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BEFORE THE

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OF THE

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GLOBAL ECONOMIC AND TECHNOLOGICAL CHANGE: THE SOVIET UNION, EASTERN EUROPE, AND CHINA

THURSDAY, MAY 16, 1991

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON TECHNOLOGY AND NATIONAL SECURITY
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The Subcommittee met, pursuant to notice, at 9:15 a.m., in room SD–628, the Dirksen Senate Office Building, Honorable Jeff Bingaman (chairman of the Subcommittee) presiding.

Present: Senator Bingaman and Representative Armey.

Also present: Richard F Kaufman, general counsel.

OPENING STATEMENT OF SENATOR BINGAMAN, CHAIRMAN

Senator BINGAMAN. The Subcommittee will come to order. This is a meeting of the Subcommittee on Technology and National Security of the Joint Economic Committee.

This Subcommittee has been holding annual hearings on the economies of the Soviet Union and other centrally planned systems since 1974. This year, in light of the rapid changes taking place in these countries, we are shifting the focus and title of the hearings. From now on the annual hearings will concentrate on economic and technological change in the countries of interest. My hope is that we can improve our understanding of the trends abroad and the implications for ourselves.

To do this, we need better economic intelligence, and we need to revamp the way that the U.S. Government goes about collecting, analyzing, and disseminating economic intelligence to policymakers. Previously, we concentrated much of our attention on the Soviet Union and China. We began broadening our purview last year when we included for the first time a report by the CIA on the economies of Eastern Europe. Although the countries of Eastern Europe are no longer a part of the Soviet bloc or even centrally planned in the former sense, they are of continued interest for a number of reasons.

Therefore, we have asked the CIA and DIA to once again present to the Subcommittee reports on the Soviet Union and Eastern Europe, and spokespersons for the two agencies will present them to us this morning.

I have asked the agencies to address a number of specific issues, such as arms exports and the proliferation of sensitive weapons technologies, and also to comment on the allegations that the size of the Soviet economy has been overestimated in prior intelligence assessments.

Because of the controversy over the CIA's and other Western estimates of the Soviet economy, last year Representative Lee Hamilton and I asked the National Research Council of the National Academy of Sciences to do a study of the methodologies involved, and to identify what is known and what is knowable about the Soviet economy. The National Research Council held a two-day conference on the subject in November and has just issued a summary report of the proceeding.[1] One of our witnesses, Vladimir Treml, served as a consultant to the Council and will discuss what took place.

After the intelligence reports have been presented, we will hear testimony from two distinguished experts, Professor Treml and Dr. Charles Wolf. We will then, subject to the time that remains, go into closed session to receive further testimony from the CIA and the DIA.

Our time is somewhat limited by the visit of Queen Elizabeth II, who is scheduled to address a joint session of Congress later this morning. In the interest of time, I have asked the witnesses to each take no more than 15 minutes to make their oral presentations.

We have the reports of the two agencies, and they will be printed in full in the record. I am much impressed with the efforts that went into the reports and their high quality. If they can try to summarize the reports in that timeframe, that would be helpful.

At the witness table are George Kolt, director of the Office of Soviet Analysis, Directorate of Intelligence of the CIA. John McLaughlin is not going to make a presentation today. Charles Duecy is the assistant director for research of the Defense Intelligence Agency and is also here to make a presentation.

[A joint paper by the Central Intelligence Agency and the Defense Intelligence Agency presented to the Subcommittee, and the National Research Council report follow:]

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[1] See National Research Council report, *Estimating the Size of the Soviet Economy*, on p. 119.

BEYOND PERESTROYKA: THE SOVIET ECONOMY IN CRISIS

A paper prepared by the Central Intelligence Agency and the Defense Intelligence Agency for presentation to the Technology and National Security Subcommittee of the Joint Economic Committee, Congress of the United States.

14 May 1991

EMBARGOED UNTIL 12:30 PM, 16 MAY 1991

Contents

Summary

Six years after Mikhail Gorbachev launched the policies and reforms that have come to be known as perestroyka, the Soviet economy is in crisis. Output is declining at an accelerating rate, inflation threatens to rage out of control, interregional trade has broken down, and the center and the republics are engaged in a fierce political struggle over the future of the multinational state. Rather than responding to these problems with reforms, since last fall the union authorities have attempted to reassert central control of the economy and politics with counterproductive results. Although a recent accord between the center and the republics may impart new momentum to reform, previous agreements of this sort have proved fragile. Even if reform proceeds anew, tough economic times are in store for the Soviets. If meaningful reform is not carried out, the economic future will be totally bleak.

Economy in Turmoil

The accelerating deterioration of the Soviet economy goes beyond declining output and rising inflation. Worsening imbalances between supply and demand have contributed to a breakdown of the distribution system, which has been aggravated by the efforts of regional authorities to insulate factories and consumers on their territories from the effects of shortages. The USSR's economic relations with the rest of the world are also suffering. Hard currency imports exceeded exports in 1990 for the second straight year, while a combination of rising hard currency debt and a backlog of late payments to Western suppliers brought a credit crunch.

The economy's deterioration results largely from the chronic weaknesses of the central planning system, which have been compounded by partial and ad hoc economic reforms, excessive growth in the money supply, and regional protectionism. The traditional discipline of the Soviet economy--with central planners setting output targets for all sorts of products and allocating the supplies needed to produce at these levels--has eroded drastically under perestroyka but has not been replaced by the discipline of the marketplace. Moreover, rapid growth in the money supply--fueled by large budget deficits--has led to a scramble for goods, rising inflation, and acute shortages. As shortages have worsened, republic and local authorities have banned shipments of goods outside their borders, disrupting longstanding trade patterns and denying badly needed supplies to producers.

The Soviet economic decline also reflects the impact of policy mistakes and mismanagement. The budget deficits that have brought monetary expansion and rising inflation were a serious blunder. In addition, the leadership's policy of shifting resources from investment and defense to consumption, although long overdue, has been mismanaged. Inadequate investment in basic materials and transportation has contributed to declining output and shortages of these vital goods and services, and increases in the defense industry's output of civilian goods have fallen short of overly ambitious targets. Also, efforts to improve supplies of consumer goods quickly by stepping up imports have left the USSR with a rising hard currency debt.

Mounting political and social tensions have exacerbated Soviet economic difficulties. Continuing center-republic clashes have contributed to a worsening confusion of economic authority, and ethnic disputes have brought a variety of conflicts--many of them violent--between and within republics. Strikes remain a growing problem, and popular concern over the environment has forced plant closures that have made a substantial dent in output.

Advances and Halts on Reform

The Gorbachev economic program approved by the Soviet legislature in October does call for the replacement of Marxist by market economics and would, if strictly implemented, deregulate most prices, sell off a substantial portion of state assets, and introduce an element of genuine competition to an economy long dominated by monopolies. Like the failed reform programs of the past, however, it places much of the responsibility for implementation on the central government bureaucracy--the very institution that stands to lose the most from the dismantling of the old system. Moreover, the vagueness of its provisions and timetables has made the program subject to selective implementation and delay by the political leadership. Indeed, in the several months that followed the legislature's approval of the program, Gorbachev's implementing decrees gave a clear priority to stabilization, with much of this to be accomplished by administrative measures and a new reliance on the police and KGB to enforce the center's economic decrees.

Economic reform legislation passed last year, however, remains on the books and could stimulate the development of private economic activity and markets if the political climate improves. Moreover, the growing self-assertiveness of the republics has given reformers reason to believe that their cause is no longer completely hostage to changes in the commitment of the union authorities. Private economic initiative also continues to expand and find new outlets. Production by cooperative businesses has grown rapidly in spite of cumbersome and frequently changing regulations, and the sprouting of "commodity exchanges" in cities from the Baltics to Siberia holds promise for the development of a market-oriented trade system.

Grim Economic Outlook

There is no doubt that 1991 will be a worse year for the Soviet economy than 1990, and it is likely to be radically worse. The center's recent policy of seeking to stabilize the economy through primarily administrative means and the accompanying refusal by the republics to comply with the center's orders have already led to a sharp drop in output. If this standoff continues, real gross national product (GNP) likely would decline by 10 to 15 percent and the annual inflation rate could easily exceed 100 percent.

An alternative strategy of stepping up repression to control the republics and enforce the center's economic decrees could temporarily stem the decline in output and the rise in prices. More likely, however, it would provoke popular resistance, which could lead to conditions in which the fall in real GNP would exceed 15 percent and inflation would spiral out of control. Moreover, stepped up repression would not address the underlying systemic problems of the Soviet economy, nor would it help to establish a foundation for future progress.

Another possibility is that the center-republic accord of 23 April could serve as a basis for a sustained improvement in center-republic relations and the renewal of reform. Even under these circumstances, the decline in Soviet GNP this year probably would still be close to 10 percent in real terms and inflation would reach a high double-digit rate. Prospects for the next few years would improve, however, and the longer-term forecast would clearly be brighter.

A message that all of these scenarios have in common is that the Soviets--including the defense sector--will face hard times in the next few years regardless of which path they choose. The crucial question is not whether continued austerity will be required but when the end will be in sight. If reform acquires a new momentum, the Soviets will at least have embarked on a path with the potential to lead to economic recovery. If economic reform continues to be postponed, the Soviets face a future of seemingly endless and worsening crises.

The System in Crisis

After six years under Mikhail Gorbachev, the Soviet economy is in crisis. This crisis has several elements: an accelerating decline in production, worsening inflation, a breakdown in interregional trade, and a fierce political struggle between the center and the republics over the future of the multinational state. Rather than responding to these problems with reforms, since last fall the union authorities have attempted to reassert central control over the economy and politics. This approach has been counterproductive. Although a new approach to the country's economic and political ills may be in the offing if a center-republic accord signed in late April bears fruit, previous agreements of this sort have proved fragile and fleeting.

Sharp Deterioration in Economic Performance

The Soviet economy had a bad year in 1989, but the period since January 1990 has been much worse. For the first time since World War II, the Soviets have acknowledged that overall output is declining--by 2 percent in 1990 and by a startling 8 percent during the first quarter of 1991 compared to the same period last year. Our own estimates, while subject to greater uncertainty than in years past, continue to indicate that the decline has been greater than officially claimed. Also, inflation is accelerating sharply, with retail prices rising by an estimated 14 percent in 1990, a reported 24 percent in the first quarter of 1991, and an average of more than 60 percent on 2 April of this year as a result of a presidential decree.

Measures of output and inflation alone do not fully reflect the extent to which imbalances between supply and demand have worsened or indicate how explosive the economy's problems have become. Shoppers with huge accumulations of excess rubles have swept store shelves clean. And rising prices and proliferating shortages have made consumer frustration a growing liability for leaders at all levels of government--especially as the population becomes increasingly aware of how poorly Soviet living standards compare with those in other countries.

Shortages of energy and basic industrial materials such as steel and chemicals have also intensified, and their impact has spread rapidly across the economy. Shortfalls in production of metallurgical coal, for example, have contributed to a reduction in steel output, which in turn has left machine builders short of materials. Factory managers, who can no longer rely on ministry and party officials to help them find supplies, have spent more and more time searching for crucial inputs and arranging barter deals. Even the defense industries appear to be less insulated than in the past from difficulties experienced in the rest of the economy. In an open letter in Pravda last September, for example, 45 high-level defense industry managers complained that the USSR's economic problems have caused increasing disruptions in their enterprises and "massive losses" of skilled workers.

Regional Fragmentation

The regional fragmentation of the Soviet state and economy is also proceeding at an increasingly rapid rate. Some republics--Estonia, Latvia, and Lithuania in the Baltic region, Armenia and Georgia in the Caucasus, and Moldova on the border with Romania--are bent on independence regardless of what happens in the rest of the USSR. The central leadership and the other republics have been locked in disagreement over a wide range of issues: the shape and content of a union treaty, the strategy and pace of market-oriented economic reforms, and control over natural resources, budget revenues, banks, the money supply, and earnings from hard currency exports. This political gridlock has impeded the efforts of leaders at all levels of government to address the economy's problems.

The nationwide breakdown of distribution has been aggravated by the efforts of republic and local authorities to insulate their own territories from the effects of ubiquitous shortages. Republics producing large amounts of food and other consumer goods have tried to keep their own populations supplied by withholding deliveries to central stocks and customary trading partners. The Ukraine and Kazakhstan failed to meet targets for grain deliveries to the state last year, and Georgia restricted shipments of citrus fruit and tea--its primary exports to the rest of the USSR. Many republics held back on deliveries of livestock products, which have been especially valuable in barter transactions. The main losers as a result of these disruptions in food deliveries have been industrial cities, other nonagricultural regions, and the food processing industry.

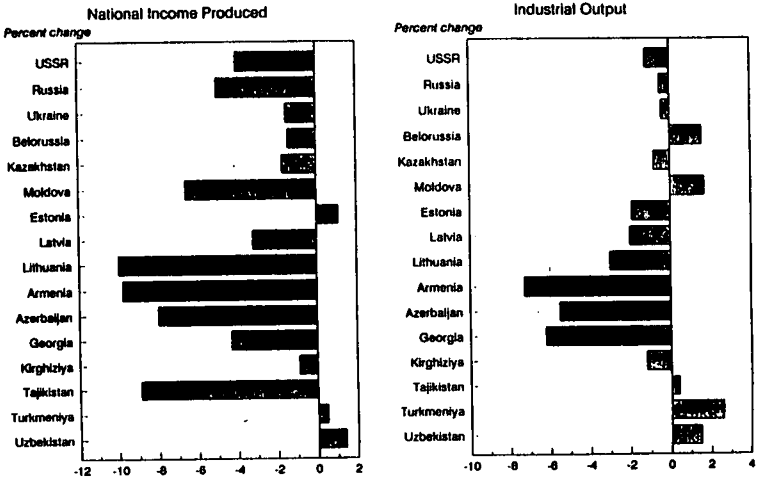
Regions producing key raw materials--such as oil, coal, and cotton--have also begun to ignore centrally mandated delivery targets in an effort to deal for supplies the center cannot guarantee. The Bashkir autonomous republic in Russia, for example, bartered oil for Estonian consumer goods last year, while Azerbaijan concluded a similar deal with Turkey. Uzbekistan withheld cotton from the state in hopes of increasing hard currency exports.

As these problems spread across the USSR, few regions escaped the decline in output last year. Official Soviet statistics indicate that in 1990 only three republics--Estonia, Turkmeniya, and Uzbekistan--registered increases in national income (a Soviet measure of total output excluding services--see figure 1). Some of the steepest declines occurred in republics experiencing interethnic violence or striving for independence--Armenia, Azerbaijan, and Lithuania.

In an ominous sign for future inflation, the dispute over the transfer of budget revenues from the republics to the central government has escalated sharply. Shortfalls in republic contributions reportedly left the union budget with a deficit of 27 billion rubles in the first quarter of this year--more than double the expected amount of 11 billion rubles.

Figure 1

USSR: Official Soviet Statistics on National Income Produced and Industrial Output by Republic, 1990



Source: Soviet press releases.

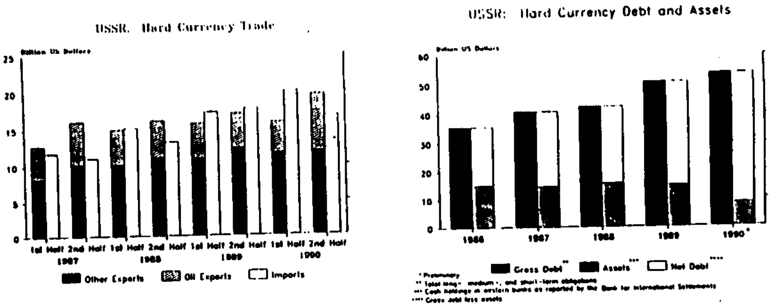
Problems in Foreign Economic Relations

As a result of the ills afflicting the domestic economy, Soviet foreign economic relations are suffering, and the problems in foreign economic relations in turn are magnifying the domestic economy's problems. Hard currency imports, which jumped by more than 50 percent from 1987 to 1989, continued to climb in the first half of 1990. The Soviet leadership's efforts to ease shortages of consumer goods were largely responsible for this import surge, and enterprises exercising newly acquired rights to buy directly from Western businesses also played a role. Hard currency exports also rose but could not keep pace with imports, and the trade deficit for the first half of last year reached a record $4 billion (see figure 2 and appendix B).

The USSR got some breathing space in the second half of 1990. Heightened tensions in the Middle East led to a rough doubling of the hard currency prices of oil exports, and a reassertion of central control brought down hard currency imports. Many of the import cuts, however, came from supplies--particularly of steel products and chemicals--that were badly needed for domestic production.

To finance their burgeoning import bill, the Soviets nearly doubled their total borrowing from the West from 1987 to 1989. In late 1989 they also began to run up an unprecedented backlog of late payments to Western suppliers. With these arrears coming on top of mounting domestic political and economic turmoil, the Soviets found Western banks unwilling to provide new loans last year. To alleviate the resulting credit crunch, the USSR has

Figure 2



USSR: Hard Currency Trade
Billion US Dollars
1987
1988
1989
1990
Other Exports
Oil Exports
Imports
USSR: Hard Currency Debt and Assets
Billion US Dollars
1986
1987
1988
1989
1990*
Gross Debt**
Assets***
Net Debt****
* Preliminary

drawn down cash reserves in Western banks, stepped up gold sales, and obtained financial assistance from Western governments. Nonetheless, its hard currency position remains weak.

The Soviets' economic problems--and the profound transformation under way in the region--have taken an especially heavy toll on Soviet-East European trade. The USSR ran a deficit in trade with Eastern Europe last year, when oil exports fell and imports remained about the same as in 1989. In the first quarter of 1991, when most of these longstanding trade arrangements changed to a hard currency basis, the Soviets slashed imports. Because they cut exports by much less than imports, the Soviets ran a trade surplus with Eastern Europe and earned badly needed hard currency. The costs have been high, however. The Soviets have lost badly needed imports of industrial supplies and consumer goods, and East European exports have suffered a severe blow.

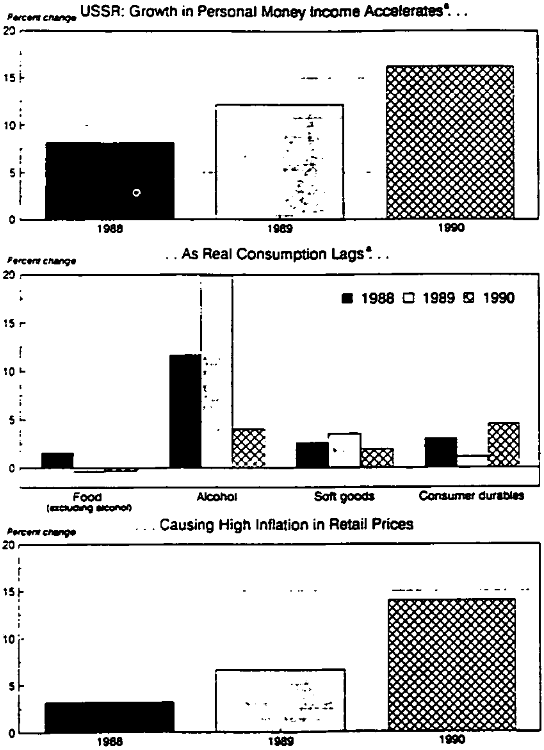
In another dramatic change this year, the USSR will become a recipient of significant aid from the rest of the world. The Soviets have lined up about $14 billion in grants, loans, and credits backed by non-Communist governments that they must rely on during 1991 to maintain imports of needed goods. Italy and Germany are the largest donors of overall financial assistance, but about one-third of the aid to be disbursed this year will come from Arab states and South Korea. Moreover, Soviet economic aid to the less developed world is dropping sharply. Longtime clients such as Mongolia and Vietnam are slated to be virtually stricken from the aid roster this year.

Erosion of Living Standards

Since late 1988, the Soviet leadership has attempted to improve living standards by shifting resources from investment and defense to consumption. This policy has produced few benefits for Soviet consumers, who have complained with increasing frequency that inflation and shortages have sharply reduced their welfare. Although estimated consumption of goods and services adjusted for inflation registered a small per capita increase in 1990, much of this increase reflected higher output of alcohol and expensive household appliances and consumer electronics. Moreover, the imports and drawdowns of inventories that helped boost consumption last year cannot be sustained.

Problems on the supply side, in any event, have been only partly to blame for the erosion of living standards. Personal money incomes leaped by 16 percent per capita in 1990, according to official Soviet statistics, overwhelming the small improvement in supplies of consumer goods and services (see figure 3). One result was a surge of inflation. Our estimates indicate that retail prices of consumer goods sold in state stores and on farmers' markets climbed by about 14 percent last year--roughly twice as fast as in 1989. Black market prices almost certainly went up even faster. In addition, because controls still kept most prices from rising enough to balance supply and demand, some inflation was repressed, resulting in shortages and a scramble for goods. According to one Soviet report, for example, the "availability"--not further defined--of basic food items declined

Figure 3



[a]Per capita

from 90 percent in 1983 to 22 percent in 1989 and 11 percent in mid-1990.

With shortages leaving state store shelves bare, some lucky consumers have had access to special distribution channels, such as workplace sales of food and appliances. Arrangements of this kind have spread rapidly in recent years, helping some segments of the population--especially workers at large factories--but reducing supplies of consumer goods available to the general public.

In an effort to protect residents of their areas from shortages, first local and now republic-level authorities throughout the Soviet Union have introduced a rapidly growing number and variety of rationing schemes. More and more cities have issued coupons for consumer goods in short supply, such as meat and sugar. In the Baltic republics and in many cities, including Moscow and Leningrad, consumer goods are sold only on proof of residence. The most extensive rationing scheme to date --introduced by the Ukraine in November 1990 and adopted by Moldova in March 1991--requires purchasers to provide coupons distributed along with their pay or pensions, in addition to money, for the vast majority of their purchases from state stores. Also, as mentioned earlier, several republics have banned the shipment of consumer goods outside their borders, in what one Soviet economist has called a "bacchanalia of local protectionism."

Consumers whose needs are not covered by special distribution channels or rationing have been left to rely to an ever greater extent on black market purchases, if they can afford the higher prices, or on potluck in state stores. Press reports indicate that many shoppers buy goods they do not want themselves and barter with family members and friends for what they do need, and almost everyone stocks goods for future use. One Soviet survey found that 9 out of 10 respondents maintained such stocks in 1989, up from 1 out of 4 in 1988. In November 1990, a deputy trade minister placed the value of household hoards at 120 to 130 billion rubles--roughly one-fourth of the value of retail sales last year.

As miserable as the consumer's lot was in 1990, it has worsened since the beginning of this year. Official Soviet statistics indicate that output of manufactured consumer goods in the first quarter of 1991 was 3 percent lower than in the same period last year, while money incomes went up by 24 percent. Two presidential decrees implemented in January also added to rising consumer frustration. A 5-percent sales tax was imposed on all goods--even the most basic consumer necessities--and a currency changeover resulted in the confiscation of 50- and 100-ruble notes that could not be proved to have been earned.

Probably the greatest blow to consumers occurred on 2 April 1991, when much of the repressed inflation that has built up in recent years was transformed into open price increases. The retail prices of consumer goods were raised by 60 to 70 percent on average--with larger increases in food prices that were particularly alarming for the low-income population. Despite the compensation payments accompanying these price hikes, we estimate that the purchasing power of people's incomes has fallen by 15 to 20 percent on average.

Cutbacks in Investment

Although the regime's shift of resources toward consumption has done little to improve living standards, it has taken a substantial bite out of investment at a time when the Soviet economy is in dire need of modernization. According to official Soviet statistics, state investment in 1990 was 4 percent less than in 1989, reflecting a sharp drop in centrally financed investment that was partly offset by an increase in investment funded by enterprises. Completions of investment projects also declined, and only two-fifths of the high-priority projects included in state orders were finished--down from one-half in 1989. This decrease in project completions included infrastructure intended to benefit consumers, such as housing, schools, preschools, hospitals, and clinics. Meanwhile, the backlog of unfinished construction reportedly swelled by 11 percent.

The investment downturn last year reflected a decrease in domestic output of machinery and an especially sharp drop in construction activity. Inadequate supplies of construction materials and equipment such as bulldozers, cranes, and excavators were part of the problem. In addition, state construction organizations lost workers to cooperatives, where wages reportedly were nearly one-third higher.

Defense Spending Down

Defense program reductions last year followed the same general trends that developed in 1989. Our estimates indicate that the overall annual decline in defense spending was about 6 percent in both years. The driving forces behind these cuts have been the poor state of the economy and the leadership's desire to reduce the budget deficit and shift resources to civilian production. On the arms control front, the Soviets have tried to ease requirements for new weapons by constraining Western force modernization while posturing their forces for Strategic Arms Reduction Talks and Conventional Forces in Europe agreements.

We estimate that procurement outlays, which account for almost half of total defense spending, fell by about 10 percent in each of the last two years. Percentage reductions were almost equally distributed between strategic and general purpose forces. The heaviest cuts in both 1989 and 1990 came in procurement of land arms--artillery, light armored vehicles, and particularly tanks. Aircraft procurement declined as well.

Expenditures on the other major components of defense also have fallen over the past two years, although not quite as steeply as procurement. Personnel outlays reflect a decrease of about 500,000 in the number of troops since 1988. The decline in spending on operations and maintenance results primarily from a downturn in space launch activity, as well as from shrinking inventories and a slower pace of training and exercises. The available evidence suggests that outlays on research and development leveled off in 1989 and declined in 1990, although our estimates for this category are much more uncertain than for the other components of defense spending.

Sources of Difficulties

The Soviets' current economic problems stem from a variety of sources: an accelerating breakdown of the traditional system of managing the economy from the center, a progressive loss of control over financial flows, a mismanaged shift of resources from investment and defense to consumption, and rising political and social tensions.

<u>Breakdown of Traditional System</u>

The traditional Soviet economic system--with central planners setting output targets for all sorts of products and allocating the supplies needed to produce at these levels--was always inefficient. Its allocation procedures and excessive secrecy also condemned the USSR to technological backwardness. In short, it was a system that was relegating the USSR to the status of a developing country. Nonetheless, it was a functioning system with fairly stable rules. In 1988 and 1989, however, it was seriously weakened by partial economic reforms, and, since early last year, its erosion has accelerated rapidly and developed a regional dimension. The country went from stagnation into decline.

Early in the *perestroyka* years, enterprises were instructed to earn profits, but most prices--which did not reflect supply and demand accurately--were not changed until 1991. Even the realigned prices now in effect take little account of demand, although they do better reflect current production costs. Under these conditions, prices have not stimulated increases in production of the goods that are needed most urgently. Moreover, controlled prices have combined with inflationary pressures--fueled by the excessive budget deficits discussed below--to create steadily worsening shortages.

Another problem is that the development of the "direct links" between buyers and sellers that were supposed to reduce the need for central planning has run into difficulties. The lack of progress stems partly from the continuing efforts of bureaucrats in ministries and supply organizations to cling to their old functions. It has been exacerbated by the longstanding monopolization of industry and by the recent plague of regional protectionism.

Many Soviet industries are dominated by monopoly producers, whose development was actively encouraged by central planners. For example, the USSR's entire output of potato, corn, and cotton harvesting machinery comes from single factories--all in different republics. Single factories also account for more than half of all production of automobiles, freezers, and oil and gas drilling rigs. Under these conditions, shortfalls of output at one plant cannot be made up elsewhere and spread rapidly across the economy.

The efforts of republic and local authorities to protect factories and consumers on their territories from the general deterioration of the economy became a major factor in the erosion of the traditional system last year. In the past, Soviet economic development policy encouraged most republics to specialize in certain kinds of production and trade with each other, rather than become self-sufficient (see figure 4). The Ukraine is a major center of heavy industry, for instance, while Uzbekistan specializes in cotton. Given these circumstances, republic bans on shipping goods outside their borders have been particularly disruptive. On a more positive note, the republics have moved quickly to sign economic agreements with each other in efforts to assure deliveries of needed supplies. The terms of most of the basic agreements are vague, however, and often cannot be enforced.

Loss of Financial Control

For all but the first year of Gorbachev's tenure, the Soviet government has been running large budget deficits, and the 1990 deficit further fueled inflationary pressure (see figure 5). We are skeptical of official claims that the deficit last year was slightly below the limit approved by the Supreme Soviet, partly because the claimed figure for total budget revenues appears inflated compared with the information available on individual revenue categories. In addition, a thorough examination of the Soviet budget by the International Monetary Fund indicates that off-budget expenditures to support agricultural prices should be

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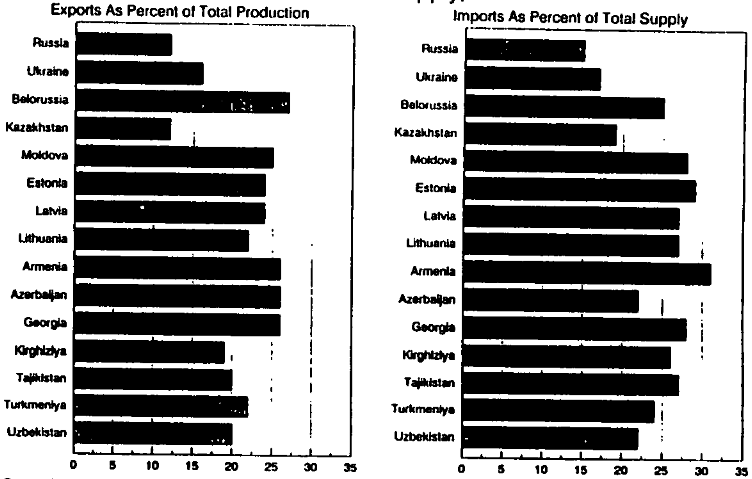
Figure 4

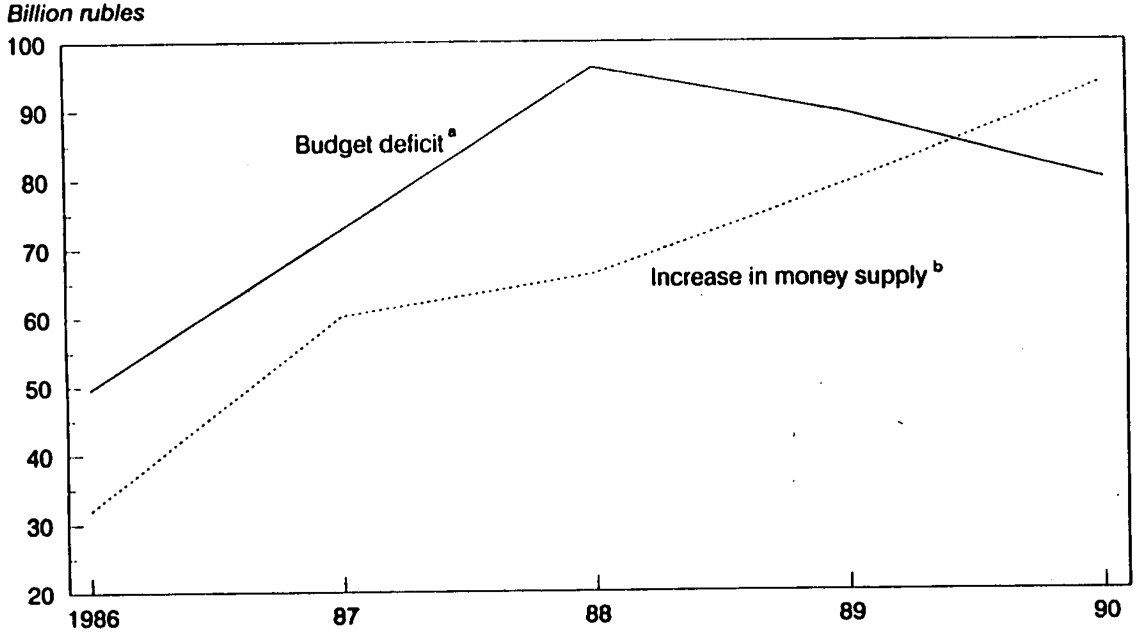
USSR: Shares of Exports and Imports in Republic Production and Supply, 1988



Source: *Narodnoye khozyaystvo SSSR v 1989 godu,* p.635. Data include both interrepublic and foreign trade and are based on domestic ruble prices.

Figure 5

USSR: Budget Deficit and Increase in Money Supply, 1986-90



Source: International Monetary Fund et al., *A Study of the Soviet Economy*, (Paris, 1991), Volume 1, pp. 54, 130.

[a] Plan for 1990.

[b] Money supply is defined as sum of currency, demand deposits, and time deposits; figure for 1990 is projection.

added to the official deficit.[1] Whatever the actual deficit was, the government's efforts to finance it by selling interest-bearing securities fell far short of plan. As in the past, therefore, the deficit was funded almost entirely by adding to the money supply, which increased by an estimated 15 percent in 1990. The excessive budget deficit and rapid growth of the money supply, in turn, made a major contribution to the leap in personal money incomes.

Fiscal and monetary problems multiplied rapidly in the first quarter of 1991. Budget outlays on subsidies rose sharply when wholesale prices were raised on 1 January while retail price hikes were delayed, pending negotiation of a center-republic agreement, until 2 April. The subsidy burden shifted to the republics starting this year, and perhaps partly to cover that bill, they withheld budget revenues from the central government. The center was then forced to finance its expenditures by creating money. Now that retail prices are up, subsidies will be reduced sharply, but compensation payments to the population--financed by a combination of budget and enterprise funds--are so generous that they will add new fuel to inflationary fires.

Mismanaged Shift of Resources

The leadership's policy of shifting resources toward consumption is a move that was badly needed and long overdue, but

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[1]International Monetary Fund, The World Bank, Organization for Economic Cooperation and Development, European Bank for Reconstruction and Development, A Study of the Soviet Economy (Paris, February 1991), Volume 1, p. 54.

the mismanaged implementation of this policy has led to disarray and confusion in investment and the defense industry. Skimping on investment in basic industrial materials has contributed to declining output and shortages of these vital supplies. Centralized investment in these industries was cut last year, and producing enterprises--whose profit margins were dwindling rapidly before wholesale prices were raised this January--had few funds of their own to invest. Moreover, investment in transportation has been neglected for years. Premier Pavlov recently recommended an adjustment of priorities to maintain adequate investment in output not directly used by consumers.

Soviet officials have said that only part of the drop in military production is being offset by increases in the defense industry's output of civilian goods (see inset). Moreover, many defense industry managers are now worried that the speed with which they have had to increase civilian production is causing them to lose valuable technical expertise acquired over years of working for the military. A number of these managers have expressed interest in developing export markets and spin-offs of their traditional output that would allow them to maintain military production capacity and remain solvent financially.

Moreover, efforts to improve supplies of consumer goods quickly by stepping up imports have left the USSR with a rising hard currency debt, which must now be serviced in spite of falling oil production (see inset) and the reluctance of commercial creditors to extend new loans. Hard currency problems led to some reductions last year in imports of materials and

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Defense Conversion: Meager Progress to Date

Gorbachev began to expand the defense industry's role in the civilian economy in March 1988 by subordinating 260 plants producing civil machinery to defense industrial ministries. In December 1988 he announced more extensive plans to convert defense plants to civilian production. Soviet officials have stated that more than 400 defense industrial plants and 100 civil industrial plants will be involved in conversion to some degree. Of these, only 6 defense plants, along with some 34 civilian plants, are planned to totally cease military production.

The Soviets' claims about conversion must be interpreted carefully, however, because their use of the term varies. In the strict sense of the word, conversion means the retooling of military production lines for civilian output, but the Soviets also use the term to refer to the expansion of civilian output using excess floor space, the sale of military property to the civilian economy, the retooling of civil factories by the defense industry, the diversion of resources, the sharing of expertise, and the release of previously classified technical data.

Problems of Implementation

Soviet defense industrial managers have faced numerous problems in implementing conversion. In many cases, they have had to produce civilian goods with which they had no experience. At the same time, like their civilian counterparts, defense managers have had to adapt to partial reforms of the economic system. Rising pressure to earn profits has been made more difficult by reduced military orders and increased retooling and retraining costs. Because of the priority treatment they enjoyed in the past, defense managers also have developed less experience dealing with transportation and supply problems than managers in civilian industry. Moreover, workers faced with retraining, job transfers, and the end of higher wages and bonuses for military output have left the defense industry in substantial numbers.

Lack of Clear Strategy

Another major problem for the defense industry has been the Soviet leadership's lack of careful planning--at a time when markets were not developed enough to tell producers what consumers really wanted. Enterprises were ordered to begin the conversion process before the regime recognized the financial burden this would impose. While the Soviets plan to invest a hefty 40 billion rubles in conversion during 1991-95--about the

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same amount as total investment in metallurgy during 1986-90--only 9 billion rubles is to be spent on actually retooling from military to civilian production. The bulk of this investment in conversion is earmarked for adding new civilian production capacity in the defense sector, not further retooling military production lines. After many revisions and considerable debate, a conversion program drafted within the defense sector reportedly was approved by the government last December, but its funding and implementation await Supreme Soviet legislation.

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Declining Soviet Oil Production: How Western Technology Could Help

Although the USSR has some of the world's largest oil reserves and is still the world's leading oil producer, Soviet oil production has been declining markedly since peaking in 1987. Output dropped by 6 percent in 1990 and appears headed this year for its lowest level since 1975. A combination of short-sighted investment policies, technological shortcomings, and substitution of gas for oil is responsible for the current decline in oil output. The standard Soviet practice of injecting water into reservoirs to force oil out as quickly as possible has left flooded fields that now require sophisticated equipment to recover the remaining oil. Moreover, corrosion is wearing out the production infrastructure faster than it can be replaced. Years of neglect of the oil equipment industry, however, have left it incapable of supplying either the quantity or the quality of the equipment needed.

The challenges of maintaining output from mature fields, coping with equipment shortages, and developing new fields are outpacing the USSR's technical capabilities and increasing its need for Western technology and assistance. In the near term, the most pressing Soviet needs for Western equipment and services include:

- Enough equipment--not necessarily state-of-the-art technology--to overcome chronic shortages of artificial-lift equipment, blowout preventers, drill bits and pipe, and oil tools.

- Modern rotary drill rigs or drilling services, specialized arctic drill rigs, and measure-while-drilling equipment.

- Social infrastructure such as housing and schools to improve the difficult living conditions of oil-field workers.

- Advanced exploration capability--either equipment or services--to locate small, deep, complex reservoirs.

Moreover, to turn longer-term performance around, the Soviets need to:

- Revitalize their oil equipment industry with new plants.

- Modernize their oil-handling infrastructure, including pipelines, storage facilities, and ports.

equipment needed to sustain domestic production and much sharper cutbacks in the first quarter of 1991.

Political and Social Tensions

Another reason for the economy's decline is that mounting political and social tensions have interacted with--and worsened --Soviet economic difficulties. Center-republic clashes over the republics' efforts to achieve independence, for example, have sparked labor protests and blockades as well as entailing violence and loss of life, as in Lithuania in January 1991. Ethnic disputes, too, have fueled a variety of conflicts--many of them violent--between and within republics, and these conflicts have at times played havoc with the economy. The clashes between Armenia and Azerbaijan in early 1990, for example, dealt severe setbacks to economic performance in both republics.

Strikes--sparked partly by worsening consumer shortages and inflation--have also become an increasingly serious problem. According to Soviet statistics, losses of work time as a result of strikes amounted to 10 million worker days in 1990--easily surpassing the previous record of 7 million in 1989. This year, the coal miners' strikes that began in March have aggravated energy shortages and contributed heavily to the sharp drop in output.

Finally, popular concern over the environment has forced plant closures that have made a substantial dent in industrial output. The impact on the chemical and wood products industries last year was particularly severe. A series of closings and partial reopenings of the Nairit chemical factory in Armenia, for example, cut supplies of plastics, synthetic rubber, and chemicals used to produce medicine. The shutdown of the Sloka pulp plant in Latvia removed the USSR's sole source of paper for computer punch cards, book and magazine covers, and cigarette packaging. In addition, public protests about the safety of nuclear power plants in the last several years have contributed to delays in the construction of electric power stations. Nuclear plants accounted for more than half of the shortfall in completing new electric power generating capacity in 1990.

Little Progress Toward a Market Economy

Although advocates of markets can take some consolation from important legislation passed last year, the Soviet central leadership has concentrated on stabilization since last November while putting market-oriented economic reforms on the back burner. In response, some republics, especially Russia, have attempted to seize the initiative from the center by proposing alternative reform programs. At the grass roots level, moreover, private economic initiative remains alive despite cumbersome and frequently changing regulations.

The Reform Debate

As the Soviet economic crisis deepened last year, most economists and politicians came to realize that the reform and stabilization plan approved in December 1989 had been overtaken by events and was simply inadequate to the task at hand. The consensus ended there, however, and most of the year was consumed by bickering over which of several proposed new game plans to adopt.

The debate over a new economic program began in May 1990 when Premier Ryzhkov first presented the government's version to the Supreme Soviet. Ryzhkov's plan called for a five-year transition to a "regulated market" economy and emphasized the need for price revisions as a first step toward deregulation. Legislators rejected the increase in bread prices he proposed for July, questioned the wisdom of other price hikes scheduled for January 1991, and remanded the program for further work.

Meanwhile, Boris Yel'tsin, elected head of the Russian republic's legislature in May, began promoting an alternative program that would give first priority to supplanting state control of assets with private ownership and shorten the time allotted for the transition to a market economy from five years to "500 days." To keep Yel'tsin from moving ahead on his own, Gorbachev reached an agreement with him to cosponsor a working group, chaired by Presidential Council member Stanislav Shatalin, that would come up with a "synthesis" of the Yel'tsin and Ryzhkov programs. Ryzhkov and other members of his government, however, were totally unwilling to cooperate with Shatalin, and Gorbachev himself may have developed doubts as he realized the loss of central power the Shatalin plan would entail.

Gorbachev's Program: A Pledge to Implement Real Reforms . . .

Gorbachev directed the preparation of another program that replaced Shatalin's link between stabilization and reform with an emphasis on stabilization now, reform later. That program, which was approved by the legislature in October, still called for the eventual replacement of Marxist by market economics (see inset). If strictly implemented, it would deregulate most prices, sell off a substantial portion of state assets to joint-stock companies, labor collectives, cooperatives, and individuals, and introduce an element of genuine competition to an economy long dominated by monopolies.

. . . But With Potentially Fatal Flaws

The Gorbachev economic program, however, contained a number of fatal flaws:

- Like past reform programs, all of which have failed, it placed considerable responsibility for implementation on the central government bureaucracy--the very institution that stands to lose the most from the dismantling of a command economy.
- The increased economic autonomy it gave the republics fell far short of their demands, reducing the prospects for unionwide adherence.
- The vagueness of its provisions and timetables made it subject to selective implementation and delay by the political leadership.

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Gorbachev's Economic Reform Program

Stabilization of Production and Finances

Retain mandatory state orders for output and existing contracts between enterprises during period of transition to markets

Increase supply of consumer goods and services by
- Providing tax breaks for producers
- Privatizing retail trade and consumer services

Reduce budget deficit to at most 3 percent of GNP by
- Decreasing spending on investment, defense, and government administration
- Increasing revenues from turnover tax

Raise interest rates administratively

Retain central controls on foreign exchange during period of transition to markets

Sell state enterprises to generate revenue

Privatization and Development of Markets

Privatize state property by
- Sale or transfer of state enterprises to shareholders, labor collectives, cooperatives, individuals, and foreign firms
- Distribution of land to farmers
- Transfer of housing to residents

Decontrol wholesale and retail prices in stages
- Set key wholesale prices centrally during 1991, while letting buyers and sellers negotiate prices for wide range of industrial products
- Remove controls on retail prices for all but narrow range of consumer necessities by 1992

Replace detailed regulation of wages with new system of minimum wage rates depending on worker skills

Reform banking system by
- Establishing new system of central and commercial banks
- Putting insurance system on commercial basis

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Move toward foreign trade with ruble convertible to hard currency by
- Passing new customs and currency laws
- Establishing internal market for hard currency

Expansion of Social Safety Net

Set up state employment service to provide
- Job search, retraining, and career guidance services
- Unemployment compensation

Pass new pension law

Index personal incomes to cost of living

The plan's malleability predictably has proved a curse for reform. The regime's initial implementing decrees have given a clear priority to stabilization, with much of this to be accomplished by administrative measures and a new reliance on the police and KGB to enforce the center's economic decrees (see inset). This emphasis has come largely at the expense of fundamental reforms the economy so urgently needs. Moreover, stabilization by administrative decree has proved elusive at a time when the center's commands carry increasingly less weight with republic leaders and enterprise managers.

The regime's retreat from reforms has not been confined to the economic arena. Powerful groups--notably the Communist Party, the military, and defense industrialists--felt seriously threatened last fall by the devolution of power to the republics proposed in the Shatalin program. To placate these groups, Gorbachev has used the expanded presidential powers he requested and received in November to fight reformist efforts being pursued by the republics.

Some Remaining Bright Spots on Reform Front

Economic reform legislation passed last year, however, remains on the books and could provide a framework for the development of private economic activity and markets at some future date, if the political climate improves. The USSR Supreme Soviet approved a wide array of laws on such fundamental issues as property rights, land use, enterprise rights, taxes, and banking. Most were drawn up in 1989 but became the subject of

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Presidential Decrees Emphasize Stabilization at the Expense of Reform

The Supreme Soviet in late September 1990 granted Gorbachev emergency power to issue decrees on a broad range of economic matters without consulting the legislature. Most of those decrees attempt to stabilize the economy by bolstering central controls at the expense of economic reform.

