforms would depend on large cash infusions. He characterized the foreign aid sent by the United States so far as no more than a gesture. The speaker urged the West to undertake a second Marshall Plan for Eastern Europe, providing technical assistance, grants of food and equipment, guarantees and concessions to promote foreign direct investment, and a long-term commitment of top Western expertise.

In responding to these criticisms and suggestions, Western conference characterized the criticism of the IMF and World Bank as unduly harsh. If the IMF can be criticized, then it should be on the insufficient emphasis that it has placed on the correct combination and sequencing of other interdependent reform elements. The problem has partly arisen because complete, simultaneous reform of the economy has been impossible for political, social, and institutional reasons. Eastern participants were said to be forgetting that the IMF’s principal role is that of financier, not organizer, of economic reform. If anything, one Western representative said, the IMF is too weak. This speaker criticized the West, saying that Western governments should act on their own behalf in rendering aid to Russia and Ukraine rather than hide behind the IMF and let this organization take the heat for shortcomings.

Western discussants agreed on the need to render greater technical assistance to Russia and Ukraine and pointed out that the United States has already given Ukraine substantial help in the reform of its military education system. With two of the major economies of the West either in stagnation or recession and Japan unwilling and increasingly unable to offer help due to declining economic growth, territorial disputes with Russia, and an increasingly precarious financial system, a Western speaker said, prospects for a Marshall plan to help Ukraine and Russia are not good.

A participant proposed that the West might be able to go some way towards easing Ukraine’s and Russia’s external debt servicing and repayment problems through the use of debt-equity swaps. This device was successfully used during the Latin American debt crisis and would involve swapping debt for the 35 to 40 percent stake that Eastern governments have retained in privatized enterprises. The flow of funds to owners of equity is not a fixed obligation, as in the case of debt, but depends on asset performance. Relief from the burden of debt servicing and repayment could thus be provided while stimulating privatization and further foreign direct investment.

\[1\text{Unable to attend.}\]

\[1\text{The order in which these goals were introduced has been rearranged for the purpose of presentation.}\]