Decree	Impact
Freezing economic ties between enterprises through 1991	Intended to relieve supply bottlenecks but will slow development of wholesale trade, hamstring formation of new enterprises, and hinder republic efforts to privatize
Allowing enterprises to negotiate wholesale price increases	Positive step toward rational pricing but diminished by imposition of state-set price guidelines and 100-percent tax on excess profits
Raising interest rates	Intended to sop up excess rubles but relies on administrative fiat rather than allowing interest rates to respond to changing economic conditions
Creating worker committees to control the distribution of food and other consumer goods	Attempt to reduce theft and speculation is a return to administrative control that reflects inability of legal system and ruble to perform their functions
Confiscating high-denomination ruble notes	Attempt to confiscate black market profits also hurt legitimate small entrepreneurs who were unable to document past earnings

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Creating central stabilization fund	Effort to cushion transition to new system by enterprises operating at a loss will be financed primarily by successful enterprises; undermines effort to force enterprises to operate more efficiently and become financially independent
Allowing KGB to inspect business inventories, documents, and cash	Effort to prevent "economic sabotage" adds to problems of small businesses and cooperatives that have stockpiled scarce materials to protect against shortages; also dampens entrepreneurial initiative and foreign interest in joint ventures and investment

prolonged and divisive debate that stretched well into 1990. While the final package is a product of political compromise, it still breaks new ground in establishing the legal basis for a more market-oriented system (see inset).

The growing self-assertiveness of the republics and their willingness to pursue policies different from the center's also have given reformers reason to believe that their cause is no longer completely hostage to changes in the commitment of the union authorities. Market-oriented reform efforts in the republics during the past year have been closely intertwined with efforts to promote economic independence from the central government. All of the republics have issued declarations of sovereignty that proclaim authority over natural resources on their territory and control over their tax collection and banking systems, but republic reform efforts have varied greatly in pace and scope.

The reform climate has been most favorable in the Russian and Baltic republics. Russia has passed key legislation on property and land reform as part of a professed commitment to the Shatalin program rejected by the center. In addition, the government's most recent reform initiative calls for stepped up privatization and a phased decontrol of prices within six to eight months. The Baltic republics also have begun implementing ambitious plans to privatize property, reduce budget subsidies, and create their own banks and convertible currencies. In addition to these reform efforts, Russia and all three Baltic

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Key Features of Reform Legislation Passed in 1990

Property	Broadens the definition of "socialist" property to include both public and individual ownership. Stops short of using the term "private property" but sanctions wider range of private enterprise activities than previously permitted.
Land	Gives peasant farmers the right to own land and pass it on to their heirs but not to sell, mortgage, or give it away. Gives republics considerable flexibility in implementation.
Enterprise rights	Increases autonomy of state enterprises by removing some restrictions on how they can use their profits and by allowing them to establish independent associations not subject to ministerial control. Purports to give enterprises run by organizations of leaseholders, cooperatives, and shareholders equal status with state-run enterprises.
Income tax	Union set two primary rate schedules--low for most of the work force and high for self-employed workers. Revisions effective 1 April 1991 raise tax-free income level in response to retail price hikes, lower tax rates on high incomes, and end discrimination against self-employed. Some republics have altered specific tax rates.
Profits tax	Arbitrary confiscation by ministries replaced by maximum 45-percent tax on profits of most state enterprises. Extraordinarily high profits to be confiscated. Maximum union rate reduced to 35 percent effective 1 April 1991. Some republics have set lower rates.
Banking	Establishes modern two-tier banking system, with central bank operating independently of government and reporting directly to Supreme Soviet. Independent republic central banks are to delegate control over money supply to central bank. All other banks are to become profit-seeking commercial ventures providing banking services to enterprises and consumers.

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republics are actively promoting trade with the outside world and foreign investment on their territory.

Meanwhile, at the grass roots level private economic initiative continues to expand and find new outlets. According to Soviet statistics, production by cooperative businesses increased by 75 percent last year, even though the number of restrictive regulations also grew. In agriculture, the formation of independent farms has continued, albeit slowly, with a minimum of official encouragement. One of the most promising recent developments is the sprouting of "commodity exchanges" in cities from the Baltics to Siberia. So far, these exchanges bear little resemblance to the sophisticated Western organizations of the same name, but they do provide a source of badly needed supplies for factory managers who can no longer rely on the crumbling central distribution system. In addition, they are much more efficient than barter deals arranged one at a time.

Given several years to develop in a political environment conducive to their growth, these exchanges and other fledgling market institutions could contribute greatly to economic recovery. The Soviet economy's problems are currently so severe, however, that our assessment of its prospects must have a shorter-term focus.

Grim Prospects in Near Term

The Soviet economy is in such turmoil that it is impossible to estimate its performance by relying totally on the methods used when the economic system was relatively stable. All things considered, we believe real Soviet gross national product (GNP) declined by about 4 to 5 percent in 1990 (see appendix A). Given the great perturbation in the economy, however, GNP numbers alone tell much less of a story than usual.

There is no doubt that 1991 will be a worse year for the Soviet economy than 1990, and in all likelihood it will be sharply worse. Despite renewed expressions of support for market-oriented reforms by the union leadership and an agreement by the center and nine republics to implement anticrisis measures, the politics of both reform and stabilization likely will continue in turmoil, and the economy likely will continue to suffer from sharp shifts in government policy. Most unofficial Soviet forecasts place the likely decline in output at 10 to 20 percent, and, according to some estimates--which we consider extreme--output could fall by as much as 40 percent. Declining output will not be the only problem, moreover. The Soviets also will have to face the consequences of excessive budget deficits, rapid expansion of the money supply, rising inflation, and deteriorating external economic relations.

The Leadership's Anticrisis Program

The central leadership recently responded to the accelerating deterioration of the economy with yet another effort at stabilization--this time called an "action program for leading the economy out of crisis." The draft anticrisis program issued in early April includes a host of measures aimed at stabilizing the production and distribution of goods--especially food and other consumer necessities--and bringing the budget deficit and money supply under control (see inset). Some of these measures have been tried before with little success, but others--for example, the removal of restrictions on overtime work and the reopening of factories closed for environmental reasons--are as yet untested. In an effort to enhance its appeal to reformers, the program also calls for speeding up the privatization of housing, retail trade, consumer services, and small industrial enterprises, as well as for completing the transition to "primarily free price formation" by 1 October 1992.

The prospects for the anticrisis program depend less on these provisions, however, than on whether the center and the republics can resolve the impasse in their political and economic relations and on whether the promises in the program will be followed by concrete actions. The agreement reached on 23 April 1991 by Gorbachev and the leaders of nine republics may be a promising sign for future cooperation and could give new momentum to economic reform. Although not all the details of this accord are known, it appears that Gorbachev consented to a devolution of political and economic power to the republics in return for their

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Key Measures in Anticrisis Program

Center-Republic Relations

- Suspend decisions of republic and local bodies that contradict agreed center-republic policy on budget and other issues; relieve guilty officials of positions and prosecute them
- Pass legislation obligating lower-level executive bodies to carry out decisions of higher bodies
- Trade at world prices with republics not signing union treaty
- Give republics responsibility for privatizing some union enterprises
- Work out new arrangements for distributing hard currency funds and foreign debt between center and republics

Stabilization of Production and Distribution

- Ban strikes for period of anticrisis program; increase penalties for illegal strikes
- Remove restrictions on overtime work; suspend legislation adopted in 1990-91 that causes reduction in working time
- Direct urban workers and military personnel to help with harvest
- Introduce "special mode" of operating transportation and communications systems
- Restart most important production stopped for ecological reasons
- Shut down inefficient production capacity
- Sell unused inventories of materials and equipment

Special Help for Agriculture

- Strengthen wage and price incentives to deliver more supplies to agriculture than in 1990; stiffen penalties for reduced deliveries
- Allow farms to market up to 30 percent of output at free prices in 1991
- Allow retail stores and restaurants to buy food from farms and people with private plots for sale at free prices
- Grant credit on advantageous terms to farms in financial difficulty

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Stabilization of Financial Situation

Work out plan for reducing budget expenditures in second half of 1991 at union, republic, and local levels
Suspend programs for which financing is scheduled to begin after 1 July 1991; impose moratorium on new programs
As of 1992, replace sales tax and turnover tax with value added tax and excise duties
Authorize state bank to establish ceilings for 1991 on credits for budget spending by center and republics
Reduce imports by at least 10 to 15 percent by end of 1991

Development of Markets and Private Economic Activity

On priority basis, privatize enterprises in retail trade, restaurants, personal services, and automobile repair, plus small industrial enterprises
Abolish restrictions on cooperatives engaged in retail trade in second quarter of 1991
Privatize housing on voluntary and predominantly free basis
Complete transition to primarily free price formation by 1 October 1992; introduce "special mechanism" for regulating prices charged by monopoly producers
Pass legislation on repatriation of profits and hard currency investment

Expansion of Social Safety Net

Pass legislation on indexing incomes to cost of living
Complete formation of state employment service network and employment funds in first half of 1991; complete formation of job retraining and vocational guidance system by end of 1991
Introduce paid public work

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support of the center's stabilization measures and agreement to sign a new union treaty soon. Reportedly the republics will be free to pursue economic reform at their own pace. If so, they will be give a chance to demonstrate that their claims of being more committed than the center to free market principles are more than empty boasts. If the accord is to be sustained for more than a few months, however, the center will have to permit a much larger republic role in central decisionmaking.

Falling Output and Rising Inflation

The course Gorbachev was pursuing prior to 23 April--trying to stabilize the economy and maintain the union through a mixture of administrative measures and intimidation--has already led to a sharp drop in output. If this course is maintained, real Soviet GNP is likely to decline by 10 to 15 percent in 1991, and the annual rate of inflation could easily exceed 100 percent.

If the regime resorts to more repressive policies--such as the introduction of presidential rule in the republics and severe punishment for failure to comply with central orders--the results would depend on the population's response. Acceptance of such a step back toward the old system probably would help stem the decline in output and the rise in prices in the short run. The regime would run a serious risk, however, of popular resistance in the form of demonstrations, strikes, and possibly outright rebellions. Under these conditions, real GNP would fall by at least 15 percent, and inflation could spiral out of control.

Another possibility is that the 23 April agreement could serve as a basis for sustained improvement in center-republic relations and a renewal of reform. This would help to reduce confusion over lines of authority, promote interrepublic trade and thus ease supply bottlenecks, and facilitate center-republic cooperation on efforts to reduce the budget deficit. The decline in real GNP this year probably would still be close to 10 percent, but inflationary pressures could ease. In the next few years, prospects for stabilizing output would improve, but the freeing of prices that serious reform efforts would require probably would lead to extremely high inflation.

Hard Currency Crunch

Whatever course the center pursues, the USSR will face tough choices this year in trying to halt the deterioration of its external financial position. Oil exports will continue to decline as a result of problems in domestic production and the soft world market. Depending on world prices, hard currency revenues from oil exports could fall by 25 to 60 percent. Markets will remain weak for Soviet exports of manufactured goods, including arms. Meanwhile, demand for imports, especially of agricultural products, is likely to remain high.

The Soviets will also face a rising debt service burden in the form of interest charges and scheduled payments of principal on medium- and long-term debt. Some short-term credits that Western lenders have been refusing to roll over also will have to be repaid, and the pressure to eliminate arrears in payments to

Western firms will be great. Some of the credits already pledged by Western governments have been disbursed slowly--probably as a result of Western displeasure over center-republic confrontations and a lack of progress on economic reforms. Moreover, the Soviets have not drawn heavily on credits tied to nonfood goods. Instead, the drastic import reductions in the first quarter of 1991 indicate that the USSR has chosen to limit expenditures rather than face comprehensive debt rescheduling. These import cuts have hurt domestic production, however, and the Soviets will have difficulty continuing along this course.

Tighter Belts All Around

Given the sharp drop in output that appears all but inevitable this year, nearly everyone will be left with fewer resources. Rising pressure to reduce the budget deficit but still improve the social safety net is likely to mean continued reductions in both investment and defense (see inset). Indeed, defense cuts are likely regardless of the direction center-republic relations take. If the center resorts to more repressive tactics, the most likely result would be a drop in output so sharp that it would necessitate lower military spending. A center-republic accord, in contrast, would improve economic prospects generally. At the same time, it would likely give the republics a greater share of tax revenues and reduce the funds available for defense and other programs financed by the central government.

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Defense Budget Up, But Not as Much as Prices

In January 1991, the Supreme Soviet approved a defense budget of 96.6 billion rubles for this year--up from the 1990 budget of 70.9 billion rubles. Soviet officials say the new figure includes compensation for large increases in the prices of defense goods and actually reflects a cut of about 10 percent in real terms. Draft budget figures indicate that real procurement is to fall by about 20 percent, while real outlays on personnel and operations and maintenance will rise by 15 percent, probably in connection with the costs of withdrawal from Eastern Europe. Real spending on research, development, testing, and engineering was originally slated for a sharp decline, but the military is struggling to minimize cuts in this area.

We believe the published Soviet defense budget captures only about half of the outlays actually devoted to defense and as a result is seriously flawed as an indicator of changes in the allocation of resources to defense. Nonetheless, our analysis of Soviet military programs indicates that total defense spending will, as official Soviet sources claim, continue to fall in 1991.

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After the erosion in the quality of life that has occurred during the past two years, Soviet consumers are reluctant to endure further hardships. Unfortunately, no relief is in sight. The drop in output in the first quarter extended to manufactured consumer goods, and the defense conversion program has not provided the benefits the leadership hoped for. Moreover, tight limits on the availability of hard currency will make it increasingly difficult to boost imports. Perhaps worst of all are the twin threats of rising unemployment and accelerating consumer inflation.

Under these circumstances, it is no surprise that consumer hardships have become a severe liability for political leaders at all levels of government. The recent prolonged strikes by coal miners and sporadic protests by other workers were directed at the policies of the central government and played a role in moving the center back toward a dialogue with reform-minded republic leaders. But these demonstrations were also an indication of popular impatience with all levels of government for not improving standards of living. It will take great political skill to retain--and, in the case of the central government, regain--popular trust and to put through effective but often initially painful reform measures. The alternative, however, is a completely bleak Soviet future.

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Lessons From East European Economic Reforms

Market-oriented economic reforms in Eastern Europe vary considerably among countries, but the Soviets can draw some general lessons from the combined East European experience:

- The transition from a centrally planned economy to a market-oriented one has been painful in all the countries that have undertaken it. Output and employment have declined, sharply in most cases, and inflation has climbed at annual rates with at least two digits and sometimes four.

- A lack of fiscal and monetary restraint leads to rapid inflation when central controls over the economy are relaxed. Attempts to avoid inflation by slowing the transition to markets have not been successful.

- Privatization is difficult to accomplish quickly. Most East European governments have made some progress in encouraging small businesses but have yet to come to grips with the politically sensitive issue of how to equitably transfer ownership of large state-owned enterprises to private hands.

- Political unity behind an elected government, or at least one with wide popular support, is at least a major advantage and probably an essential condition for successful economic reform. Poland, for example, suffered through a decade of declining output and spiraling inflation with few positive results before the elected Mazowiecki government instituted the "shock therapy" program. Yugoslavia, in contrast, has been torn apart by clashes between divergent national groups unable to resolve their differences.

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Appendix A

Problems of Measuring Soviet Economic Performance

The CIA has been involved in measuring Soviet economic performance since the early 1950s and has been the principal source of Western estimates since the mid-1960s. Over the years, the primary focus of our estimates has been to provide a quantitative basis for analysis--like that in this paper--of changes in the Soviet economy. In addition, we have produced comparisons of the size of the Soviet and US economies. These two estimating efforts are largely distinct and are discussed below in separate sections of this appendix.

In the last few years, our estimates of Soviet economic performance have become a subject of increasing criticism. Although there are some who have claimed that our estimates understate the growth that has occurred over the years, most of the recent critics maintain that we have overestimated both the growth and the size of the Soviet economy. The arguments of these critics draw in part on a surge of attacks on official Soviet statistics--including some of the data we use--by Soviet economists encouraged by glasnost. Other arguments refer to the present turmoil in the USSR and Eastern Europe and question whether our estimates provided an adequate picture of Soviet economic difficulties as they developed.

Estimates of Economic Growth

Measuring real economic growth is a difficult task--even in Western countries, where data are far better than in the Soviet Union--but the changes in the level of production that have occurred in the USSR over the past year have been unusually difficult to quantify. Changes in Soviet reporting, for one thing, have left gaps in some of the data we use. In addition, rapid changes in the economy itself are increasing the degree of uncertainty normally involved in our estimates.

Over many years, with only a few exceptions, CIA estimates have shown notably slower overall growth than official Soviet summary statistics. This can be seen in the following tabulation:

	CIA	Official Soviet	Gap
	Percent Change in Soviet GNP		
1981-85	1.7	3.7	2.0
1986-88	2.5	3.9	1.4
1989	1.5	3.0	1.5

For last year, however, the routine application of our standard estimating methods indicates that the drop in Soviet GNP was only slightly worse than the 2-percent decline the Soviets officially reported. Part of the reason is that one of the key assumptions we use in estimating changes in Soviet GNP may no longer be valid under current economic conditions. Our estimates of trends are based primarily on detailed data on the output of individual products included in the various components of GNP. In most instances, we use data on quantities of output in physical units, such as tons of oil or liters of vodka, valued at base-year prices per unit. Over the years, we and other students of the Soviet economy have looked long and hard at the reliability of these data and found them generally acceptable.

Our data, however, reflect changes in total output--including materials used in production--while the standard definition of GNP includes only output sold to final purchasers, or, equivalently, the value added by the primary inputs, such as labor and capital, used to produce that output. We have examined the impact of using data on total output rather than value added and believe that, most of the time, this simplification has not led to substantial errors in our estimates. Given the breakdown that occurred in the Soviet transportation and distribution systems last year, however, when materials were tied up in freight cars and warehouses, value added almost certainly fell more than total output. Data reported by an official of the Soviet State Planning Committee suggest that a correction for this problem might lower our estimate of the change in 1990 GNP by 1 or 2 percentage points.

Another measurement problem that may have worsened last year results from our use of Soviet data on ruble values of output in supposedly constant prices to calculate the change in some components of GNP. Almost all Western experts, and now most Soviet economists, believe that these data overstate output growth--and understate inflation--because new products are introduced at prices that include overly generous allowances for improvements in quality that are often illusory. We believe that these data have not had a severe impact on our estimates in the past because they are used to estimate only about 10 percent of total GNP and because Soviet inflation has been slow by Western standards. Last year, however, price controls weakened seriously, and inflation accelerated sharply. Our estimate of the change in GNP might be reduced by roughly one-half of a percentage point on this count.

Corrected for both of the problems reviewed above, our estimate of the decline in GNP last year is about -4 to -5 percent. Part of this reduction might be offset, however, by an adjustment for underreporting of physical data. In the past production managers had incentives to overstate the output they reported to the statistical authorities because a considerable share of their incomes--and that of their workers--depended on reported output. Last year incentives for underreporting may have increased as acute shortages made barter deals between factories more attractive than deliveries to the central supply system. Enterprises may also be underreporting output to reduce their tax obligations. Unfortunately, the impact of such a change in reporting is nearly impossible to quantify.

Even our corrected GNP estimate does not reflect the full impact of last year's economic decline on consumers and other final users of output. One reason is that GNP includes depreciation, which is a cost of production but does not yield direct benefits to users. At a time when repairs of aging plant and equipment are taking up a growing share of output, Soviet GNP excluding depreciation--or net national product, as it is called in the United States--has almost certainly declined by more than total GNP.

More important, ubiquitous shortages dealt a serious blow to consumer welfare last year. The loss of leisure time as a result of searching for goods and standing in line, although difficult to quantify, must have been substantial. In addition, the combined effects of shortages and inflation resulted in a rising "misery index" and growing popular anxiety about future living standards.

Comparisons of Economic Size

Comparing the size of the Soviet economy with that of the United States is an even more complicated task than estimating economic trends. During the past year, a rising tide of critical attention has been focused on the comparisons conducted by both the CIA and the Soviet State Committee for Statistics.[2]

At present, we estimate that total Soviet GNP in 1989 was 39 percent of US GNP when valued in ruble prices and 66 percent of US GNP in dollar prices. The geometric mean of these ratios--a generally accepted single estimate of relative size--is 51 percent. Soviet GNP appears smaller in rubles than in dollars because goods and services that are relatively abundant in the

[2]For further discussion of this issue, see the statement, "Estimates of the Soviet Economy," presented by George Kolt, Director of Soviet Analysis, Central Intelligence Agency, to the Senate Foreign Economic Relations Committee, July 1990.

USSR are relatively cheap there and relatively expensive in the United States. This sort of inverse relationship between relative prices and relative quantities is found in almost all international economic comparisons.

Although we often summarize US-Soviet GNP comparisons by using the geometric mean, the gap between the ruble and dollar measures provides an important indication of the difficulty of comparing two economies as disparate as those of the United States and the Soviet Union. In part, this gap also reflects the much greater sophistication of US technology. In general, Soviet production processes require large inputs of labor, which is much more expensive in the United States.

As we have acknowledged, our comparisons almost certainly overstate the size of Soviet GNP because we cannot adjust completely for the inferior quality and limited variety of Soviet goods and services. We do try. To calculate the ratios of ruble and dollar prices on which these comparisons are based, we match Soviet and US products as closely as possible in size, design, durability, and other qualitative features. The remaining quality gap is substantial, however. For example, Soviet consumer goods lack style and variety, retail shopping conditions are primitive, providers of education are often poorly trained, and health care is miserable. Nonetheless, until we get better data, the only further adjustments we could make for quality differences would be arbitrary.

In a promising sign for the future, the Soviet State Committee for Statistics has begun participating in the ongoing

United Nations project comparing economies worldwide. As one result of this work, Soviet statisticians have recently published "experimental" comparisons of Soviet and US GNP that reflect substantial downward revisions of their earlier claims and that also are lower than CIA estimates, as shown in the tabulation below:

	CIA		Official Soviet	
	1989	1985	Previous 1985	Experimental 1985
	USSR as Percent of US[a]			
Total GNP	51	54	56	43
GNP per capita	44	46	48	37
Consumption per capita	31	32	31	26

[a]Geometric Mean

We are studying these new estimates and looking forward to the results of further Soviet work in this area. The new estimates need to be interpreted carefully, however, because they reflect a change from previous UN practice, which the CIA continues to follow. In the past, the United Nations assumed that the productivity of an hour of labor used to provide services such as health, education, and government administration was the same in all countries. In the latest UN comparisons (phase V), however, the productivity of labor services in several East European countries--including Hungary, which is used as a link country in the new Soviet comparisons with the United States--is assumed to be only half that in the rest of the world. This new assumption, which has aroused controversy, is responsible for a substantial portion of the downward revision in UN estimates of the relative size of the East European economies.

Appendix B

Tables on Soviet Foreign Economic Relations

Billion Current US Dollars

Table B-1

USSR: Total Trade, 1981-90

	Average Annual 1981-85	1986	1987	1988	1989	1990
Total Soviet exports	87.4	97.0	107.7	110.7	109.3	104.1
Communist	49.5	65.0	70.0	71.0	67.1	52.1
Developed countries	25.2	18.8	22.7	24.6	26.6	38.7
Developing countries	12.7	13.2	14.9	15.2	15.7	13.3
Total Soviet imports	79.1	88.9	96.0	107.3	114.7	120.9
Communist	44.7	59.4	66.6	71.6	71.0	61.4
Developed countries	24.9	22.7	22.1	27.2	33.4	48.6
Developing countries	9.5	6.8	7.3	8.5	10.3	11.0

Figures for 1990 are preliminary.

Includes both hard currency trade and trade conducted with soft currency countries.

Million Current US Dollars

Table B-2

USSR: Estimated Hard Currency Balance of Payments

	1975	1980	1985	1986	1987	1988	1989	1990
Current account balance	-4565	1470	137	1383	5118	1183	-4419	-4500
Merchandise trade	-4804	1814	519	2013	6164	2634	-2115	-1300
Exports f.o.b.	9453	27874	26400	25111	29092	31165	32931	35500
Imports f.o.b.	14257	26960	25881	23098	22928	28531	35046	36800
Net interest	-521	-1234	-1482	-1730	-2146	-2551	-3404	-4300
Other invisibles and transfers	760	890	1100	1100	1100	1100	1100	1100
Capital account balance	6981	284	1869	1795	-739	965	6807	7573
Change in gross debt	6786	-792	6804	6811	5011	1579	8500	2800
Official debt	1492	-280	463	391	480	-1300	6600	NA
Commercial debt	5294	-512	6340	6420	4532	2879	1900	NA
Net change in assets in Western banks	-163	-35	1787	1595	-527	1119	-900	-6500
Estimated exchange rate effect	-22	-411	3248	3322	4977	-2205	-581	-2400
Net credit to LDCs	715	950	1700	4100	4800	5500	5665	3775
Gold sales	725	1580	1800	4000	3500	3800	3665	4500
Net errors and omissions	-2416	-1754	-2006	-3178	-4329	-2148	-2388	-3073

Figures for 1989 and 1990 are preliminary.

Net errors and omissions include hard currency assistance to and trade with Communist countries, credits to developed Western countries to finance sales of oil, and other nonspecified hard currency expenditures, as well as errors and omissions in other line items of the accounts.

Billion Current US Dollars

Table B-3

USSR: Estimated Hard Currency Debt to the West

	1975	1980	1985	1986	1987	1988	1989	1990
Gross debt	12.5	20.5	29.0	35.8	40.8	42.3	50.8	53.6
Commercial debt	8.2	11.0	19.5	25.9	30.4	33.2	39.8	42.3
Government and government-backed debt	4.3	9.5	9.5	9.9	10.4	9.1	11.0	11.3
Assets in Western banks	3.8	10.0	13.3	14.9	14.4	15.4	14.7	8.2
Net debt	8.7	10.6	15.7	20.9	26.4	26.8	36.1	45.4

Eastern Europe: Coming Around the First Turn

16 May 1991

Not to be released without permission of the Chairman.

A paper presented by the Central Intelligence Agency to the Technology and National Security Subcommittee of the Joint Economic Committee, Congress of the United States.

SUMMARY

Economic reform programs are now in place in Eastern Europe, although progress is uneven across the region and this year will be even tougher than last. The reform programs cover the gamut of economic activity: eliminating price subsidies, abolishing centralized economic planning, creating a convertible currency, and establishing a legal framework for fostering private ownership, both domestic and foreign. Judged against the glacial pace of economic change over the previous four decades, and compared to the structure and management of the economies two years ago, the region has advanced dramatically.

Those countries farthest along on the reformist road--Poland, Hungary, and Czechoslovakia--have made significant gains. The elimination of price subsidies, for example, dramatically improved the availability of a wide range of consumer goods. As a result, long lines of shoppers--still one of the dominant features of daily life in the Soviet Union--have all but disappeared. With support from the International Monetary Fund, officials are learning how to draft more realistic budgets that, if sustained, should foster monetary stability and help keep a lid on inflation.

Officials across the region have encouraged private investment by easing restrictions on the size of landholdings, on the percent of foreign ownership in local firms, and on the repatriation of profits. A lively debate is underway on how to compensate owners of property confiscated by previous Communist regimes. A thriving private sector has already begun to emerge in trade and other service-oriented activities--one that could become the engine of future economic growth.

Notable achievements have occurred in the region's external economic accounts. The reforming countries quickly began reorienting their trade to the West with positive results. Poland and Hungary recorded their largest trade surpluses in years. All three northern reformers substantially devalued their domestic currencies as part of a program to establish limited currency convertibility. Black market activity and currency speculation, particularly in Poland, have declined substantially.

Progress has come at a cost. According to our estimates, GNP fell about 7 percent for the region as a whole, the steepest annual decline on record. Although published data understate the output from new private economic activity, per capita GNP was below the 1980 level for all but Hungary and Czechoslovakia. New governments inherited deep-seated systemic problems that had only grown more acute in the final days of Communist rule. In the Balkan countries of Yugoslavia, Bulgaria, Albania, and

Romania, political upheavals led to widespread worker absenteeism and loss of discipline in the workplace. Soviet economic problems, meanwhile, led to irregular deliveries of critical raw materials and oil to Eastern Europe that disrupted industrial activity there.

Economic output in 1991 is likely to decline as much as last year. Local industries will continue to feel the effects of a weak domestic market, compounded by the loss of their Soviet customers. Declining production will put even more pressure on the region's leaders to begin selling off or shutting down unprofitable firms. Officials have hesitated to move in this direction--which is essential to making these economies competitive in the international marketplace--because of the impact on unemployment. The political euphoria of the "revolution of '89" is giving way to frustration over the slow pace of economic transformation.

Western assistance will continue to be important to the region. The United States and other Western donors have already provided or pledged almost $45 billion in credits and other assistance since July 1989. The $45 billion total, moreover, does not take into account the recent decision by Paris Club creditors to forgive more than half of their outstanding loans to Poland. In addition, the International Monetary Fund and World Bank are providing critical technical assistance, advising government leaders on key policy requirements, and monitoring country economic performance. This level of assistance will take several years to utilize fully, and require a more systematic effort by the various governments to develop a comprehensive plan identifying suitable projects.

As important as this assistance is, the key variable remains the will of East Europeans to persist in the face of further difficulties. They are now the world's pioneers in transforming command economies into free ones. Those leading the region along this difficult road will have to resist pressure to turn back, and publics bearing the costs of these changes will have to draw on the same reservoir of persistence and courage that led to the dramatic changes of 1989-90.

Eastern Europe: Coming Around the First Turn

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APPENDIX

Eastern Europe: Coming Around the First Turn

Eastern Europe's historic effort to transform moribund centrally-planned economies into dynamic market-oriented ones is at a critical juncture. Some changes are obvious. Reform programs--in some cases extremely ambitious--have been launched, private property is becoming a reality, money is beginning to take on real value, and a new class of entrepreneurs has materialized, literally on the streets of their cities.

This activity has begun to have some positive impact on the lives of ordinary people. In Poland, for example, the ubiquitous lines of frustrated consumers and barren store shelves have all but disappeared. The more fortunate in the area have begun to get a taste of the luxuries of Western consumer societies, as import restrictions crumble. The first thin wave of Western investment has begun to introduce new skills and new products.

But there are shadows as well. Prices have soared, unemployment is rising, and public support for reform has been dampened by the realization that the road to prosperity will be a long and frequently painful one. Moreover, the benefits of change are not evenly distributed, and grumbling about the need for even greater sacrifices on the part of ordinary people is becoming louder. The looming difficulties and rising discontent have fueled debate about both the pace and scope of reforms among political and opinion leaders.

The most important issue they face is how to handle privatization and dismantling of inefficient state enterprises. Rapid privatization is the key to quickly generating the positive "supply response" needed to raise consumer living standards and get a sustained economic recovery underway. At the same time, closing down state firms will generate another surge in unemployment that could seriously undermine the public commitment to reform. The crunch may come this year. IMF programs call for tight budgets that leave little room to subsidize bankrupt firms left over from the Communist era.

Western assistance will be even more critical to the ability of East European governments to convince their publics to tolerate the additional pain that is an inevitable part of the transformation process. Regional leaders will be looking for continued sizable flows of financial support, particularly grants. They also will be pushing for Western governments to provide incentives that will accelerate the flow of Western investment and technical assistance. And, finally, East Europeans will want greater understanding from the West when domestic political pressures lead to a momentary slowdown in the reform process.

Eastern Europe: Putting Reforms Into Place

Throughout Eastern Europe, the departure of Communist governments has been quickly followed by a new focus on economic reforms. The need for reform had been recognized even by most of the previous Communist regimes, and several of them--notably Hungary's--had adopted a few reform measures beginning in the 1960s. These hesitant steps pale in comparison with the dramatic changes occurring over the past year or so. The programs new governments have put in place--often developed with the International Monetary Fund--cover the gamut of economic activity. They have moved to free prices and eliminate subsidies, abolish centralized economic planning, create a convertible currency, and establish a legal framework for private ownership, both domestic and foreign.

As of May 1991, all five of the former CEMA countries in Eastern Europe--Poland, Czechoslovakia, Hungary, Bulgaria, and Romania--have made changes that dramatically alter the way their economies operate. In accepting the need for market forces to guide their economies if they are to have any hope of eventual prosperity, they have made a major break with their Communist past. Nevertheless, much ground remains to be covered before achieving true market economies; in each former CEMA country, the state still owns between 80 percent (in Poland and Hungary) and more than 95 percent (in Czechoslovakia and Bulgaria) of production assets.

Key Reform Measures

Economic reform packages throughout the region generally have included similar measures designed to dismantle government control over the economy. Implementation has varied, however, depending on the degree of political change and the solidity of the consensus within the new governments. Another key variable is the extent to which populations accustomed to the security which accompanied the penury of Communist command economics support the need for change.

Price liberalization has been one of the first measures East European reformers have implemented. Governments have removed most of the controls and subsidies that not only kept prices low but fostered inefficiency through distorted prices that failed to reflect real costs. Fear of the reaction in the streets has led them to retain controls on a few key consumer goods, primarily housing, certain foodstuffs, and energy. These fears are not misplaced--

protests last fall in Budapest over the doubling of fuel prices paralyzed the city for three days and prompted the government to rescind most of the increase.

Governments also have made good progress with **currency reform and other financial liberalization measures** in most of the region. Currency devaluations have reduced or eliminated the gap between official and black-market rates, and at least limited convertibility with Western currencies has been established. The most progress has been achieved in the three northern countries, Poland, Hungary, and Czechoslovakia, but there has been some progress elsewhere as well. Even beleaguered Yugoslavia's experiment with convertibility, introduced in January 1990 as part of an ambitious stabilization program, held up remarkably well until late in the year. Growing concerns about the country's uncertain political future, however, now have sparked a massive run on hard currency reserves.

Privatization--the process of transferring ownership of the economy from the state to private concerns--is the nut that every East European government must crack to ensure a successful transition to a market economy. Without it, other elements of the reforms will either fail to take root or not yield the desired results. The privatization issue covers several sets of reform measures, including joint-venture legislation, land reform, bankruptcy laws, methods of ownership transfer, subsidy policies, and compensating former owners for property confiscated by the Communists. Plans in most countries call for a transfer of ownership from state control within the next few years, but all are well behind their targets, both because of the complexity of the process and worries about massive unemployment.

The legal, administrative and financial problems which must be unravelled are seemingly without end. Governments are having difficulties determining the value of large and sprawling state firms, and the claims of pre-Communist owners also have snarled negotiations. Lack of investment capital is another problem--few East Europeans are able to finance the purchase of large firms, and foreign investors, with a few exceptions, have been wary of investing in the region.

Country Comparisons

Poland, Hungary, and Czechoslovakia are leading the way. All three had experimented with economic reforms even under Communism, and this experience--together with their generally more advanced economies and stronger political mandates--left them much better prepared to deal with change than their neighbors to the south. But even Romania and Bulgaria have begun to grapple with reform. Sofia--on paper, at least--has one of the region's boldest programs.

Change is evident even in Albania, long isolated from the rest of Eastern Europe. Yugoslavia's long-running reform effort, on the other hand, has bogged down amid political strife that threatens to break up the country.

Poland: The Region's Reform Leader

The bold economic program Warsaw initiated at the beginning of 1990 continues to be the pacesetter for the region. Poland has greatly reduced import quotas and duties, devalued the zloty to market rates, and made substantial progress toward convertibility. In addition, the National Bank of Poland increasingly is relying on indirect levers of monetary control, such as reserve requirements and changes in refinance rates, rather than credit ceilings. It has freed nearly all producer prices and all but 5 to 10 percent of retail prices. Warsaw still retains some price controls over energy, rents, and public transportation but is gradually trying to raise them toward market levels.

Poland is still struggling, however, with the pivotal issues of privatization and structural change. On the plus side, Warsaw has achieved rapid progress in promoting the formation of small private businesses, mainly in retail trade and services. The number of registered private stores--a figure that excludes a large number of street vendors--has quadrupled, and the government has sold or leased half of its stock of small state shops. Reported private industrial output grew 8.5 percent in 1990, and the private sector's share of total industrial production now totals 17 percent.

The swift growth of small private firms contrasts sharply with the lagging pace of privatization of large state enterprises. Only eight state firms have been privatized so far, five of them through public stock offerings. Warsaw's initial experiments with public stock offers proved disappointing, and three of the initial offers had to be partially bought out by state banks because of insufficient public demand. Warsaw is now trying to develop a voucher system to accelerate privatization through the free distribution of shares and is more actively promoting private placements with major foreign and domestic investors. Structural change has also been slowed by Warsaw's reluctance to force insolvent state firms into bankruptcy for fear of the political and social consequences. In 1990, 214 loss-making state firms were being monitored by the government, but only 12 were taken to bankruptcy court and no verdicts have been declared. In addition to worries about unemployment, particularly in rural, one-industry towns, government officials worry about prematurely shutting down potentially economically viable firms.

Hungary: Building on Past Programs

Budapest's reform effort, which is second only to Poland's in its ambitions to eliminate state controls over the economy, has roots that go back to the 1960s. Hungary's new democratically elected government has been able to benefit from a solid groundwork of reform legislation already on the books covering key areas like foreign investment and financial liberalization. Last year, Hungary opened the region's first stock exchange, auctioned off a number of small, state-owned businesses, and created the State Property Agency to oversee privatization of large firms.

In March 1991, the government announced its latest reform effort, a four-year program intended to accelerate privatization, reduce inflation, improve the hard currency payments account, and foster economic growth. The program closely follows IMF recommendations. Steps taken to date to implement the program include the lifting of controls on 90 percent of prices, eliminating the need for licenses on all but 10 percent of imports, and allowing private companies to conduct foreign trade transactions. Budapest has also introduced internal convertibility of the forint by allowing domestic firms to hold hard currency accounts. Foreign investment legislation, already liberal by East European standards, has been further deregulated, for example, by lifting requirements that foreigners get approval for control of joint ventures.

Although 16,000 new businesses opened last year, privatization has been slowed by political bickering as well as by technical problems of implementation. Critics of the government's program charge that it has set prices too low for the assets it is putting on the market. Disputes over ownership also have been a hindrance. The government has been reluctant to tackle the largest enterprises, which are responsible for the bulk of Hungary's industrial activity and are its leading employers. As a result, roughly 80 percent of assets are still state-owned--compared with 90 percent in 1988. A 1986 bankruptcy law was strengthened last year, but few large firms have been allowed to go under.

Czechoslovakia: The Cautious Approach

Unlike the situation in Poland, the Czechoslovak Government is not of one mind about the advantages of a market economy and the wisdom of moving quickly. President Havel and the political circles closest to him have taken careful note of the political and social impact of Poland's "Big Bang" program, and have inclined towards a more cautious approach designed to lessen the immediate risk of inflation and unemployment. At the same time, Prague wants Western assistance and has moved to lay the legal foundation for economic reforms. The legislation in place includes new laws on private enterprise, joint ventures, foreign trade, currency convertibility, privatization, and collective bargaining. The government also has lifted controls on some retail prices while tightening monetary and fiscal policy to curb inflation.

Last September Prague laid out a two-year program of further reforms. The program is another compromise between those pushing for radical reforms and those more wary of the social and political costs. It includes measures to:

-- liberalize more retail and wholesale prices, leaving controls in place on only 15 percent of prices.

-- unify commercial and tourist exchange rates, adopt internal convertibility, and remove most restrictions on the purchases of hard currency by firms.

-- liberalize foreign investment and trade laws to attract investment and increase domestic competition.

-- privatize small firms by auction or repatriation to former owners or their heirs.

-- construct a social safety net.

The impact of the new program was immediately apparent. Inflation in the first quarter of this year soared to 64 percent due to sharp cuts in subsidies, the devaluation of the crown, and decontrol of prices in January. Industrial output dropped by almost 12 percent during the same time frame, due largely to the sharp reduction in exports to the USSR and other CEMA trading partners. Unemployment has risen by more than 20 percent since December and now stands at about 2.4 percent of the labor force. The number of people out of work reportedly is increasing by about 1,000 daily.

<u>Bulgaria: Reforms Launched This Year</u>

The Bulgarian Communist Party--now calling itself Socialist--remains powerful, and economic reform did not get seriously underway until it was forced to enter a coalition with the anti-Communist Union of Democratic Forces (UDF) in

December 1990. In January 1991, the National Assembly approved several key reform measures. They include:

-- The lifting of price controls on 1 February. Key exceptions include electricity, fuel, and basic foodstuffs. Prices for most basic goods immediately surged 400-600 percent, but goods began reappearing on store shelves and many shortages were eased.

-- New legislation allowing former landowners or their heirs to reclaim land expropriated in 1946 and permitting farm families to apply for up to 30 hectares of land. The first private farmers may appear after this year's harvest, but widespread private agriculture in Bulgaria will have to await the full implementation of the legislation.

-- Amending the commercial code to allow the privatization of small firms, and introducing key draft laws liberalizing foreign investment guidelines and clearing the way for large-scale privatization. The last is still before the parliament.

-- Allowing the Bulgarian lev to float freely against Western currencies. Bulgarians soon will be allowed to hold and trade Western currencies.

<u>Romania: Furthest to Go</u>

Romania still labors under the legacy of Ceausescu and has moved more slowly to close the reform gap than the other East European countries; only Albania began 1990 with an economy less responsive to market signals. The problem is political as well as economic; the upheaval that destroyed Ceausescu was as much a palace coup as a revolution, and the ruling National Salvation Front lacks the strong commitment to political as well as economic change found elsewhere. The Romanian people are no less ambivalent about the advisability of economic change than their leaders, and the government must walk a fine line between reforming the economy fast enough to attract foreign loans and investment, but not so quickly as to trigger unemployment and violent protests.

Romania's reform program began to take shape only this year, and falls well short of an open embrace of the market. Price controls remain, although price ceilings for most goods were raised substantially. Ceilings for meat and bread, for example, were doubled. Proposals by some advocates of quick reform for prices to rise to market levels, however, have been rejected as too risky. Moreover, Bucharest has provided a safety net--and added to inflationary pressures--by raising salaries, pensions, and child stipends by 20 to 60 percent.

Impelled by the need to compete for foreign support, Bucharest has passed measures to encourage foreign investment. It now accepts full foreign ownership and has committed itself to protecting capital, guaranteeing the repatriation of profits, and offering tax breaks. Repatriation of profits earned in Romania, however, is still limited to 15 percent, and there are still many restrictions on foreign companies. They may not, for example, own property not directly related to their businesses.

Bucharest legalized private ownership of small businesses in early 1990, and about 50,000 such enterprises have since been established in food processing, farming, foreign trade, consumer goods, and personal services. The process has advanced furthest in agriculture. The regime claims that well over half of all cropland already has been privatized, and state farms are well on the way to being shifted to private ownership. Farm families are entitled to up to 10 hectares each, and the remaining farm land will be transferred to holding companies.

The privatization of large firms is moving much more slowly. Bucharest has announced a complicated plan to privatize industry by first converting ownership to state-owned holding companies and then selling shares of these to employees through a voucher system. As of late 1990, Romania's State Secretary for Economic Orientation claimed that ownership of about two-thirds of state enterprises had been transferred to the holding companies. By the end of this year, Bucharest claims it will have sold 30 percent of the holding companies' shares to employees. Bureaucratic hindrances could well delay these sales, and Bucharest has not indicated a schedule for the sale of the remaining 70 percent. Most important, the scheme for privatizing through employee buy-outs excludes those industries that provide the bulk of Romania's hard currency earnings--mining, energy, and military equipment--as well as telecommunications and rail transport.

Yugoslavia: Collapsing Reforms

Economic reform in Yugoslavia has fallen victim to the country's increasingly chaotic political situation. The virtual collapse of federal authority over the republics has left the federal government unable to enforce its economic policies. The government is now unable even to control federal tax revenues, which are collected by the republics, and faces the threat of financial paralysis. The rapid deterioration of the economy, moreover, has increased the determination of some republics to act unilaterally through such means as credit creation--illegal under federal law--to protect local businesses and workers.

Economic reform in Yugoslavia has been dead in the water over the past year of political turmoil. Key provisions of the bankruptcy laws are widely ignored, and no major insolvent firm has shut down. New banking reform laws have not been able to check the flow of credit; commercial banks held $12 billion in nonperforming loans last year, and the total almost certainly has risen this year.

With the federal government unable to make progress on reforms, the focus has shifted to some of the republics. Western-oriented Slovenia and Croatia are drafting privatization legislation, and Slovenia has issued bonds to finance restructuring of its banking system. Both harbor hopes of shedding their ties to the other Yugoslav republics and regaining what they regard as their rightful place in Western Europe.

Albania: First Halting Steps

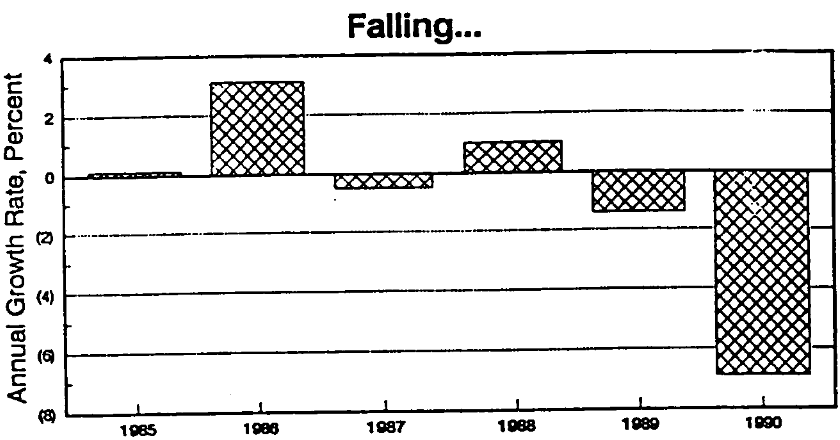
Europe's most backward country has begun to undertake what, for the last bastion of Stalinism in Europe, are significant economic reforms. Early in 1990, the Alia government announced that it would approve some economic incentives and moved to decentralize economic decision-making. Peasants now are allowed to sell produce and livestock produced from small private plots. In April the parliament gave enterprises some financial autonomy, including the authority to set prices and establish staffing levels. Tirane has approved the expansion of private businesses in the service sector and legalized foreign investment and joint ventures in July.

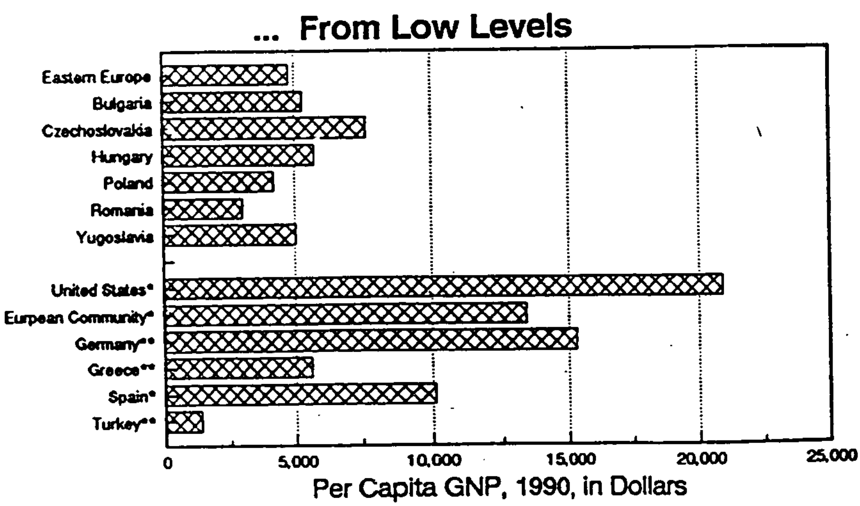
More reforms have been announced in the first months of 1991. President Alia named a State Commission on Wages and Prices to recommend by this July ways to allow wages and prices to rise to market levels. In early April, the regime approved a decree supporting private initiatives, including creation of stockholding enterprises, and set up a committee for reorganizing the economy. These measures still leave Albania far behind even pre-reform Eastern Europe, but they are moves in the right direction and show the strength of the region's reform movement.

Economic Slump Grips the Region

If they were not already aware of it, Eastern Europeans now know that economic transformation will be a long and painful process. Economic regeneration can only proceed if prices are permitted to rise to realistic levels and labor and capital are free to move from inefficient and uneconomic

Figure 1: East European GNP





* 1989 GNP
** 1989 GDP

enterprises to more efficient and competitive ones. This knowledge, however, does little to ease the distress of East European governments--and even more, the man in the street--over the grim realities of increasing joblessness and falling living standards.

The severity of the challenges that will accompany the reform process emerged into clear focus last year. Political upheaval fed worker absenteeism and sagging labor discipline. That affected industrial production, particularly in the Balkans. Central plan directives were abolished faster than they could be replaced by the signals of a still rudimentary market. Even where reforms had not materialized, the anticipation of change prompted firms to defer business decisions in anticipation of new rules.

Several other factors combined to accelerate Eastern Europe's recession in 1990. New governments inherited not only an inefficient central planning apparatus but also an aging industrial base, obsolescent technology, chronic trade and debt problems, inefficient distribution systems, a crumbling infrastructure, and steadily worsening energy shortages.

Moreover, the region's dependence on the USSR for vital energy and raw material supplies made it vulnerable to the effects of the spreading political and economic disorder in the USSR. A sharp drop in Soviet oil deliveries forced East European governments to scramble for alternative suppliers, almost at the same time that the international oil market was jolted by the Persian Gulf crisis. As a result, the region had to shell out an estimated $3 billion in hard currency.

The cumulative impact was severe. According to our estimates, GNP fell about 7 percent for the region as a whole, the steepest annual decline on record.* All of the countries experienced at least some downturn, with Romania and Poland suffering the steepest falls, respectively, of 11 and 9 percent. Per capita GNP fell below the 1980 level for every country but Hungary and Czechoslovakia.

Almost all major indicators took a sharp nosedive. Industrial production was particularly hard hit, but agricultural production also was down, largely the result of prolonged drought. Inflation soared as the East Europeans lifted price controls on a wide range of goods. The cost of many products jumped by several hundred percent. Unemployment, though still generally low by Western standards, reached levels unprecedented under Communist rule.

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*See Appendix for a discussion of East European economic data.

Table 1: Poland--Economic Data

	1985	1986	1987	1988	1989	1990/1
	(percent average annual rate of growth)					
Total GNP	1.0	3.2	-1.7	2.3	-2.0	-8.9
of which:						
Industry	1.7	0.8	-1.3	1.9	-5.8	-19.3
Agriculture and Forestry	0.4	8.0	-6.6	3.4	1.1	-1.2
Combined Inputs	1.3	1.1	1.1	1.2	1.1	NA
Capital Stock	2.9	2.5	3.3	3.2	3.0	NA
Labor	0.7	0.6	0.3	0.5	0.4	NA
Combined Productivity	-0.2	2.1	-2.7	1.1	-3.0	NA
Capital Productivity	-1.8	0.7	-4.9	-0.9	-4.8	NA
Labor Productivity	0.4	2.5	-2.0	1.8	-2.4	NA
Foreign Trade Hard Currency	(million dollars)					
Exports (f.o.b.)	6152	6623	7280	8311	8533	11892
Imports (f.o.b.)	5098	5505	5982	7302	7766	8094
Trade Balance	1054	1118	1298	1009	767	3798
Socialist Trade	(million rubles)					
Exports (f.o.b.)	9413	10373	11218	11938	12218	11356
of which USSR	5751	6353	6889	7330	7376	NA
Imports (f.o.b.)	10121	10853	11077	10819	10268	6569
of which USSR	6579	6931	6785	6233	5735	NA
Trade Balance	-708	-480	141	1119	1950	4787
of which USSR	-828	-578	104	1097	1641	NA

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There were, however, some bright spots as well. The lifting of price subsidies helped generate increased supplies that all but eliminated shortages of consumer goods in some countries. The Polish case is the best known but is not the only one. The lifting of controls on food prices in Bulgaria, for example, has eased shortages of many food products. Most encouragingly, the spirit of private enterprise has begun to reemerge after the long, bleak winter of Communist rule. Some entrepreneurs in countries like Poland and Hungary already have gained a level of prosperity unimaginable under the old system.

In another positive development, the region has begun to reorient its trade to the West more quickly than had been anticipated. Its trade with non-Communist countries jumped sharply, while trade with Moscow fell (largely because of Soviet problems). Even more unexpectedly, Poland and Hungary recorded their largest trade surpluses in years on the strength of booming exports to the West. Trade with the USSR was another story--the vacuum left by the collapse of the CEMA trading system left the East Europeans with the problem of how to collect a Soviet debt of several billion rubles.

Performance Assessments by Country

Poland

Poland experienced the second sharpest decline in GNP in the region. To a greater extent than in the other countries, recession stemmed from a serious effort to reform and stabilize the economy. Tight monetary and fiscal policies, combined with subsidy cuts, wage controls, a large devaluation of the zloty, and the freeing of prices contributed to a 30-percent fall in real wages and a sharp contraction in domestic demand. As a result, GNP fell by 9 percent and unemployment rose. The loss of Soviet oil supplies and markets, as well as the rise in oil prices also contributed to the decline. We believe Polish statistics somewhat overstate the decline by failing to adequately capture private-sector activity, but many Polish firms and households experienced real hardships.

At the same time, Poland's reforms had some significant positive effects on the economy. Shortages of basic consumer goods were largely eliminated, the national budget was in surplus after a large deficit in 1989, and inflation was substantially reduced. Inflationary pressures have remained strong, however, with monthly inflation rates exceeding 4.5 percent since last September. Contributing factors include further increases in those prices that remain state controlled--public transportation fares, rents, and energy tariffs--the growth of

Table 2: Hungary--Economic Data

	1985	1986	1987	1988	1989	1990/1
	(percent average annual rate of growth)					
Total GNP	-2.5	2.4	1.7	1.7	-2.2	-5.7
of which:						
Industry	0.1	2.0	1.4	-1.1	-3.3	-7.8
Agriculture and Forestry	-8.6	3.4	0.0	8.2	-2.7	-6.4
Combined Inputs	0.9	1.2	1.2	1.8	1.8	NA
Capital Stock	3.6	3.9	3.8	5.6	5.6	NA
Labor	-0.5	-0.3	-0.1	-0.1	-0.1	NA
Combined Productivity	-3.4	1.2	0.5	-0.1	-4.0	NA
Capital Productivity	-5.9	-1.4	-2.0	-3.7	-7.4	NA
Labor Productivity	-2.0	2.7	1.8	1.8	-2.1	NA
Foreign Trade						
Hard Currency	(million dollars)					
Exports (f.o.b.)	4486	4488	5051	5505	6446	7048
Imports (f.o.b.)	4356	4940	5014	5016	5910	6103
Trade Balance	130	-452	37	489	536	945
Socialist Trade	(million rubles)					
Exports (f.o.b.)	9459	9024	9052	9805	9541	5260
of which USSR	5428	5082	5394	5352	5065	NA
Imports (f.o.b.)	8491	8752	8859	8907	8195	5673
of which USSR	4689	4851	4827	4551	4081	NA
Trade Balance	968	272	193	898	1347	-413
of which USSR	740	231	567	802	984	NA

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interenterprise credits and payments arrears, lagging structural reforms--particularly demonopolization and the development of financial markets--and the temporary easing of fiscal and monetary policies in the second half of 1990.

The economic program also generated an export boom in 1990 that gave Poland a large hard currency surplus and its first curre.. account surplus since 1971. Devaluation of the zloty at the beginning of the year and weak domestic demand contributed to a stunning 43 percent increase in the volume of exports to hard currency markets, while imports were virtually unchanged. Poland's ruble trade with the Soviet Union also registered a huge surplus--4.8 billion rubles--due in part to a fall of 20 percent in contracted Soviet oil deliveries. For the first time in decades, the USSR was not Poland's leading trade partner; Germany surpassed it in 1990.

Hungary

Hungary's GNP was down 5.7 percent last year, its third consecutive year of negative growth. Industrial production fell 8.5 percent, as sales to the Soviet Union slumped and privatization of some state firms disrupted production, while severe drought reduced agricultural output by 6-7 percent. Unemployment rose from 10,000 to 90,000 but was still just 2 percent of the official labor force. Consumer prices surged by 30 percent, compared with 19 percent in 1989.

Partially offsetting Budapest's domestic economic difficulties was a substantial improvement in its external payments position. Export growth was responsible for a hard currency trade surplus of nearly $1 billion, the fourth consecutive year of trade improvement. The devaluation of the Hungarian forint and the availability of subsidized Soviet raw materials allowed Hungarian firms to sell their poorer quality goods in the West through steep price discounts. Exports to the West jumped by 23 percent, while sales to the USSR fell by 15 percent. Even so, Moscow remained Hungary's leading trade partner. Hungary showed a small surplus in its current account in 1990 after years of substantial deficits and rising hard currency debt. Restrictions on personal spending abroad cut back on Hungarian shopping in neighboring Vienna, which had accounted for much of the 1989 deficit.

Czechoslovakia

Prague's reluctance to rush headlong into reform was the primary reason why Czechoslovakia's economic downturn in 1990 was milder than that of the rest of the region. Nevertheless, the fall in GNP of nearly 3 percent was the first in over a decade. Energy shortages stemming from .

Table 3: Czechoslovakia--Economic Data

	1985	1986	1987	1988	1989	1990/1
	(Percent Annual Average Rate of Growth)					
Total GNP	0.7	2.4	0.8	2.3	1.1	-2.9
of which:						
Industry	1.9	2.2	1.3	1.7	0.2	-3.7
Agriculture and Forestry	-4.1	5.5	-1.5	5.1	3.8	-3.8
Combined Inputs	1.8	2.0	1.8	2.0	2.0	NA
Capital Stock	4.7	4.5	4.5	5.2	5.2	NA
Labor	0.6	0.9	0.7	0.7	0.7	NA
Combined Productivity	-1.1	0.1	-0.7	-0.2	-0.9	NA
Capital Productivity	-3.9	-2.0	-3.5	-2.7	-3.9	NA
Labor Productivity	0.1	1.4	0.1	1.6	0.4	NA
Foreign Trade						
Hard Currency	(million dollars)					
Exports (f.o.b.)	3852	4293	4545	5014	5442	6198
Imports (f.o.b.)	3177	4065	4666	5130	5043	6670
Trade Balance	675	228	-122	-117	399	-472
Socialist Trade	(million rubles)					
Exports (f.o.b.)	10646	11083	11731	12351	11697	11052
of which USSR	5849	6007	6201	6426	5905	NA
Imports (f.o.b.)	11338	11780	11877	11837	11824	12550
of which USSR	6297	6466	6350	5858	5655	NA
Trade Balance	-693	-697	-146	514	-127	-1498
of which USSR	-448	-459	-149	568	250	NA

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Table 4: Bulgaria--Economic Data

	1985	1986	1987	1988	1989	1990/1
	(Percent Annual Average Rate of Growth)					
Total GNP	-3.0	2.6	1.2	0.3	-1.2	-6.0
of which:						
Industry	0.2	1.5	3.2	1.8	-0.5	-12.0
Agriculture and Forestry	-15.4	7.0	-3.8	-3.2	-2.1	2.7
Combined Productivity	-4.0	3.7	-2.2	-1.0	-1.9	NA
Capital Productivity	-8.3	-3.1	-4.9	-7.1	-8.5	NA
Labor Productivity	-2.8	2.7	1.3	0.1	-1.4	NA
Combined Inputs	1.1	1.1	1.3	1.9	1.9	NA
Capital Stock	5.8	5.9	6.4	8.0	8.0	NA
Labor	-0.2	-0.1	-0.1	0.2	0.2	NA
Foreign Trade						
Hard Currency	(million dollars)					
Exports (f.o.b.)	3307	2656	3277	3539	3138	2272
Imports (f.o.b.)	3694	3488	4232	4511	4337	2772
Trade Balance	-387	-832	-955	-972	-1199	-500
Socialist Trade	(million rubles)					
Exports (f.o.b.)	8338	8393	8692	9135	8892	6478
of which USSR	5981	6273	6486	6928	6832	NA
Imports (f.o.b.)	8478	8868	8762	8553	8013	6047
of which USSR	6076	6229	6180	5734	5178	NA
Trade Balance	-140	-475	-70	582	879	431
of which USSR	-94	44	306	1194	1654	NA

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reduced oil deliveries from the Soviet Union, lower Soviet demand for Czechoslovak exports, and disruptions associated with the implementation of some reforms caused industrial production to drop 4 percent below the 1989 figure. Prices rose about 10 percent as a result of reduced subsidies, and unemployment climbed to 70,000--still small, but double the number for 1989.

A substantial jump in imports pushed the hard currency trade account $500 million into the red, compared with a $400 million surplus in 1989. At just over $8 billion, Czechoslovakia's hard currency debt still remains one of the region's most manageable. Exports to both the West and the USSR dropped last year.

Bulgaria

Bulgaria, staggering under the cumulative burden of an enormous foreign debt, dissolving economic command structure, and political gridlock, was among the worst hit of the East European countries. According to our estimates, GNP fell 6 percent and inflation hit 120 percent in Bulgaria last year. By the end of the year, shortages of food, energy, and water were more severe than at any time since World War II. Energy shortages that usually appear in the winter were felt by late summer. Unemployment was just 2 percent, but a leading Bulgarian economist estimated that some 30 percent of workers were underemployed. Unemployment would have been much higher if some 460,000 Bulgarians--nearly 5 percent of the population--had not left the country in the past two years to find jobs or to emigrate to Turkey.

Imports and exports both fell by more than 20 percent. Bulgaria was no longer able to keep up payments on its $11 billion hard currency debt and in March 1990 imposed a unilateral moratorium on debt service to Western creditors. Banks refused to provide further credits, and Sofia was forced to slash imports of a wide range of goods. Lack of imports disrupted production of export goods as well as products for domestic markets. The Persian Gulf crisis also hurt; Iraq was a major trade partner, an important oil source, and owed Bulgaria $1.3 billion. Trade with the USSR--traditionally about 60 percent of total Bulgarian trade--was off sharply.

Romania

Romania suffered even more severely than Bulgaria. A wave of strikes and a breakdown in labor discipline threw Romania's economy--virtually untouched by reforms--into a tailspin. Official statistics show that GNP fell an estimated 11 percent, and industrial production was down 20 percent. The actual deterioration was probably less, because official data from previous years were inflated by

Table 5: Romania--Economic Data

	1985	1986	1987	1988	1989	1990/1
	(Percent Annual Average Rate of Growth)					
Total GNP	-0.3	2.9	-1.9	-0.5	-3.7	-10.9
of which:						
Industry	-0.9	3.0	-1.4	-2.1	-3.9	-18.1
Agriculture and Forestry	1.8	4.2	-6.2	-2.5	-10.1	-6.0
Combined Inputs	3.2	3.0	2.7	3.4	3.4	NA
Capital Stock	8.0	7.0	6.7	8.9	8.9	NA
Labor	0.6	0.8	0.6	0.5	0.5	NA
Combined Productivity	-3.4	-0.1	-4.5	-3.7	-6.8	NA
Capital Productivity	-7.7	-3.8	-8.0	-8.6	-11.5	NA
Labor Productivity	-0.9	2.1	-2.5	-1.0	-4.1	NA
Foreign Trade						
Hard Currency	(million dollars)					
Exports (f.o.b.)	6280	5960	5150	6036	5526	NA
Imports (f.o.b.)	4835	4043	2808	2534	2951	NA
Trade Balance	1445	1917	2342	3502	2575	NA
Socialist Trade	(million rubles)					
Exports (f.o.b.)	4780	4654	4648	5007	4641	NA
of which USSR	2308	2303	2286	2446	2345	NA
Imports (f.o.b.)	4545	4629	4792	4802	5126	NA
of which USSR	1969	2436	2463	2368	2638	NA
Trade Balance	235	25	-144	205	-485	NA
of which USSR	339	-133	-177	78	-293	NA

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the Ceausescu regime. Unemployment, a negligible 1 percent in 1989, swelled to 10 percent of the labor force. The lifting of some price controls late in the year spurred unprecedented inflation, and severe energy shortages forced the closure of some state enterprises.

Bucharest's international trade position also deteriorated sharply. The slowdown in industrial production, combined with the priority the government assigned domestic consumption helped reduce exports by 44 percent. Bucharest's new leadership, its legitimacy challenged by weak but bitter opponents, is under tremendous popular pressure to end the poverty Ceausescu imposed on his people in his single-minded obsession with paying off Romania's hard currency debt. The government managed to cushion the impact on living standards of the decline in production with large imports of food and other consumer goods, in the process turning a $2.5 billion hard currency surplus (1989) into a $1.6 billion deficit. Romania slashed exports to the USSR even faster than the Soviets cut energy deliveries, registering the only trade deficit with the USSR in the region, an amount equal to 370 million transferable rubles.

Yugoslavia

The erosion of political unity has led to an even more rapid deterioration of Yugoslavia's economy. The Yugoslav economy is adrift, unguided by either centralized control or strong market influences. GNP and industrial production fell 7 percent and 11 percent, respectively, in 1990 as a consequence of the political turmoil and the federal government's ineffective efforts to bring the country's inflation, which surged at an annual rate of 162 percent, under control. Severe liquidity problems slowed industrial production when firms were unable to pay workers and suppliers. The country's destructive inflation results from Belgrade's inability to impose financial discipline on the republics and force them to curb credit to enterprises.

Yugoslavia's foreign trade problems matched those of the domestic economy in 1990. The trade deficit surged to $4.6 billion and pushed the current account into the red for the first time since 1986. Foreign exchange reserves fell 40 percent and hard currency debt climbed to $18 billion from $16 billion in 1989. The deterioration in Belgrade's external accounts stems largely from Belgrade's decision to tie the Yugoslav dinar to the German mark, leaving it overvalued and pricing Yugoslavia's goods out of foreign markets.

Table 6: Yugoslavia--Economic Data

	1985	1986	1987	1988	1989	1990/1
	(Percent Annual Average Rate of Growth)					
Total GNP	0.9	4.3	-0.8	-1.2	-1.1	-6.4
of which:						
Industry	-7.2	12.6	-4.2	-7.2	2.8	-2.2
Agriculture and Forestry	0.9	4.3	-0.8	-1.2	-1.1	-6.4
Combined Inputs	1.6	1.6	1.8	3.4	3.4	NA
Capital Stock	1.7	2.0	2.3	4.9	4.9	NA
Labor	1.3	0.9	0.9	1.1	1.1	NA
Combined Productivity	-0.7	2.7	-2.5	-4.5	-4.4	NA
Capital Productivity	-0.8	2.3	-3.0	-5.8	-5.7	NA
Labor Productivity	-0.5	3.4	-1.7	-2.3	-2.2	NA
Foreign Trade						
Total Trade	(million dollars)					
Exports (f.o.b.)	12992	14498	11752	12779	13362	NA
of which USSR	3396	3122	2138	2365	2898	NA
Imports (c.i.f.)	12223	13096	12989	13329	14800	NA
of which USSR	1977	1874	1825	1758	2172	NA
Balance	769	1402	-1237	-550	-1438	NA
of which USSR	1419	1248	313	608	725	NA
Hard Currency						
Exports (f.o.b.)	6496	7249	8521	9624	10554	11834
Imports (c.i.f.)	8267	9739	9589	10212	11979	16504
Trade Balance	-1771	-2490	-1068	-588	-1425	-4670
Nonconvertible Currency						

Exports (f.o.b.)	6496	7249	3231	3155	2808	NA
Imports (c.i.f.)	3956	3357	3400	3117	2821	NA
Trade Balance	2540	3892	-169	38	-13	NA

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Albania

Albania's economy, the most backward in Europe, has been on a downward slide for several years. The country suffers from chronic shortages of raw materials and an aging industrial base. Tirane does not publish aggregate economic data, but it is clear that the decline accelerated in 1990 because of worker absenteeism connected to political turmoil. In addition, agricultural production has been hit by five years of drought--last year was the driest year this century.

Prospects for 1991: Another Tough Year as Reforms Take Hold

This year will be a decisive one for the region. East European governments will have to press ahead with reform without the political cushion provided by revolutionary euphoria and the clear responsibility of hated Communist rulers. The key test for governments whose options are severely constrained will be to make a convincing case that more patience is required, even as citizens weary of belt-tightening have begun to look for some improvement in their situation. Even if governments were inclined to make concessions--which those facing elections may be--pressure from the IMF and creditors to maintain tight monetary and fiscal policies will limit how far they can go in offsetting price increases with wage hikes.

If the East Europeans stick with their reform programs, we anticipate that overall economic output for 1991 will decline by between 5 and 10 percent--about the same rate as last year. Local industries will continue to feel the effects of a weak domestic market, compounded by the loss of their Soviet customers. Even last year's surprising hard currency trade performance by Poland and Hungary will be hard to duplicate. The new rules governing trade with the Soviet Union mean the end to the heavily subsidized inputs that allowed East European firms to make up for poor quality with cheap prices in Western markets. Eastern Europe also will have to struggle to replace markets lost in the Soviet Union and the Middle East.

The private investment crucial to an economic take-off probably will remain largely on the sidelines unless East European governments make a far more concerted effort to dismantle grossly inefficient state enterprises and address other tough issues.

-- A host of legal questions that inhibit Western business activities--such as land ownership--must be resolved;

-- More liberal foreign exchange laws must be passed;

-- A comprehensive program to improve the region's woefully inadequate infrastructure--roads, railways, and telecommunications--must begin;

-- An independent banking system must be established.

Soviet Trade Collapse

Attracting Western investors--and with them entree to Western markets--will be all the more important against the backdrop of the collapse of the CEMA trade regime. Although they agreed last year to eliminate clearing trade in favor of settlements in hard currency, the East Europeans are ill-prepared for the shift to hard currency trade. Official Polish statistics, for example, indicate that trade with the Soviet Union is off by 80 percent from the same period last year.

-- The collapse of trade with the USSR has led to a sharp drop in the output of plants geared to the Soviet market. A projected 60-percent fall in East European exports to the USSR this year could force the shutdown of thousands of factories producing primarily for the Soviet market, depressing industrial output and increasing unemployment. Warsaw, for example, is already warning that 150,000 workers in the machine-tool, electronics, textiles, and transport industries may have to be dismissed.

-- A reduction in supplies of energy and other raw materials traditionally provided by the Soviets has sent the East Europeans scrambling for alternative sources. Natural gas deliveries have not been significantly curtailed, but Soviet oil deliveries to Eastern Europe are down substantially from last year's already reduced levels. This will force the region to spend several billion dollars in foreign exchange for supplies elsewhere.

Intense discussions this spring to overcome the trade slump so far have not produced solutions, but the best hope remains a return to some type of clearing-house trade arrangement.

Trading Without CEMA

The switch to hard currency trade exposed the weakness of the Soviet-East European trade relationship. Under the old clearing system, trade imbalances were covered by bilateral credits. Because the CEMA members did not have convertible currencies, these credits were settled in goods rather than financial instruments. Putting trade on a hard currency basis eliminated the incentive for the Soviets to buy East European "soft goods"--equipment and consumer goods not marketable on Western markets. Soviet demand also was reduced by its hard currency shortages and its inability to maintain oil exports to the former CEMA countries.

In an ironic twist to the changeover from barter to hard currency trading arrangements, the East Europeans appear to have suffered both from last year's surplus and this year's deficit with the Soviet Union. In 1990, the East Europeans had a large net outflow of goods balanced by a soft loan of several billion rubles to Moscow. This year's deficit, which is to be settled in hard currency, adds to the region's financing requirements. The key issue for Eastern Europe will be how last year's debt is settled. With Moscow in no position to repay in hard currency or oil--as Eastern Europe would doubtless prefer--the issue is unlikely to be resolved soon and will hamper negotiations on current trade.

Reforms Kick In

The reforms the Eastern Europeans have begun to put in place will begin to bite this year. Prices will be relatively free to move in nearly all countries, and exchange rates will be important determinants of trade performance.

The key task facing East Europeans this year is to accelerate privatization. Resources now controlled by large and inefficient state-owned firms need to be reallocated to encourage more productive use and efficient management. Although most countries have approved measures to encourage privatization, concerns about unemployment and, to a lesser extent, problems in implementing programs have slowed government efforts to sell off state enterprises. Even the region's leading reformer, Poland, has fallen short.

A financial squeeze may yet do what intellectual conviction and Western advice have failed to accomplish. State firms are growing increasingly unprofitable as wages and other input prices rise and CEMA markets collapse. Growing losses will force governments to increase subsidies to keep the firms operating or to allow the least efficient firms to go bankrupt in a kind of forced privatization. "Privatization from below"--the sale of small state firms and the opening of new enterprises--is likely to continue to compensate in part for the failure of governments to move quickly to sell off larger state-run companies.

Outlook by Country

Poland: Staying the Course?

Poland's radical economic reforms are entering their most difficult and painful stage. Pressures to ease fiscal and monetary policies are growing as public support for shock therapy declines and legislative elections in the fall approach. More Polish firms are moving rapidly towards bankruptcy, and the government will have to decide whether to close a large number of them, which would deepen the recession in the short term and increase the threat of a political backlash. Protecting them, on the other hand, would slow structural change and lower medium-term prospects for recovery.

Economic performance measured by most indicators will look poor again this year. A further decline in GNP, perhaps by as much as 3 to 5 percent, is likely. The collapse of exports to the Soviet Union, higher energy and raw materials costs, deteriorating enterprise finances, limited labor and capital mobility, and other structural rigidities are likely to prolong the Polish recession. Although the rapid reorientation of trade toward the West undoubtedly will continue, last year's impressive trade performance is unlikely to be repeated. Hard currency trade even could slip into deficit because of the trade problems with the Soviet Union and the declining competitiveness of Polish firms in Western markets as the zloty has appreciated. The government is reluctant to devalue the zloty again because exchange-rate stability is a key anchor of its anti-inflation policies.

Inflation is likely to be between 55 and 90 percent, depending on whether Warsaw devalues the currency and to what extent it eases anti-inflation policies. Unemployment will increase and may approach 1.9 million, or more than 10 percent of the work force. On the bright side, the private sector probably will continue to show dynamic growth and absorb workers laid off from the state sector.

Hungary: Slump Continues

As in Poland, significant progress on the reform front depends on Budapest's willingness to tackle the dismantling of state enterprises. The schedule for privatization continues to lag because of red tape, the difficulty of valuation, and concerns about unemployment. The issue of resolution of claims by holders of property confiscated before 1949 continues to hold up the sale of state assets. The intricacies of coalition politics represent a problem that the Poles have not had to manage. A bill providing for compensation for former landowners and designed to clear the way for the transfer of state lands, for example, has met opposition from the Smallholders Party--a junior coalition party--and remains unsigned.

Hungary's recession is likely to deepen this year, with GNP falling by another 4 to 5 percent. Unemployment could reach 200,000, or some 4 percent of the labor force by the end of this year; there were already some 50 percent more registered unemployed in April than at the end of last year. Inflation could reach close to 40 percent due to subsidy cuts, devaluation of the forint, and higher input prices for oil and energy formerly purchased from the USSR. Agriculture--accounting for about one-fifth of GNP--will register a decline this year as a result of a drop in livestock output and farmer uncertainty over the fate of land reform. We forecast at least a 40-percent drop in exports to the USSR. Private sector activity, most of which is unreported by entrepreneurs eager to avoid taxation, may mitigate some of the decline in industrial output in the state sector. While expansion of the private sector may absorb some laid-off workers, housing shortages will limit labor mobility.

We forecast a sharp deterioration in Hungary's external payments position, projecting a current account deficit of some $1 billion, compared with last year's slight surplus. The primary factors underlying our projections are a $200-400 million trade deficit with the USSR, the disruption of regional trade due to the end of the CEMA system, and the continuing impact of last year's drought. Budapest registered a strong export performance in the first quarter of this year--exports to the EC were up by 56 percent--but this in part reflects last year's devaluation of the forint and will be hard to sustain. The Antall government is strongly committed to servicing its substantial debt, and we estimate that planned financing from international organizations and some limited commercial banks will cover Budapest's financing needs.

Czechoslovakia: Hard Hit By CEMA Collapse

Czechoslovakia is likely to slow the implementation of its reform program because of sharp divisions within the government and between Czechs and Slovaks over the pace and scope of change. President Havel continues to favor a cautious approach that maintains social stability, while Finance Minister Klaus is a strong proponent of faster reforms. Czechs are likely to be more receptive to reform than Slovaks, whose "smokestack" industries will be the primary targets of any sell-off of state enterprises. A commitment to settle old claims and reliance on a cumbersome voucher system for selling shares to citizens will complicate privatization.

Prague is likely to see further economic deterioration this year, due primarily to the collapse of exports to the USSR and Eastern Europe. The Czechoslovak economy is more dependent on the Soviet market than is that of any country in the region with the exception of Bulgaria. As a result, GNP could fall by as much as 5 percent this year, and the unemployment rate could hit 5 percent. Although price increases have eased since the first quarter, inflation could reach 30 percent for the year if Prague goes ahead with its plan to raise rents and energy prices. The decline will have a particularly hard impact on the Slovak Republic--home to the nation's huge arms industry and large numbers of CEMA-dependent industries, exacerbating already strong resentment about economic inequities that favor the Czechs.

Czechoslovakia's external finances, strong relative to those of other East European countries, will come under increased pressure this year. The deterioration in trade with the USSR could result in an overall trade deficit of more than $2 billion. This will force Prague to tap international financial markets in addition to the IMF and World Bank to finance at least part of the shortfall. Prague is counting on private foreign investment to play a major role in marketization, but its hesitancy to press ahead with fundamental economic reform and any further squabbling between the Czechs and Slovaks are likely to intimidate many investors.

Bulgaria: Steep Decline Continues

The pace of reform in Bulgaria will depend heavily on the outcome of elections scheduled for this year. A strong showing by the Union of Democratic Forces, currently leading in the polls, would auger well for reform, while a resurgence by the ruling Bulgarian Socialist Party could set back the reform effort. With many price controls eliminated and some steps toward currency reform put in place early in 1991, moving ahead on privatization and foreign investment measures now before the Parliament is the top priority.

Bulgaria needs to move into the forefront of reform if it is to have any chance of attracting the interest of foreign investors and bankers. Its short-term economic prospects are among the region's most bleak. Serious shortages resulting from poor credit, bad harvests, energy shortfalls, and declining industrial production all point to an even deeper decline in economic activity in 1991. GNP may fall by an additional 10 percent this year, and inflation could reach 200 percent. Bulgarians' standard of living is likely to drop 30 percent, and unemployment probably will reach 10 percent of the labor force.

Bulgaria's state-run firms are struggling to cope with the additional burdens imposed by wage indexation and other rising costs. Some heavy machinebuilding plants may go under as the government moves ahead with privatization. The government's austere budget and reform program are likely to intensify the crisis. In the short term, sectors such as agriculture, food processing, light industry, and tourism appear the most promising.

The changeover to hard currency trade among the former CEMA countries will cause a sharp drop in Bulgaria's foreign trade and in the Soviet share of that trade. Trade with the USSR probably will decline from 60 percent of Bulgaria's total foreign trade to 35 to 40 percent. During the first quarter of 1991, Bulgaria imported goods from the USSR worth approximately $300 million, while exporting goods worth about $57 million.

Bulgaria will need almost $4 billion this year to cover the current account deficit and scheduled amortization. Given the dimensions of the financial challenge, it is in relatively good shape. Bulgaria and the IMF recently completed a standby loan agreement for up to $500 million, official debt to the Paris Club has been rescheduled, and an agreement to reschedule commercial debt and financing from the World Bank is likely.

<u>Romania: Bracing for the Worst</u>

Romania's past is likely to continue to weigh it down. Public pressure for political and economic change is at best weak and uncertain, and the political leadership has its roots in the Communist bureaucracy. Not surprisingly, it has been cautious and inconsistent in its pursuit of reform. So far it has made little progress in selling state holding companies, 30 percent of which are targeted for private ownership by yearend. Nevertheless, the country's desperate need for Western funding may prod Bucharest to proceed with some aspects of the reform program, such as price liberalization and limited land reform.

Against a backdrop of political instability and labor unrest, economic decline is likely to continue unabated. We estimate that Bucharest could see GNP drop by 10 to 15 percent in 1991. Severe energy shortages during early 1991--many factories were shut down entirely for weeks at a time to conserve energy--contributed to production declines of over 20 percent for those months. Inflation is also likely to rise sharply--probably by over 200 percent--due to the cutting of price subsidies and a huge monetary overhang.

Unemployment is likely to rise as well--possibly to more than 15 percent--if industrial restructuring gets underway. Energy shortages will hurt production and employment.

Bucharest's hard-earned status as one of the world's few debt-free countries is likely to be obliterated by a projected current account deficit of $2 billion stemming from the government's need to appease restive workers with consumer goods. Trade with the East--less important to Romania than to other East European countries--is likely to decline sharply because of a switch to hard currency pricing and production slowdowns on both sides. Trade with Moscow, currently 25 percent of Bucharest's trade, is likely to fall significantly.

Yugoslavia: Political Turbulence, Economic Disruption

No progress on economic reform is likely as long as Yugoslavs are preoccupied by their mutual animosities and their future relationships with each other. We expect GNP to decline faster in 1991 than in 1990, unless political tensions ease significantly and the federal government dramatically loosens monetary policy--at the cost of a return to hyperinflation.

The political free-for-all holds hostage monetary and fiscal policies--and hence output and inflation. The growing number of politically-driven work stoppages in some parts of the country are sure to hurt economic performance. Inflation probably will climb in 1991 under any scenario, but monetary policy and the effect of political turmoil on the supply of goods and services will be key variables in determining the actual rate. Exports almost certainly will fall across the board because of disruptions in production. Imports probably will fall as well--in part because unrest will discourage foreign tourism and could cost Yugoslavia some $2.5 billion in hard currency. Should civil war erupt--as some Yugoslav officials claim is already beginning--the economy would obviously be badly affected.

Albania: Tentative Moves Toward Liberalization

Albania's leaders are unlikely reformers, but they will continue to be driven by the knowledge that their past policies have left them the most backward and poor country in Europe, and that this situation can change only with Western assistance. Progress, nevertheless, will be slow and delayed by bureaucratic obstructionism and political arm wrestling. The government had promised to release a detailed plan for privatization in April, but this has been delayed by the political struggle over the shape of a new constitution and the formation of a new government after the election in March. The first steps are likely to be the freeing of some prices or at least raising price ceilings.

Tirane's interest in IMF membership will impel it to introduce some changes.

Longer Term Prospects: From Reform to Restructuring

Some Eastern European countries have made notable progress toward their long-range goal of building competitive economies capable of integration into the West, but the changes yet to come are of an incomparably greater magnitude. Their factories are still designed to satisfy undemanding domestic and Soviet markets rather than Western consumers, machinery is decades old, and workforce attitudes are still attuned to the inferior standards of the command economy.

Possible Future Production Structure

The region's existing industrial structure and its relative production strengths offer some guidelines for its future economic contours:

--The relatively small East European countries are certain to remain heavily dependent on foreign trade, and will have to take into account demand in Western markets, especially Western Europe.

--Heavy industry may well remain a mainstay of industry for some time, although production will need to become much more efficient for East European steel and chemicals, for example, to be competitive. Given the large technology lag, the East Europeans are not likely to move into production of leading-edge technology products.

--Abundant labor is likely to be Eastern Europe's chief production advantage and attraction to foreign investors. The labor force is relatively well educated, and many laborers will need to be absorbed as state enterprises downsize or go under. Labor-intensive service industries such as tourism and construction could benefit.

--Agriculture is likely to thrive in several countries, particularly with more farmland shifting to private ownership.

Enormous Capital Needs

Restructuring and retooling East Europe's economies will create a huge appetite for capital for a variety of purposes:

TABLE 7

Western Aid to Eastern Europe *

Country	Total Aid ($ Million)	Grant Aid ($ Million)
EC Members		
Belgium	428.7	141.3
Denmark	605.0	355.4
France	2417.2	851.5
Germany	6669.6	1921.2
Greece	85.3	46.5
Ireland	85.0	46.2
Italy	2423.5	902.7
Luxembourg	43.1	9.8
Netherlands	353.1	215.7
Portugal	35.1	17.3
Spain	914.9	240.0
UK	1426.8	913.2
Other Europe		
Austria	880.7	646.4
Finland	319.5	87.0
Iceland	4.3	3.9
Norway	75.2	39.7
Sweden	285.8	72.9
Switzerland	538.3	117.9
Turkey	440.8	3.1
Other G-24		
Australia	5.7	4.7
Canada	167.1	96.7
Japan	2176.5	58.8
New Zealand	69.8	0.8
US	1325.0	1053.0

* For EC countries the aid figures include a pro-rated share of the $6.5 billion pledged by the EC.

-- **Efficiency:** to modernize plant and equipment and to reduce the per unit consumption of energy and other raw materials, largely through imports of technology;

-- **Restructuring:** to develop new industries and to produce competitive export goods; and

-- **Infrastructure:** to clean up the environment and develop modern transportation and communication facilities.

The vast amounts of capital East European countries need will drive them to clarify their economic and industrial strategies. To attract Western investment, they will have to further liberalize their investment laws by allowing the repatriation of domestic profits and lifting controls on labor and management. Allowing foreign ownership of real estate and providing state guarantees against expropriation will also be essential if Western investors are to be attracted to joint ventures or purchases of stakes in firms being privatized. Improvements in infrastructure are another pressing need.

The West Responds

The West has provided or pledged almost $45 billion in credits and other assistance since July 1989. Nearly two-thirds of this total represents commitments by multilateral institutions, including the IMF, the World Bank and the European Community. The amount of assistance actually reaching Eastern Europe to date, however, is substantially reduced in amount and utility by several factors:

-- Disbursements to date are far less than commitments of assistance, which will be drawn over several years;

-- East European repayments to the IMF and World Bank offset a large share of commitments;

-- Some of the commitments are less than firm;

-- Exchange rate fluctuations over time make conversion into dollar figures problematic;

-- Much of the aid is in the form of loans rather than grants and the loan terms are not very concessionary.

The IMF and World Bank are playing key roles in East European economies by monitoring economic performance, reforms, and policies in exchange for substantial credits. All of the countries are now members except Albania, which

TABLE 8

Eastern Europe: Gross Hard Currency Debt
(Billion US$)

	1989	1990(1)
Eastern Europe	94.9	103.7
Poland	40.8	46.6
Hungary	20.3	21.0
Czechoslovakia	7.9	8.1
Bulgaria	10.2	10.6
Romania	0	2.2
Yugoslavia	15.7	15.2

1. End Year Data

applied to the IMF and the World Bank early this year. The IMF has approved a total of $8.4 billion in credits in 1991 for Bulgaria, Czechoslovakia, Hungary, Poland, and Romania.

European organizations have also been important donors. Poland, Czechoslovakia, and Hungary have been negotiating association agreements with the European Community. The major economic benefits from these agreements will be increased access to West European markets for East European exports. The EC has also been coordinating aid for the region. The European Bank for Reconstruction and Development was established specifically to meet the financing needs of the Soviet Union and the East European countries. The EBRD opened its doors this April in London.

The East Europeans are likely to continue to press Western governments and multilateral organizations for assistance. In a practical sense, Eastern Europe's needs are too great to be met in a short period, especially given the West's resource limitations and budget constraints. Moreover, the region is not yet prepared to use hundreds of billions in capital. Eastern Europe will need years to absorb the funds, and investment priorities will need to be clarified once reforms are implemented and the emphasis shifts to restructuring. Some foreign investment can be immediately used to speed privatization, however, through joint ventures or purchases of stakes in firms being privatized.

Expertise is another key--and relatively low cost--requirement to support the reform process. East European managers are unaccustomed to operating in a market environment and need training in a wide variety of business skills to adjust to new incentives and to compete in Western markets. More important, all potential creditors and aid sources will gauge each country's success in staying the reform course and maintaining stability and public support. Finally, with a hard currency debt of over $100 billion, the region still faces pressing balance of payments and debt problems that will complicate meeting more fundamental capital needs.

Looking Ahead

Eastern Europeans are pioneers on a road that has never before been traveled. Most appear committed to the path they have chosen, and the determination with which they have pushed through reform programs is a good sign. The tolerance and patience most have shown so far is also encouraging, but their fortitude will continue to be tested by the tough challenges which lie ahead. Their own long term interests, however, dictate that the direction they have chosen be maintained.

There can be no lasting gains in real wages and living standards until productivity rises, and for this a reallocation of resources based on the demands of the market rather than the state is essential. There is no alternative to privatization if these ends are to be accomplished. In the end, the outcome will be a matter of will--the political will of leaders who must be prepared to resist public pressures, and the will of the people themselves to endure the pains of economic rebirth.

Appendix A

Data Problems Accompany Change

Statistics on output in centrally planned economies have never been free of serious problems or anomalies which complicate their interpretation and put their accuracy into question. Differences between Marxist and capitalist concepts of production, for example, have meant in the past that labor was overvalued and capital was undervalued in East European statistics.

The political and economic upheaval of the past two years has added new problems to these traditional difficulties. For example, the current data series are noncontinuous with figures for the years prior to 1990, rendering meaningful comparisons very difficult. In short, the rules of the game have changed much faster than national statistical authorities in the region have altered their ways of collecting and reporting data on economic activity.

As another concrete example, a large share, and perhaps almost all, of private-sector activity is not reported. When the state controls production by issuing plans, allocating resources, and collecting plan fulfillment data, output figures are simple to collect. Although most countries tally new enterprises, probably through registrations or licence applications, the economic activity of these firms is not covered by these gross activities. Moreover, a number of new firms--especially small ones--probably have not even registered. Pricing is another important new difficulty. High rates of inflation have had a sharp impact on the valuation of output.

We suspect that the drop in East European output in 1990 was not as large as published statistics--and estimates of GNP derived from them--indicate. Unreported private-sector activity and more accurate (less inflated) reporting by state enterprises probably were the main factors in showing a greater statistical than actual fall in economic output in the region in 1990.

The accuracy of data issued by the East European Communist regimes was generally regarded as adequate, but it was also recognized that there was some incentive for producers to overreport production to claim success in meeting plan targets. This was particularly true of Romania.

These data and interpretation problems are likely to ease in the next several years. Statistical offices over time will adjust their collection and reporting to incorporate the changes in economic structure and management. Marxist approaches to national income accounting and other economic concepts are likely to give way to statistical reporting more comparable to that of market economies. The growing role of the IMF as it gains experience in monitoring economic performance will also lead to improvements in East European data.

Appendix B

__Eastern Europe: Selected Economic Data__

Table B-1: Eastern Europe: Quality of Life Indicators

	1980	1985	1986	1987	1988	1989	1990
Poland							
GNP per Capita (constant 1989 dollars)	4661.0	4600.4	4714.7	4607.3	4701.0	4607.3	4195.3
(index 1980=100)	100.0	98.7	101.1	98.8	100.0	98.8	90.0
Percent Change	-4.3%	-1.3%	2.5%	-2.3%	2.0%	-2.0%	-8.9%
Consumer Price Index							
(1980=100)	100.0	376.6	450.8	583.6	960.5	3307.5	19507.6
Percent Change	8.5%	276.6%	19.7%	29.5%	65.9%	243.8%	478.2%
Current per Capita Disposable Income							
(index 1980=100)	100.0	387.5	462.0	582.1	1070.6	3928.9	NA
Percent Change	12.6%	287.5%	19.2%	26.0%	83.9%	267.0%	NA
Real per Capita Disposable Income							
(index 1980=100)	100.0	102.9	102.4	99.7	110.5	116.0	NA
Percent Change	0.4%	2.9%	-0.4%	-2.6%	10.8%	5.0%	NA
Hungary							
GNP per Capita (constant 1989 dollars)	5632.1	5854.5	6003.1	6116.2	6244.9	6103.1	5759.4
(index 1980=100)	100.0	104.0	106.6	108.6	110.9	108.4	102.3
Percent Change	0.9%	4.0%	2.5%	1.9%	2.1%	-2.3%	-5.6%
Official Consumer Price Index							
(1980=100)	100.0	139.0	146.3	158.9	183.6	214.8	274.2
Percent Change	9.1%	39.0%	5.3%	8.6%	15.5%	17.0%	27.6%
Current per Capita Disposable Income							
(index 1980=100)	100.0	151.9	165.2	180.2	214.0	248.5	NA
Percent Change	8.6%	51.9%	8.8%	9.0%	18.8%	16.1%	NA
Real per Capita Disposable Income							
(index 1980=100)	100.0	109.3	113.0	113.4	116.6	115.7	NA
Percent Change	-0.5%	9.3%	3.3%	0.4%	3.0%	-0.7%	NA
Czechoslovakia							
GNP per Capita (constant 1989 dollars)	7165.7	7489.2	7648.2	7694.5	7852.8	7922.1	7670.9
(index 1980=100)	100.0	104.5	106.7	107.4	109.6	110.6	107.1
Percent Change	1.9%	4.5%	2.1%	0.6%	2.1%	0.9%	-3.2%
Official Consumer Price Index							
(1980=100)	100.0	109.9	110.4	110.5	110.7	112.2	120.6
Percent Change	2.9%	9.9%	0.4%	0.1%	0.2%	1.4%	7.4%
Current per Capita Disposable Income							
(index 1980=100)	100.0	116.3	119.9	123.6	130.6	129.0	NA
Percent Change	3.8%	16.3%	3.1%	3.1%	5.7%	-1.2%	NA
Real per Capita Disposable Income							
(index 1980=100)	100.0	105.0	108.7	111.9	118.0	114.9	NA
Percent Change	0.9%	5.0%	2.7%	3.0%	5.4%	-2.6%	NA
Bulgaria							
GNP per Capita (constant 1989 dollars)	5309.5	5469.9	5605.4	5662.0	5670.6	5610.3	5296.0
(index 1980=100)	100.0	103.0	105.6	106.6	106.8	105.7	99.7
Percent Change	-3.2%	3.0%	2.5%	1.0%	0.2%	-1.1%	-5.6%
Official Consumer Price Index							
(1980=100)	100.0	105.0	109.4	109.4	110.9	119.6	263.13
Percent Change	14.9%	5.0%	4.2%	0.0%	1.3%	7.9%	120.0%
Current per Capita Disposable Income							
(index 1980=100)	100.0	122.2	130.8	136.6	143.0	150.7	NA
Percent Change	17.7%	22.2%	7.0%	4.5%	4.6%	5.4%	NA
Real per Capita Disposable Income							
(index 1980=100)	100.0	116.4	119.5	124.8	1[illegible]8.9	126.0	NA
Percent Change	2.4%	16.4%	2.7%	4.5%	3.3%	-2.3%	NA
Romania							
GNP per Capita (constant 1989 dollars)	3320.0	3326.2	3407.0	3325.6	3293.2	3154.0	2797.9
(index 1980=100)	100.0	99.9	102.4	99.9	99.0	94.8	84.1
Percent Change	-1.0%	-0.1%	2.4%	-2.4%	-1.0%	-4.2%	-11.3%
Consumer Price Index							
(1980=100)	100.0	141.3	144.1	144.1	144.5	156.1	NA
Percent Change	5.0%	41.3%	2.0%	0.0%	0.3%	8.1%	NA
Current per Capita Disposable Income							
(index 1980=100)	100.0	132.1	137.0	138.3	145.5	155.6	NA
Percent Change	5.9%	32.1%	3.8%	0.9%	5.2%	7.0%	NA
Real per Capita Disposable Income							
(index 1980=100)	100.0	104.3	108.3	109.2	114.9	121.6	NA
Percent Change	3.7%	4.3%	3.8%	0.0%	5.3%	5.8%	NA
Yugoslavia							
GNP per Capita (constant 1989 dollars)	5326.0	5470.6	5677.2	5599.3	5499.8	5409.9	5035.8
(index 1980=100)	100.0	102.9	106.6	105.1	103.3	101.6	94.6
Percent Change	4.1%	2.9%	3.6%	-1.4%	-1.8%	-1.6%	-6.9%
Consumer Price Index							
(1980=100)	100.0	725.4	1364.6	2966.5	8724.6	117899.9	761175.5
Percent Change	27.0%	625.4%	88.1%	117.4%	194.1%	1251.3%	545.6%
Current per Capita Disposable Income							
(index 1980=100)	100.0	651.0	1343.0	3061.0	9228.5	135215.7	NA
Percent Change	33.7%	551.0%	106.1%	127.9%	201.5%	1365.2%	NA
Real per Capita Disposable Income							
(index 1980=100)	100.0	89.8	98.4	103.2	105.8	114.7	NA
Percent Change	4.7%	-10.2%	9.6%	4.9%	2.5%	8.5%	NA

Table B-2: Poland--Energy Balance
(thousand barrels per day oil equivalent)

	1980	1985	1986	1987	1988	1989	1990
Production	2446	2464	2483	2513	2510	2333	2007
Coal	2318	2358	2386	2415	2412	2243	1935
Oil	7	4	3	3	3	3	3
Natural Gas	104	83	75	75	75	69	50
Electricity	17	19	19	20	20	18	19
Consumption	2488	2397	2478	2570	2560	2409	2030
Coal	1890	1870	1916	1999	1962	1830	1535
Oil	391	339	351	344	361	357	278
Natural Gas	192	179	192	199	195	196	188
Electricity	15	9	19	28	42	26	29
Imports	538	483	528	541	561	566	505
Coal	14	14	15	15	15	12	12
Oil	416	345	357	352	365	369	298
Natural Gas	87	97	117	123	120	127	137
Electricity	21	27	39	51	61	58	58
Exports	496	548	532	484	511	490	484
Coal	442	502	485	431	465	425	412
Oil	32	9	9	10	7	15	24
Natural Gas	0	0	0	0	0	0	0
Electricity	22	37	38	43	39	50	48

Table B-3: Hungary--Energy Balance
(thousand barrels per day oil equivalent)

	1980	1985	1986	1987	1988	1989	1990
Production	279	322	316	337	330	323	286
Coal	138	125	121	121	113	105	90
Oil	41	40	40	38	39	39	40
Natural Gas	99	120	113	115	101	99	76
Electricity	1	37	42	63	77	80	80
Consumption	602	644	637	623	637	633	592
Coal	184	179	174	160	156	146	118
Oil	212	183	172	146	151	147	152
Natural Gas	165	185	190	195	188	197	179
Electricity	41	97	101	122	142	143	143
Imports	374	375	387	367	379	371	353
Coal	46	56	56	40	44	42	29
Oil	206	183	187	176	170	157	147
Natural Gas	66	66	78	80	88	98	103
Electricity	56	70	66	71	77	74	74
Exports	50	53	67	80	72	62	47
Coal	0	2	3	1	1	1	1
Oil	35	40	56	68	58	50	35
Natural Gas	+0	+0	+0	+0	+0	+0	+0
Electricity	15	11	8	11	13	11	11

Table B-4: Czechoslovakia--Energy Balance
(thousand barrels per day oil equivalent)

	1980	1985	1986	1987	1988	1989	1990
Production	963	990	1015	1044	1033	1018	928
Coal	899	892	886	886	872	853	768
Oil	2	2	3	3	3	3	3
Natural Gas	9	11	11	12	15	13	8
Electricity	53	85	115	143	143	149	149
Consumption	1460	1506	1544	1581	1552	1571	1429
Coal	887	892	892	890	885	858	770
Oil	371	333	346	341	321	341	277
Natural Gas	139	177	183	188	187	209	220
Electricity	63	104	123	162	159	163	162
Imports	624	619	637	649	641	680	604
Coal	70	68	71	62	72	68	62
Oil	403	353	369	371	355	368	282
Natural Gas	131	166	177	186	183	206	223
Electricity	20	32	20	30	31	38	37
Exports	125	103	108	113	121	117	103
Coal	82	68	64	58	59	62	60
Oil	33	22	26	33	37	30	8
Natural Gas	1	0	6	10	10	10	11
Electricity	9	13	12	12	15	15	24

Table B-5: Bulgaria--Energy Balance
(thousand barrels per day oil equivalent)

	1980	1985	1986	1987	1988	1989	1990
Production	173	200	205	216	222	215	211
Coal	111	110	121	129	115	116	116
Oil	6	6	6	6	6	6	6
Natural Gas	3	+0	+0	+0	+0	+0	+0
Electricity	53	84	78	81	101	93	89
Consumption	656	711	703	727	710	715	603
Coal	206	220	222	227	204	201	198
Oil	305	292	288	295	280	284	185
Natural Gas	71	90	93	100	102	112	111
Electricity	74	109	100	105	124	118	109
Imports	489	535	509	519	494	524	436
Coal	95	118	105	102	89	84	82
Oil	301	287	282	290	275	299	214
Natural Gas	67	89	93	99	102	112	111
Electricity	26	41	29	28	28	29	29
Exports	6	24	13	9	6	25	43
Coal	0	7	4	3	+0	+0	+0
Oil	1	1	1	1	1	21	35
Natural Gas	0	0	0	0	0	0	0
Electricity	5	16	8	5	5	4	8

Table B-6: Romania--Energy Balance
(thousand barrels per day oil equivalent)

	1980	1985	1986	1987	1988	1989	1990
Production	1102	1095	1090	1062	1089	1023	831
Coal	164	198	202	217	242	248	158
Oil	242	214	203	190	188	183	159
Natural Gas	639	624	632	600	590	529	455
Electricity	57	59	53	55	69	63	59
Consumption	1364	1431	1392	1445	1464	1454	1221
Coal	259	305	311	333	365	354	238
Oil	384	314	333	378	338	348	310
Natural Gas	661	737	672	654	656	650	575
Electricity	60	75	76	80	105	102	98
Imports	445	446	513	621	643	703	540
Coal	96	107	109	116	123	107	80
Oil	320	293	341	427	419	436	301
Natural Gas	26	30	41	53	65	121	120
Electricity	3	16	22	25	36	39	39
Exports	182	196	211	240	269	271	150
Coal	0	0	0	0	0	0	0
Oil	178	196	210	240	269	271	150
Natural Gas	4	0	1	0	0	0	0
Electricity	0	0	0	0	0	0	0

Table B-7: Yugoslavia--Energy Balance
(thousand barrels per day oil equivalent)

	1980	1985	1986	1987	1988	1989	1990
Production	529	655	677	681	679	671	650
Coal	259	376	380	386	389	399	407
Oil	85	83	83	77	74	68	63
Natural Gas	33	43	44	52	54	52	48
Electricity	152	153	170	166	162	152	132
Consumption	835	968	1027	1036	1041	1036	1009
Coal	309	438	440	445	443	448	451
Oil	314	270	306	301	318	302	303
Natural Gas	62	104	108	122	126	136	126
Electricity	150	156	173	168	154	150	129
Imports	333	350	387	393	400	404	399
Coal	55	68	64	63	59	54	50
Oil	241	207	245	246	263	254	260
Natural Gas	30	61	64	70	72	84	78
Electricity	7	14	14	14	6	12	11
Exports	25	36	38	39	37	39	39
Coal	5	5	4	5	5	5	5
Oil	11	20	22	22	18	20	20
Natural Gas	0	0	0	0	0	0	0
Electricity	9	11	12	12	14	14	14

NRC

Estimating the Size of the Soviet Economy

Summary of a Meeting

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Michael Alexeev and Lee Walker, editors

Commission on Behavioral and Social Sciences and Education
Office of International Affairs

National Research Council

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Foreword

At the request of Representative Lee Hamilton, Chair of the Joint Economic Committee and Senator Jeff Bingaman, Chair of the Senate Subcommittee on Technology and National Security, the National Research Council (NRC) hosted a meeting on estimating the size of the Soviet economy in the fall of 1990. The participants were asked to identify the methodological factors that had produced radically divergent estimates, to place the controversy in the context of what is known and knowable about the Soviet economy, to advise U.S government agencies concerning the relative reliability of these methodologies, and to assist them in better understanding the strengths and weaknesses of the current estimating methodology.

The NRC, under the aegis of the Commission on Behavioral and Social Sciences and Education and the Office of International Affairs, convened a panel of experts chaired by Lawrence Klein that included specialists from academia, independent research institutions and government agencies. These experts met in a series of plenary sessions and small workshops over a 2-day period and presented their findings to representatives of the larger specialist community on the final afternoon. Despite the severe time constraint and the broad range of opinion represented on the panel, the participants made significant strides at this meeting in terms of defining the controversy, determining the central factors at issue in the dispute, gauging the impact of these factors on the estimates, and identifying areas where methodological improvements were needed.

The NRC considers that a summary of these discussions will be of value to members of the government, specialists in the field, and those with broad interests in the fields of Soviet and comparative economics. We express our appreciation to Vladimir Treml, who served as the principal consultant on the project, Michael Alexeev, who prepared the report, and Lee Walker, who organized the meeting and coedited the proceedings.

Robert McC. Adams, *Chair*
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Meeting Sessions

INTRODUCTION

The National Research Council (NRC) hosted a meeting of specialists concerned with developing estimates of the size of the Soviet economy in order to clarify the fundamental methodological issues that lie at the base of the current debate over the reliability of the estimates produced and utilized by the U.S. government. The goal of this meeting was not to produce a better estimate of the size of the Soviet economy, or to attempt to reach a concensus concerning the validity of various current estimates, but rather to investigate the problems inherent in efforts to produce such estimates. The participants in the meeting sought to clarify what is known and what is knowable about the Soviet economy, to analyze the assumptions on which the major methodologies rest, to critique the methods used by practitioners in the field, and to suggest adjustments, alternative strategies, and methods--the adoption of which might lead to improved calculations. As this summary report makes clear, the meeting constituted only a preliminary step in the process, focusing on the identification of areas of controversy, the specification of issues meriting further study, and offering suggestions concerning possible alternatives.

SESSION I: THEORETICAL FOUNDATIONS OF CURRENT METHODOLOGY

The methodology currently used by the Central Intelligence Agency (CIA) to measure both Soviet gross national product (GNP) and Soviet growth rates is largely based on the adjusted factor cost (AFC) method. Abram Bergson argued that although a case could still be made for using the AFC method to measure both the relative size and rate of growth of Soviet GNP, one of the main problems with this method is its quasi-conventional nature as an adaptation of the ideal standard. Theoretically, the AFC method corresponds to this ideal standard only if there is no misallocation of resources in production in the Soviet system. This raised the question as to whether it would be possible to obtain a better measure of marginal rates of transformation (MRT) in the Soviet economy if different techniques were applied. One reason advanced against the use of alternative techniques was the fact that the AFC standard incorporates a number of adjustments (such as removing taxes and subsidies from prices) that are similar to those used in calculating GNP and national income in the West. It was suggested that these similarities provide a basis for the comparison of Soviet GNP with the GNPs of other countries.

In addition to the traditional adjustments performed in measuring GNP in Western countries, the AFC methodology as applied by the CIA removes profits from Soviet prices and factors in a uniform for all sectors average return on capital. Bergson noted that he made a series of alternative calculations on the basis of various adjustments, but that he found the standard AFC calculations to be remarkably insensitive to such alterations. He suggested that this robustness might be due to the highly aggregated nature of the available data. Bergson also mentioned that the CIA decision to eliminate profits from ruble prices had been challenged by Judith Thornton, who argued that disparate profit rates in different sectors might reflect real MRTs in the Soviet economy.

The meeting did not produce a consensus on the best way to adjust Soviet prices. One view was that Soviet prices were so divorced from reality that no adjustments would produce reasonable MRT estimates. However, if one were to operate on the basis of this assumption, one would have to resort to current dollar prices for similar goods or to Soviet pre-5-year plan prices as a base from which to measure Soviet economic growth.

The participants agreed that one of the most important problems underlying the contemporary debate about the size of the Soviet economy was the popular confusion between GNP estimates and measures of social welfare. The debate has been skewed by a fundamental misunderstanding of what it is that GNP is designed to measure. Estimates of the Soviet economy that placed its aggregate size at roughly half that of the United States were not intended to suggest that individuals living in that economy lived half as well, but that total Soviet economic production was roughly half that of the U.S. economy. Although GNP offers little or no information as to the distribution of income, access to public and private goods, or to the noneconomic priorities that vitally affect social welfare, it remains a useful tool when used with a proper understanding of what it does and what it does not seek to measure. It was also noted that some analysts have attempted to introduce adjustments into consumption calculations in order to derive better measures from a welfare point of view, but it was agreed that more work will be necessary in this area.

One of the first theoretical issues explored at the meeting was the issue of "cost maximization" in the Soviet economic system. Vladimir Kontorovich argued that one difficulty that arises in dealing with inflation in the Soviet case is the assumption of cost-minimizing producers. Even the most cursory examination of the Soviet case, however, demonstrates that this assumption is not validated by the data. Kontorovich cited a series of examples that he contended demonstrated that policies of "cost maximization" prevailed in construction, machine building, and a number of other Soviet industries. Other participants queried the use of this term, arguing that "cost maximization" was theoretically impossible in that it would lead to infinite costs. Even though the assumption of cost efficient behavior is central to all modern methodologies of measuring economic aggregates, Richard Kaufman pointed out that similar practices occur in certain sectors of Western economies as well (notably defense). He further noted that the attempt to measure and/or make adjustments for inefficiency is a general problem in GNP accounting procedures, that it is unrelated to the issue of inflation, and that the problem is not limited to the Soviet case.

One major area of criticism of CIA estimates discussed at the meeting concerned the issue of inflation in the Soviet economy. The CIA attempts to deal with this issue by using the most extensive sample of goods and prices that it can obtain and by basing its calculations on physical units wherever possible. It was pointed out that this approach does not work well in sectors such as machine building where the rate of introduction of new products is particularly high. In addition, the peculiarities of new product pricing in the Soviet Union complicate measurements of inflation. Although there was substantial agreement that hidden inflation poses a significant problem in attempting to measure the Soviet economy, none of the participants were able to suggest mechanisms that would reliably exclude it from GNP calculations.

It was noted that one of the main problems in dealing with Soviet data is that of attempting to monitor the quality of output, both over time and in comparison with other economies. The quality issue is particularly difficult to resolve because different sectors sometimes exhibit divergent trends with respect to the quality of their output. For example, researchers who focus on the service and defense sectors have claimed that the CIA estimates systematically understate improvements in quality, whereas those who investigate other sectors of the Soviet economy contend that the CIA has overstated Soviet GNP because it does not make allowances for the generally poor and apparently deteriorating quality of Soviet goods.

Since the AFC method substitutes an assumed rate of return on capital for various kinds of nonlabor charges, variations in the quality of capital goods can be particularly important for the validity of AFC-based results. In this regard, Dmitri Steinberg noted the conclusion of a study conducted by a group of Soviet economists that stated that returns on capital investment (the present value of output per ruble of cost) varied significantly across different sectors of the Soviet economy. Others pointed out that it is frequently difficult to distinguish between the low relative quality of capital goods and the misallocation of capital resources within the economy. The central issue raised at the session, however, was whether the uniform 12 percent rate of return on capital that is currently used by the CIA should be replaced with a number of variable rates of return for different sectors.

Richard Ericson pointed out a more general problem with the AFC method. He argued that any attempt to automatically impute output from factor inputs assumes that a useful output will be produced and that the relationship between its value and the value of the inputs can be reliably established. In the Soviet case it is possible that neither of these holds true. The AFC method uses adjustments that are based on labor payments, but these labor payments are determined in accordance with administrative plans and often remain fixed for long periods of time. Although some researchers have argued that competition in the Soviet labor market alleviates this problem, Ericson emphasized that no competition takes place on the demand side of the market.

Ericson also pointed out that the attempt to determine the cost of capital on the basis of the AFC method presents even greater problems. Ideally, one would want to measure the expected present value of future services on the basis of the output they will produce, rather than on the cost of the inputs. Unfortunately, a measurement technique that would accomplish this task, and that would be applicable to a Soviet-type economy, does not yet exist.

A number of other issues were touched on at the opening session, although they could not be explored in any depth due to time limitations. One of the most important of these was the extent to which the structural changes introduced in the Soviet system during the recent period of perestroika and increased glasnost have made the utilization of alternative measurement techniques and methodologies possible. Uncertainties as to the future course of change in the Soviet system prevented any resolution of this issue.

SESSION II: AN ANALYSIS OF THE DATA USED IN ESTIMATING THE SIZE OF THE SOVIET ECONOMY

Until quite recently the conventional wisdom in the field maintained that with few exceptions, the data published by the Soviets in physical units were generally reliable, but the data furnished in current prices were of only limited utility. The first assumption has been seriously undermined by Goskomstat's recent report (*Pravitel'stvennyi Vestnik*, No. 12, 1990) that cites an aggregate employment figure for the Soviet economy that includes 4 million people who had not appeared in any previous report. Although the source of this discrepancy is not known, Dmitri Steinberg contended that the increase in this employment figure validated his long-standing contention that Soviet official statistics on material production have consistently excluded a large part of defense output. The issue remains unsettled, but it underlined the more general problem of how to reconcile the old data with much of the new information that is becoming available.

With the onset of glasnost, large quantities of new data on the Soviet economic system have become available. These new data come from a variety of sources including Goskomstat, local, regional, and republican sources, as well as individual Soviet economists. One of the central issues before the meeting was the question of how these new data might affect Western estimates of the size and rates of growth of the Soviet economy. It was suggested that these new data might shed some light on the degree of statistical overstatement in the Soviet system and provide more information on data expressed in physical units. It was also noted that given the post-1985 reforms and the general decline in central control in the Soviet economy, inflation in the data expressed in physical units may have been increasing throughout the period. The traditional point of view has been that even if the physical data were inflated to a significant degree, it would not affect the estimates of growth rates, as long as the degree of inflation did not change over time. No one expressed confidence that this condition held true during the period in question.

It was pointed out that even if the official Soviet data have become increasingly inflated, it does not necessarily follow that GNP estimates have to be adjusted downward. For an example, the padded distances and loads recorded for motor transport do not necessarily represent complete fabrications as these vehicles are frequently engaged in hauling freight for the second economy. Another phenomenon affecting the reliability of physical unit calculations is the double counting of output that may occur when producer cooperatives are attached to state enterprises. In these cases the output of the cooperative may be counted twice, once in the figures for the output of the state enterprise itself (for the purposes of plan fulfillment) and once in the figures for total cooperative output (for statistical purposes).

Examples of cheating and the fabrication of physical data are well known, but the meeting produced no consensus on how to deal with these widespread phenomena or the degree to which they might effect GNP estimates. Campbell pointed out that there were incentives in the Soviet system that led to the underestimating of economic production and for an example cited sheep herds that included uncounted, "private," sheep. Those familiar with the CIA research effort stated that the agency had not been able to produce any reliable way to make the adjustments needed to incorporate these phenomena.

The problems with cheating aside, it was generally accepted that the physical data could provide useful information about the structure of the Soviet economy and the size of particular sectors. For example, Steinberg suggested that although the value of inputs is a notoriously unreliable guide to the output of the construction industry, largely due to waste and the lack of incentives for cost minimization, one can reliably use the square footage of industrial floor space as a direct measure. However he also noted that this measure was less than fully satisfactory in that it did not take into account differences or changes in the quality of output. Steinberg suggested that, in general, indices based on comparable prices should be replaced by indices based on the available output data in physical units (e.g., square meters of fabric should be used to estimate increases in clothing production). Steinberg's suggestions were criticized in particular for the lack of uniformity in his approach; he uses inputs to measure growth in apparel production but employs physical measures of output to evaluate trends in construction output.

Richard Ericson suggested that some of the problems with both value series and physical data series could be alleviated if researchers were able to obtain access to individual ministries' accounting data. Vladimir Treml pointed out that in some cases these data remain classified and that in others Goskomstat does not have the authority to publish them. However, he indicated that in those instances where ministries have been abolished their records may become available. Some participants expressed the hope that the increasing decentralization in the Soviet system and the concomitant increase in the power of regional authorities might result in improved access to the highly disaggregated data that are collected at this level. It was noted, however, that not only the reliability of these data would be questionable, but that their value would be limited in that they would lack comparability with other data and old time series.

Gur Ofer suggested that Western researchers could benefit not only from greater glasnost in the Soviet Union but also from more openness from the CIA. Although he noted that the so-called CIA estimates should more accurately be termed the estimates of the field of Sovietology--since many researchers had a hand in establishing the general framework--he argued that the agency had taken the generally accepted mechanism and proceeded to work on its own, making decisions about the details without either adequate scrutiny or feedback from other practitioners in the field. He further asserted that neither the papers contributed by CIA analysts to the Joint Economic Committee's publications on the Soviet economy nor the CIA's own publications made completely clear the rationale behind particular decisions as to how the agency handles specific data. Other participants suggested that the agency should provide other researchers with access to much of the raw data that it collects on the Soviet economy, produce comparable estimates across sectors, and provide an integrated accounting of the economy as a whole.

Steinberg suggested that one way to improve Western estimates of the size and growth of the Soviet economy would be to compare the sector-of-origin estimates with end-use estimates. According to his calculations, the two sets of CIA estimates produce significantly different results with the discrepancies ranging from 1-2 percent a year. Bergson asserted that it would be useful for the CIA to produce an alternative estimate on the basis of the deflation of current ruble data, and Steinberg added that from a strictly methodological point of view double deflation would be even better.

Ofer identified a need to "predict the past." He suggested that it would be extremely valuable to produce a comprehensive picture of what the Soviet economy looked like in the early 1980s, before the onset of perestroika. Asserting that it was time to "think anew," Ofer stated that 1985 should be the last possible date for the utilization of the old procedures, and he called for the application of a completely new structure in the subsequent period. Barry Kostinsky stated that the Department of Commerce was about to publish a very detailed series of accounts for 1985. He also noted that the Center for International Research (Bureau of the Census) had produced an estimate for Soviet GNP in 1985 on the basis of established prices that was very close to the official Soviet figure for GNP, although they had derived different subtotals for different sectors.

SESSION III:
COMPARISON AND CRITIQUE OF ALTERNATIVE METHODS OF ESTIMATING THE SIZE OF THE SOVIET ECONOMY

The examination of various issues associated with the use of the AFC methodology was followed by a discussion of possible alternatives. Richard Ericson posed a series of questions at the outset of the session that served to focus the discussion. Are there alternatives to the AFC method? Are the alternative estimates that are at the center of the current debate based on alternative methodologies? How should we account for the second economy? How important a factor is hidden inflation in the Soviet economic system?

Some participants maintained that at this point there were no real alternatives to the AFC-based methodology, and that what passed for alternative estimates had in fact been derived from various makeshifts and ad hoc extrapolations. Richard Judy stated that although the CIA estimates could be marginally improved, it was not at all clear that the results would change. Vladimir Treml stated that in view of the inherent limitations on the data available, the estimates produced by the AFC method provided the best approximations possible, and he suggested that efforts should be concentrated on attempting to improve rather than replace the standard methodology.

Other participants asserted that better practical alternatives to the AFC method already existed, and that they had demonstrated their capacity to produce more accurate estimates. William Lee stated that he had been able to produce better estimates for the defense sector both now and in the past by basing his calculations on the official ruble numbers published by Soviet statistical agencies. He contended that the estimates produced in this way were not only far closer to the mark than those produced by the CIA, but that they also provided a far superior measure of the effective resource costs of production. Igor Birman stated that he generated an alternative estimate on the basis of the same data and the same basic methodology by altering the imputed values assigned to investment and capital stock in the Soviet economy. Contending that much of what the CIA counted as investment should be considered as waste or written down as inflated, Birman suggested that if the CIA's investment figures had been accurate that the Soviet economy would have long since outstripped that of the United States.

A number of participants suggested ways in which the production of estimates of the Soviet economy could be improved. Whereas the CIA bases its estimates on an elaborately derived calculation for a single base year and then estimates the size of the economy in subsequent years on the basis of rates of growth from that base, it was argued that it would be better to calculate GNP annually. Ericson suggested that the economy be treated as a whole, that the defense sector be integrated into the general accounts, and that input-output tables should be compiled in order to produce a more accurate depiction of the Soviet economy. Steinberg contended that Soviet "comparable" prices should not be used at all, but he contended that there are compelling reasons for using "established" prices in calculating the weights of various branches within the economy. Although he was willing to accept the argument that established prices contain certain distortions, he argued that they still provide important indicators of financial flows and resource allocation within the economy. He also noted that value added should not be assumed to grow at the same rate as the gross value of output.

Steinberg asserted that the utilization of his method of calculating the size of the Soviet economy produced estimates of Soviet growth rates that were considerably smaller than those produced by the CIA. He argued that there had been no real growth either in productive investment or in consumption in the U.S.S.R. since 1976, and that most of the growth that had occurred was limited to the military sector. He stated that his results did not take into account the reported deterioration in the quality of Soviet consumer goods that may have taken place during the period under study, and suggested that if such a tendency was indeed present, that Soviet consumption levels had actually declined since 1976.

Steinberg suggested that two separate sets of estimates should be produced and their results compared. One set should be based on the AFC methodology, but it should also introduce a series of improvements identified at the meeting: adjustments in the capital data to account for variations in the productivity of capital in different branches of the economy, adjustments in wage data that would take into account the difference between nominal and real wages (including differential access to goods in short supply), and a mechanism to account for unfinished construction projects and inventories. The second set of estimates should be produced on the basis of black market and world market prices.

A number of the alternatives proposed at the session raised problems of their own. It was noted that black market prices may be quite different from free market prices, that world market prices may be difficult to use over long periods of time due to fluctuations that have nothing to do with conditions on internal markets and that the valuation of services in terms of comparable world prices may obscure important differentials in quality and productivity between different countries. Moreover, there are goods and services within the Soviet Union that are not traded on the world market and for which there are no adequate world price equivalents. Adjustments in nominal wages are also difficult to make in view of the differential access to goods of different population groups and the inherent problems associated with assigning numerical values to privileges or perquisites. Most fundamentally, neither the methodology that would be appropriate for making adjustments for differential rates of productivity of capital nor the data that might be required for such adjustments are presently available.

Robert Campbell pointed out that the conventional treatment of investments and many types of services as final goods does not take into account their differential productivity across countries. He also noted that investment goods are final goods only if one adopts a relatively short time horizon. Considered over a longer period of time, investment goods are intermediate goods that are used up in production. Given that the goal is to measure the output of genuinely final goods, one should adjust the comparative GNP calculations to take into account the fact that Soviet investment goods represent a smaller stream of future services than would a similar stock of U.S. investment goods. This approach would essentially require measuring per capita consumption, rather than the more conventional approach of measuring GNP. Others pointed out that consumption measures welfare, not total economic performance, and is therefore not commensurate with GNP.

This approach also encounters conceptual difficulties. It is not always clear what should be counted as consumption. For example, such conventional consumption goods as bread and sugar constitute intermediate goods when they are used to feed livestock or to produce moonshine for the second economy. More importantly, in order to make productivity adjustments for investment goods, one must first be able to calculate productivity. If productivity is calculated on the basis of conventional GNP accounting techniques, the process becomes circular and fails to advance the analyst's work.

Others asserted that this was not an irremediable problem, and that the comparative consumption approach would be a useful tool for measuring and describing the size of the Soviet economy. For example, if you have two economies in a steady-state equilibrium, each producing 100 units, but with one producing 80 percent consumer goods and 20 percent producer goods, while the other produces only 70 percent consumer goods and 30 percent producer goods, the first economy is clearly operating far more efficiently than the second.

The most frequently used ways of determining the relative size of Soviet and U.S. GNPs are product comparisons and dollar/ruble ratios. Abram Bergson suggested that official U.S. agencies would benefit from an extended analysis of alternative dollar/ruble ratios, but he also noted that the level of sophistication and detail in the alternative approaches he had examined was considerably inferior to that in the AFC method. Several participants countered that such comparisons were necessarily skewed by the fact that no individual researcher has had the opportunity or the funding to produce estimates of a comparable range or complexity.

Others raised questions as to the extent to which the alternative methods under examination actually provided estimates that were significantly different from those produced by the conventional methodology. The CIA generated estimate of Soviet GNP as roughly 50 percent of that of the U.S. has sometimes been contrasted with Igor Birman's estimate that Soviet per capita consumption is approximately 22 percent of the U.S. level. However, the two figures are not strictly commensurate with each other. In order to make a valid comparison one would have to make adjustments for the following factors: (1) the CIA's estimate represents a geometric mean of vastly different ruble and dollar estimates; (2) the share of investment in Soviet GNP is considerably greater than that in U.S. GNP; and (3) the Soviet population is almost 20 percent greater than that of the U.S. Making these adjustments would substantially diminish, but by no means eliminate, the gap between the two estimates. The remaining gap appears to result from different estimates of the appropriate dollar/ruble ratio, from Birman's ad hoc adjustment for largely nonquantifiable "other factors," and from the different treatment of trade services. Regarding the treatment of trade services, Bergson pointed out that his own calculations of their effect on total consumption implied the need for much smaller adjustments than those used by Birman.

To a large extent the recent intense debate about the validity of official U.S. estimates of the size and growth of the Soviet economy and the methodologies used to generate them is a result of what Gregory Grossman has termed "cognitive dissonance." This dissonance resulted from the apparent contradiction between the prima facie evidence available to both experts and casual observers that demonstrate that the Soviet economy is in a crisis and the CIA's analyses throughout the Cold War period that maintained that the Soviet economy was performing reasonably well and exhibiting respectable growth rates. A variety of factors were suggested to account for this:

- First, the units of comparison are clearly incommensurate. Second, the Soviet economic system is currently performing much worse than before, due to the disruption of the command-administrative system, changing national objectives, and the chaos introduced by the perestroika reforms.
- The generally accepted accounting conventions used to derive GNP, that use a single year as the standard for calculations, necessarily lead to counting investments as final goods. Utilizing a longer time frame could substantially alleviate this problem.
- Repressed inflation in the Soviet economy was not effectively accounted for in the official estimates. Inflation was engendered by unusually large budget deficits and unrestricted monetary growth and has been manifested in longer queues, increased rationing through the work-place, and a greater propensity on the part of consumers to hoard goods. All of these factors tend to mislead casual observers and to create the impression that the economy is performing less well than may be the case.
- The casual observations that influence specialist and nonspecialist perceptions in the West are usually made in Moscow and Leningrad, and this may seriously misrepresent trends in the country at large.

It was also noted that the CIA's estimates of the rates of growth of Soviet consumption may actually be consistent with the current state of affairs since growth rates have been calculated relative to the abysmally low level of Soviet consumption in 1953.

No consensus as to the general applicability of particular alternative methodologies was achieved during this session. Several participants stressed the importance of keeping in mind the particular goal of the exercise in evaluating the utility of alternative methodologies; it would not be reasonable, for example, to expect a method designed to measure the welfare of the population to adequately encompass the total production of goods and services in the Soviet economy. It was suggested that alternative methodologies can coexist and should be used to answer different questions.

Meeting Workshops

WORKSHOP I:
THE SIZE OF THE MILITARY-INDUSTRIAL SECTOR

Richard Judy defined the major issues before the participants at this workshop as the determination of the areas of disagreement among the experts and the sensitivity of the results to these disagreements. Additionally he called on the participants to determine the data requirements that would be necessary in order to improve the existing estimates. Despite the workshop title, this session focused on estimates of the size of the military sector with only peripheral attention paid to questions concerning nonmilitary industrial production.

Frank Holzman initiated the discussion with a series of criticisms of the way in which the CIA produces its estimates of the military sector of the Soviet economy. At the most general level of criticism he suggested that the CIA made a major methodological error in preparing its estimates on the basis of dollar rather than ruble prices. He contended that the CIA should have followed its 1983 downward revision of the rate of growth of military expenditures with a corresponding revision of its military burden estimates. He also maintained that the upward revision of the Soviet military burden that was performed in the wake of the 1982 price reform was not warranted. In fact, Holzman argued that this price reform should have reduced the military burden, relative to the burden calculated in 1970 prices, since the prices of high-tech military output should have declined relative to prices of civilian goods as a result of the reform. The military burden, estimated at 12-14 percent by the CIA in 1980, should have declined to about 10 percent in 1982 prices, but the CIA increased its estimate to the 15-17 percent range. Holzman also pointed out that the arbitrary nature of the upward shift in the CIA's estimate was evidenced by the CIA's admission, in a November 1987 pamphlet, that no information was available on how the 1982 reform affected the prices of weapons.

Jim Noren responded that the CIA had made its revision only after a careful study of hundreds of weapons' prices, and that on the basis of that study they had concluded that the 1982 reform had not resulted in significant changes in the prices of military hardware. He also noted that after 1982 the rate of inflation in military procurement appeared to have remained about the same as it was prior to the reform. He said that the agency had conducted a statistical inquiry into the relation between prices and changes in weapons characteristics at the time and had followed up with a further study using actual prices on a small sample of goods, and that both had confirmed the validity of their numbers.

William Lee advanced the opposite critique, arguing that the CIA underestimated military expenditures in the Soviet economy by imputing too much inflation to military output prices. Most of the price increases, according to Lee, represented genuine improvements in the quality of Soviet weaponry. Lee stated that eliminating this bias would result in an estimate of the military burden on the Soviet economy of 15-19 percent for the 1985-1988 period, or an effective rate of 22-25 percent once one factored in the cost of underground shelters and a number of other military expenditures not included in the CIA's estimates.

Noren asserted that the major difference between Lee's approach and that of the CIA was that Lee derives his estimates from an analysis of official Soviet statistics. Lee's "residual" methodology derives the size of the military component of the economy from an analysis of Soviet statistics on the Soviet machine-building sector, whereas the CIA uses a "building block" approach to estimate military output. Lee countered the criticism that he utilizes Soviet "comparable" prices as the basis for his calculations with the argument that these prices had been adequately adjusted for inflation. Noren replied that the CIA had found the residual approach to be completely unreliable and the use of "comparable" prices to be unwarranted. He further noted that comparable prices include significant amounts of inflation and that the precise methodology used to calculate them remains unknown to Western researchers.

A different criticism of the CIA's methodology was advanced by Dmitri Steinberg. He estimated Soviet military expenditures as a component of GNP on the basis of Soviet established prices. One of the advantages of this approach is that it estimates the military burden in the same way that it would be calculated in Soviet national accounts, thus permitting insights into Soviet policy making. Another advantage of this approach is that it provides an alternative assessment of the military burden that is independent from the building block approach. On the other hand, Steinberg's estimates can only be calculated in established prices, and additional work would be required in order to deflate them.

Steinberg criticized the CIA estimates of the military sector as incomplete. He stated that part (approximately 16 billion rubles) of what the CIA counts as household consumption was actually purchased by the military. He also asserted that the CIA fails to effectively account for hidden material costs, the purchase of a variety of services, and the artificially low level of revenues compared to the size and quality of labor and capital resources in the military sector. A larger problem is that the CIA makes no attempt to link its GNP and military expenditures estimates. Steinberg insisted that realistic estimates could only be developed by integrating the two, that everything the military does occurs within the economy, and that if it appears there is insufficient room for the military sector within the overall GNP estimates, that this insufficiency is an important indicator that something is wrong with the aggregate estimates.

Steinberg's estimate for total Soviet military expenditures in 1988 in established prices was 120-125 billion rubles or 14-15 percent of GNP, but he noted that this figure does not represent the effective resource cost of the military to the Soviet economy. The Soviet military generally pays the same prices for goods and services as civilian users, but receives higher quality for its money. Also, military personnel enjoy various "perks" in addition to their monetary wages. Factoring in these hidden resource costs would add 25-30 percent to his established prices estimate, bringing the total military expenditures for 1988 to approximately 160 billion rubles or 18 percent of GNP (this compares with a CIA/DIA estimate of approximately 150 billion rubles or 15-17 percent).

Several points concerning Steinberg's approach were noted at the session. First, U.S. military contractors operate under cost-plus pricing and they are also able to inflate the prices of some of their major inputs. For the sake of comparability, estimates of the military burden on the U.S. economy should therefore be adjusted as well. Second, Soviet military industry produces a significant quantity of civilian output, of which the GNP share changes over time. This factor complicates the calculations of real resource costs. It was also noted that although the underlying methodologies are quite different, numerically, Steinberg's estimates do not differ greatly from those produced by the CIA. The difference in approach may be more important, however, in calculating the rates of growth of Soviet military expenditures.

WORKSHOP II: CONSUMPTION AND SERVICES

The most important debate at this workshop revolved around U.S./Soviet comparisons of per capita consumption. Comparisons have been made in both ruble and dollar prices, and one of the key issues in the debate concerned the best way to calculate the dollar/ruble ratio. Another major issue was how to account for factors that are not normally included in conventional international comparisons of consumption and GNP.

The workshop discussion particularly focused on the debate concerning the CIA estimate of the U.S./Soviet per capita consumption ratio for 1976. Igor Birman contended that the CIA's figure (34 percent) was far too high, and he argued that even his own estimate (22 percent) probably erred on the high side. After prolonged debate between Gertrude Schroeder, Gur

Ofer, and Igor Birman the group reached a consensus on the following factors as being the principal factors responsible for the difference between the two sets of calculations. Nonquantifiable factors, such as the lack of variety in consumer goods and services and time wasted in queues, were considered to account for approximately one-third, or five percentage points of the difference, but these are factors that are neither included in conventional international comparisons of consumption nor in GNP. Another five percentage points of the difference was ascribed to different ways of accounting for retail trade services. In this area the CIA follows the International Comparisons Project (ICP) methodology that does not include these services in GNP calculations for any country. It was indicated that the CIA was well aware of the importance of this omission for its U.S./U.S.S.R. comparisons, but had decided to follow the ICP convention for the sake of international comparability. The remaining difference appeared to be the result of differences in calculating the dollar/ruble ratio and of different ways of accounting for the contribution of services.

The workshop discussion also centered on the methodological problems posed by the measurement of the service sector. The standard practice for measuring such services as health and education is to derive output from the total value of the inputs used to provide the service. This approach assumes, however, that the skill of a doctor or teacher does not vary from country to country. This assumption may be entirely unwarranted when the countries being compared are at substantially different levels of development. The ICP dealt with this problem in its most recent comparisons by assigning a weight of 50 percent to labor inputs in this sector for Hungary, Yugoslavia, and Poland. This introduction of non-unitary weights into the ICP comparisons was considered highly controversial by the participants. They were unanimous, however, in rejecting its application only to formerly centrally planned economies and not to LDCs. Some participants suggested that the CIA should investigate the possibility of assigning a less than unitary weight to Soviet labor inputs in the production of services.

The discussion also included an examination of issues concerning housing in the Soviet economy. Once again, the CIA's use of physical data does not make any adjustments for changes in the quality of output. Many researchers have argued that the quality of Soviet housing has improved over time, particularly in view of the increasing availability of various household amenities. If this is the case then the CIA underestimates real growth in consumption, and, therefore, the level of consumption as well.

In contrast, Steinberg argued in the paper he prepared for the meeting that the quality of many Soviet services had actually declined over time. He reached this conclusion on the basis of an analysis of a mix of inputs, including labor, capital, and materials. For example, he considered that a decline in the capital/labor ratio in the production of a service was likely to have resulted in a reduction in labor productivity and thereby counted this as a deterioration in the quality of output. On the basis of this methodology, Steinberg concluded that the CIA's disregard of trends in the input mix may have led to an overestimation of consumption in the service sector.

Although there was no firm consensus, the balance of opinion indicated that the participants considered that the CIA estimates of the U.S./U.S.S.R. consumption ratio probably suffered from an upward bias. The discussion was also instrumental in clarifying existing disagreements and identifying areas for further study.

WORKSHOP III: THE SECOND ECONOMY

The first issue examined at this session was the most appropriate definition of what constitutes the second economy. Several approaches have proven useful in the context of the Soviet economy. According to Gregory Grossman's definition, the second economy consists of any economic activities that satisfy at least one of two tests: (1) the activity is directly for private gain, or (2) the activity is knowingly illegal. An alternative approach that some participants considered useful for the purposes of the present discussion was the statistical approach. This approach considers the second economy to include all economic activities that are not directly reflected in official economic statistics. While the first definition provides a wider scope for research and does not place a researcher at the mercy of the statistical authorities, the second definition may be more useful for GNP adjustments.

Traditionally, illegal economic activities have been excluded from official statistical accounting, but a number of countries have recently begun to make adjustments in order to incorporate their second economies into their GNP accounts. For example, Italy increased its official GNP figure for 1984 by 11 percent. It was noted, however, that when such adjustments are made, they are usually phased in, and this is done in such a way that they do not affect the growth rates of the economy.

All the participants agreed that the second economy in the U.S.S.R. is sufficiently large to warrant its inclusion in the Soviet GNP accounts. According to the calculations made by Grossman within the framework of the Berkeley-Duke project on the second economy, approximately one-third of urban household income in the U.S.S.R. is generated within the second economy. The salience of the second economy is enhanced by the fact that it appears to be the only sector of the Soviet economy that is experiencing rapid growth. In a recent Soviet newspaper interview, Soviet economist Tatiana Koriagina estimated that the second economy has been growing at an average rate of about 10 percent per year since 1960. Not only does the second economy affect many of the magnitudes used in the weighting procedures for calculating GNP growth rates, but official prices often have a tendency to follow those of the black market.

The CIA does attempt to incorporate part of the legal second economy in its GNP accounts. For example, the output of private plots and some private construction are explicitly included and some adjustments are made in its estimates of the weighting of food and services. Several participants argued, however, that the CIA is not doing enough in this respect. Vladimir Treml suggested that the inclusion of elements of the second economy that are missing from the CIA adjustments would add another 15-18 percent (in nominal terms) to Soviet GNP. Some types of income are not taken into account by the CIA in its analyses of the Soviet economy, but are included in conventional estimates of U.S. GNP, for example, the income of churches. This results in further imbalances in comparisons.

Many difficult issues arise once the attempt to incorporate the second economy into the GNP accounts is made. To begin with, one cannot simply add the turnover in the second economy to the GNP estimate, since a large part of the second economy consists of transfer payments. Also, an indeterminate amount of the inputs used in second economy production have already been counted in the official statistical data. Another problem is that of pricing, since prices for the same goods are frequently higher in the second economy than they are in the first. The international convention is to use average realized prices, but it is difficult to calculate the quantity of goods sold at official and at second economy prices in the Soviet context. The emergence of entirely new institutions in the U.S.S.R. in the most recent period, particularly the creation of the crypto-private cooperatives, has complicated the situation even further. Koriagina has estimated that 1.75 rubles worth of illegal activities are generated with every ruble of officially recorded cooperative sales.

Despite these difficulties, many adjustments can be readily made to the CIA GNP accounts. The main economic activities that should be included are the production of moonshine, various kinds of repairs (appliances, cars), and the crypto-private production of clothing. The reclassification of certain components of GNP will also be necessary. For example, a certain portion of bread and sugar production that has traditionally been counted as consumption, but that are actually being used as inputs in the second economy (both in the production of livestock and moonshine), will have to be reclassified. It was pointed out by a number of participants that a proper accounting for second economy activities will raise the U.S./U.S.S.R. GNP ratio by a far from trivial amount, and that it might also help to reduce the "cognitive dissonance" discussed in Session III.

Plenary Session

On the final afternoon of the meeting a plenary session was held to enable the participants to both report on their deliberations and to receive comments and feedback from a larger group of economic specialists working in related areas in government agencies, the academic community, and private research organizations. Lawrence Klein introduced the session with an extended commentary on the issues investigated at the meeting and a presentation of his own conclusions concerning future research efforts. Klein argued that American Sovietologists had done a better job of estimating the size of the Soviet economy than anyone else, including the Soviets themselves. He noted that Soviet statistics offer little more information to analysts than is characteristic of many LDCs, that the economy in question has been in chronic disequilibrium throughout the postwar period, and that a sizable amount of production and trade takes place in the second economy.

Klein contended that while everyone had been wrong to a certain extent, on the whole American experts had presented policy makers, specialists, and the larger public with as accurate a picture of the Soviet economy as the limited data could provide. He also suggested that recent changes in the Soviet system and the Soviets' avowed interest in participating in various international organizations indicated that analysts might be able to go beyond the short cuts of the AFC method in the future. In closing, Klein called for the development of an integrated accounting system for the Soviet economy and a full scale study to elucidate the complex and interconnected methodological issues raised at this meeting.

Conclusion

The absence of consensus on the central methodological questions addressed at this meeting provides a strong argument for further efforts to investigate and analyze the relevant questions. While some participants maintained that the current methodology provides the best estimates possible in a difficult situation, others registered serious reservations concerning the assumptions on which the AFC standard is based and the methods by which the CIA produces its estimates of both the size and rates of growth of the Soviet economy. A number of the challenges advanced at the meeting have suffered in the past from the absence of sufficient funding to support the research necessary to fully elaborate an alternative to the AFC model, and a consensus was reached that alternative methodologies should be investigated in the future. The participants also concurred in the view that they had only been able to initiate an examination of the issues under review at this meeting, and that a major study would be necessary in order to reach definitive conclusions.

Glossary

Adjusted factor cost (AFC) standard. This method adjusts all commodity prices to make them equal to average costs of production. In other words, the AFC standard takes out all taxes and subsidies from the prices of goods and services and replaces all types of income with a uniform for all sectors average return on capital. The adjusted prices also include depreciation of capital in free household services, science, and housing sectors.

Comparable prices. These prices are supposed to have been adjusted for inflation by Soviet statisticians. The methodology used by the Soviets for the adjustments, however, is not clear. Most Western observers believe that these prices include a significant amount of inflation and view these prices as utterly unreliable.

Current or established prices. These prices are the prevailing nominal ruble prices within the economy, i.e., the existing prices, not adjusted for inflation.

Deflation. In the context of this conference, deflation is the process of adjusting economic data for inflation.

Input-output table. An input-output (I-O) table is in essence a graphic presentation of the national accounts of an economic system, showing the interrelations among the producing and the using sector. The table has four quadrants only three of which are generally used. the first or the interindustry transactions quadrant shows the flows of intermediate inputs from one branch of the economy to another; the second or final use quadrant shows the distribution of production to final use; and the third or value added quadrant presents the distribution of primary inputs to final users. The I-O table presents an internally consistent picture of transactions flows within the economy. (The above description is adopted from P. Gregory and R. Stuart, *Soviet Economic Structure and Performance*, 4th edition, Harper & Row, New York, 1990.)

Marginal rates of transformation (MRT). MRT is the numerical value of the slope of the production possibilities frontier, i.e., the number of units of one kind of good one can obtain by giving up one unit of another kind of good.

Production possibility frontier (PPF). PPF is all "efficient" combinations of goods and services that can be produced given the resources of the society and the existing state of technology. A combination X is efficient if given the resource endowment the society cannot produce more of all goods and services than is contained in X.

Purchasing power parity (PPP). PPP is the rate of exchange between the currencies of two countries in which the units of national currency expressed in the exchange rate command equivalent or comparable purchasing power, in terms of specified commodities, in either the domestic or world markets (Adopted from H. Sloan and A. Zurcher, *A Dictionary of Economics*, Barnes & Noble, New York, 1951.)

Senator BINGAMAN. Mr. Kolt, we appreciate very much your being here. Why don't we go ahead and proceed in whatever order you would prefer.

STATEMENT OF GEORGE KOLT, DIRECTOR, OFFICE OF SOVIET ANALYSIS, DIRECTORATE OF INTELLIGENCE, CENTRAL INTELLIGENCE AGENCY

Mr. KOLT. Thank you, Mr. Chairman. I am pleased to appear before your Subcommittee, as usual, at this time of the year, along with my colleague from the DIA, Pat Duecy.

DISINTEGRATION OF ECONOMY

This year's hearing comes at a time when the Soviet economy is disintegrating and could be on the way to a disaster of historic proportions. The only glimmer of hope is the broadening realization inside the Soviet Union that only systemic and structural changes can bring about an economic turnaround.

Six years after President Gorbachev courageously launched the reforms that came to be known as perestroyka, much of the totalitarian system constructed by Lenin and his successors has been undermined. But the halfway nature of Gorbachev's changes and continued opposition to them, on the part of Soviet traditionalists, have produced a situation in which a growing disorganization pervades the economy. Farms and industrial enterprises face a contradictory mixture of incentives, including continued central government orders, instructions from local and Republic authorities, and worker demands. Fiscal and monetary irresponsibility has also taken its toll. As a result, output is falling at an accelerating rate, inflation is increasing rapidly, interregional trade is breaking down, and economic relations with the rest of the world are suffering.

Painful as these shocks are to the Soviet society, they would have had a positive side had there been the consequence of efforts to restructure production, reform prices, replace central allocation of goods and supplies with genuine wholesale trade, and create a more rational basis for foreign trade.

MISGUIDED POLICIES

The tragedy is that the hardship being inflicted on the Soviet population is almost entirely the result of misguided policies and not part of a coherent reform program. Things could have developed differently. Last summer, fresh from a victory at the 28th Party Congress and alarmed over the country's incipient economic decline, Gorbachev seemed ready to accept the Shatalin-Yavlinsky 500-day program that called for a rapid transition to a market economy and stabilization through reform. Faced with the determined opposition of traditionalists and perhaps after pondering the loss of central power the 500-day program would entail, Gorbachev opted instead for increased decree-issuing authority, allegedly to push through unpopular reform measures and an alternative economic program.

While the new program still posited the goal of market economy, the vagueness of its provisions and its lack of clear timetables have made it subject to selective implementation and delay by both the central bureaucracy and political leaders. Gorbachev's implementing decrees have focused on stabilizing the economy through administrative measures, and the use of the regular police and the KGB to enforce economic laws. At least three decrees have simply ordered farms and enterprises to fulfill contracts and maintain last year's supply relationships rather than change the incentive system to encourage them to do so.

Gorbachev has called upon the KGB and the Ministry of Internal Affairs to assume a more active role in stopping so-called economic crimes, such as speculation. Workers' committees to control the distribution of food and other consumer goods have been created in an effort to reduce theft and hoarding. The Center has even tried to treat the buildup of increased purchasing power, as a law-and-order problem, requiring citizens to turn in their 50- and 100-ruble banknotes, and demonstrate that they were legally earned before receiving new banknotes in return. These decrees and measures have proven hopelessly ineffective.

Reform, however, has not been completely hostage to changes in the Center's commitment. The leaders of a number of Republics, primarily the Baltics and Russia, have been critical of the Center's policies and have declared their own commitment to market reform. While the Baltics have pushed ahead with continuing reform initiatives in Russia, where traditionalists still enjoy substantial clout in the Republic legislature, progress has been slow.

Last fall, Boris Yeltsin reacted to the Center's rejection of the 500-day plan by saying that his Republic's options were to attempt to work within the new plan, to try to launch its own comprehensive reform despite the enormous difficulty of going it alone, or to wait 6 months for the Center's version of reform to fail. The Russian Government chose the last of these options. The expected failure having come about and the Center's policies having so far remained essentially the same, the Russian Republic is now proceeding with broad reforms of its own, as outlined by Russian Prime Minister Silayev during his recent visit to the United States.

Despite the slow pace at which the implementation of reform has proceeded, legislation at both the Union and Republic level has been passed or decrees issued on property ownership, taxation, banking, small business, and joint stock companies, which could provide the institutional framework for movement toward a market economy. Moreover, at the grass-roots level, reform has continued with or without the active encouragement of the authorities and, despite the obstacles, the bureaucracy has put in the path of the new cooperatives, embryonic commodity exchanges and other reform institutions. Such developments bode well for the future, but until now have been overwhelmed by the negative trends in the economy.

CRISIS OF GOVERNANCE

Many of the recent problems in the economy can be traced to a profound crisis of governance. Most of the economic and political institutions that held the economy together in the past have been discredited and even discarded. But new institutions are not in place. Rather, a political struggle is raging over the creation of new institutions, while the economy is floundering.

A focal point has been the struggle between the Center and Republics over the control of resources. All the Republics issued declarations of sovereignty last year, and battles between the Republics and the Center have ensued over control of natural resources, budget revenues, the banks, and hard-currency earnings. Russia, the Baltics, and the Ukraine have been the most vigorous in asserting their rights.

In addition, the Republics have sought to keep their own population supplied with consumer goods, especially food, by withholding deliveries to central stocks and customary trading partners outside the Republic. Local, as well as, republic-level officials have also become more assertive, holding back supplies and bartering them for consumer goods and industrial materials needed for local businesses, and closing down facilities polluting the environment. Free from the control of the central bureaucracy and the discipline of the marketplace, some enterprises have reduced output while raising prices and wages, thereby contributing to shortages and increasing inflationary pressures.

FISCAL AND MONETARY CRISIS

A second major cause of the U.S.S.R.'s economic deterioration is the growing fiscal and monetary crisis that is fueling inflationary pressures. The Soviets ran another large deficit last year, and the growth in the money supply accelerated. Developments so far this year suggest that the U.S.S.R.'s once highly centralized fiscal and monetary systems are breaking down.

The Center's plan had been to retain control of natural resources, while devolving the responsibilities to the Republics for social programs. Not surprisingly, once faced with popular pressures, the Republics are responding by withholding revenue payments to the Center to help pay for these social programs and, in a number of cases, increasing social benefits above levels mandated by the Center. Bank credits are being expanded to support financially troubled enterprises. These actions are fueling central and republic budget deficits and leading to a rapid expansion of the money supply.

MISMANAGEMENT

Decades of mismanagement and the shortcomings of central planning are also taking their toll on the Soviet economy. Because much of the Soviet industry is dominated by monopoly producers, production difficulties at one factory quickly lead to countrywide shortages. For example, shortages of cigarettes, medicines, and soap can be traced, in part, to production problems at individual factories.

Mismanagement of investment resources has left many crucial sectors with an aged capital stock that is subject to frequent breakdowns, and they are unable to help cope with the change in demands. Environmental pollution has reached such proportions that the government can no longer ignore it, and local officials have closed numerous facilities, creating further disruptions in the economy.

FACTORS LEADING TO ECONOMIC DECLINE

All these factors are converging to bring about a deepening decline in the Soviet economy. Official Soviet statistics acknowledge that overall output declined last year, the first time since World War II that Moscow has reported an absolute drop in production. Although it has become harder than ever to make estimates of the Soviet economy, we believe that GNP fell by around 4 to 5 percent last year. Official Soviet statistics indicate that the decline accelerated sharply during the first 3 months of 1991, compared to the same period a year ago. And President Gorbachev confirmed this in a statement yesterday.

Soviet industries producing energy and basic materials have led the economy's downturn, causing cascading shortages that are now being felt in almost all sectors of the economy as buffer stocks and inventories have waned. Shortages of basic industrial materials contributed to a 3 percent drop in agricultural output last year, despite a near-record grain crop.

The regime has made some progress in shifting production from investment in defense toward consumption, but only with a few positive results. While a shift in resources in the defense sector contributed to increased output of consumer durables, overall cuts in defense spending have produced only meager gains for the civil economy.

Investment cuts were also not offset by greater efficiency, and in fact completions of investment projects fell far below planned levels. Instead, these cuts contributed to production declines in the energy and other basic industrial sectors.

Inflation is also accelerating sharply, with retail prices rising by an estimated 14 percent in 1990, and a reported 24 percent in the first quarter of 1991. In an effort to bring prices in line with the cost of production, the government mandated a 60 percent hike in the average retail prices charged in state stores that went into effect on April 2. The price increases were meant to be a one-time adjustment, but uncontrolled growth in the budget deficit and money supply, and a rapid erosion of state control over prices promise a further upswing in inflation later this year.

Soviet foreign trade is suffering both from and contributing to the ills afflicting the economy. To ease shortages of consumer goods, the Soviet leadership stepped up imports during the first half of 1990. Exports, however, failed to keep pace, and the U.S.S.R. ran into increasing difficulty meeting its import bill. Despite increased earnings from oil exports and import cuts of much needed supplies in the second half of the year, payment problems remain.

Meanwhile, reacting to mounting arrears in payments by Soviet firms, Western banks became unwilling to provide new loans. To cover its bills, the U.S.S.R. had to draw down reserves, step up gold sales, and seek assistance from Western governments, as well as from several Arab states. Nonetheless, its hard-currency position remains precarious. A sharp drop in imports from Eastern Europe this year, as longstanding trade arrangements were switched to a hard-currency basis, is helping the Soviets with their cash crunch, but at the cost of reduced inflows of badly needed products. The pinch for Eastern Europe has been very great.

As a result of the country's worsening domestic and foreign economic problems, the misery of the Soviet consumer has increased. Output of alcohol and expensive consumer durables increased last year, but production of many food items and other daily necessities either stagnated or declined. Moreover, the sharp growth in money incomes overwhelmed the small improvement in supplies. Consumers faced greater shortages and higher prices than at any time in the past four decades.

Breakdowns in distribution compounded the shortage problem, and magnified regional and social inequalities and living standards. The biggest losers were and still are industrial regions, which are highly dependent on centrally allocated supplies of food, and individuals on low fixed incomes without access to specialized distribution networks, primarily pensioners.

Looking ahead, we foresee a continuation of hard times. But whether the economic decline accelerates or the economy begins to stabilize will depend crucially on the Center's willingness to arrive at a new division of authority between itself and the Republics, and on the economic policies of both the Center and the Republics.

APRIL 23 ACCORD —— OFFER OF SOME HOPE

The April 23 accord between Gorbachev and the leaders of the nine Republics offers some hope that the Republics are closer to an agreement over the delineation of power. There are also indications that an economic plan, based on the April 23 accord, is being worked out and could serve as the basis for genuine stabilization, reform, and eventual upturn of the economy. That plan, I might add, was discussed yesterday at an expanded meeting of the Council of Ministers in which both President Gorbachev and ministers from the nine Republics participated. Still, as happened last summer in negotiations over the Shatalin-Yavlinsky program, the accord could collapse as the principals attempt to hammer out the details.

THREE ECONOMIC SCENARIOS

Overall, we see three basic scenarios that could determine economic performance in 1991. In each of them it will be important to remember that at a time of great perturbation, GNP numbers alone will tell even less of the story than usual about the economy. The big question will be whether the basis is being laid for future recovery through systemic reform.

In the first scenario, this would be the case: The April 23 accord would indeed become the basis of a political agreement that delineated the control of resources and other economic powers between the Center and the Republics. If that plan also fully supported reform, restored interrepublic trade links, and reestablished financial discipline, then it would establish the foundations for a new order that could eventually stabilize the economy. But improvements would not be immediate. In 1991, GNP would probably still fall by some 10 percent. Inflation would accelerate as prices were freed to go to market levels, but with a sound financial policy, it could be reined in before long. Moreover, shortages would ease, the flight from the ruble would slow, and market stimulation of production would begin.

In a second scenario, should the putative accord fail and the government continue to try to stabilize the economy through administrative measures that rely upon central controls that have lost much of their former force, the decline would worsen. Soviet GNP would probably decline by 10 to 15 percent, and annual inflation could exceed 100 percent. Indeed, failure to regain control over the financial system could lead to runaway inflation by yearend. Moreover, prospects for turning the economy around would remain bleak. This approach, which would not seek the consent of the governed, would also be likely to engender more strikes and labor protests.

Finally, in a third scenario, the leadership would step up repression in an effort to control the Republics, to enforce state orders, and to control the economy. Under such circumstances, the decline might slow temporarily if accepted by enough of the population. More likely, an attempt to reverse the changes and the liberalization of recent years, and to force additional hardships on the population would precipitate widespread resistance and considerable bloodshed. This would greatly accelerate the downward spiral. The decline could eventually equal or exceed the 30 percent drop in GNP and the 25 percent unemployment rate experienced in this country during the Great Depression of 1930 to 1933.

OVERVIEW OF SOVIET UNION SITUATION

Mr. Chairman, even if central republic political differences are resolved and the U.S.S.R. embarks on a transition to a market economy, tough times are in store for the Soviets. The mechanics of transferring property to private hands, and breaking monopolistic industries will have to be worked out. Longstanding antimarket attitudes will need to be changed. There will almost certainly be substantial unemployment and inflation as the economy adapts itself to a market environment. Production will continue to decline as the fall in output of unwanted goods will not be immediately offset by increased output of what consumers and producers want and need. Finally, while the competitive environment of the market can give a big boost to economic efficiency, it will take decades to replace obsolescent capital stock, rebuild the infrastructure, and repair the damage to the environment.

REMARKS ON CRITICISM OF INTELLIGENCE ASSESSMENT OF SOVIET ECONOMY

Mr. Chairman, you have asked me to say a few words about criticism that has been directed at our past work on the size and capabilities of the Soviet economy. I think three remarks are in order on that score. First, it is widely recognized that it is tricky business to compare the size of a Western economy, where prices reflect supply and demand, and a centrally planned economy, where prices are administratively determined. Another key problem is in comparing the quality of what is produced in both types of economies. Making comparisons becomes even more difficult when dealing with an economy steeped in secrecy. For this reason, as I have testified to this Subcommittee, we have always been much more confident in our estimates of the structure and trends of the Soviet economy than in our estimate of size. If we receive more information and are able to make qualitative adjustments, we could well retrospectively lower our size estimate, as we recently have done for some Eastern Europe countries. Unfortunately, Soviet officials are only slowly becoming responsive to those kinds of demands for information. Even when President Gorbachev appointed a team of economists headed by Professor Shatalin to come up with a remedy for the Soviet economy, the Soviet Ministry of Defense, the State Planning Committee, and the Finance Ministry refused to supply the needed data. That is stated in the Shatalin report.

Second, I would caution that we should not project on the Soviet economy of the early 1980s the much more serious crisis in which it finds itself today. That pre-1985 economy had growing problems, including great overspending on defense. The magnitude of today's crisis, however, is the result not only of decades of mismanagement but also, and more significantly, of misguided policies since 1985.

Third and last, until we get more information that would allow us to make any necessary factually substantiated adjustments to our past estimates, I think, Mr. Chairman, we would be better served by turning our attention to the future. I think that this would respond to your admonition at the beginning of this hearing about looking to the future, and the new issues that confront the United States. In the Soviet Union, we are now looking at a highly complex transformation process from central planning to a different economic system, which will require different methods of analysis. The central planning system is disintegrating before our eyes, and a new economic system is only slowly and erratically emerging. In these circumstances we, in the Central Intelligence Agency, are looking at the kind of analysis that will be required of us tomorrow, and have a task force working on these emerging Soviet economic issues. Certainly, that task force is looking at lessons from the past, but the thrust of its work is directed at how to analyze an economy in which decisionmaking authority is already becoming and will continue to become much more diffuse than before. As in the past, we are seeking the expertise and wisdom of all those outside as well as inside the government who can help us.

EASTERN EUROPE

Turning now to Eastern Europe, where democratically elected leaders are pressing ahead with serious reform programs, they too face serious problems. Their problems, however, are more manageable than those of the Soviet Union. Change has been faster and smoother in Eastern Europe, and the political situation is, on the whole, much more stable than in the U.S.S.R. The overall economic outlook provides more hope for eventual recovery and prosperity as recent reforms pay dividends.

When we reported to you last year, it was only months after the historical changes that saw the removal of the Communist regimes in Eastern Europe. The region has moved quickly to consolidate these changes, with elections and the formation of new governments. Meanwhile, dissolution of the Warsaw Pact and the Council for Mutual Economic Assistance has broken key organizational bonds to the Soviet Union.

The primary goal of the new governments in Eastern Europe is to develop prosperous, technologically advanced, and competitive economies. A strong local consensus has developed in the last year that replacing central planning with market mechanisms is the best way to attain this goal. The countries of Eastern Europe have made substantial progress in reforming their economies in the past 2 years under conditions that would test even the most stable democracies. Consumers in most countries now have an impressive array of goods available, and the notorious lines of shoppers seen in the Soviet Union have all but disappeared.

EASTERN EUROPE'S 1990 ECONOMY

Looking at this progress in relative terms, it is clear that these economies remain weak by Western standards. Change has come so quickly to the economies of the region, however, that the official figures on output—on which our GNP estimates are based—are even more uncertain than in the past. By our estimates, GNP fell by 7 percent in 1990 for Eastern Europe as a whole, the steepest decline on record.

All of the countries experienced some downturn, with Romania and Poland suffering the sharpest declines of 11 and 9 percent, respectively. Industrial production was especially hard hit by high-energy costs. Inflation soared as the Eastern Europeans lifted price controls, eliminated subsidies, and devalued their currencies, all initial steps needed to make the transition to a market economy. Unemployment rose sharply, but was still generally low by Western standards.

The downturn continued a long-term trend of flagging economic performance. New governments inherited not only an inefficient central planning apparatus but also an aging industrial base, chronic trade and debt problems, inefficient distribution systems, a crumbling infrastructure, and steadily worsening energy shortages. These systemic problems actually grew more acute in the final years of the previous regimes, and the new leaders are only now starting to make a dent in fixing them.

Several new factors also worked to slow output last year. Political upheavals of the previous year caused considerable uncertainty, leading to worker absenteeism and declining productivity in some countries. Economic liberalization itself, underway only in Poland for the full year, also reduced output. Domestic demand contracted sharply in response to higher prices and devaluation by Warsaw. More broadly, the anticipation of reforms may also have disrupted output as firms tried to prepare for new rules. Energy costs increased sharply, with turmoil in oil markets resulting from the Persian Gulf crisis and a sharp drop in Soviet oil deliveries.

Foreign trade in 1990 was one of the bright spots in several countries. The share of trade with non-Communist countries jumped sharply as the region showed interest in trade with the West. While trade with the U.S.S.R. languished, export booms to the West from Poland and Hungary had improved their payment positions markedly. Less burdened by debt problems, Czechoslovakia and Romania opted to boost hard-currency imports to prop up living standards, although the purchases pushed their trade accounts sharply into the red. On the negative side, Bulgaria declared a moratorium on its debt payments.

Most important, all five of the former CEMA countries in Europe now passed laws that explicitly accept the need for market forces to guide them to eventual prosperity. Judged against the glacial pace of economic change over the past 4 decades and compared to the structure and management of the economies 2 years ago, the region has made rapid progress. Prices now play a major role in economic decisions of producers and consumers. Supply and demand are more in balance. Central planning has been abolished. Entrepreneurship has flourished with the creation of tens of thousands of new firms providing needed services and easing shortages of consumer goods.

Nevertheless, much ground remains to be covered before achieving a market economy. In each Eastern European country, the state still controls at least 80 percent of the production assets. The northern countries—Poland, Czechoslovakia, and Hungary—have set the pace in economic reform. They began with some experience with reforms, and were much better prepared to change their economies than their neighbors to the south. Romania and Bulgaria have lagged in their programs, but the changes in these countries have also been dramatic in early 1991. Change is evident even in Albania, long isolated from the rest of Eastern Europe. Yugoslavia's long-running reform effort has bogged down in the political strife that threatens to break up the country.

Economic reform packages throughout the region generally include the same measures to replace central management of their economies, although timing and emphasis have varied among countries. The governments have removed most controls and subsidies that kept prices low but fostered inefficiency. Controls now cover prices on only politically sensitive items, such as housing, energy, and food. Currency devaluations have reduced or eliminated the gap between the official and the black market rates, and at least limited convertibility with Western currencies has been established.

Although many small, new private enterprises have blossomed throughout the region; only limited progress has been made toward selling large state companies. Some of the delay reflects the lack of legal institutions needed to transfer ownership to private hands. The governments also realize that many of these state enterprises are so inefficient that they will have to be closed, adding thousands of persons to already record-high unemployment rolls.

EASTERN EUROPE'S 1991 ECONOMY

More economic hardship is in store for 1991. We expect the downturn for this year to be nearly as great as in 1990, a fall in GNP in the 5 to 10 percent range and an even larger drop in industrial production. The shift from barter to hard-currency trade with the U.S.S.R. has caused a collapse in Eastern European exports to the Soviet Union and a slide in production. The surge in exports to the West by some countries is not likely to be repeated this year because exchange rates will not be as favorable. Continued reform is also likely to cause drops in output if privatization forces substantial plant closures and layoffs.

Looking at this, we can say that Eastern Europe's economic reform is at a delicate stage. The enthusiasm that swept the region with the fall of the Communist regimes has given way to the realization that the region has only begun a journey down a long, hard road. Laws have been passed, but much of the most painful implementation stage lies ahead. With continuing widespread acknowledgement that reform is necessary, the debate at this point is likely to cover the pace of reform rather than its inherent desirability.

The Eastern European populations generally have borne the burden of recession, inflation, and uncertainty with impressive tolerance and patience. More recently, however, even the most ardent reformers have been forced to rethink the wisdom of rapid introduction of reforms.

Economic policymakers may yet be tempted to reflate the economies by slowing privatization, raising wages to offset price increases, and restoring subsidies. Such policies would endanger the reform programs already in place and run afoul of IMF guidelines that call for tight budget and credit policies to damp inflation.

ACCELERATION OF PRIVATIZATION

The next key task for Eastern European reformers is to accelerate privatization. But the Catch-22 of reform is that rapid privatization is needed to hasten the end of the transition period, but it is this very step, with its accompanying unemployment and other adjustment problems, that could cost the government public support necessary to survive the transition. The financial squeeze may yet force the hand of economic managers. Rising costs and the collapse of CEMA markets could force decisions on whether to increase subsidies to keep firms operating, or to allow firms to go bankrupt.

HELP FROM THE WEST

East Europeans believe that the West should contribute in a variety of ways to support the reforms. After being told for years that economic relations with the West were limited as long as the countries were so closely tied to the U.S.S.R. and their economies centrally controlled, the Eastern Europeans now feel that they have fulfilled the West's conditions. Moreover, they believe that the West—Western Europe in particular—has a large stake in Eastern Europe's economic reorientation.

The East Europeans expect a larger volume and a wider range of financial flows from the West. The need for restructuring and retooling their economies has created a huge appetite for capital for a variety of purposes: For efficiency, to modernize plant and equipment, and to reduce the per-unit consumption of energy and other raw materials; for restructuring, to develop new industries and produce competitive export goods; and for the infrastructure, to develop modern transportation and communication facilities, and to clean up the environment.

Indeed, the region's investment needs probably a total in the hundreds of billions of dollars, with self-financing not a feasible option for the foreseeable future; and the governments and populations eager to transform their economic systems and structures, Eastern Europe sees the West as a major source of the imports to meet these goals and as a source of financing to purchase these imports.

The West has provided a large sum of credits and other assistance in the past 2 years. Since July 1989 Western pledges totaled almost $45 billion. Nearly two-thirds of this represents commitments by multilateral institutions, including the IMF, the World Bank, and the European Community. The actual amount of assistance reaching Eastern Europe to date, however, is substantially reduced, both in amount and utility by several factors. Disbursements to date are far less than commitments to assistance. East European repayments to the IMF offset a large share of aid commitments. Some of the commitments are less than firm. Exchange rate fluctuations over time make conversion into dollar figures problematic. Finally, much of the aid is in the form of loans rather than grants, and the loan terms are not very concessionary.

KEY PLAYERS IN EASTERN EUROPE'S ECONOMY

The IMF and World Bank are playing key roles in East European economies by monitoring economic performance, reforms and policy in exchange for substantial credits. All of the countries are now members except for Albania, which applied to IMF and the World Bank earlier this year. The IMF has approved a total of $8.4 billion in credits in 1991 for Bulgaria, Czechoslovakia, Hungary, Poland, and Romania.

European organizations have also played a key role. Poland, Czechoslovakia, and Hungary have been negotiating association agreements with the European Community. The major economic benefits from these agreements are likely to increase access to West European markets for East European exports. The EC has also been coordinating aid for the region. The European Bank for Reconstruction and Development was established specifically to meet the financing needs of the Soviet Union and the East European countries. The EBRD, as it is called, opened its doors this April in London.

FUTURE NEEDS OF EASTERN EUROPE

The East Europeans are likely to continue to press Western governments and multilateral organizations for assistance. In a practical sense, Eastern Europe's needs are too great to be met in a short period of time, especially given the West's resource limitations and budget constraints. Moreover, the region is not yet prepared to use hundreds of billions in capital. Eastern Europe will need years to absorb the funds, and investment priorities will need to be clarified once reforms are in place and the emphasis shifts to restructuring. Some foreign investment can be immediately used to speed privatization, however, through joint ventures or purchases of state firms being privatized.

Expertise is another key and relatively low-cost requirement to support the reform process. East European managers are unaccustomed to operating in a market environment, and need training in a wide variety of business skills to adjust to new incentives and to compete in Western markets. As they move into this arena, Eastern Europe's potential creditors and aid sources will gauge each country's success in staying the reform course and maintaining stability and public support. Finally, with a hard-currency debt of over $100 billion, the region still faces pressing balance-of-payments and debt problems that will complicate the meeting of more fundamental capital needs.

In sum, Eastern Europe has made a good start down the road to transforming weak command economies into democratically-based free-market systems. They are so far the world's pioneer on this road that has never been traveled before. The determination with which new leaders have pushed through reform programs and the popular tolerance for austerity are good signs. But the persistence and courage of the East Europeans will clearly continue to be tested by tough challenges through the rest of the 1990s.

Mr. Chairman, this concludes my statement. I thank you for your attention.

[The prepared statement of Mr. Kolt follows:]

PREPARED STATEMENT OF GEORGE KOLT

Beyond Perestroyka: The Soviet Economy in Crisis

Good morning, Mr. Chairman. I am pleased to appear before your subcommittee as usual at this time of the year along with my colleague Mr. Patrick Duecy, DIA's Assistant Deputy Director for Research.

This year's hearing comes at a time when the Soviet economy is disintegrating and could be on the way to a disaster of historic proportions. The only glimmer of hope is the broadening realization inside the Soviet Union that only systemic and structural changes can bring about an economic turnaround.

Six years after President Gorbachev courageously launched the reforms that came to be know as perestroyka, much of the totalitarian system constructed by Lenin and his successors has been undermined. But the halfway nature of Gorbachev's economic changes and continued opposition to them on the part of Soviet traditionalists have produced a situation in which a growing disorganization pervades the economy. Farms and industrial enterprises face a contradictory mixture of incentives, including continued central government orders, instructions from local and republic authorities, and workers demands. Fiscal and monetary irresponsibility has also taken its toll. As a result, output is falling at an accelerating rate, inflation is increasing rapidly, interregional trade is breaking down, and economic relations with the rest of the world are suffering.

Economic Policy

Painful as these shocks are to Soviet society, they would have had a positive side had they been the consequence of efforts to restructure production, reform prices, replace central allocation of goods and supplies with genuine wholesale trade, and create a more rational basis for foreign trade. The tragedy is that the hardship being inflicted on the Soviet population is almost entirely the result of misguided policies and not part of a coherent reform program.

Things could have developed differently. Last summer, fresh from a victory at the 28th Party Congress and alarmed over the country's incipient economic decline, Gorbachev seemed ready to accept the Shatalin-Yavlinsky 500-Day Program that called for a rapid transition to a market economy and stabilization through reform. Faced with the determined opposition of traditionalists and, perhaps, after pondering the loss of central power the 500-Day program would entail, Gorbachev opted instead for increased decree-issuing authority, allegedly to push through unpopular reform measures, and an alternative economic program.

While the Gorbachev program still posited the goal of a market economy, the vagueness of its provisions and its lack of clear timetables have left it subject to selective implementation and delay by both the central bureaucracy and political leaders. Gorbachev's implementing decrees have focused on stabilizing the economy through administrative measures and use of the regular police and the KGB to enforce economic laws.

-- At least three decrees have simply ordered farms and enterprises to fulfill contracts and maintain last year's supply relationships, rather than change the incentive system to encourage them to do so.

-- Gorbachev has called upon the KGB and the Ministry of Internal Affairs to assume a more active role in stopping so-called economic crimes such as speculation.

-- Workers committees to control the distribution of food and other consumer goods have been created in an effort to reduce theft and hoarding.

-- The center has even tried to treat the build up of excess purchasing power as a law-and-order problem, requiring citizens to turn in their 50- and 100-ruble banknotes and demonstrate that they were legally earned before receiving new banknotes in return.

These decrees have proven hopelessly ineffective.

Reform, however, has not been completely hostage to changes in the center's commitment. The leaders of a number of republics, primarily in the Baltics and Russia, have been critical of the center's policies and have declared their own commitment to market reform. While the Baltics have pressed ahead with independent reform initiatives, in Russia where traditionalist still enjoy substantial clout in the republic legislature, progress has been slower.

Last fall, Boris Yel'tsin reacted to the center's rejection of the 500-Day plan by saying that his republic's options were to attempt to work within the new plan, to try to launch its own comprehensive reform despite the enormous difficulty of going it alone, or to wait six months for the center's version of reform to fail. The Russian government chose the last of these options. The expected failure having come about and the center's policies having remained essentially the same, the Russian Republic is now proceeding with broad reforms on its own, as outlined by Russian Prime Minister Silayev during his recent visit to the United States.

Despite the slow pace at which the implementation of reform has proceeded, legislation at both the union and republic level has been passed or decrees issued on property ownership, taxation, banking, small businesses, and joint stock companies which could provide the institutional framework for movement toward a market economy. At the grass-roots level, moreover, reform has continued with or without the active encouragement of the authorities and despite obstacles that the bureaucracy has put in the path of the new cooperatives, embryonic commodity exchanges, and other reform institutions. Such developments bode well for the future, but until now have been overwhelmed by the negative trends in the economy.

Breakdowns on Many Fronts

Many of the recent problems of the economy can be traced to a profound crisis of governance. Most of the economic and political institutions that held the economy together in the past have been discredited and even discarded, but new institutions are not in place. Rather, a political struggle is raging over the creation of new institutions while the economy is left to flounder.

-- A focal point has been the struggle between the center and republics over the control of resources. All the republics issued declarations of sovereignty last year, and battles between the republics and the center have ensued over control of natural resources, budget revenues, the banks, and hard currency earnings. Russia, the Baltics, and the Ukraine have been the most vigorous in asserting their rights.

-- In addition, republics have sought to keep their own populations supplied with consumer goods, especially food, by withholding deliveries to central stocks and customary trading partners outside the republic.

-- Local as well as republic level officials have also become more assertive, holding back supplies and bartering them for consumer goods and industrial materials needed for local businesses and closing down facilities polluting the environment.

-- Free from both the control of the central bureaucracy and the discipline of the marketplace, some enterprises have reduced output while raising prices and wages, thereby contributing to shortages and increasing inflationary pressures.

A second major cause of the USSR's economic deterioration is the growing fiscal and monetary crisis that is fueling inflationary pressures. The Soviets ran another large deficit last year, and the growth in the money supply accelerated. Developments so far this year suggest that the USSR's once highly centralized fiscal and monetary systems are breaking down.

-- The center's plan had been to retain control of natural resources while devolving the responsibility to republics for social programs. Not surprisingly, once faced with popular pressures, republics are responding by withholding revenue payments to the center to help pay for these social programs and in a number of cases increasing social benefits above levels mandated by the center.

-- Bank credits are being expanded to support financially troubled enterprises.

-- These actions are fueling central and republic budget deficits and leading to a rapid expansion of the money supply.

Decades of mismanagement and the shortcomings of central planning are also taking their toll on the Soviet economy.

-- Because much of Soviet industry is dominated by monopoly producers, production difficulties at one factory quickly lead to country-wide shortages. For example, shortages of cigarettes, medicines, and soap can be traced, in part, to production problems at individual factories.

-- Mismanagement of investment resources has left many crucial sectors with an aged capital stock that is subject to frequent breakdowns and unable to cope with changing demands.

-- Environmental pollution has reached such proportions that the government can no longer ignore it, and local officials have closed numerous facilities, creating further disruptions in the economy.

Economic Performance Worsening

All these factors are converging to bring about a deepening decline in the Soviet economy. Official Soviet statistics acknowledge that overall output declined last year--the first time since World War II that Moscow has reported an absolute drop in production.

-- Although it has become harder than ever to make estimates of the Soviet economy, we believe that GNP fell by around 4-5 percent last year. Official Soviet statistics indicate that the decline accelerated sharply during the first three months of 1991 compared to the same period a year ago.

-- Soviet industries producing energy and basic materials have led the economy's downturn, causing cascading shortages that are now being felt in almost all sectors of the economy as buffer stocks and inventories have dwindled.

-- Shortages of basic industrial materials contributed to a 3 percent drop in agricultural output last year, despite a near record grain crop.

-- The regime made some progress in shifting production from investment and defense toward consumption but with only a few positive results. While shifts in resources in the defense sector contributed to increased output of consumer durables, overall, cuts in defense spending have produced only meager gains for the civil economy.

-- Investment cuts were not offset by greater efficiency, and, in fact, completions of investment projects fell far below planned levels. Instead, they contributed to production declines in the energy and other basic industrial sectors.

Inflation also is accelerating sharply, with retail prices rising by an estimated 14 percent in 1990 and a reported 24 percent in the first quarter of 1991. In an effort to bring prices into line with the cost of production, the government mandated a 60 percent hike in the average retail prices charged in state stores which went into effect on April 2. The price increases were meant to be a one-time adjustment, but uncontrolled growth in the budget deficit and the money supply and rapid erosion of state control over prices promise a further upswing in inflation latter this year.

Soviet foreign trade is both suffering from and contributing to the ills afflicting the economy. To ease shortages of consumer goods, the Soviet leadership stepped up imports during the first half of 1990. Exports, however, failed to keep pace and the USSR ran into increasing difficulty meeting its import bills. Despite increased earnings from oil exports and import cuts of much needed supplies in the second half of the year, payment problems remained.

Meanwhile, reacting to mounting arrearages in payments by Soviet firms, Western banks became unwilling to provide new loans. To cover its bills, the USSR had to draw down reserves, step up gold sales, and seek out assistance from Western governments, as well as from several Arab states and South Korea. Nevertheless, its hard currency position remains precarious. A sharp drop in imports from Eastern Europe this year, as longstanding trade arrangements were switched to a hard currency basis, is helping the Soviets with their cash crunch but at the cost of reduced inflows of badly needed products. The pinch for Eastern Europe has been even greater.

As a result of the country's worsening domestic and foreign economic problems, the misery of the Soviet consumer has increased. Output of alcohol and expensive consumer durables increased last year, but production of many food items and other daily necessities either stagnated or declined. Moreover, the sharp growth in money incomes overwhelmed the small improvements in supplies. Consumers faced greater shortages and higher prices than at any time in the past four decades.

Breakdowns in distribution compounded the shortage problem and magnified regional and social inequalities in living standards. The biggest losers were--and still are--industrial regions which are dependent on centrally allocated supplies of food and individuals on low, fixed incomes without access to specialized distribution networks, primarily pensioners.

Harder Times Ahead

Whether the economic decline accelerates or the economy begins to stabilize will depend crucially on the center's willingness to arrive at a new division of authority between itself and the republics and on the economic policies of both the center and the republics. The 23 April accord between Gorbachev and leaders of nine republics offers some hope that the two sides are now closer to an agreement over the delineation of power. There are also indications that an economic plan based on the 23 April accord is being worked out and could serve as the basis for genuine stabilization, reform, and eventual upturn of the economy. But, as happened last summer in negotiations over the Shatalin program, the accord could collapse as the principals attempt to hammer out the details.

Overall we see three basic scenarios that could determine economic performance in 1991. In each of them, it will be important to remember that at a time of great perturbation, GNP numbers alone will tell even less of the story than usual about the economy. The big question will be whether the basis is being laid for future recovery through systemic reform.

-- In the first scenario, the 23 April accord would indeed be the basis of a political agreement that delineated the control of resources and other economic powers between the center and republics. If that plan also fully supported reform, restored interrepublic trade links, and reestablished financial discipline, it would establish the foundations for a new order that could stabilize the economy. But improvements would not be immediate. In 1991, GNP would probably still fall some 10 percent. Inflation would accelerate as prices were freed to go to market levels, but with a sound financial policy it could be reigned in before long. Moreover, shortages would ease, the flight from the ruble slowed, and market stimulation of production could begin.

-- In the second scenario, should the putative accord fail and the government continue to try and stabilize the economy through administrative measures that rely upon central controls that have lost most of their former force, the decline would worsen. Soviet GNP would probably decline by 10 to 15 percent and annual inflation could exceed 100 percent. Indeed, failure to regain control over the financial system could lead to runaway inflation by yearend. Moreover, prospects for turning the economy around would remain bleak. This approach, which would not seek the consent of the governed, would also be likely to engender more strikes and labor protests.

-- Finally in the third scenario, the leadership would step up repression in an effort to control the republics, to enforce state orders, and to stabilize the economy. Under such circumstances, the economic decline might slow temporarily if accepted by enough of the population. More likely, an attempt to reverse the changes of recent years and force additional hardships on the population would precipitate widespread resistance and considerable bloodshed, which would greatly accelerate the downward spiral. The decline could eventually equal or exceed the 30% drop in GNP and 25% unemployment rate experiences in the United States during the great depression of 1930-1933.

Mr. Chairman, even if center-republic political differences are resolved and the USSR embarks on a transition to a market economy, tough times are in store for the Soviets. The mechanics of transferring property to private hands and breaking monopolistic industries will have to be worked out. Long-standing anti-market attitudes will need to be changed. There will almost certainly be substantial unemployment and inflation as the economy adapts itself to a market environment. Production will continue to decline as the fall in output of unwanted goods will not be immediately offset by increased output of what consumers and producers want and need. Finally, while the competitive environment of a market can give a big boost to economic efficiency, it will take decades to replace obsolescent capital stock, rebuild the infrastructure, and repair the damage to the environment.

Mr. Chairman, you have asked me to say a few words about criticism that has been directed at our past work on the size and capabilities of the Soviet economy. I think three remarks are in order on that score.

-- First, it is tricky business to compare the size of a Western economy, where prices reflect supply and demand, and a centrally planned economy, where prices are administratively determined. Another key problem is in comparing the quality of what is produced in both types of economies. Making comparisons become even more difficult when dealing with an economy steeped in secrecy. For this reason, as I have testified to this committee, we have always been much more confident in our estimates of the structure and trends of the Soviet economy than in our estimate of size. If we receive more information and are able to make qualitative adjustments, we could well retrospectively lower our size estimate, as we recently have done for some Eastern European countries. Unfortunately, Soviet officials are only slowly becoming responsive to those kinds of demands for information. Even when President Gorbachev appointed a team of economists headed by Professor Shatalin to come up with a remedy for the Soviet economy, the Soviet Ministry of Defense, the State Planning Committee, and the Finance Ministry refused to supply it with needed data.

-- Second, I would caution that we should not project on the Soviet economy of the early 80s the much more serious crisis in which it finds itself today. That pre-1985 economy had growing problems, including great overspending on defense. The magnitude of today's crisis however, is the result not only of decades of mismanagement but also, and more significantly, of misguided policies since 1985.

-- Third and last, until we get more information that would allow us to make any necessary, factually substantiated adjustments to our past estimates, I think, Mr. Chairman, we would be better served by turning our attention to the future. We are now looking at a highly complex transformation process from central planning to a different economic system that will require different methods of analysis. The central planning system is disintegrating before our eyes and a new economic system is only slowly and erratically emerging. In these circumstances, we in the Agency are looking to the kind of analysis that will be required of us tomorrow and have a task force working on these emerging Soviet economic issues. Certainly, that task force is looking at lessons from the past but the thrust of its work is directed at how to analyze an economy in which decision making authority is already becoming and will continue to become much more diffuse than before. As in the past, we are seeking the expertise and wisdom of all those--outside as well as inside the government--who can help us.

Eastern Europe: Reform Programs Under Pressure

Turning now to Eastern Europe where democratically elected leaders are pressing ahead with serious reform programs, although they also face serious problems. Their problems, however, are more manageable than those of the Soviet Union. Change has been faster and smoother in Eastern Europe. And the political situation is on the whole much more stable than in the USSR. The overall economic outlook provides more hope for an eventual recovery and prosperity as recent reforms pay dividends.

When we reported to you last year, it was only months after historic changes that saw the removal of the Communist regimes in Eastern Europe. The region has moved quickly to consolidate these changes with elections and the formation of new governments. Meanwhile, dissolution of the Warsaw Pact and the Council for Mutual Economic Assistance has broken key organizational bonds to the Soviet Union.

The primary goal of the new governments in Eastern Europe is to develop prosperous, technologically-advanced, and competitive economies. A strong local consensus has developed in the last year that replacing central planning with market mechanisms is the best way to attain this goal. The countries of Eastern Europe have made substantial progress in reforming their economies in the past two years under conditions that would test even the most stable democracies. Consumers in most countries now have an impressive array of goods available, and the notorious lines of shoppers seen in the Soviet Union have all but disappeared.

Weak Economies

Looking at this progress in relative terms, it is clear that these economies remain weak by Western standards. Change has come so quickly to the economies of the region, however, that the official figures on output--on which our GNP estimates are based--are even more uncertain than in the past. But by our estimates, GNP fell 7 percent in 1990 for Eastern Europe as a whole, the steepest decline on record. All of the countries experienced some downturn, with Romania and Poland suffering the sharpest declines of 11 and 9 percent, respectively. Industrial production was especially hard hit by higher energy costs. Inflation soared as the East Europeans lifted price controls, eliminated subsidies, and devalued their currencies--all initial steps needed to make the transition to a market economy. Unemployment rose sharply, but was still generally low by Western standards.

The downturn continued a long-term trend of flagging economic performance. New governments inherited not only an inefficient central planning apparatus, but also an aging industrial base, chronic trade and debt problems, inefficient distribution systems, a crumbling infrastructure, and steadily worsening energy shortages

These systemic problems actually grew more acute in the final years of the previous regimes, and the new leaders are only starting to make a dent in them.

Several new factors also worked to slow output last year. Political upheavals of the previous year caused considerable uncertainty, leading to worker absenteeism and declining productivity in some countries. And economic liberalization itself, underway only in Poland for the full year, also reduced output. Domestic demand contracted sharply in response to higher prices and devaluation by Warsaw. More broadly, the anticipation of reforms may also have disrupted output as firms tried to prepare for new rules. Energy costs increased sharply with turmoil in oil markets resulting from the Persian Gulf crisis and a sharp drop in Soviet oil deliveries.

Foreign trade in 1990 was one of the bright spots in several countries. The share of trade with non-Communist countries jumped sharply as the region showed interest in trade with the West while trade with the USSR languished. Export booms to the West from Poland and Hungary improved their payments positions markedly. Less burdened by debt problems, Czechoslovakia and Romania opted to boost hard currency imports to prop up living standards, although the purchases pushed their trade accounts sharply into the red.

On the negative side, Bulgaria declared a moratorium on its debt payments.

Putting Economic Reform Programs in Place

All five of the former CEMA countries in Eastern Europe now have passed laws that explicitly accept the need for market forces to guide them to eventual prosperity. Judged against the glacial pace of economic change over the previous four decades, and compared to the structure and management of the economies two years ago, the region has made rapid progress:

-- prices now play a major role in economic decisions of producers and consumers;

-- supply and demand are more in balance;

-- central planning has been abolished;

-- and entrepreneurship has flourished with the creation of tens of thousands of new firms providing needed services and easing shortages of consumer goods.

Nevertheless, much ground remains to be covered before achieving a market economy; in each East European country, the state still controls at least 80 percent of production assets.

The northern countries--Poland, Czechoslovakia, and Hungary--have set the pace in economic reform. They began with some experience with reforms and were much better prepared to change their economies than their neighbors to the south. Romania and Bulgaria have lagged in their programs, but the changes in these countries have also been dramatic in early 1991. Change is evident even in Albania, long isolated from the rest of Eastern Europe. Yugoslavia's long-running reform effort has bogged down amid political strife that threatens to break up the country.

Economic reform packages throughout the region generally include the same measures to replace central management of their economies, although timing and emphasis have varied among countries. Governments have removed most controls and subsidies that kept prices low but fostered inefficiency. Controls now cover prices on only politically sensitive items, such as housing, energy, and food. Currency devaluations have reduced or eliminated the gap between official and black market rates, and at least limited convertibility with Western currencies has been established. Although many small new private enterprises have blossomed throughout the region, only limited progress has been made toward selling large state companies. Some of the delay reflects the lack of legal institutions needed to transfer ownership to private hands. Governments also realize that many of these state enterprises are so inefficient that they will have to be closed, adding thousands of persons to already record high unemployment rolls.

1991: Another Tough Year

More economic hardship is in store. We expect the downturn this year to be nearly as great as in 1990--a fall in GNP in the 5 to 10 percent range, and an even larger drop in industrial production. The shift from barter to hard currency trade with the USSR has caused a collapse in East European exports to the Soviet Union and a slide in production. The surge in exports to the West by some countries is not likely to be repeated this year because exchange rates will not be as favorable. Continued reform is also likely to cause drops in output if privatization forces substantial plant closures and layoffs.

Staying the Course

Eastern Europe's economic reform is at a delicate stage. The reform enthusiasm that swept the region with the fall of the Communist regimes has given way to a realization that the region has only begun a journey down a long hard road. Laws have been passed, but much of the most painful implementation stage lies ahead. With continuing widespread acknowledgement that reform is necessary, the debate at this point is likely to be over the pace of reform rather than over its inherent desirability.

The East European populations generally have borne the burden of recession, inflation, and uncertainty with impressive tolerance and patience. More recently, however, even the most ardent reformers have been forced to rethink the wisdom of rapid introduction of reforms. Economic policymakers may yet be tempted to reflate the economies by slowing privatization, raising wages to offset price increases, and restoring subsidies. Such policies would endanger the reform programs already in place and run afoul of IMF guidelines that call for tight budget and credit policies to damp inflation.

The next key task for East European reformers is to accelerate privatization. The "Catch-22" of reform is that rapid privatization is needed to hasten the end of the transition period, but it is this very step--with its accompanying unemployment and other adjustment problems--that could cost the governments public support necessary to survive the transition. A financial squeeze may yet force the hand of economic managers. Growing losses from rising costs and the collapse of CEMA markets could force decisions on whether to increase subsidies to keep firms operating or to allow firms to go bankrupt.

The Role of the West--Economic Relations on the Upswing

East Europeans believe that the West should contribute in a wide variety of ways to support the reforms. After being told for years that economic relations with the West were limited as long as the countries were so closely tied to the USSR and their economies centrally controlled, the East Europeans now feel that they have fulfilled the West's conditions. Moreover, they believe that the West--Western Europe in particular--has a large stake in Eastern Europe's economic reorientation.

The East Europeans expect a large volume and wide range of financial flows from the West. The need for restructuring and retooling their economies has created a huge appetite for capital for a variety of purposes:

efficiency: to modernize plant and equipment and to reduce the per unit consumption of energy and other raw materials, largely through imports of technology;

restructuring: to develop new industries and to produce competitive export goods; and

infrastructure: to develop modern transportation and communication facilities and to clean up the environment.

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The region's investment needs probably total in the hundreds of billions of dollars. With self-financing not a feasible option for the foreseeable future, and the governments and populations eager to transform their economic systems and structures, Eastern Europe sees the West as a major source of the imports to meet these goals and as the source of financing to purchase these imports.

The West has provided a large sum of credits and other assistance in the past two years. Since July 1989, Western pledges total almost $45 billion. Nearly two-thirds of this total represents commitments by multilateral institutions, including the IMF, the World Bank and the European Community. The amount of assistance actually reaching Eastern Europe to date, however, is substantially reduced in amount and utility by several factors:

-- disbursements to date are far less than commitments of assistance, which will be drawn over several years;

-- East European repayments to the IMF and World Bank offset a large share of aid commitments;

-- some of the commitments are less than firm;

-- exchange rate fluctuations over time make conversion into dollar figures problematic;

-- much of the aid is in the form of loans rather than grants, and the loan terms are not very concessionary.

The IMF and World Bank are playing key roles in East European economies by monitoring economic performance, reforms and policy in exchange for substantial credits. All of the countries are now members except for Albania, which applied to the IMF and the World Bank early this year. The IMF has approved a total of $8.4 billion in credits in 1991 for Bulgaria, Czechoslovakia, Hungary, Poland, and Romania.

European organizations have also played a key role. Poland, Czechoslovakia, and Hungary have been negotiating association agreements with the European Community. The major economic benefits from these agreements is likely to be increased access to West European markets for East European exports. The EC has also been coordinating aid for the region. The European Bank for Reconstruction and Development was established specifically to meet the financing needs of the Soviet Union and the East European countries. The EBRD opened its doors this April in London.

The East Europeans are likely to continue to press Western governments and multilateral organizations for assistance. In a practical sense, Eastern Europe's needs are too great to be met in a short period of time, especially given the West's resource limitations and budget constraints. Moreover, the region is not yet prepared to use hundreds of billions in capital. Eastern Europe will need years to absorb the funds, and investment priorities will need to be clarified once reforms are in place and the emphasis shifts to restructuring. Some foreign investment can be immediately used to speed privatization, however, through joint ventures or purchases of stakes in firms being privatized.

Expertise is another key--and relatively low cost--requirement to support the reform process. East European managers are unaccustomed to operating in a market environment and need training in a wide variety of business skills to adjust to new incentives and to compete in Western markets. As they move into this arena, Eastern Europe's potential creditors and aid sources will gauge each country's success in staying the reform course and maintaining stability and public support. Finally, with a hard currency debt of over $100 billion, the region still faces pressing balance of payments and debt problems that will complicate the meeting of more fundamental capital needs.

In sum, Eastern Europe has made a good start down the road to transforming weak command economies into democratically based free market systems. They are so far the world's pioneers on this road that has never been traveled before. The determination with which new leaders have pushed through reform programs and the popular tolerance for austerity are good signs, but the persistence and courage of the East Europeans will clearly continue to be tested by tough challenges through the rest of the 1990s.

Senator BINGAMAN. Thank you very much. We appreciate it.

Mr. Duecy, why don't you go right ahead for the Defense Intelligence Agency.

STATEMENT OF CHARLES P. DUECY, ASSISTANT DEPUTY DIRECTOR FOR RESEARCH, DEFENSE INTELLIGENCE AGENCY

Mr. Duecy. I am pleased to be here to assist this Subcommittee as it considers developments in the Soviet Union and Eastern Europe. As in the past DIA appearances before this Subcommittee, I will focus my observations on changes that are affecting the Soviet military. I might add that this presentation is a somewhat condensed version of what has been provided for the record.

SOVIET MILITARY

Mr. Chairman, it is abundantly clear that the geopolitical landscape has changed in ways and at a pace that no one could have imagined even a few years ago. The Soviet Union finds itself at the vortex of both the cause and effect of the change underway. For the Soviet military, these developments have fundamentally altered the factors long considered constants in the Soviet Union's national security calculus.

The Soviets are challenged by the collapse of the Warsaw Pact as a military alliance, the emergence of dramatic new political circumstances in Eastern Europe and at home, and a resilient NATO. As a result, the General Staff must now base its war plans on defense of the western borders of the U.S.S.R. The Soviets can no longer factor East European cooperation in planning for operations against NATO.

This radical turn of events and the prospects for conventional force reductions in Europe have mandated a basic reorganization of Soviet force structure, and have further stimulated debate within the Soviet General Staff concerning future military doctrine and planning. The military is absorbed in the difficulties of simultaneously managing force withdrawals, reductions and reorganization. Complicating these tasks, domestic political and economic trends threaten to undermine the military's ability to continue to sustain force modernization programs, particularly technological modernization over the long term. The morale, readiness, and cohesion of the all-Union forces are also serious problems. How the Soviet military evolves in response to these realities will be a major determinant of future European and international security environments.

Force withdrawals, redeployments, and restructuring are major preoccupations of the Soviet military. All Soviet forces are slated to depart Hungary and Czechoslovakia by July of this year. Soviet forces remaining in Germany are expected to return to the Soviet Union in the next few years. The Soviets have agreed to remove forces from Poland by the end of 1993.

Soviet force reductions in Eastern Europe, coupled with the collapse of the Warsaw Pact, have eliminated the threat of a short-warning Soviet offensive on NATO territory. If the CFE agreement enters into force, the treaty-mandated reductions will further reduce Soviet capabilities to initiate offensive operations in Europe, and will provide the Western alliance with a much longer warning of changes in Soviet intentions.

If CFE is implemented, the Soviets will retain a more modern, still large, but less ready, ground force structure, lacking much of its combat equipment owing to treaty limits. The retention of this large force structure, upward of 90 to 100 divisions, demonstrates a continuing Soviet desire to preserve the potential for mobilizing a substantial force opposite the Western alliance and Eastern Europe.

The Soviets have moved thousands of pieces of combat equipment, which are capable of supporting the new force structure to new locations east of the Ural Mountains. This equipment is, therefore, sheltered from destruction under CFE provisions. It is evident that measures are being taken for the long-term preservation and storage of much of this equipment. This move allows the Soviets to protect their costly investment in general-purpose forces equipment, provides a hedge in future reductions in military production, and keeps open the option to fill out lower strength divisions west of the Urals during a crisis or war.

Soviet air forces in the Atlantic-to-Urals zone have been restructured and modernized. Despite reductions of over 30 percent, Soviet tactical air forces in the region remain the largest air arm in Europe.

In sum Soviet forces in the Atlantic-to-Urals region in a post-CFE environment will be postured to conduct a strong defense of Soviet territory, but will also possess significant offensive potential. The Soviets would be able to complete mobilizing and deploying their Atlantic-to-Urals zone force into strategic defensive positions within 2 to 3 months. In 3 to 4 months, they could mobilize and deploy a force for limited strategic offensive operations. However, this force would probably not be sufficient to defeat a reinforced NATO, assuming NATO retains its full CFE entitlement.

Moreover, low morale and discipline, ethnic problems, draft evasion, reduced budgets, and republic demands for stronger roles in military affairs will remain significant factors affecting the actual combat potential represented by these forces.

Outside the Atlantic-to-Urals zone and CFE, the Soviets are well along in completing announced unilateral reductions in the Far East and Mongolia. Ground forces in the Far East and Southern U.S.S.R. are adopting a smaller, but more modern, structure.

STRATEGIC FORCE MODERNIZATION

In contrast to reductions and restructuring in theater forces, strategic force modernization continues to enhance Soviet capabilities. Strategic forces will be more evenly balanced between land-based, sea-based, and bomber systems. Deployment of the SS-18 ICBM, Mods 5 and 6, is proceeding. Rail- and silo-based SS-24 deployments have probably ended, but road-mobile SS-25 deployments continue apace. At least two new ICBMs, follow-ons to the SS-24 and SS-25, are in development.

Under a START Treaty, the Soviets will have considerably fewer strategic submarines. However, nearly all will carry long-range sea-launched ballistic missiles, capable of hard-target attack. Three new, more accurate SLBMs are in various stages of research and development.

Soviet intercontinental aviation will exhibit significant growth in weapon-carrying capability, particularly long-range cruise missiles. Although a START agreement would reduce the overall number of Soviet strategic weapons from about 11,000 to some 7,000, this smaller force will become more balanced, reliable, and survivable, and will possess more accurate weapons. For example, by the late 1990s, about 80 percent of Soviet strategic forces will be mobile, presenting an extremely difficult targeting problem for the United States. These modernized forces will enable the Soviets to maintain a formidable strategic nuclear posture. START will have only a minor impact on Soviet capabilities to hold key North American and Eurasian targets at risk.

Overall, Soviet force developments reflect the goals of reduction and modernization. Soviet military doctrine, based on war prevention, is continuing to evolve.

SOVIET DEFENSE SPENDING

One key indicator of priorities and future capabilities is the level and trend of Soviet defense spending. In 1990 defense spending fell by an estimated 6 percent in real terms, roughly the same decrease as in 1989. Declines occurred in all spending categories. Procurement outlays, which account for almost half of total defense spending, fell about 10 percent in each of the last 2 years. The heaviest cuts were in procurement of land armaments—tanks, light armored vehicles, and artillery—which is consistent with force reductions and restructuring.

The Soviets have announced—and we expect to see—additional defense spending cuts this year. These will complete and possibly go beyond the unilateral spending reductions announced in January 1989. However, spending levels planned beyond 1991 are not as clear.

The Soviet Ministry of Defense recently published the draft, 10-year budget projections that indicate that the military is planning for a slight spending increase, in real terms, during the second half of the 1990s. The military's plans, however, will be severely challenged by the realities of the rapidly deteriorating economy, burgeoning budget deficits, and republic efforts to constrain the central government's spending.

Spending cuts in the last 2 years have only slightly reduced the share of gross national product devoted to the military. While uncertainties exist over the size of the Soviet GNP, the important point is that the Soviets will not achieve a sizable drop in the defense burden in a period of rapid economic decline without steep military spending cuts.

MILITARY R&D

Trends in research and development are another key determinant of future military capabilities. Soviet military R&D remains broad-based and well endowed with resources. We have no evidence that major weapon development programs have been canceled, although some programs probably have been slowed. In the future, the Soviets will concentrate on trimming waste and redundancy in their R&D establishment and reducing the number of similar types of weapon systems under development.

The Persian Gulf war reinforced the military's calls to safeguard R&D funding from budget reductions. The war reinforced the conviction of many Soviet military officers, voiced since the early 1980s, that weapon quality is replacing quantity as the determining factor in modern warfare.

The Desert Storm coalition forces' successful display of surprise, maneuver, precision deep-attack capabilities, logistic support, and superiority in the air and at sea has heightened Soviet concerns over Western capabilities and the relative technological level of their own forces. We expect the Soviets to place even greater R&D emphasis on such areas as air defense, cruise missiles, target acquisition systems, and space-based command, control, communications, and reconnaissance.

MILITARY PRODUCTION

Military production, like military spending, continued to decline in 1990. The drop represents cuts in production of modern systems, as well as the decline or elimination of older programs. The deepest production cuts have been in theater ground force weapons. Tank production, for example, fell from some 3,500 units in 1988 to 1,300 in 1990. Even with reductions in the output of most categories of weapons, however, the U.S.S.R. remains the world's largest arms producer.

Despite much fanfare, defense industry conversion has made scant progress, as the Soviets candidly admit. While reductions in weapon production and defense spending are occurring, the defense industry, for the most part, is retaining a mobilization base. Military production lines are operating at reduced output levels or, in some cases, lines are being shut down but maintained in operating condition.

Conversion, under current plans, will be achieved by expanding existing civilian production and adding new capacity at military plants rather than by switching weapon lines to civilian output. Although Soviet statistics show some increases in consumer production by the defense sector, growth has been far short of plans.

Slow progress is not surprising. Conversion remains in the hands of government officials strongly tied to the defense-industrial complex and interested in retaining its established priorities and skilled manpower. Many reform economists, now out of favor with the central leadership, have argued that significant conversion will not occur under the current command approach, but awaits exposure of Soviet defense industries to effective market forces.

Defense industrialists are increasingly looking for joint ventures with Western firms to produce civilian products. They hope such ventures will open new sources of financing and technology transfer, especially in areas such as civilian aircraft. Western response, however, continues to be lukewarm because of the economic turmoil, political instability, and remaining bureaucratic and legal impediments in the U.S.S.R.

THE MILITARY'S ECONOMIC PROBLEMS

A discussion of military trends would be incomplete without addressing the repercussions of Soviet political, social, and economic problems on the armed forces. Military morale and prestige are being eroded by the use of regular forces to quell internal unrest. The prospect of wider use of regular forces, if internal security forces proved insufficient, would severely test military reliability and cohesion.

Rapid withdrawal of Soviet forces from Eastern Europe is exacerbating housing and job shortages at home. Unprecedented disciplinary problems, such as desertion and illegal weapon sales, are afflicting the Soviet forces remaining in Germany. Ethnic strife and separatist challenges to central authority are jeopardizing the integrity of the all-Union armed forces. Draft evasion has reached record proportions.

The future of the armed forces depends largely on how the basic issue of Republic participation in the all-Union military is resolved. The March 1991 draft of Gorbachev's Union treaty incorporates some concessions to Republic aspirations for a voice in security decisionmaking. However, no progress has been made in resolving the conflict between those seeking to maintain a single, centrally controlled military, and Republic leaders demanding reduced participation in such a force.

ARMS EXPORTS

I would like to turn now to arms exports and other external aspects of Soviet military-economic trends. Arms exports to the Third World fell about 30 percent in value terms in 1990, compared to 1989.

Two main reasons account for the drop. Due to their financial straits, the Soviets are trying to make arms sales more profitable, offering far less generous repayment terms and paring down gratis aid. The result was a sharp drop in deliveries to poor, developing countries. At the same time, Soviet efforts to increase sales to hard-currency customers met with little success, because many of them are experiencing their own serious financial and economic difficulties.

In an effort to reverse the decline in sales, the Soviets are seeking more hard-currency buyers and marketing more sophisticated, high-priced weaponry. Moscow's efforts may be hindered by the image of poorly performing Soviet weapons in the Persian Gulf war, and increasingly stiff competition in world arms markets. While the U.S.S.R. remains the world's largest arms supplier, the overall downward trend is expected to continue at least into the mid-1990s.

The Soviets' quest for hard-currency arms sales on world markets and for joint ventures in the U.S.S.R. raises concerns about the potential for increased technology transfer and further proliferation of advanced weapons. Soviet circumvention of COCOM restrictions remains a concern, as in the past.

In the near term, at least, joint ventures are unlikely to be a vehicle by which the Soviets acquire significant amounts of strategic technology. If the Soviet Union becomes a better environment for joint ventures, the danger of transferring controlled technology to the Soviets will increase, particularly where Western firms establish production facilities in dual-use technology areas.

In looking at the U.S.S.R. as a potential source of sensitive weapon technologies for developing countries, it must be noted that the Soviets have demonstrated some concern for proliferation. Because of financial needs and declining domestic nuclear material requirements, however, the Soviets now offer a wide range of formerly restricted nuclear materials and technologies for sale.

The Soviets have for many years marketed chemical and biological protective equipment, for example, to Iraq and Syria. But there is little evidence that production technology has been sold. They have provided missile technology principally in the form of complete short-range systems to many countries, but refrain from selling longer range or more accurate missile systems.

Soviet transfer of dual-use technologies to developing countries will be the most difficult for the West to monitor. Removing items from the COCOM lists would certainly make sensitive Western technologies more accessible to the Soviets and others, unless controlled by some other form of multilateral agreement.

SOVIET MILITARY PROSPECTS

Mr. Chairman, I would like to conclude by addressing Soviet military prospects. In the near term, the Soviets can maintain their military modernization programs. This is because the military-industrial infrastructure remains largely intact and more insulated than other sectors from economic disruptions. Nevertheless, continuing economic deterioration will be accompanied by greater disruptions that will eventually affect the defense industry. Military programs will most likely have to be cut further. Strong resistance in the Republics to high military spending could also become a major factor affecting future military programs.

While many uncertainties exist regarding the shape and capabilities of future Soviet forces, a significant military potential will be maintained. Although overall military manpower and force structure probably will decline in size, modernization of Soviet theater and strategic forces will continue, albeit at a reduced rate. The introduction of limited, professional military service will reduce reliance on conscripts. It is clear, however, that domestic affairs, especially the state of the economy, will be among the major determinants of future Soviet military capabilities.

Despite all the political, economic, and ethnic turmoil we have recently witnessed in the Soviet Union, it remains the dominant military power on the Eurasian continent. Soviet military capabilities are not static, but rather reflect continuing improvements in the quality of systems and refinements in the doctrine for their employment.

With its modernized strategic forces, the U.S.S.R. remains the only nation capable of threatening the survival of the United States. These formidable military capabilities have to be viewed in the context of the political, social, and economic forces at play in the Soviet Union. The current state of chronic crisis in the U.S.S.R. will continue and likely worsen for the next several years. A transition from this crisis period will likely involve shifts in leadership and varying degrees of violence, which have the potential to threaten U.S. and allied interests.

Mr. Chairman, the Defense Intelligence Agency and the Intelligence Community face many key tasks in meeting the global challenges of this decade. Based on the observations here today, I believe few would dispute that developments in the Soviet Union will remain high on the list of demands for our attention.

Mr. Chairman, this completes my remarks.

[The prepared statement of Mr. Duecy follows:]

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PREPARED STATEMENT OF C. PATRICK DUECY

Good morning, Mr. Chairman. I am pleased to represent the Defense Intelligence Agency before your subcommittee as it considers developments in the Soviet Union and Eastern Europe. As in past DIA appearances before this subcommittee, I will focus my observations on changes that are affecting the Soviet military.

The geopolitical landscape has changed in ways that fundamentally alter the Soviet national security equation. The Soviet military is challenged by the collapse of the Warsaw Pact as a military alliance, the emergence of dramatic new political circumstances in Europe, and a resilient NATO. The General Staff must now base its war plans on defense of the Western borders of the USSR. The Soviets can no longer factor East European cooperation in any planning for operations against NATO.

This radical turn of events and the prospects for conventional force reductions in Europe mandate a basic reorganization of Soviet force structure and has further stimulated debate over Soviet military doctrine. Implementing the intertwined concepts of military sufficiency and defensive doctrine continue to be a focus of serious debate within the military. This debate has become more intense in the wake of the stunning Coalition Force victory over Iraq.

The military is absorbed in the difficulties of simultaneously managing withdrawals, reductions and reorganization. Complicating this arduous task, the USSR's political and economic crises threaten to undermine the military's ability to sustain force modernization programs, particularly technological modernization over the long term. The morale, readiness, and cohesion of the all-Union forces are also serious problems.

How the Soviet military evolves in response to these realities will be a major determinant of the future European and international security environment. I will devote most of my comments to assessing the direction and status of this process.

Soviet Force Withdrawals and Redeployments

Force withdrawals, redeployments and restructuring are major preoccupations of the Soviet military. All Soviet forces are slated to depart Hungary and Czechoslovakia by July of this year. Those withdrawals are on schedule. Soviet forces remaining in Germany are expected to return to the Soviet Union in the next few years. The Soviets have agreed to remove forces from Poland by the end of 1993 despite continued wrangling with Warsaw over financial terms and the conditions under which most Soviet troops in Germany will transit Poland. Selective pullouts from Poland began in April, but the Poles are still bargaining for an earlier completion date.

Soviet force reductions in Eastern Europe, coupled with the collapse of the Warsaw Pact, have eliminated the threat of a short-warning Soviet offensive on NATO territory. If the CFE Agreement is ratified and enters into force, the treaty-mandated reductions will further reduce Soviet capabilities to initiate offensive operations in Europe and will provide the Western Alliance a much longer warning period of changes in Soviet intentions.

If CFE is implemented, the Soviets will retain a more modern, still large, but less ready ground force structure lacking much of its combat equipment owing to treaty limits. The Soviets' CFE data declaration suggests they will maintain a force structure of some 60 to 70 divisions and up to 30 mobilization divisions in the Atlantic-to-the-Urals (ATTU) zone. These mobilization divisions could be filled with men and equipment during a crisis. The movement of thousands of pieces of treaty limited equipment from east of the Ural Mountains as well as training would be required to make this total of 90 to 100 divisions fully combat capable. Nonetheless, the retention of this large force structure demonstrates a continuing Soviet desire to preserve the potential for mobilizing a substantial force opposite the Western Alliance and Eastern Europe.

The Soviets have moved thousands of pieces of combat equipment east of the Urals that are capable of supporting the new force structure. This shelters them from destruction under CFE provisions. It is evident that they are taking measures for the long-term preservation and storage of much of this equipment. This move allows the Soviets to protect their costly investment in general purpose forces equipment, provides a hedge against future reductions in military production, and keeps open the option to fill out lower strength divisions West of the Urals during a crisis or war.

Soviet Air Forces in the ATTU have been restructured and modernized. Despite reductions of over 30 percent, Soviet tactical air forces in the region remain the largest air arm in Europe. This force is still composed predominantly of aircraft with offensive rather than defensive roles. The Soviets are retaining the bulk of their fixed-wing capability in the ATTU and are focusing modernization and restructuring on the NATO central region.

The Soviets also resubordinated several hundred tactical aircraft from the Air Forces to Soviet Naval Aviation. This action removes these assets from CFE accountability. However, 40 months after treaty implementation, the Soviets have agreed to retain no more than 400 land-based naval aircraft in the ATTU. More disturbing has been the Soviets' insistence that equipment held by Naval Infantry, Coastal Defense, and Strategic Rocket Forces--over 5400 pieces of treaty limited equipment--is exempt from treaty limitations by virtue of their subordination. The Soviets may be considering a compromise on this issue to move CFE forward.

In sum, Soviet forces in the ATTU in a post-CFE environment will be postured to conduct a strong defense of Soviet territory, but will also possess significant offensive potential. The Soviets would be able to complete mobilizing and deploying their ATTU force into strategic defensive positions within 2 to 3 months. In 3 to 4 months they could mobilize and deploy a force for limited strategic offensive operations. However, this force would probably not be sufficient to defeat a reinforced NATO, assuming NATO retains its full CFE entitlement. The myriad of problems facing the Soviet military over the next several years--low morale and discipline, ethnic problems, draft evasion, and reduced budgets--would mitigate the actual threat these forces pose.

Outside the ATTU and CFE, the Soviets are well along in completing announced unilateral reductions in the Far East and Mongolia. Ground forces in the Far East and southern USSR are adopting a smaller but more modern structure. As in the ATTU, the Soviets are retaining a significant ability, in terms of structure and residual equipment, to expand these forces during mobilization. In addition to storing equipment east of the Urals, the military has used substantial quantities of modern equipment withdrawn from the ATTU to upgrade and modernize units in the Southern and Far Eastern theaters.

While Soviet naval forces are not subject to CFE limitations, they too are restructuring. Ongoing construction of a broad range of modern combatants combined with an accelerated program of scrapping obsolescent ships is resulting in a smaller, but potentially more capable naval force. Key naval missions remain the protection of Soviet SSBNs and maritime approaches.

Soviet Strategic Forces

In contrast to reductions and restructuring in theater forces, strategic force modernization continues to enhance Soviet capabilities. Strategic forces will be more evenly balanced between land-based, sea-based, and bomber systems. Deployment of the SS-18 ICBM, Mods 5 and 6, is proceeding. Rail- and silo-based SS-24 deployments have probably ended, but road-mobile SS-25 deployments continue apace. At least two new ICBMs--follow-ons to the SS-24 and SS-25--are in development.

Under a START treaty, the Soviets will have considerably fewer strategic submarines. However, nearly all will carry long-range sea-launched ballistic missiles (SLBMs) capable of hard target attack. Two new, more accurate SLBMs are in various stages of research and development.

Soviet intercontinental aviation will exhibit significant growth in weapons carrying capability--particularly long-range cruise missiles. Although a START agreement would reduce the overall number of Soviet strategic weapons from about 11,000 to some 7,000, this smaller force will become more balanced, reliable and survivable and will possess more accurate weapons. For example, by the late 1990s about 80 percent of Soviet strategic forces will be mobile, presenting an extremely difficult targeting problem for the United States. These modernized forces will enable the Soviets to maintain a formidable strategic nuclear warfighting posture. START will have only a minor impact on Soviet capabilities to hold key North American and Eurasian targets at risk.

Soviet strategic defenses continue to be upgraded, despite budget reductions. The Moscow ABM system is nearing full operational capability, and strategic SAMs and fighter interceptors are being upgraded. The Soviets are continuing work on deep underground facilities for leadership protection and command continuity.

Overall, Soviet force developments reflect the goals of reduction and modernization. Soviet military doctrine, based on war prevention, is continuing to evolve.

Defense Spending

A key indicator of Soviet priorities and future capabilities is the level and trend of their defense spending. In 1990, defense spending fell by an estimated 6 percent in real terms, roughly the same decrease as in 1989. Declines occurred in all spending categories. Procurement outlays, which account for almost half of total defense spending, fell about 10 percent in each of the last two years. The heaviest cuts were in procurement of land armaments—tanks, light armored vehicles, and artillery—consistent with force reductions and restructuring.

The Soviets have announced, and we expect to see, additional defense spending cuts this year. These will complete—and possibly go beyond—the unilateral spending reductions announced in January 1989. However, spending levels planned beyond 1991 are not as clear. The Soviet Ministry of Defense recently published draft 10-year budget projections that indicate the military is planning for a slight spending increase in real terms during the second half of the 1990s. The Defense Ministry plans for the most significant spending growth to occur in military research and development, with procurement outlays remaining essentially stable. This reflects the great importance placed on enhancing the technological sophistication of weapons as the Soviets move toward smaller forces that can be modernized at lower rates of production. The military's plans, however, will be severely challenged by the realities of the rapidly deteriorating economy, burgeoning budget deficits, and republic efforts to constrain central government spending.

Spending cuts in the last two years have only slightly reduced the share of gross national product devoted to the military. While uncertainties exist over the size of Soviet GNP, the important point is that the Soviets will not achieve a sizable drop in the defense burden in a period of rapid economic decline without steep military spending cuts. When Soviet officials spoke hopefully two years ago of reducing the defense burden by one-third to one-half by 1995, their goal was based on what are now clearly unrealistic economic growth projections. Over the next few years, if defense spending is not cut sharply, economic decline could even result in an increase in the defense burden.

Military Research and Development

Trends in research and development (R&D) are another key determinant of future military capabilities. Soviet military R&D remains broad-based and well-endowed with resources. We have no evidence that major weapon development programs have been canceled, although some programs probably have been slowed. In the future, the Soviets will concentrate on trimming waste and redundancy in their R&D establishment and reducing the number of similar types of weapon systems under development.

The Persian Gulf War reinforced the military's calls to safeguard R&D funding from budget reductions. The war reinforced the conviction of many senior Soviet officers—voiced since the early 1980s—that weapon quality is replacing quantity as the determining factor in modern warfare. The Desert Storm Coalition's successful display of surprise, maneuver, precision deep-attack capabilities, logistical support, and superiority in the air and at sea has heightened Soviet concerns over Western capabilities.

We expect the Soviets to place even greater R&D emphasis on such areas as air defense; cruise missiles; target acquisition systems; and space-based command, control, communications, and reconnaissance.

Military Production

Military production, like military spending, continued to decline in 1990. The drop represents cuts in production of modern systems as well as the decline or elimination of older programs. Even with these reductions, however, the USSR remains the world's largest arms producer.

The deepest production cuts have been in theater ground force weapons. Tank and self-propelled artillery output declined heavily. Tank production, for example, fell from some 3,500 in 1988 to 1,300 in 1990. Significant cuts were also made in towed artillery, multiple-round rocket launchers, and helicopters. Total combat aircraft output dropped in 1990, but production of modern MIG-29/Fulcrum, MIG-31/Foxhound, and SU-27/Flanker remained steady.

Although the Navy has not been immune from funding cuts, naval construction reflects a continuing commitment to fleet modernization and enhancement of antiship and antisubmarine warfare capabilities. More submarines were completed in 1990 than in either of the two previous years.

Strategic system output declined slightly over the past few years, but is sufficient to permit force modernization under a START treaty. Output of bombers, ICBMs, and SLBMs all declined somewhat, although new ICBMs and SLBMs are in the late stages of development. Production of air-launched cruise missiles was stable.

Defense Industry Conversion

Despite much fanfare, defense industry conversion has made scant progress, as the Soviets candidly admit. Of the several thousand plants producing for the military, only about 500 will undergo some degree of conversion. About 40 plants are to cease military production altogether. However, most of these belong to the civilian sector and devote only a small share of their output to defense.

While reductions in weapons production and defense spending are occurring, the defense industry, for the most part, is retaining a mobilization base. Military production lines are operating at reduced output levels or, in some cases, lines are being shut down but maintained in operating condition. Soviet economists and industrialists indicate that conversion, under current plans, will be achieved by expanding existing civilian production and adding new capacity at military plants rather than by switching weapon lines to civilian output. Although Soviet statistics show some increases in consumer production by the defense sector, growth has been far short of plans.

Slow progress is not surprising. Conversion remains in the hands of government officials strongly tied to the defense industrial complex and interested in retaining its established priorities and skilled manpower. Furthermore, experience shows it is very difficult to convert military plants to civil use in a cost effective manner. Many reform economists now out of favor with the central leadership have argued that significant conversion will not occur under the current command approach, but awaits exposure of Soviet defense industries to effective market forces.

Defense industrialists are increasingly looking for joint ventures with Western firms to produce civilian products. They hope such ventures will open new sources of financing and technology transfer, especially in areas such as civilian aircraft. Such gains in sophisticated technologies and production techniques also have applications to military production. Western response, however, continues to be lukewarm because of the economic turmoil, political instability, and remaining bureaucratic and legal impediments in the USSR. Moreover, the KGB's recently enhanced powers to approve joint ventures and inspect business records is causing more Western businessmen to shy away.

Military Morale

A discussion of military trends would be incomplete without addressing the repercussions of Soviet political, social, and economic problems on the Armed Forces. Military morale and prestige are being eroded by the use of regular forces to quell internal unrest. The events in Tbilisi, Baku, and more recently Vilnius and Riga demonstrate that Moscow's use of force against the civilian population is politically counter-productive, further polarizing Soviet society. The prospect of wider use of regular forces, if internal security forces prove insufficient, would severely test military reliability and cohesion.

Rapid withdrawal of Soviet forces from Eastern Europe is exacerbating housing and job shortages at home. The Soviet press has described returning officers and their families as "refugees," and tent cities are sprouting outside garrisons receiving returning troops. Unprecedented disciplinary problems such as desertion and illegal weapon sales are afflicting Soviet forces remaining in Germany.

Ethnic strife and separatist challenges to central authority are jeopardizing the integrity of the all-union armed forces. Draft evasion rose to record proportions last year, with over 20 percent of inductees failing to report for the fall callup. The Baltic republics, Armenia, and Georgia experienced new highs in draft resistance. Despite their small populations, they accounted for much of the 20 percent shortfall. We expect this spring's callup to show even larger shortfalls.

The future of the Armed Forces depends largely on how the basic issue of republic participation in the all-union military is resolved. Some republics have claimed a legal right to define conditions of military service for republic citizens. Others have simply refused to participate in Moscow's security arrangements and have begun to establish their own military units. The March 1991 draft of Gorbachev's Union Treaty, which defines the relationships between the center and the republics, incorporates some concessions to republic aspirations for a voice in security decisionmaking. It also assigns the republics a role in matters regarding troop stationing and military activities and installations on their territory. However, no progress has been made in resolving the conflict between those seeking to maintain a single, centrally controlled military and republic leaders demanding reduced participation.

Arms Sales

I would like to turn now to arms exports and other external aspects of Soviet military-economic trends. Soviet foreign military sales continued a downward trend in 1990 that has been apparent for the past few years. Arms exports to the Third World fell about 30 percent in value terms compared to 1989. Two main reasons account for the drop:

- Due to their financial straits, the Soviets have tried to make arms sales more profitable, offering far less generous repayment terms and paring down gratis aid. The result was a sharp drop in deliveries to poor, developing countries.

- At the same time, Soviet efforts to increase sales to hard-currency customers met with little success because many of them are experiencing their own serious financial and economic difficulties.

In an effort to reverse the decline in sales, the Soviets are seeking more hard-currency buyers and marketing more sophisticated, high-priced weaponry such as newer model fighter aircraft. For example, they have resumed weapon sales to Iran, which stopped in the mid-1980s during the Iran-Iraq war. Moscow's efforts may be hindered by the image of poorly performing Soviet weapons in the Gulf War and increasingly stiff competition in world arms markets. At best, the Soviets probably will be able to slow the rate of decline in weapons sales. While the USSR remains the world's largest arms supplier, the overall downward trend is expected to continue at least into the mid-1990s.

Proliferation and Technology Transfer

The Soviets' quest for joint ventures and for hard-currency arms sales on world markets raises concerns about the potential for increased technology transfer and further proliferation of advanced weapons.

Soviet circumvention of COCOM restrictions remains a concern, as in the past. In the near term, at least, joint ventures are unlikely to be a vehicle by which the Soviets acquire significant amounts of strategic technology. If the Soviet Union becomes a better environment for joint ventures, the danger of transferring controlled technology to the Soviets will increase, particularly where Western firms establish production facilities in dual-use technology domains such as computers, microelectronics, telecommunications, and engineering.

In looking at the USSR as a potential source of sensitive weapon technologies for developing countries, it must be noted that the Soviets have demonstrated some concern for proliferation. For example, they have required that the nuclear facilities they provide to developing countries be placed under international inspection. Because of financial needs and declining domestic nuclear material requirements, however, the Soviets now offer a wide range of formerly restricted nuclear materials and technologies for sale, including low enriched uranium, space reactors, and reprocessing capabilities.

The Soviets have for many years marketed chemical and biological protective equipment—for example, to Iraq and Syria—but there is little evidence that production technology has been sold. They have provided missile technology, principally in the form of complete short-range systems, to many countries, but refrain from selling longer range or more accurate missile systems.

Soviet transfer of dual-use technologies to developing countries will be the most difficult for the West to monitor. Removing items from the COCOM lists would certainly make sensitive Western technologies more accessible to the Soviets and others, unless controlled by some other form of multilateral agreement.

<u>Outlook</u>

I would like to conclude by addressing Soviet military prospects over the next year or so.

- The overall pace of theater force reductions will slow, as the Soviets complete their originally planned unilateral cuts. CFE implementation would prompt the destruction and dismantlement of equipment in excess of treaty limits remaining in the ATTU.

- Air Force capabilities will be less affected by cutbacks in the short term because of the large number of fighters in service and the improved capabilities of newer models.

- The number of ships will continue to decline, but the Soviets will maintain or enhance their capabilities as fewer but more modern ships replace obsolescent ones being scrapped.

- Political and economic instability probably will have only a limited effect on strategic force modernization, which is expected to continue at a moderate pace. The Soviets also have begun to posture their forces in anticipation of START.

In military production, the Soviets have planned additional cuts in 1991, primarily in theater weapons, reflecting the ongoing force reductions and restructuring. In the near term, they can maintain their military modernization programs because the military-industrial infrastructure remains largely intact and more insulated than other sectors from economic disruptions. Nevertheless, continuing economic deterioration will be accompanied by greater disruptions that will eventually affect defense industry. Military programs will likely have to be cut further. Strong resistance in the republics to high military spending could become a major factor affecting future military programs if republics wrest more control of economic decision-making from the central government.

While many uncertainties exist regarding the shape and capabilities of future Soviet forces, a significant military potential will be maintained. Although overall military manpower and force structure probably will decline further in size, modernization of Soviet theater and strategic forces will continue, albeit at a reduced rate. The introduction of limited, professional military service will reduce reliance on conscripts. Domestic affairs, especially the economy, will be among the major determinants of future Soviet military capabilities.

Despite all the political, economic, and ethnic turmoil we have recently witnessed in the Soviet Union, it remains the dominant military power on the Eurasian continent. Soviet military capabilities are not static, but rather reflect continuing improvements in the quality of systems and refinements in the doctrine for their employment. With its modernized strategic forces, the USSR remains the only nation capable of threatening the survival of the United States. These formidable military capabilities have to be viewed in the context of the political, social, and economic forces at play in the Soviet Union. The current state of chronic crisis in the USSR will continue and likely worsen over the next several years. A transition out of this crisis period will likely involve shifts in leadership and varying degrees of violence, which have the potential to threaten U.S. and Allied interests. While DIA must address the numerous global challenges facing the United States in the 1990s, the important developments in the Soviet Union demand our continued attention.

Mr. Chairman, this concludes my remarks.

Senator BINGAMAN. Thank you very much for both statements.

We are informed that neither the CIA nor DIA would wish to respond to questions in open session. We will honor that and go ahead to our next two witnesses. Then following the open session, we will have a closed session where we will present some questions. So, we will excuse both witnesses at this time. Our other witnesses today are Professor Vladimir Treml of Duke University, and Dr. Charles Wolf of the Rand Corporation. If they would come forward, that would be appreciated. Let me thank both of you for being here. We will put your entire statement in the record, and if you can summarize your statement, we will have some questions for you. I don't know what order is the most appropriate.

Mr. Wolf, did you want to start; then Professor Treml after you.

STATEMENT OF CHARLES WOLF, DIRECTOR OF INTERNATIONAL ECONOMIC RESEARCH, RAND CORPORATION

Mr. WOLF. I will be pleased to. Thank you very much, Mr. Chairman. It is a great pleasure for me to have this opportunity to appear before the Subcommittee, before you and Congressman Armey, to share with you some observations on the Soviet economy.

Let me start with the standard disclaimer: The views I am expressing are my own and don't necessarily represent those of Rand or any of our sponsors. I have put my statement in the form of an outline. In view of your request for speed and summary comments, I will run through the points that are on this outline, which I hope you have accessible, and then return and amplify any points that are truncated along the way, as you wish, in the question period. As you see, I have organized these general observations in terms of five categories. Let me begin with the general issue of the fundamental difficulties of accurate economic measurement in command economies, where the prices of output don't reflect their opportunity costs for the forces of demand and supply.

ECONOMIC MEASUREMENT DIFFICULTIES

As a reflection of those fundamental difficulties and ambiguities in economic measurement, it is well to note that the estimates by both Soviet and American economists of the size of the Soviet economy vary by a factor of three, and I have shown that range in the first bullet of the outline. There are specific analysts whose names are associated with that range and various points within that range. At the low end of the GNP estimates, the Soviet GNP would be about equivalent to that of India. At the high end of the range, which is the general view of the CIA's estimates, Soviet GNP would be about the same as Japan's. Similarly, the range of estimates of Soviet per capita GNP is also enormously wide, ranging from the level of about that of Turkey or Mexico to that of Spain or Portugal. Actually, the report of the IMF and the World Bank on the state of the Soviet economy in December 1990 placed Soviet per capita

GNP at less than the lowest of the several figures I have shown in the second bullet of my outline paper.

Senator BINGAMAN. That is less than $3,000 per person?

Mr. WOLF. $1,780 or something like that, per capita.

Senator BINGAMAN. Which estimate is that, again?

Mr. WOLF. That is the estimate by the World Bank, the IMF, and the OECD, and the EBRD—the European Bank for Reconstruction and Development—in their joint study of the Soviet economy published at the end of 1990.

The third point about the range and the uncertainties of economic measurement relates to the size of the military burden, where the uncertainties accompany both the numerator and the denominator of that quotient; that is, the actual size of Soviet military spending and the size of the GNP to which the military figures compare or relate.

HOW CAN WE IMPROVE THE INFORMATION BASE?

Now, one of the questions, Mr. Chairman, that you raised in the invitation letter that you sent me on April 29, is what can be done about improving the information base for these sorts of estimates in the future? I have two brief suggestions that we can come back to and amplify as you wish.

The first suggestion is to change our focus from working on and with the data provided by the State Commission on Statistics by focusing more effort on sample surveys of households, enterprises, cooperatives, collective farms, etc.. In other words, moving outside the official data that are then modified and adjusted in a number of ways in the intelligence analysis of those data, to collect independent data as well—not only by the United States but by other participants—through sample surveys of particular types of economic activity, and then cross-checking those estimates of real production against those published by the official sources.

A second mode of improvement of these fundamental statistical difficulties relates to looking at the market prices of Soviet goods in world markets in places like India, Western Europe, and so forth. How do those goods exchange against the prices of internationally marketed export commodities, in steel, in machine tools, in automotive equipment, and so forth?

The second point on the outline that I have filed with the Subcommittee has to do with Soviet economic performance, about which a consensus exists that was reflected in the two prior statements by the CIA and DIA representatives. The consensus is that Soviet performance is poor, and its prospects are dim. We have made estimates at Rand that are consonant with those that were mentioned by Mr. Kolt earlier this morning, and these Rand estimates are referred to in the second bullet.

I would register one comment that, in a sense, loops back to the first point about the difficulties of measurement in command, nonmarket, noncompetitive systems. When we make comments about the impact of reform and systemic transformation in these economies in Eastern Europe and in the Soviet Union, it is generally contended that the impact of such reform measures will be sharp decreases in production; increases in unemployment; and increases in inflation.

It is very questionable that such statements and judgments are accurate, because the benchmarks on which they are based are themselves questionable. In the pre-reform command systems, inflation is hidden. Much of the reported output is either valueless or of low quality. And unemployment is also hidden. So, when one refers to the increases in unemployment, the increases in inflation, the decreases in output resulting from reform of these economies, one is comparing, especially in Eastern Europe, current observation of those indicators with questionable, if not spurious, ones in the benchmarks that they refer to from the prior, pre-reform economies.

Another point about the uncertainties has to do with the difference between production and distribution indicators. There can be, at the same time, in the disequilibrium economy of the Soviet Union surpluses in the Ukraine or in Tashkent, while there are deficits, long queues, and empty shelves in Leningrad and Moscow. And finally, there are leakages of production to shadow markets, so that the second economy becomes a more active part of the actual economic situation, compared with the official one that is covered by the statistics that the Agency deals with.

IS SOVIET REFORM GENUINE?

The third point, on page 222 of the outline I have given you, relates to Soviet prospects for genuine system reform. I think that, as the previous statements have indicated by the CIA and the DIA, the prospects are somewhat bleak because there isn't a clear concept and design for systemic reform, and the progress to date in reform efforts under Mr. Gorbachev's watch have been very meager.

The recent effort by Soviet Prime Minister Pavlov, who is characterized as an economist or financial expert, raises questions about the validity of that characterization. I have given some examples of the reform efforts that have been instituted under his watch, and they raise questions about whether the Soviets are moving in a genuinely realistically, substantively reformist direction.

I think what is generally requisite to transform command systems is a package of six elements of mutually supporting, synergistically-related components. I have diagrammed them on the accompanying chart where the boxes with the arrows show relations among these several elements.

The boxes numbered 1, 2, and 5 provide a macroenvironment of stability and economic predictability in which the microincentives and motivating forces involved in the boxes numbered 3, 4, and 6—competition, price, and wage deregulation; the investing of private property rights and currency convertibility to link the economy with comparative cost and advantage in the international economy—can function. There is very little evidence of an approach to reform in the Soviet Union that involves a simultaneous and substantial effort in these six dimensions. I have used in other writings the metaphor of difficulty of trying to swim with one arm and one leg rather than two of each; trying to reform a command system by doing only some of these components rather than all of them is analogous to what the metaphor implies.

PROSPECTS BETTER IN SOME REPUBLICS THAN IN OTHERS

To move to the fourth point, I think the prospects for system transformation may be considerably better in some of the Republics than in the Soviet Union. There is evidence from a number of people in the Republics, especially in the Russian Republic, many of whom visited Rand recently, and from some of the other Republics—especially the Baltic states and the Ukraine—that their disposition and receptivity to move along the comprehensive lines, reflected in the schematic diagram on page 3, are considerably brighter and more encouraging than in the Soviet Union.

We will come back to a discussion of that, if you like. There are reasons why that is the case, and has been and is likely to continue to be the case. There is a sharp contrast between the relatively promising prospects for systemic, marketized reform along the lines of that schematic diagram in the Republics compared with the Soviet Union.

I think there is a possibility for the Republics to pool their reform efforts on the premise that, even though I think they should do all these six component measures as a package, the reality is they won't. Some can do more of the package than others. Some will do the package more rapidly than others. But perhaps there is an opportunity for the Republics to pool their individual reform efforts and experience. This would not be a controlled experiment, but could be mutually beneficial for them to learn from one another's experience. I think that is something that the United States might try to facilitate.

U.S. POLICY FOR THE SOVIET UNION

Moving on to considerations for American policy—the fifth point in my outline—I think there is a tension between the desirability, on the one hand, of the United States maintaining relationships, contacts, and channels with the Soviet Union; because of its vote in the Security Council; because of the nuclear weapons issues, because of our interest in downsizing the Soviet Union's military; while at the same time increasing contacts with the Republics for a number of other reasons that I have alluded to. The greater prospects for genuine systemic reform in the Republics; access to better information by dealing with the Republics; and the prospect that the Republics are a more promising venue for commercial, business, and joint venture relations with American business than with the Soviet Union.

What I am suggesting by calling attention to the desirability of this, doesn't make it easy. But I am suggesting a "two-track strategy." The last time we tried a two-track strategy was in connection with INF. In this case, I am suggesting a two-track strategy to both maintain relations with the Soviet Union while increasing contacts with the Republics. If you do too much of one, you compromise the opportunity to do the other.

We should make more explicit use of the analogy between our Federal Government and our state governments. As you gentlemen on the Subcommittee well know, our states have many programs for promoting foreign business, trade, and investment in their individual states. Perhaps, we can make the "two-track strategy" more palatable to the Soviet Union by saying, "look, after all, what we are trying to do is encourage direct contacts with the Republics the way we allow such direct contacts with our States."

I think, to turn to the second bullet under point 5, our assistance—U.S. and Western assistance—should primarily be technical—along the lines that I have included within the parentheses of the second bullet under 5—directed to encourage system reform. Our technical assistance and possible food aid, I think, should be extended on such a conditional basis. This obviously has to be handled deftly, delicately, on movement toward the kind of reform packages or combinations of elements that I referred to, basing that conditionality on what I think is a valid premise. That is, if the system changes, there will be access to foreign capital flow; without it, there won't be access to private profit-motivated capital inflow, and assistance provided from the outside will be wasted.

I will conclude with two points. As the Republics acquire more autonomy, I think the second track of this two-track strategy should be more emphasized in U.S. policy. That is, we should increasingly encourage contacts and linkages with and visits to and from the Republics, while maintaining relations with the Center.

One final point occurred to me when the representative of the DIA was talking about the plans in the Soviet Union for increasing real defense outlays in the middle of the 1990s and maintaining modernization of Soviet forces, even as they are downsized, and the absence of any evidence that major R&D programs have been curtailed. The statement was made that this set of objectives will run into an increasing challenge and constraint from the realities of the economic bind that the Soviet economy faces. To the extent that there is a tension between the decline and troubles of the Soviet economy, and the expectations and wishes of the military to maintain R&D programs and proceed with force modernization, it's not at all clear to me that we should want to resolve that tension by improved performance of the Soviet economy. That is, if the constraint on the pursuit of force modernization and R&D is the prospect of further declines in the Union economy, then perhaps we should not hasten to reverse that decline.

Thank you, Mr. Chairman.

[The prepared statement in the form of an outline of Mr. Wolf follows:]

PREPARED STATEMENT OF CHARLES WOLF, JR.

1. Inherent difficulties and unreliability of economic measurement in non-market economies

- Estimates (by Soviet as well as U.S. economists) of Soviet GNP range from 14 percent of U.S. GNP (equivalent to India's GNP), to 53 percent (Japan's).

- Estimates of Soviet per capita GNP range from that of Turkey or Mexico (about $3000-$4000, or less) to that of Spain or Portugal ($8000-$9000).

- Estimates of military burden range from 15 to 30 percent of Soviet GNP.

- Suggestions for improving Soviet economic information—cross-checking Goskomstat data by:
  - — sample surveys of households, enterprises, cooperatives, collective farms, etc.
  - — using market prices of Soviet goods in foreign markets

2. Soviet economic performance

- Consensus that performance is poor, prospects bleak.

- RAND estimates of slow or negative GNP growth: from 1.6 percent annual growth (1990-1995), to 20 percent decline (1990-1992), then zero growth until 1995, 2 percent 1995-2000.

- Uncertainties
  - — unreliability of prior estimates as benchmarks, hence inaccuracy of inferences about changes (e.g., decreases in GNP, increases in unemployment, inflation)
  - — distribution vs. production indicators
  - — leakages to "shadow" markets

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[1] Dr. Wolf is director of international economic research at RAND and Dean of the RAND Graduate School. He co-edited (with Henry S. Rowen) *The Impoverished Superpower: Perestroika and the Soviet Military Burden* (ICS Press, 1990).

3. Soviet economic prospects and system transformation

- Prospects bleak because clear concept and design of reform lacking, and progress of reform efforts (1987-1991) meager.

- Recent "reform" efforts: confiscation of large ruble notes, tripling of prices, reduced enterprise subsidies but increased wage subsidies, loose fiscal and monetary policy.

- Need for comprehensive reform because of synergy among six elements: reform as a systems problem (see attached diagram).

- Instead, Soviet reform efforts are piecemeal, gradual, faltering.

4. Prospects for system transformation may be better in some Republics than in SU

- RSFSR, Ukraine, Baltic States.

- Possibility of Republics' pooling of reform efforts, experimentation, and sharing/learning from mutual experience.

- Compatibility between political decentralization/autonomy among Republics, and economic interdependence (treaty among nine Republics and Gorbachev).

5. Considerations for U.S. policy

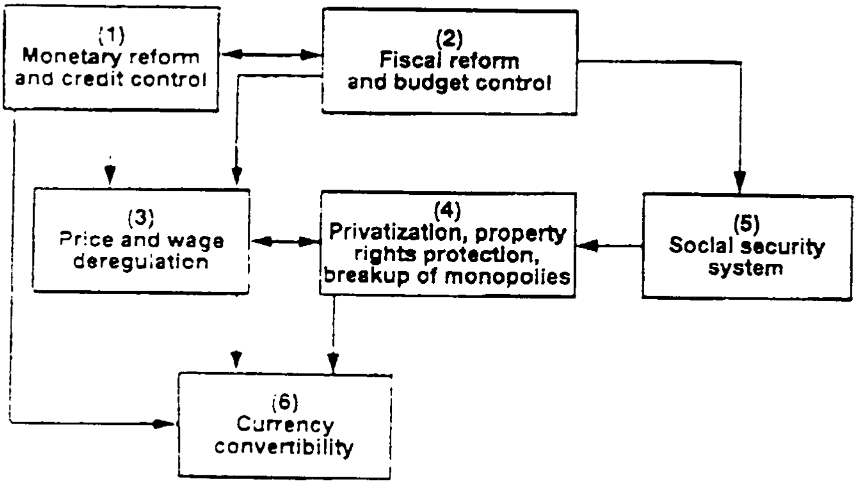
- Difficulty, as well as desirability, of U.S. maintaining relations with Soviet Union (e.g., UN Security Council, nuclear weapons, down-sizing of Soviet military), *while* increasing contacts with Republics (e.g., information, economic relations, progress of reform).

- U.S. and Western assistance should primarily be technical (management training, accounting, budgeting, legal and legislative, economic advice), to further system reform.

- "Conditionality" relating such assistance (and possible food aid) to system reform: with system change, foreign capital flow becomes feasible; without it, assistance wasted.

- As Republics acquire more autonomy, U.S. should focus more efforts and interests there.

Transformation as a Systems Problem



RAND

Senator BINGAMAN. Thank you very much.
Professor Treml, why don't you go right ahead.

STATEMENT OF VLADIMIR TREML, PROFESSOR, DEPARTMENT OF ECONOMICS, DUKE UNIVERSITY

Mr. TREML. Thank you, Mr. Chairman. I wish to thank the Subcommittee for inviting me, which I consider a privilege. Right now the issues are quite important and, at the same time, very confusing. I cannot comment on the CIA/DIA report presented here earlier, because I just received it last night. But I did read it.

Basically, I agree with the analysis and most conclusions. In fact, I find the report admirably comprehensive and balanced. There are one or two points I would like to raise.

OVERVIEW OF CIA/DIA REPORT

One is, I believe that the report correctly identifies the conservative, antireform forces as consisting of the Communist Party—a large share of the state bureaucracy—the military, and the defense-industrial complex. However, the report does omit what I consider unfortunately to be a very important factor, and that is the strong antireform, antimarket feelings among the ordinary Soviet people. It doesn't quite make sense to us, but I think it is a fact of life. The CIA/DIA report refers to the Baltic Republics and the R.F.S.S.R., the Russian Republic, as having the most favorable reform climate. I agree with statement if the statement refers to the governments.

However, I would not agree with the statement if the reference is to the people. Clearly, the reform sentiment, the support of markets, is very strong in the Baltic Republics and in the south—in Georgia, Armenia, and Central Asia. But the bulk of the Slavic element of the country—the Ukraine, Russia, Byelorussia—or at least a very sizable share of the population, is antimarket; they are afraid of markets. People are afraid of privatization, and that is a conservative force Gorbachev has to deal with and which should not be dismissed lightly.

The second issue I would like to mention in reference to the CIA/DIA report is in regards to foreign trade. I believe the report is quite correct in drawing a rather pessimistic picture of Soviet foreign trade prospects. I would add one more point that I believe is missing from the report. Soviet imports have always contributed a major share to the state budget in the Soviet Union, primarily derived from the difference between external world market prices and domestic ruble prices.

To give an example, in the late 1980s, as much as 13 percent, possibly 14 percent, of total state revenues were derived by this pseudo-tariff or price differentials payments into the state budget. It is an important source of revenue, and now with Soviet imports falling, this source of revenues is being cut. I think it is a major link between foreign trade and the budget that must be very alarming and about which the Soviet Government cannot do very much about.

Lastly, a marginal comment, I would like to see the CIA/DIA report say more about defense spending. The reference in the insert in the report to the published Soviet defense expenditures and the fact that the real defense expenditures are probably double this amount is intriguing, but this reference is very vague. We don't really know whether the reference is to 1988, 1989, or 1991, when the defense budget went up in nominal terms. If the reference is in real terms, I think it is one of the crucial issues, and that particular insert does not clarify it sufficiently.

GNP AS A MEASUREMENT OF THE WELFARE OF THE SOVIET UNION

A couple more issues, Mr. Chairman, that you had asked me to address in my presentation. One has to do with the measurements of the Soviet economy, both in terms of the absolute size of the Soviet GNP and in terms of U.S.-Soviet comparisons. The issues are quite technical. The report addresses the issues. Dr. Wolf talked about it, but what I would like to highlight is a technical issue but at the same time a very important one that somehow we keep missing in our debates and in our discussions. In fact, it was discussed thoroughly at the National Academy of Sciences conference last November, the report that was just published.

When we speak of GNP, or welfare, or per capita consumption, we must recognize that GNP or national accounting systems, whether Western or Soviet, have not been designed to measure the utility of outputs or the welfare of the population. As a rough measure, we do equate them, and presumably the closer the system is to a market economy and the more flexible prices are, the less discrepancy there is.

But basically GNP measures the productive capacity of a nation and not the utility or welfare. Therefore, the CIA's measures of the Soviet Union do not really refer to the welfare of the Soviet population, because the GNP measures were never designed to do this—and this is not the CIA's opinion—but this is basically what the statistical system reflects.

If I may use at least one example that impresses me, in this regard, from American statistics. In World War II, the United States lost 400,000 people in battle casualties. We had another 600,000 people suffering from battle wounds. Sixteen million Americans served in the Armed Forces. Consumption was restricted. Family life was disrupted. Nevertheless, if you look at the Department of Commerce statistics, you will see that per capita consumption in the United States—measured in constant prices—increased on an average by 1.5 percent every year in the period of 1941-1945. This illustrates the point I am making: GNP and per capita consumption do not reflect welfare. Only some intuitive "index of misery" would have shown that in the United States the people were not particularly happy between 1941 and 1945, but that is not what the statistics show.

We may consider designing new measures. We may consider new econometric techniques or new advances in statistics. We may develop some new insights on how to measure misery, quality of life, or satisfaction, but it is pointless to look for these measures in GNP statistics.

THE "SECOND ECONOMY"

The second point, which was raised and discussed at the National Academy of Sciences, and also the point that Dr. Wolf made, is the "second" or "shadow economy" in the Soviet Union. I have been studying it with a group of other academic scholars for several years now, and I believe—at least the consensus in the academic community is—that the "second economy," the private economy has become too large to ignore. In fact, a number of national statistical indices that are produced in the Soviet Union simply do not make any sense unless or until you consider the contribution to the overall economy by the "second economy," which is not recorded in official statistics.

Just to offer some order of magnitude, our estimates indicate that in the late 1980s the illegal, private economy comprised, roughly speaking, of between 24 and 25 percent of total GNP. The labor force is about 12 to 15 percent of the total labor force.

The "second economy" transactions, including both production and distribution of goods and services, should be integrated with official national income accounts. This would give us a much more accurate measure of nominal Soviet GNP, and help us in the understanding of price changes.

We are keenly interested in the privatization in the Soviet Union, such as the development of private cooperatives and of private individual activities. But again, without taking into account the contribution of the "second economy," we cannot fully assess this phenomenon. To give an example, private construction cooperatives have been the fastest growing part of the legalized private sector. The question is: Is it new production that the Soviet economy was enjoying, or is it simply the so-called "Shabashniks"—the illegal private builders who had been operating in the shadow for the last ten years and are simply coming out in the open and being recorded?

In many other areas, we similarly cannot assess the success or failure of privatization of officially recorded private activities unless we know roughly—and the "second economy" is not easy to study or analyze—what is happening in the unreported sphere. The CIA analysts do take into account some "second economic" activities, but I do not agree with their methodology, which I think is too restrictive.

I would urge the CIA to expand the scope and the classification of the "second economy." Private contributions would be larger, which brings us back to the problem of measuring the second economy. If we would recognize the second economy as existing and would integrate it with

GNP, the per capita consumption in the Soviet Union would be higher. GNP would probably increase both in nominal and real terms, which fortunately or not—it's not for me to say—will actually be in the opposite direction from what CIA critics were suggesting.

The second economy is not an easy topic to research, as we would have to agree on novel statistical conventions and develop the methodology of integrating the second economy with national income accounts. But it must be done for a better understanding of the changes in the Soviet system. Having ignored the second economy for years, Soviet economists and state authorities have recently recognized its existence. Both heads of the MVD and the KGB are on record for asking for more research on the subject. Soviet rough estimates of the size of the second economy are more or less consistent with American estimates, but they have not taken the necessary steps in integrating it with GNP accounts.

Let me stop at this point. There are a number of other issues I would like to address, but I seem to be running out of time. Thank you, Mr. Chairman.

[The prepared statement of Mr. Treml follows:]

PREPARED STATEMENT OF VLADIMIR G. TREML

A Statement Prepared on Request by the Senator Jeff Bingaman, Chairman of the Subcommittee on Technology and National Security. Submitted to the Joint Economic Committee, US Congress

Unfortunately, I was not provided with the CIA Report until shortly before the start of these Hearings and cannot, at this time, offer the Committee my evaluation. I will, therefore, restrict my statements to a general summary, and a brief review of two topics specifically requested by Senator Bingaman, that is, the second economy and the findings of a special National Academy of Sciences conference on measurements of the size of the Soviet economy.

1. SUMMARY

As it is clear to even most casual observers, the Soviet system is in a most severe economic crisis, unlike any crisis experienced by the USSR in the past. The crisis appears so severe and the prospects of immediate improvements seem to be so remote that the question of the survival of the Soviet Union as an integrated political and economic system can be legitimately raised at this time.

The deterioration of the economy and the fact that the initial Gorbachev's perestroyka reforms were not working (at least not producing immediate beneficial results) became evident in 1988. But even at that time it was difficult to foresee how strong the downward movement was to become. The accelerating downward trend including serious drops in output and national income in the first four months of this year are particularly alarming because the central government does not seem to have a coherent plan of action. The currency confiscation and price boosts enacted recently angered the Soviet people but, unfortunately, were not sufficiently radical or comprehensive to resolve the monetary and fiscal difficulties. The latest set of proposals and the program of introduction of market relations advanced by Gorbachev are too simplistic to be very promising. The only moderately encouraging sign is a slow movement to a possible resolution of the conflict between the center and the republics in which Gorbachev seems for the first time to be prepared to transfer significant powers to the regions.

Nevertheless, the Soviet Union is not likely, in my opinion, to collapse in the near future. One reason is that some elements of Gorbachev's reforms introduced earlier and some more elaborate changes being prepared now, such as, for example, the new banking and taxation system (including the shift of taxation authority to republics) were in the right direction and, given time, cannot fail to but bear fruit.

2. THE "SECOND ECONOMY" IN THE USSR

The rapid growth of the so-called "Second economy," that is, unrecorded and mainly illegal private economic activities undertaken for profit, presents a serious challenge for all specialists involved in the study of the USSR. I believe that strong evidence exists to suggest that the overall volume of second economy activities is so high and that it is intermeshed with legal state activities to such a high degree that many studies based on official statistics covering only recorded "first economy" produce distorted and possibly even meaningless results.

Estimation of various aggregates composing the second economy is fraught with difficulties of both statistical and methodological nature and firm figures are not available. My very rough estimates suggest that the second economy comprised anywhere from 14 to 16 percent of the total Soviet GNP in 1979 and rose to 21-25 percent in 1988. Labor inputs into the second economy measured about 11 million persons (full-year equivalents) in 1979 and rose to about 18 million persons in 1988, accounting respectively for 11.5 and 16.6 percent of total labor resources. Both the volume of second economy activities and labor inputs have been growing at rates that are much higher than the rates of growth of state inputs and outputs thus altering the economic structure.

Soviet authorities and state statistical agencies did not recognize the existence of the second economy until recently. But it is interesting (and encouraging) to note that starting in 1988 they "discovered" the phenomenon of the second economy, recognized its importance for the overall performance and efficiency of the state economy, and the fact that it impacts on the progress of economic reforms. Chairmen of both the KGB and the MVD, leading economists and journalists began to offer estimates of second economy transactions ranging from 100 to 350 billion rubles or between 10 and 27 percent of total Soviet 1989 GNP. Unfortunately, quantitative references to the second economy found in Soviet sources are poorly documented and all we can say that omitting extreme values they are fairly consistent with Western estimates.

I believe that CIA's figures on Soviet GNP could be significantly improved by incorporating in them comprehensive estimates of second economy transactions. The CIA starts with a reasonable position that Soviet GNP accounts should include all economic activities that are classified as legal in the US to make US-Soviet GNP comparisons meaningful. At the present time the CIA does include some figures on privately produced consumer goods and services in their GNP estimates. These are, in my opinion, grossly understated; furthermore CIA omits a large share of private economic transactions such as arbitrage, graft and illegal side payments arguing that these do not add new production but only affect redistribution of national income. I believe that this position is incorrect. Income generated in arbitrage (i.e., revenues of middlemen engaged in black market sales of state produced goods) should be counted with national income flows analogous to income of speculators that are included in US accounts. Similarly, side incomes (or bribes) accruing to workers in the state service sector are necessary for ensuring better quality of these services and must, therefore, be counted.

There are reasons to include second economy activities in our measures of the Soviet economy that go beyond the requirements of US-Soviet comparisons. For example, the addition of rapidly growing arbitrage profits, side payments in services, and other forms of second economy to the GNP series would increase its nominal level and rates of growth and provide additional insights into the phenomenon of suppressed inflation. And this would ultimately add to our understanding to the yet to be fully explained rapid deterioration of the Soviet economy.

The rate and the scope of "privatization" and "destatization" of the Soviet economy under Gorbachev's reforms is, needless to say, an important facet of the overall economic performance. At this time, however, neither Western analysts nor the Soviets specialists know what share of goods and services produced by newly created private cooperatives and private entrepreneurs is accounted for by truly new output and what share represents the output of previously concealed and unrecorded illegal activities. Thus, the rapid growth of private construction cooperatives may very well be explained not by an expansion of this sector but simply by the fact that the so-called illegal "shabashniks" of yesterday are now operating openly.

It must be recognized that the incorporation of the second economy in Soviet GNP accounts involves not only additions but corrections of presently measured flows. Some elements of the final set of goods and services which are at the present time counted by the CIA and Soviet statisticians with household consumption must be reclassified as intermediate inputs into the second economy. For example, counting bread products used by peasants as livestock feed and sugar and other commodities used in distillation of moonshine as intermediate goods would reduce Soviet calorie consumption by four to eight percent.

I am fully aware of the fact that identification and measurement of the volume of second economy activities is, for obvious reasons, rather difficult. But given the importance of the topic it should be undertaken.

Recognition of the second economy would alter Soviet per capita consumption in nominal and real terms and US-Soviet comparisons. In fact, it should be noted that incorporation of second economic activities in CIA estimates would change the US-Soviet consumption ratio in the opposite direction from the direction the CIA's critics would like it to see.

3. THE NAS CONFERENCE ON THE SIZE OF THE SOVIET ECONOMY

Last year, at the request of Representative Lee Hamilton and Senator Jeff Bingaman, the National Academy of Sciences organized a conference focused on the accuracy of quantitative measures of the Soviet economy produced by US government agencies, primarily the Central Intelligence Agency. More than twenty participants from government and private agencies and academic institutions reviewed such issues as the appropriateness of the current techniques used by the CIA in estimating Soviet Gross National Product, in making US-Soviet GNP and consumption comparisons, and in such related areas as measurements of defense expenditures and the relative size of the Soviet defense burden. A comprehensive summary of was just released by NAS and I will include only a brief précis of conference proceedings.

The conference discussed at length the so-called Adjusted-Factor-Cost method of estimating Soviet GNP developed in the 1960s by Professor Bergson and employed, with some modifications, by the CIA. As with other Soviet national aggregate statistics the CIA's GNP series suffer from distorted Soviet prices which cannot be fully adjusted. Several shortcomings of the method were identified and directions of possible improvements were suggested.

One issue which came up a number of times in the past and at the NAS conference is the validity of CIA produced US-Soviet comparisons. Several critics rejected the CIA estimate that in the 1970s on a per capita basis Soviet consumption was about one-third of the US level as unduly high and suggested that the correct ratio was anywhere between 16 and 20 percent. Similarly, the CIA-estimated Soviet-US GNP ratio of about 50 percent was criticized as too high. This criticism found a receptive audience among a number of Western visitors to the USSR who were impressed by poverty, crowded housing, low quality of goods, and frequently occurring scarcity of most basic goods. This "cognitive dissonance," (Professor Gregory Grossman) stems from the fact that GNP and its consumption components are equated in the view of general public with utility of produced goods and services and the welfare of the people. Technically speaking, this is not necessarily true as GNP and other national aggregates are primarily designed to measure a country's capacity to produce outputs or its economic potential and not welfare. For example, the deterioration of the Soviet trade and distribution networks resulting in wrong goods delivered to wrong locations at wrong times would not be reflected in conventional national income accounts.*

In the opinion of conference participants CIA's work on US-Soviet comparisons could still be improved by larger samples and better adjustment for the inferior quality of Soviet goods and services.

A review of CIA's and independent measures of the level of Soviet defense expenditures and the relative burden of defense (ratio of full defense expenditures to GNP) undertaken at the conference did not produce a consensus. The issues involved are extremely complicated. Although the Soviet Union began recently to release some statistics on defense expenditures these data are probably not fully reliable because of hidden subsidies and other distortions in prices in which military purchases are recorded and by possible omissions of certain categories of defense-related expenditures from the published totals. The CIA method of estimating defense expenditures by the so-called "building block" approach was criticized by some conference participants as producing unduly high defense burden and by some as being unduly low.

4. FUTURE RESEARCH WORK UNDERTAKEN BY THE CIA

The criticism of CIA's work on Soviet GNP, US-Soviet comparisons and related topics may be considered as a sufficiently good reason for the CIA to curtail or even to discontinue their efforts in this area. This, I submit, would be highly undesirable particularly at this time of turmoil and economic crisis in the USSR. Shortcoming in CIA's analytical efforts highlighted by outside critics are not, in my opinion, sufficiently serious and alternatives methods and approaches mentioned by critics are, by and large, not promising.

In the atmosphere of "glasnost" the availability and credibility of Soviet economic and demographic statistics have been improving. So far, however, main improvements have been observed in the greatly expanded scope and volume of published data. Some serious gaps in coverage still exist. The quality of Soviet statistics, the underlying methodologies, definitional consistencies among statistics produced by different state agencies, collection methods, etc have been improving much slower. In my opinion it would take many years before the statistics produced by Soviet statistical agencies and independent scholars in the USSR can be accepted as completely reliable and comprehensive. Thus, CIA's quantitative research and similar studies done by government and academic scholars will remain important for our understanding of the performance of the Soviet economy and I would, therefore, strongly recommend that the Joint Economic Committee encourages the CIA to continue its efforts.

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* **ENDNOTE**. I would like to offer one example from the US history which illustrating this phenomenon. During World War II the US suffered 400,000 war-related deaths; some 670,000 Americans were wounded; more than 16 millions served in Armed Forces. It would be reasonable to expect that these factors associated with disruptions of normal family lives, reduced consumption, and general misery caused by war casualties would be reflected in national income statistics. In fact it is not so: our GNP series record that per capita consumption measured in constant 1958 dollars increased by an average 1.4 percent in the four war years (Bureau of the Census, HISTORICAL STATISTICS OF THE UNITED STATES, Washington, DC 1975, Volume I, p. 225).

Senator BINGAMAN. Thank you very much. I will just ask a question or two here then, and then let Congressman Armey ask his questions. We will then adjourn to do some questioning in closed session.

Mr. Wolf, in going through your outline of points, you said that one thing we might consider is ways—and I would use the word facilitate—the pooling of reform efforts among the Republics. I would be interested in any more elaboration of what you think we could be doing. You also indicated that you thought in the area where assistance could be provided is technical assistance of various kinds. What do you see that we could do to facilitate this pooling of reform efforts that is going on in different places in the Soviet Union?

Mr. WOLF. Let me first apologize for calling Congressman Armey, "Mr. Obey." My vision is a little weak at this distance. I apologize for that.

POOLING OF REFORM EFFORTS AMONG REPUBLICS

What I had in mind is based on the premise, which I think is realistic, that the prospects for the Republics—let alone the Union—to proceed with the kind of comprehensive, massive, simultaneous system—reform components that are diagrammed on this accompanying schematic are probably less than what has been followed in Poland. On the premise that those prospects are not awfully bright but are brighter in the Republics than in the Soviet Union, it seems to me that the Republics, especially with some encouragement and technical assistance from the United States and the West, will still only embark on some of these measures but not on all of them. They will perhaps embark on fiscal and monetary stabilization. They will embark on price reform. They probably won't embark on convertibility. They probably will have varying degrees of privatization and vesting of property rights.

So, my picture is that the Republics will do some of these reform measures but not all of them. Different republics will find political, bureaucratic, or conceptual reasons why they can only do certain segments of this package, but not all of it.

So, what I am suggesting is that it would be useful to have a formalized system for sharing the information and experience that the Republics develop, by embarking on the components that they find feasible to pursue. Over time they will be able to benefit one another by the learning and experience of the Republics that have done some things that others haven't done.

U.S. ASSISTANCE

In terms of U.S. assistance, what I had in mind is the sorts of things—management training, accounting, methods of dispute resolution, legal code drafting, and economic advisory services—that we, the West, can provide. Assistance from the United States and the West should be related to furthering not only the reform efforts in each of the Republics but the pooling of their collective experience. What I have in mind is that they might have a semiannual or quarterly review of the effects and experience of the R.F.S.S.R., the Baltic states, the nine Republics that have entered into this treaty with Gorbachev, and the network of interrepublic treaties that Mr. Yeltsin has developed. I think that is the direction to proceed.

Senator BINGAMAN. You are suggesting that we could help facilitate or bring about those, say, quarterly meetings with persons who are engaged in this reform process by sponsoring conferences of that type?

Mr. WOLF. Right. These would be their conferences, but we would help to do the staff work; we would help to relate the technical assistance components that I mentioned before to the reform efforts in each of the Republics, recognizing that they are going to have political constraints that will probably preclude their implementing the entire package.

You see, I think that the chances of swimming are a lot better if you use two arms and two legs. The chances of systemic transformation are better if you do all six of these things together. But they are not going to do that. So, what I am suggesting is a second-best or maybe third-best approach, which is find a way to bring them together so that the differential measures, the different measures that each of them does, can be reviewed, evaluated, and communicated in ways that will benefit all of them.

Senator BINGAMAN. Congressman Armey, we will include in the record at this point your opening statement.

OPENING STATEMENT OF REPRESENTATIVE ARMEY

Representative ARMEY. Thank you, Mr. Chairman, for holding these hearings and for this excellent set of witnesses. I want to brush up on Shakespeare a little bit. It has been a little while since I was a graduate student.

I seem to recall that the most sophisticated input-output model that we had at that time was 48 sectors? But at any rate, can you tell me how many sectors we have now in our matrix and more sophisticated models, and how much that has changed, say?

Mr. WOLF. For the United States or for the Soviet Union?

Representative ARMEY. In terms of our capacity to put a model together that is tractable.

Mr. TREML. Four hundred fifty, 500 for the United States, in the recent one.

Representative ARMEY. So, the model would work with that many components. Would you suggest that we don't have one that sophisticated for the Soviet Union because we wouldn't have the data to drive it? I guess I just assumed that.

Mr. WOLF. Right. I would distinguish, Congressman Armey, between an input-output analysis and sort of intersectoral flows—whether 46 sectors or 500—and the schema on page ?

Representative ARMEY. Right. I understand. You all, of course, I am sure will agree with me that Von Mises settled this issue with Lange back in the 1930s, when he pointed out that no institution of government could possibly have good data processing to replicate the performance of that most vital data processing component, the market, the pricing system. That, in my estimation, settled the issue forever. It did for me. But let me ask you.

Mr. WOLF. I am not sure if my friend and colleague Vladimir would agree, but I agree with that. Actually, Hayek was more emphatic on the informational constraints. Von Mises was partly that and partly that less production goods were owned privately and traded publicly on the market. You would never be able to establish values even if you had the information.

Representative ARMEY. I must say, by the way, that I very much admire Professor Lange's work. I just gave him a quick translation. Lange came to the conclusion that a planned economy could be rational if it successfully emulated a free economy. A fair characterization. But at any rate, it seems to me that with a dual economy—and I guess I am hearing that you are saying the second economy—is perhaps as big as the first economy or approximating that?

Mr. TREML. As high as 30 percent.

Representative ARMEY. That would suggest that there is, in fact, a very capable and active entrepreneurial class, which frankly is quite astounding when you realize that you are dealing with nations and peoples that for generations have had so little experience with this very risky business called freedom.

We, for example, notice a great deal of very tragic experience by way of the Soviet emigres in the United States when they are just overwhelmed by all their freedom, and some of whom have gone home. Which brings me to the point that along with this entrepreneurial class, you have another very assertive group of people who are saying, "you know, I am not jumping in that water." Security is so clearly defined.

I am fascinated by this whole process. How do we transform, as I earlier said, ground never broken before, going backwards—what Marx said would be a step backwards? Of course, I happen to believe, in the final analysis, that all of us are thinking about how we, or the institutions to which we connect, will have the ability to manage these affairs; that when we come to our senses, we will fall back to laissez faire and leave the folks to do it on their own, in essence.

But there are some things I think are essential for a government to do, and I think your chart indicates that you have to have a stable monetary system. First of all, you have to have a stable political system. I don't think we've gotten there yet in Russia and Eastern Europe. But it seems to me then that the first thing is the monetary system and then second, the transformation of property.

I once had a fascinating discussion with a Czechoslovakian economist. We had a wonderful time until we got to the question of my dumfounded insistence on trying to find out who owns the factories. The gentleman couldn't understand the question. And therefore, proprietorship becomes an essential question here. And that, I think, has to be a public policy initiative, very early, right on the heels or in conjunction with establishing the monetary system.

It strikes me, though, if in fact the government can devise a system to allow private property, the innovation of new properties by the entrepreneurial class that might come out of the closet and make new acquisitions. Or, by the transference of the fairly large state enterprises, somehow to private ownership, perhaps a few, what we call ESOP programs, where the workers acquire the proprietorship, and then at the same time are able to establish themselves as a predictable stable government, which has a new set of rules that we can presume will remain in place for some time into the future, coupling that with establishing a currency that is not only domestically but also equally important internationally and generally acceptable as a means of payment. Then, the work of governance in these matters may be all done. Am I being too laissez faire here?

Mr. WOLF. I think even Milton Friedman, whose name is not often used in these halls with praise, has said that the invisible hand of Adam Smith needs an iron hand of government to maintain a stable monetary policy. But it applies to a legal code, a legal framework that is predictable for dispute resolution and fiscal discipline, and doesn't vitiate the monetary policy by monetizing the public debt. I think you are right on.

Representative ARMEY. Mr. Chairman, I can't resist concluding with one observation. The proudest moment of my life was when I picked up the *Wall Street Journal* and found in it Milton Friedman quoting Dick Armey, warning against the invisible foot of the government. So, the man is obviously a genius, and I wonder whose advice we ought to take.

Thank you, Mr. Chairman.

[The written opening statement of Representative Armey follows:]

WRITTEN OPENING STATEMENT OF REPRESENTATIVE ARMEY

Mr. Chairman, I am glad that we have such distinguished representatives of the intelligence and academic communities here today to discuss the situation in the Soviet Union and Eastern Europe. The timing is particularly appropriate in light of the recent proposal to extend credits to the Soviet Union for the purchase of grain.

Anyone who reads the newspapers or listens to the evening news has seen the hopeful set of reforms in the Soviet Union and Eastern Europe turn into a gloomy cloud of uncertainty and suffering. At the same time that the Soviet Union seems to be on the verge of democracy and a market economy, it faces secessionist cries brought on by a retreat from individual freedoms and the danger of economic collapse. The power struggle between the hardline communists, moderates, and reformers is more than a struggle over who will govern. It is a struggle for the nature of future Soviet interactions within and beyond its borders. The emerging political orientation will have significant effects on our economy through its demands on our foreign policy and national security expenditures.

Over the last year, the bridge to reform in the Soviet Union has been washed out. The 500-day plan for transition to a market economy has been shelved, and many key reformers have been replaced by conservatives. Rather than more individual liberty, there appears to be a return to authoritarian control and repression of individual freedom.

Ultimately, a society which relies on centralized economic planning will never be as productive as a society that relies on a free market to provide a decent standard of living. It is the efficiency with which the free market allocates resources that has enabled Western economies to far exceed the standard of living in the Soviet Union or Eastern Europe. The Warsaw pact countries overspent on military sectors and ignored the needs of the civilian sectors. Now, although its military spending appears to be declining, the Soviet military industrial complex appears still to prefer plucking scarce resources out of civilian sectors.

I look forward to the witnesses' discursion of current reforms and their effects on the allocation of resources. In particular, I am interested in what our witnesses' findings are with respect to the Soviet Union's allocation of resources to its military during this time of warming superpower relations.

Senator BINGAMAN. Thank you very much.

Because of our time constraints, gentlemen, I will have to terminate the open part of our hearing at this point. We want to continue to communicate with you on these issues. It has been a very useful hearing.

We will conclude the open session at this time.

[Whereupon, at 11:15 a.m., the open session was concluded, thereafter, the Subcommittee entered into a closed session.]

EXECUTIVE SESSION (CLOSED SESSION)

Senator BINGAMAN. This part of the hearing will be short because of the various time constraints.

Thank you all for being here and participating in it. Congressman Armey said he was not able to be here for this part.

Let me just start in. Did you want to make any additional statement before I started the questions?

Mr. KOLT. No, sir. If I could, I would like to introduce Laurie Kurtzweg, who wrote our draft. So, we will give her full credit. While we are doing that, let me introduce Denny Barclay who contributed to the East European portion of the testimony.

Mr. DUECY. And I do have a host of experts who contributed to this effort.

Senator BINGAMAN. Let me ask just a few questions. Do you have any conclusions that you could give me about the appropriateness of the U.S. multinational effort to assist the Soviets to conversion of their economy from a defense economy; what they've got to do and where they're trying to get to. I know just a couple of weeks ago, the Japanese Foreign Minister opposed an initiative like that, I gather, both to Secretary Mosbacher and maybe to others, and indicated that he thought we should have a multinational effort to assist them in making that transition. I don't know any more specifics about it. I just saw a few accounts of it. Is there something there that makes sense, and, if so, what would you think of it?

Mr. KOLT. The decision, of course, or the policy recommendation on such initiative is going to be up to you and your colleagues. I think we have sketched out the conditions existing in the Soviet Union and in Eastern Europe, respectively.

Two points on this—things I think need to be watched. One—and here I will agree with what President Gorbachev said yesterday—change has to come from within the Soviet Union. I think money sent to the system as it operates today will be money that is wasted and may impede reform. Those who don't want reform could argue that we are getting the money, so we don't need reform. So, there has to be change within before any assistance or credits become worthwhile.

Second, on the multinational effort—however that can be constructed— this would prevent the Soviets from playing one country against the other and getting special deals here and there, and setting this thing up in competition among countries from the outside to get better relations with them.

Senator BINGAMAN. One of the suggestions that Dr. Wolf just said, which seems intriguing to me, was that one thing that would be of great help, since different republics are proceeding with reform at different levels, different paces; some were proceeding with actual reform and others to other kinds, would be a pooling of the experience and knowledge being gained by them as they go through, which would be a very useful thing that we might help facilitate.

Specially, what he was suggesting was that some agency—A.I.D. or some other agency—be directed to, at least, make the offer of convening quarterly conferences in which the key folks that are trying to design these reform elements could come together under their auspices of the central government, but that sharing of information about what is being tried would be a great help to them among themselves. We wouldn't come in there and lecture to them, but we would have them get together and presumably discuss and work on it.

Is that something that is going on right now? Does it make sense for us to try to encourage or facilitate it?

Mr. DUECY. I would make a comment—it is not directly relevant to the economic reform process within the republics that are sharing that type of experience. The only example I know of right at the moment and is ongoing now, as I understand it, in the Soviet Union, is a meeting of all the republics in one grouping to discuss their development or interest in independent development of national security policies from the republics' standpoint. So, it is an indication that they are talking on some common issues.

As for the U.S. participation in that, certainly, I know that there is an element of our national defense university participating in those discussions to understand what the republics are thinking. Those kinds of cross talks exist in the shared economic or conversion experience, like the transportation problems—I don't know. But at least there is a venue for part of that sort of dialogue.

Senator BINGAMAN. Does the CIA have any thoughts on that?

Mr. KOLT. Yes. First, I think that, as I indicated, both on the statement for the Soviet Union and for Eastern Europe, there is much that experts from the West can discuss and, in effect, much experience that can be imparted from the West to those who are carrying through reform.

Second, on the specifics of your question—just as Pat mentioned—there are a great many discussions going on among the republics that we often don't hear about. The republics have been concluding agreements with each other, so that there is a dialogue going on. Personally, I think for us to take on the burden of trying to get them to coordinate their efforts is not entirely appropriate, and I don't know how much good it would do.

One can run conferences, but to get engaged in an institutional way into coordinating the efforts of the republics of another country, I think, is not that helpful.

Senator BINGAMAN. There is a statement in the DIA prepared remarks that you went over somewhat, but I wanted to just ask about. You say, "removing items from the CoCom list would certainly make sensitive Western technologies more accessible to the Soviets and others, unless controlled by some other form of multinational agreement." We have had a hearing or two in this Subcommittee where we tried to elicit testimony about whether some other kind of North-South CoCom, or something like that, was appropriate. Most of the consensus, or to the extent we had any consensus, was that realistically CoCom was there, and the time it would take to put in place another mechanism would be very substantial. So, what we needed to try to do is to use CoCom to deal with this problem—this North-South problem—as well as the problem it was traditionally set up to deal with, which is the East-West problem.

I would be interested in any thoughts that either agency has as to how we deal with the North-South transfer of technologies, while we are dismantling or at least preparing to dismantle a lot of the controls that we've had on the East-West track.

Mr. DUECY. I would offer a couple of thoughts on that. There are some thoughts within DoD on this particular issue. CoCom certainly remains an important center of experience of practice in dealing with technology transfer. There are other means, such as the missile technology control issue, for example, as one means of pulling nations together in a multilateral agreement in certain technology sectors. There may be others on high-interest technologies, chemical industry processing, and nuclear industries, and, certainly, there are international controls on that. There may be other groupings. There is an Australian group that looks at similar issues that can provide the basis for dealing with sensitive technologies that are in no one's interest to have applied to certain weapons of mass destruction. That, I think, is what we are principally thinking along those lines when we talk about multilateral arrangements.

Senator BINGAMAN. How does the missile technology control issue fit into that? The State Department testified that the Soviets want to participate, or want to be involved in that. We don't want them to because we don't trust them at this point. How does that work?

Mr. DUECY. It is simply an agreement not to export systems that exceed certain ranges.

Senator BINGAMAN. I am aware of what it does. Does it make sense for us, as a policy matter, to not try to bring them into the circle of nations that are concerned about restricting this transfer of dual-use technology?

Mr. DUECY. Obviously, I can't speak for the State Department, but it would seem logical to me to have them participate in such a control issue.

Senator BINGAMAN. I guess the concern that the State Department expressed was that allowing them to be part of the Group of Seven nations that now participate in that gives them information or access to information that they might not be trustworthy in their use of. Do you have any thoughts about that?

Mr. DUECY. I think it is a tradeoff between having them participate in some positive way and any risk that might be attendant on that in terms of ... I guess that means information transfer capabilities.

Senator BINGAMAN. Do you folks have any view on that?

Mr. KOLT. No, sir. I think as this exchange has pointed out, technology transfer is a very complex issue. We do have a technology assessment center at CIA. Those questions really fall under their purview, not those of John McLaughlin and me.

Mr. GRANT. Of course, there is the possibility that the Soviets could pick up information in negotiations in developing a missile technology control list, which, incidentally, is being put in place right now—an expanded revised list.

There had been some interest earlier, at least from some quarters in DoD, in possibly having the Soviets involved. But the latest information I have on that is that the Soviets really are holding up, because the Chinese are not members of the missile technology control regime, and they are afraid that would leave the market wide open to the Chinese if they joined the missile technology control regime, as well.

Senator BINGAMAN. You are not aware of the Soviets wanting to participate in the missile technology control regime at this time?

Mr. GRANT. I think they have been lukewarm on it. They have been torn both ways. They have not been a great proliferator of missile technology. They have been selling large numbers of short-range missiles like the Scuds and things of that nature. They haven't been proliferators of the technologies. So, that is a plus on their part if they have a vested interest in seeing that that probably does not happen. They are apparently torn between getting into the MPCR and possibly leaving the market open for other countries, such as China.

Senator BINGAMAN. Unless my memory fails me, the testimony that we had at this hearing a couple of weeks ago was that the Soviets had expressed a desire to be involved, and it was our objection that was keeping that from occurring, because we did not think that they were trustworthy at this point as a potential participant in that group.

Mr. KOLT. On that specific point, yes, the Soviets have expressed an interest in participating in the MPCR. They are, however, still supplying Scuds to Afghanistan, which is not within the confines of that agreement, and I do not know exactly what the U.S. Government policy position on that is.

Senator BINGAMAN. Am I correct that we do not have in the report this year any efforts at estimating a dollar value of Soviet military spending. Is that something that is a change in the procedure you followed?

Mr. KOLT. That is correct, sir. We have found that these dollar estimates took a lot of resources to prepare and were not really that useful, because dollars is not what the Soviets paid for these systems. Dollars don't reflect the amount of strain that defense spending puts on their own economy. so, we discontinued doing our estimates.

Senator BINGAMAN. Do you think that that is not a major gap in the information we are receiving? The inability to make some comparison of the resources devoted to defense between the two countries?

Mr. KOLT. No, sir, because I think it is much better to look at it in terms of burden in the percentage of the resources being devoted to defense than putting it into dollar terms, which is not very reflective of the burden that the Soviets are bearing.

Senator BINGAMAN. How regularly are you capable of giving us updates on the Soviet activities with regard to modernization of their strategic program? You are saying in this report, strategic program modernization is continuing at a pace ... there seemed to be a change in that, obviously. If that information becomes out-of-date, we need to have that quickly, not on an annual basis.

Mr. KOLT. Absolutely. And we do this in our current publications. We can do it any time. It can be done monthly, weekly, based on any new information that comes in. As soon as we receive information that, by our analysis, suggests a change of program, that information is reported.

Senator BINGAMAN. I think that is important for us, particularly on the Armed Services Committee, as we go forward, to try to keep track of what the extent of the threat is and what we anticipate it being in the future. That is about all the questions that I had to go through right now.

Why don't we adjourn at that, and if we have other questions, we will be in touch with you.

Mr. KOLT. Thank you for your attention.

Senator BINGAMAN. Thank you very much. We will have some written questions that we will get to you in the next few weeks.

[Whereupon, at 11:40 a.m., the Committee adjourned, subject to the call of the Chair.]

[The following written questions and answers were subsequently supplied for the record:]

O

June 3, 1991

George Kolt, Director
Office of Soviet Analysis
Central Intelligence Agency
Washington, D.C. 20505

Dear Mr. Kolt:

As I indicated during the May 16, 1991 hearing on the Soviet Union and Eastern Europe, I am submitting a number of written questions that were not addressed during the oral testimony. Please answer the questions and respond to the requests for information in unclassified form.

1. A number of tables on the Soviet economy included in previous CIA reports were not included in this year's report. Please provide tables containing (1) estimated GNP by sector of origin at factor cost, (2) estimated value added in industry at factor costs, (3) estimated average annual growth of per capita consumption, (4) estimated growth of GNP, industry, and labor productivity, (5) gross fixed capital investment, and (6) selected indicators of agricultural output.

2. Is there evidence in the Soviet Union of widespread hunger, food riots, massive unemployment, extreme poverty, and other signs of distress that we associate with an economic crisis? If so, discuss the evidence. If not, discuss why not?

3. Provide a table showing the figures concerning numbers and value of foreign investment and joint ventures in the Soviet Union for each year since 1965, broken down by the U.S. and other countries. Discuss the trends and the outlook.

4. How much foreign investment in the USSR involves western advanced technologies and production techniques.

5. How many eastern and other foreign investors have suspended or abandoned projects in the Soviet Union in the past two years? Are the numbers increasing and do they indicate western business flight from the Soviet Union? Is such light likely to occur in 1991 or the near future? If not, why not?

6. A column by Leslie H. Gelb in the *New York Times*, May 19, 1991, states that before the end of the decade the USSR will become a net importer of oil, and discusses the implications of that prospect. Do you agree with Gelb's conclusions. If not, why not?

7. Discuss the international competitiveness of Soviet manufactured goods and advanced technologies, including examples of those that are and are not competitive, and the outlook for Soviet exports of aircraft, aerospace, and other high technology products.

8. Provide a table showing the composition of U.S.-Soviet exports and imports in 1990 and discuss how the composition of this bilateral trade has changed in recent years.

9. Vladimir Treml testified in the May 16 hearing that the Soviet "second" economy comprised 21-25 percent of GNP in 1988, but that the CIA estimates of Soviet GNP omit a large share of this activity. Discuss whether you agree with Treml's estimates and conclusions. Is it possible that economic activities in this sector may help explain the absence of visible signs of distress among the general public?

10. How much western aid has been given to the Soviet Union in the past several years, and which countries are the major suppliers of aid?

11. One of the most important tools for comparing U.S. and Soviet defense spending and trends have been the dollar estimates provided by the CIA. What is the rationale for discontinuing the dollar estimates?

12. Will it not become more and more difficult to compare U.S. and Soviet defense spending levels, and to understand changes in Soviet levels of effort concerning the structure of military forces and the military services, if dollar estimates are not made?

13. If you believe there are higher priorities for the use of intelligence resources than making the dollar estimates, discuss what they are.

14. What has there been so little progress in the Soviet effort to convert military production to civilian purposes, and what are the prospects for the next several years?

15. Provide a table showing Soviet hard currency earnings from arms sales in each of the past five years, with as much of a breakdown for recipient countries as can be shown in unclassified form.

I assume the information and tables I requested in my May 9, 1991 letter to Director Webster will be supplied to the Subcommittee.

Your cooperation and assistance are greatly appreciated.

Sincerely,

Jeff Bingaman, Chairman
Subcommittee on Technology
and National Security

1. A number of tables on the Soviet economy included in previous CIA reports were not included in this year's report. Please provide tables containing (1) estimated GNP by sector of origin at factor cost, (2) estimated value added in industry at factor cost, (3) estimated average annual growth of per capita consumption, (4) estimated growth of GNP, industry, and labor productivity, (5) gross fixed capital investment, and (6) selected indicators of agricultural output.

See attached.

USSR: Growth of Gross National Product by Sector of Origin[a]

Percent

	1961-70	1971-80	1981-85	1986	1987	1988	1989	1990[b]
Gross national product	4.8	2.4	1.7	4.1	1.3	2.1	1.5	-2.4 to -5.0
Industry	6.1	3.9	1.9	2.4	3.0	2.7	-0.6	-2.8
Agriculture[c]	3.1	-1.0	1.2	11.2	-3.8	-0.4	6.1	-3.6
Construction	5.1	2.0	1.1	3.7	2.4	3.1	-0.5	-8.0
Transportation	8.5	5.1	2.2	3.0	1.2	2.6	-0.3	-2.9
Communications	8.0	5.5	3.8	5.6	6.9	5.0	5.3	3.0
Trade	5.9	3.6	1.7	-0.2	1.6	3.3	2.3	0.4
Services	4.4	3.0	2.2	2.3	3.2	2.9	2.2	1.0
Other[d]	3.2	1.3	0.5	0.9	0.1	-0.3	-4.4	-6.3

a Calculated at factor cost in 1982 prices.

b All figures shown for 1990 are preliminary and subject to greater uncertainty than usual. The estimated decline of -2.4 percent in total GNP and all figures for individual components of GNP are based on the routine application of standard CIA estimating methods. Corrections for two measurement problems that worsened sharply in 1990 would change the decline in total GNP to about -4 to -5 percent, but we do not have enough data to estimate corrections for the components of GNP.

The first measurement problem is that we estimate year-to-year changes in GNP from data on gross output (the total value of output in a given sector), while the standard definition of GNP includes only the value added by primary inputs of labor and capital. We believe that this simplification usually does not lead to substantial errors in our estimates, but, given the breakdown in transportation and distribution that occurred in 1990, when materials were tied up in freight cars and warehouses, value added almost certainly fell more than total output. Data reported by an official of the Soviet State Planning Committee suggest that a rough correction for this problem might lower our estimate of the change in 1990 GNP by 1 or 2 percentage points.

Second, we use Soviet data on ruble values of output in supposedly constant prices to calculate the change in some components of GNP. Almost all Western experts believe that these data overstate output growth--and understate inflation--because new products are introduced at prices that include overly generous allowances for improvements in quality that are often illusory. We believe that these data have not had a severe impact on our estimates in the past, but price controls weakened seriously in 1990, and inflation accelerated sharply. Our estimate of the change in GNP might be reduced by roughly one-half of a percentage point on this count.

The above corrections for overestimation might be partly offset, however, by an adjustment for underreporting of output in physical units. In the past production managers had incentives to overstate the output they reported to the statistical authorities because a considerable share of their incomes--and that of their workers--depended on reported output. Incentives for underreporting may have increased in 1990, partly because acute shortages made barter deals between factories more attractive than deliveries to the central supply system. Unfortunately, the impact of such a change in reporting cannot be quantified at this time.

c Excluding intra-agricultural use of farm products as well as purchases by agriculture from other sectors. A measure of net farm output, which excludes only intra-agricultural use of farm products, shows the following growth rates for recent years: 1986, 8.7 percent; 1987, -2.1 percent; 1988, -0.1 percent; 1989, 4.0 percent; 1990, -3.6 percent.

d Including salaries for military personnel.

USSR: Growth of Industrial Production by Branch of Industry[a]

Percent

	1961-70	1971-80	1981-85	1986	1987	1988	1989	1990[b]
Industrial materials	6.2	3.7	2.1	3.8	2.6	2.4	-0.8	-3.1
Electric power	9.7	5.8	3.1	3.5	4.1	2.4	1.0	0.3
Fuels	5.6	4.1	0.8	3.3	1.9	1.4	-1.6	-4.0
Ferrous metals	6.3	2.6	1.2	3.6	0.8	1.5	-2.0	-3.4
Nonferrous metals	7.9	3.5	2.0	3.0	2.3	3.2	0.8	-3.0
Wood products	2.7	1.0	1.9	4.5	2.2	3.2	-0.5	-2.2
Construction materials	5.9	3.1	1.8	4.0	3.7	4.2	0.6	-3.9
Chemicals	10.0	5.6	3.8	4.7	2.7	2.2	-2.9	-5.3
Total machinery	6.2	4.8	1.7	2.4	3.7	2.7	-1.4	-3.5
Producer durables	8.1	6.6	3.2	2.8	2.2	3.7	2.5	n/a
Consumer durables	9.8	7.1	2.8	3.3	2.0	2.5	0.9	n/a
Nondurable consumer goods	5.5	2.6	1.7	-1.8	2.7	3.3	2.4	-0.4
Light industry	4.5	2.5	1.6	1.4	1.7	2.4	1.5	0.0
Food processing	6.4	2.8	1.8	-4.7	3.6	4.1	3.1	-0.8
Total industry	6.1	3.9	1.9	2.4	3.0	2.7	-0.6	-2.8

[a] Based on CIA estimates at factor cost in 1982 prices rather than Soviet official series. The latter are believed to contain an upward bias in rates of growth because of increased double-counting and disguised inflation. The branch indexes shown above are formed by combining price-weighted samples of products into sector indexes, which in turn are combined into branch indexes using value-added weights. The indexes for industrial materials, consumer nondurables, and total industrial production are formed by combining the component branch indexes using value-added weights.

[b] See footnote b of first table.

USSR: Growth of Per Capita Consumption[a]

Percent

	1961-70	1971-80	1981-85	1986	1987	1988	1989	1990[b]
Consumption	3.8	2.4	0.7	-2.1	0.3	2.9	2.5	1.4
Food	2.9	1.6	-0.5	-7.1	-1.2	3.0	2.7	0.5
Soft goods	4.6	2.8	1.2	2.1	0.9	2.6	3.5	1.9
Durables	6.6	6.8	2.9	3.0	0.2	3.0	1.1	4.5
Consumer services	4.3	2.5	1.6	1.5	2.6	3.1	2.0	0.9
Housing	2.2	1.4	1.7	1.7	1.9	1.9	1.7	1.7
Utilities	6.6	4.5	3.3	3.0	3.1	2.4	1.6	1.2
Personal transportation	8.6	4.3	1.7	2.2	1.3	1.4	-0.2	1.3
Personal communications	6.6	4.6	2.9	4.6	5.7	4.0	4.5	2.4
Repair & personal care	5.5	4.2	3.1	3.6	6.1	7.8	5.5	0.1
Recreation	2.7	1.8	0.6	-0.6	0.2	-0.6	-7.5	-5.5
Health	2.7	1.2	0.8	-0.9	2.6	4.2	3.2	1.4
Education	4.1	1.5	0.9	0.8	1.0	1.0	1.3	1.4

[a] Based on 1982 established prices.

[b] See footnote b of first table.

USSR: Aggregate Factor Productivity[a]

Percent change

	1961-70	1971-80	1981-85	1986	1987	1988	1989	1990[b]
Nonagriculture, nonservice GNP[c]	6.2	3.8	1.8	2.5	2.5	2.8	-0.1	-3.1
Factor productivity	0.2	-0.6	-1.2	-0.1	0.6	2.0	-0.6	-3.7
Workhours	3.1	2.0	1.2	1.9	2.6	4.2	1.5	-2.3
Capital	-2.3	-3.1	-3.5	-1.8	-1.0	0.0	-2.3	-4.8
Combined inputs[d]	6.1	4.5	3.1	2.6	1.7	0.8	0.5	0.6
Workhours	3.1	1.8	0.6	0.5	-0.1	-1.4	-1.6	-0.8
Capital	8.9	7.0	5.4	4.4	3.6	2.8	2.3	1.8

USSR: Industrial Factor Productivity[a]

Percent change

	1961-70	1971-80	1981-85	1986	1987	1988	1989	1990[b]
Industrial production	6.1	3.9	1.9	2.4	3.0	2.7	-0.6	-2.8
Factor productivity	-0.3	-0.6	-1.4	-0.3	1.2	2.0	-0.9	-3.8
Workhours	3.1	2.6	1.3	2.1	3.3	4.4	1.4	-3.1
Capital	-2.9	-3.0	-3.5	-2.0	-0.5	0.0	-2.7	-4.3
Combined inputs[e]	6.5	4.6	3.4	2.7	1.8	0.7	0.3	1.0
Workhours	3.0	1.4	0.6	0.4	-0.2	-1.7	-1.9	0.3
Capital	9.4	7.2	5.6	4.5	3.5	2.6	2.1	1.5

[a] The Office of Soviet Analysis is revising its estimates of productivity by replacing the official Soviet capital stock series with a deflated series based on a new deflated investment series. The data in this table represent the preliminary results of this research.

[b] See footnote b of first table.

[c] Gross national product less agriculture and services (based on 1982 ruble indexes, by sector of origin at factor cost) is used in order to avoid (1) the large fluctuations in growth rates caused by the effect of weather on Soviet farm output and (2) the downward bias caused by including service sectors whose output is measured by the quantity of inputs without any allowance for productivity growth.

[d] Inputs of workhours and capital are combined using weights of 46.9 percent and 53.1 percent, respectively, in a Cobbs-Douglas (linear homogeneous) production function. These weights represent the distribution of labor costs (wages, social insurance deductions, and other income) and capital costs (depreciation and a calculated capital charge) in 1982, the base year for all indexes underlying the growth rate calculations.

[e] Inputs of workhours and capital are combined using weights of 44.2 percent and 55.8 percent, respectively, in a Cobbs-Douglas (linear homogeneous) production function. These weights represent the distribution of labor costs (wages, social insurance deductions, and other income) and capital costs (depreciation and a calculated capital charge) in 1982, the base year for all indexes underlying the growth rate calculations.

USSR: Gross Fixed Capital Investment

Billion 1984 rubles

	1970	1975	1980	1985	1986	1987	1988	1989	1990
Total investment	92.2	128.5	150.9	179.5	194.4	205.4	218.2	228.5	219.4
By Source:									
State	79.4	111.8	133.1	157.9	172.0	182.6	192.9	200.8	190.0
Collective farms	8.6	12.2	13.3	15.4	15.5	15.2	16.5	18.1	NA
Consumer and housing cooperatives	2.6	2.7	2.9	3.7	4.1	4.3	4.7	5.3	NA
Private housing	1.6	1.8	1.6	2.5	2.8	3.3	4.1	4.3	NA
By Sector:									
Industry	32.5	44.9	53.3	65.5	71.0	75.0	79.5	85.7	NA
Agriculture	16.0	26.1	29.8	31.5	33.5	34.4	36.5	38.4	NA
Transportation and communications	9.0	14.4	18.1	21.9	22.8	24.0	25.1	21.6	NA
Construction	3.3	4.8	6.0	6.1	6.8	6.9	8.3	10.6	NA
Housing	15.8	19.2	21.1	28.1	30.9	33.5	35.6	37.7	NA
Trade and services	15.6	19.1	22.6	26.4	29.4	31.6	33.2	34.5	NA

Source: Narodnoye khozyaystvo SSSR, 1989 and earlier years; and official Soviet economic statistics for 1990.

NA = Not available.

USSR: Selected Indicators of Agricultural Output

	1970	1975	1980	1985	1986	1987	1988	1989	1990[a]
									Billion rubles
Value of output[b]	112.5	109.4	113.7	125.8	136.7	133.8	133.6	138.9	134.0
Commodity production									
									Million metric tons
Grain[c]	186.8	140.1	189.1	191.7	210.1	211.4	195.1	211.0	238.0
Potatoes	96.8	88.7	67.0	73.0	87.2	75.9	62.7	72.0	63.7
Sugar beets	78.9	66.3	81.0	82.4	79.3	90.7	88.0	97.4	81.2
Sunflower seed	6.1	5.0	4.6	5.3	5.3	6.1	6.2	7.1	6.4
Cotton	6.9	7.9	9.1	8.8	8.2	8.1	8.7	8.6	8.3
Vegetables	21.2	23.4	27.3	28.1	29.8	29.2	29.3	28.7	26.4
Meat	12.3	15.0	15.1	17.1	18.1	18.9	19.7	20.1	19.9
Milk	83.0	90.8	90.9	98.6	102.2	103.7	106.8	108.5	108.7
Wool	0.42	0.45	0.44	0.45	0.47	0.46	0.48	0.48	0.47
Eggs (billion)	40.7	57.4	67.9	77.3	80.7	82.7	85.2	84.9	82.0

[a] Preliminary.

[b] Net of feed, seed, and waste, in constant 1982 prices.

[c] Grain figure is bunker weight. To be comparable to Western measures, an average reduction of 11 percent is required.

2. Is there evidence in the Soviet Union of widespread hunger, food riots, massive unemployment, extreme poverty, and other signs of distress that we associate with an economic crisis? If so, discuss the evidence. If not, discuss why not?

Over the past year, consumer welfare, including food availability, has worsened considerably, as a result of falling production, skyrocketing inflation, and deterioration of the central distribution system. Nevertheless, while a sizable portion of the population in the former Soviet republics lives below or near the officially defined poverty-level, these areas are not currently experiencing widespread hunger or massive unemployment. The former republics have serious problems in all these areas, however, that have heightened consumer discontent and could lead to increased civil unrest.

With regard to the question of hunger, for example, the Soviet Union is a major agricultural producer, and in recent years most people have had sufficient food to eat, although many citizens' diet lack variety and are short on quality foods such as fresh vegetables and meat. In 1991 overall production of food will decline, however, and food distribution problems--which have been serious for the past few years--are worsening noticeably. In particular, large industrial cities and nonagricultural regions that are dependent on central allocations have experienced difficulty getting adequate supplies during the past year. Moreover, with the collapse of the center following the abortive coup--and facing a below average grain harvest--the food situation could get much worse later this year. Most at risk, especially this winter, are pensioners, the poor, and large families who cannot afford to purchase food at cooperatives, collective farm markets, or on the black market and must rely on state channels for food supplies. The capability of the republics or what's left of the central government to provide emergency relief is limited at best.

Current official estimates of unemployment stand at 2-2.5 million workers--about 2 percent of the work force. With the economy in disarray and major cutbacks in defense spending likely following the failed coup, however, this figure could well double by the yearend. Moreover, while overall unemployment is not high, regional unemployment differences exist and in some areas such as Central Asia probably exceeds 10 percent. Unemployment is likely become a much more serious problem in those republics that adopt a radical market reform program that would force enterprises to close or adopt cost-cutting layoffs. The central and republic governments have established funds to pay unemployment benefits, assist workers in finding jobs, and provide retraining, but fledgling relief agencies are ill-equipped to handle a surge in unemployment.

Rising unemployment would be especially serious because many people already live at or near the poverty level. According to official statistics, in 1989 about a quarter of households had a per capita monthly income of less than 100 rubles--the income level required to maintain a minimum acceptable standard of living according to the central authorities. Many Soviet

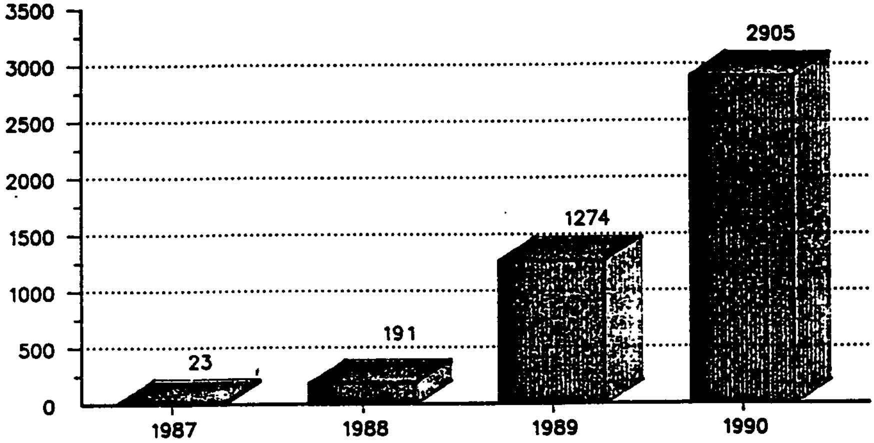
3. Provide a table showing the figures concerning numbers and value of foreign investment and joint ventures in the Soviet Union for each year since 1985, broken down by the U.S. and other countries. Discuss the trends and the outlook.

Prior to the coup attempt, the Soviets were reporting that close to 3,000 joint ventures with foreign companies had been registered by the end of 1990, with firms from West Germany, Finland, and the United States among their leading partners (see figure). While official trade data show that the pace of joint venture signings has increased dramatically since 1989, Western reporting indicates that the pace at which deals were concluded actually fell sharply during the second half of 1990. The information indicating a slowdown is also consistent with various reports that foreign firms had become discouraged about investing in the USSR--even before the failed takeover--because of economic and political instability.

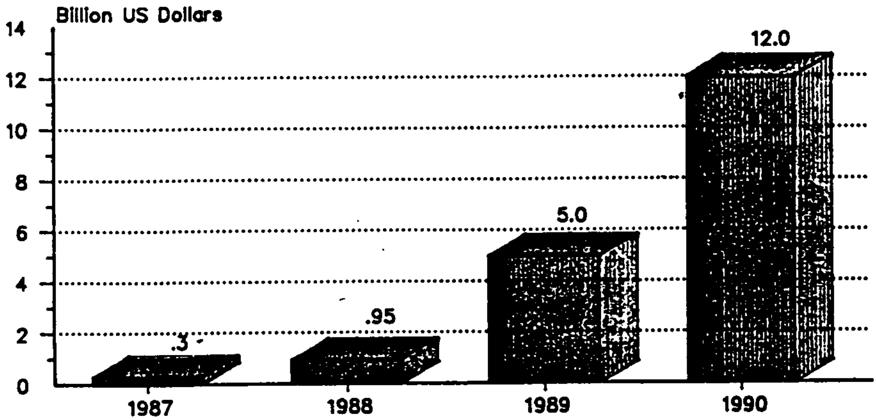
While publicly touting the large number of joint ventures that have been signed as an indication of Western interest in the Soviet economy, the leadership has been concerned about their size and scope. Although foreign partners have committed about five billion dollars in capital (equipment, technology, licenses, and hard currency) only a few hundred million dollars probably had actually been invested through mid-1991, because most of the capital pledged is to be allocated over an extended period, because only about 35 percent of joint ventures signed are already operating, and because many others may never get off the economists and public figures, however, have criticized this official poverty level as too low, and another third of households had incomes between 100-150 rubles. Because of recent price rises, the official poverty level seems to have more than doubled to 210 rubles per month in 1991. At the same time, increases on wages, pensions, and various compensation schemes have raised per capita incomes substantially above 1989 levels but have probably not been sufficient to reduce the number of poor households. Moreover, as inflation continues, the gap between those citizens whose incomes are keeping up with rising costs and those whose incomes are not is likely to widen, giving way to greater, more pronounced incidence of poverty.

USSR: Joint Venture Activity, 1987–90[a]

Registered Joint Ventures[b]



Total Joint-Venture Investment[cd]



[a] Based on Soviet data.

[b] This represents deals that have been registered with the USSR Ministry of Finance or republic ministries of finance.

[c] This indicates the total capital—including equipment, technology, and cash—that is committed by all partners as their contributions.

[d] Estimates based on Soviet press statements.

ground. Many of the joint ventures that are functioning are in the service, computer, and consumer fields, whereas government officials would prefer to see more investment in industrial production.

Profit repatriation remains the most difficult obstacle to arranging joint ventures. In most cases, profits can only be repatriated from hard currency sales, either the small volume allowed from sales to the domestic market or the larger volume allowed from exports to foreign countries. Prior to the coup attempt, some foreign partners had created innovative mechanisms to circumvent the profit repatriation problem. Joint ventures, for example, were using ruble profits to buy goods in the USSR and then exporting them for hard currency. In addition, until recently, foreign partners were allowed to exchange ruble profits at the hard currency auctions conducted by the USSR Bank for Foreign Economic Relations. This practice was halted when the currency exchange replaced these auctions; joint ventures may now only purchase hard currency to support current operations, such as purchasing imports.

Western firms also face a host of other problems that reduce the attractiveness of joint ventures. In particular, the operating climate is clouded by insufficient protection against arbitrary administrative actions, unclear property rights, confiscatory tax laws, and confused delineation of authority. Joint enterprises are also subject to the whims of the deteriorating distribution system to obtain the appropriate quantity and quality of raw materials, intermediate goods, and other inputs for production. Western firms report difficulties obtaining factory premises, office space, and living accommodations in the USSR, as well as access to the services needed to conduct business effectively such as printing, banking facilities, telephones, and faxes. Access to a trained labor force is likewise a major problem, and many foreign firms indicate that Soviet officials often transfer employees once they are trained. Finally, the hard currency costs of joint ventures have been higher than expected as many Soviet organizations have demanded at least partial payment in hard currency for raw materials, services, and the leasing of premises for both work and housing.

Reacting to these difficulties, Soviet leaders prior to the coup were moving aggressively to improve the business climate. In July, the USSR Supreme Soviet approved a new foreign investment law that contains the following provisions:

- o Foreigners may participate in joint ventures, create wholly-owned subsidiaries, and acquire Soviet stock and securities.

- o Foreign investors may freely repatriate hard currency profits and may exchange their ruble holding for hard currency within the framework authorized by the USSR's legislature.

- Foreign investment is safeguarded against nationalization or other forms of expropriation.

- Foreign investment is guaranteed treatment no less favorable than that given to Soviet enterprises.

- Enterprises with foreign investment--especially those producing priority products and services--may be granted special tax privileges.

- A joint venture is declared invalid and struck from the register unless at least 50 percent of each partner's start-up capital is committed within one year of the project's registration.

Nevertheless, while the program to attract foreign investment represents an important step forward, it will not have a major impact on the domestic economy, the country's export base, or hard currency earnings in the near future. Indeed, given the unsettled climate following the failed coup, Western investors are likely to remain hesitant until legislation is drafted in each of the republics specifying the rights of foreign companies.

4. How much foreign investment in the USSR involves western advanced technologies and production techniques?

Foreign investment in the USSR prior to the failed coup involved few advanced technologies or production techniques. Indeed, even before break-up of the Union, the Soviet press had noted that "foreign firms are wary about establishing joint ventures using advanced technologies and new techniques." Reasons for the dearth of technology transfer include:

- Many joint-venture projects are in the service and consumer goods sector which generally do not involve such technology.

- Many industrial enterprises probably are not capable of efficiently using advanced Western technology without an overhaul of their plants.

- Many foreign partners have been reluctant to supply the latest technology to Soviet joint ventures because of concerns about making the USSR a world class competitor in manufactured products.

Nevertheless, a handful of more ambitious ventures--particularly in the computer field--have emerged over the last year or so that involve some transfer of relatively sophisticated technology. The most established of these computer production joint ventures is a Soviet-Taiwanese-German project known as ASI. The plant--a $4 million turnkey project built primarily by the Germans--is highly automated by Soviet standards and produces 10,000 IBM-compatible PCs a month of the same quality as those assembled in Germany, according to German officials.

5. How many Western and other foreign investors have suspended or abandoned projects in the Soviet Union in the past two years? Are the numbers increasing and do they indicate Western business flight from the Soviet Union? Is such flight likely to occur in 1991 or the near future?

Anecdotal information indicates that many joint ventures have shut down operations during the past two years because of unprofitable business conditions, but no official data have been released. Similarly, the number of projects that have been suspended undoubtedly increased during this period as economic conditions in the USSR deteriorated. Officials of defunct joint ventures cite supply bottlenecks, problems with profit repatriation, employee theft, and bureaucratic difficulties as reasons for failure. Despite the improved prospects for reform over the longer term, the number of failed joint ventures and other investment projects probably will continue to increase because of the poor economic climate following the break-up of the Union.

6. A column by Leslie H. Gelb in the <u>New York Times</u>, May 19, 1991, states that before the end of the decade the USSR will become a net importer of oil, and discusses the implications of that prospect. Do you agree with Gelb's conclusions? If not, why not?

We agree that without market reform and Western technology and investment oil production in the former Soviet republics could fall to 9 million barrels per day (b/d) by 2000, and possibly as early as mid-decade. Such a fall in production, however, would not necessarily result in the these republics becoming a net oil importer because:

- Oil consumption in these republics, which has been declining since 1989 when it totaled an estimated 8.9 million b/d, is expected to continue to fall in the near term as a result of their deteriorating economies.
- Even if the oil-surplus republics disappear from the supply side of the world oil market, they are not likely to enter the demand side, as they would be hard pressed to pay for imported oil. Rather than import oil, the leadership would be more likely to respond to any potential shortfall between production and consumption by implementing measures they have been discussing for over a decade:

    - **Conservation:** the former Union republics could--theoretically--cut energy use by 30 to 40 percent by achieving Western efficiency levels.

- **Fuel substitution:** replacing fuel oil with natural gas for electric power generation and heat production could save up to 2 million b/d.
- **Refining industry upgrade:** a modern refining industry could almost double the amount of gasoline and other light products the Soviets obtain from a barrel of crude.

While leaders in the oil industry have been talking about these measures since the 1970s--and have renewed their calls in the face of the recent oil downturn--serious energy conservation will probably not take pace until the introduction of real prices for oil and other fuels. Similarly, efforts to attract foreign capital and expertise for production and refining--as well as measures allowing domestic producers and refiners to sell oil and petroleum products outside state channels--will depend on the center's ability to ease investors' fears about profit repatriation and provide incentives for domestic producers to export their product.

7. Discuss the international competitiveness of Soviet manufactured goods and advanced technologies, including examples of those that are and are not competitive, and the outlook for Soviet exports of aircraft, aerospace, and other high technology products.

Prior to the abortive coup, Soviet high-technology firms had launched a major campaign to sell to the West in order to acquire badly needed hard currency and offset anticipated declines in sales to domestic military customers. They have proposed ambitious deals involving commercial aircraft, space launch services, lasers, and a host of other products incorporating some of the USSR's most advanced technologies. Thus far, however, the sales campaign has had little success. Although these firms may have more success later this decade if major economic reforms are implemented, the limited products available suggest that the campaign will fare generally poorly in the next several years.

The biggest problem these firms face is that most of the products they are offering for sale are not competitive in quality. As a result, even when priced well below similar Western products, they are generally unattractive to the targeted buyers. Even before the failed takeover, Western wariness of dealing with unproven Soviet suppliers, Western technology transfer restrictions, and the Soviets' unfamiliarity with Western business practices limited prospects for increasing high-tech sales. Even when their products are technologically competitive--as is true of some advanced metals and metals-processing techniques--or when Western firms lack the capacity to satisfy demand, the prospects for significant penetration of Western markets are not promising in the near future.

In the case of the aircraft industry, for example, over the past couple of years the Soviets have made repeated overtures to the West in the hope of creating a market for the new civil aircraft they expect to introduce in the near future--the Il-96/300, Tu-204, and the Il-114. Despite their efforts, the industry is more likely to find itself fighting to hold its limited share--less than five percent--of the world civil aircraft market than find the market a lucrative source of hard currency. Traditional customers--client states, formerly aligned regimes, and Third World countries buying on a barter basis--in many cases now feel free to shop elsewhere. Indeed, the primary customers for Soviet civil aircraft in the past several years--East European airlines--are looking to the West to fill their needs for transports. Poorer countries will find buying from former Soviet republics less attractive as they will likely offer equipment on tougher terms.

In its quest for hard currency, we also expect the Soviet aircraft industry to try to branch out into the sale of smaller airplanes, but it is not a promising source of large profits. Sukhoy's Su-26 aerobatics plane is popular worldwide with stunt fliers, but both the market and the profit margin for this aircraft are small. Industry officials initially foresaw a large market for business jets, including long-range, supersonic aircraft, which partly explains why several aircraft design bureaus have business jets of various sizes on the drawing board.

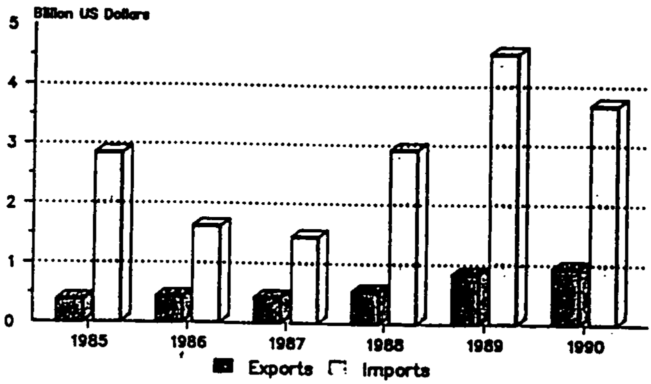
None of these aircraft, however, is likely to reach the market before 1996, and even then they face heavy competition from Western manufacturers. Commercial heavy-lift helicopters also look like moneymakers to industry officials but through lease rather than sales. However, the poor reputation of their equipment and service has complicated making deals.

8. Provide a table showing the composition of US-Soviet exports and imports in 1990 and discuss how the composition of this bilateral trade has changed in recent years.

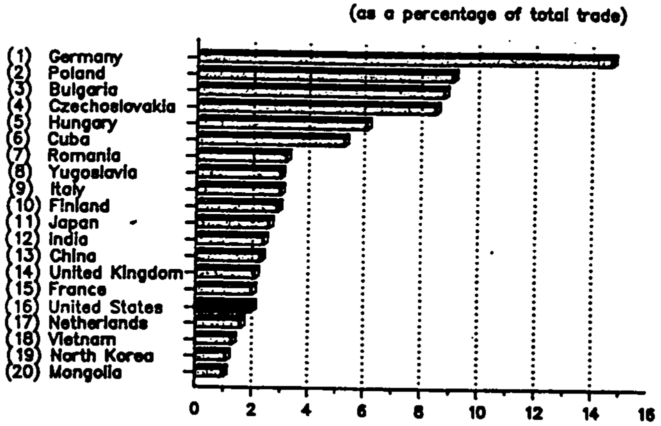
Soviet trade with the United States prior to the failed takeover represented only a small portion of the USSR's hard currency trade. During the 1980s, total US-Soviet trade averaged about $3.5 billion annually, or six percent of the USSR's total hard currency trade.

A major constraint on US-Soviet trade has been the inability of the USSR to produce goods desired in the United States. During the 1980s most Soviet exports to the US consisted of oil and oil products, and raw materials such as ammonia, fertilizers, and metals. The generally low quality of Soviet machinery and equipment resulted in sales of these goods averaging less than three percent of total sales during the 1980s, despite a long-standing Soviet objective to boost sales of manufactured goods. On the import side, Soviet purchases primarily consist of grain, industrial fats and oils, and much smaller volumes of machinery. The USSR's problems in boosting exports combined with a heavy Soviet demand for US goods have led to chronic Soviet deficits in trade with the United States. During the 1980s these deficits usually ranged from $1 to $3 billion, peaking at $3.7 billion in 1989. (see table)

USSR: Trade with the United States, 1985–1990



USSR: Leading Trading Partners, 1990



Official Soviet Trade Data

Since 1989 the USSR's worsening balance of payments position as well as the country's deepening economic crisis have substantially reduced US-Soviet trade. Severe payment problems experienced by Soviet firms and a general hard currency liquidity crunch led to a 20 percent decline in Soviet imports from the U.S. in 1990 and probably a 15 percent decline in the first half of 1991. Only the high priority Moscow places on maintaining food supplies and the extension by the U.S. of $2.5 billion in export credit guarantees for agricultural products probably prevented imports from the U.S. falling even further. In contrast, Soviet export revenues increased by 12 percent in 1990, buoyed by rising sales of platinum group metals, other raw materials, and a few competitive manufactured goods. In the first half of 1991, however, domestic economic problems have led to a decline in exports of about 4 percent, but this is less than the 15 percent fall in Soviet deliveries to all capitalist countries.

Although measures taken at the Moscow summit in July aim to normalize bilateral trade, their impact primarily will be felt over the longer term and will depend on what type of trade regime emerges following the break-up of the Union after the failed coup. Exports should be boosted with the repeal of the Byrd and Stevenson amendments that limit access to Eximbank credits and the extension of MFN. Exports may rise somewhat from these steps, but growth will be limited by domestic economic problems and continued lack of competitiveness, while imports will be constrained by ongoing hard currency shortages. In the long term, the normalization of trade may encourage some US firms to invest in projects that could eventually increase the share of manufactured goods in exports of the former Soviet republics to the U.S. Likewise, if the republics proceed with agricultural reform, especially implementation of privatization and market prices, this could decrease the need for grain imports and enable the republics to increase purchases of other types of goods. The availability of Eximbank financing for US investment in the republics would probably lead to an increase in imports of US capital goods.

9. Vladimir Treml testified in the May 16 hearing that the Soviet "second" economy comprised 21-25 percent of GNP in 1988, but that the CIA estimates of Soviet GNP omit a large share of this activity. Discuss whether you agree with Treml's estimates and conclusions. Is it possible economic activities in this sector may help explain the absence of visible signs of distress among the general public?

The second economy is one of most difficult aspects of Soviet economic performance to measure because of the thorny conceptual issues and data problems involved. All numerical estimates of the size of the second economy--ours, Professor Treml's, and those appearing with increasing frequency in Soviet publications--are subject to a good deal of uncertainty.

We agree with Professor Treml that the second economy has been an increasingly important component of Soviet GNP, and we have acknowledged that our estimates of Soviet GNP omit part of the second economy, largely because of inadequate data. Nonetheless, we think the estimates Treml presented in May are overstated. Some of our differences reflect Treml's use of a broader definition of GNP--including illegal production of alcohol and all black market operations.

For estimates of the share of the second economy in GNP, activities that are not normally included in GNP should not be counted as part of the second economy either. Theft, for example, is not included in GNP because it does not add to final output of goods and services but merely transfers existing wealth. In addition, activities that are clearly recognized as illegal--such as drug trafficking--should not be included in the

USSR's GNP for purposes of comparisons with the United States and other Western countries, because Western countries do not include such activities in their GNP estimates. Sometimes, however--as in the case of black market operations involving alcohol production--it is difficult to draw the line between activities that are illegal for reasons peculiar to the Soviet political and economic system and activities that are illegal in the West, where laws differ among countries.

Finally, Treml's estimates are based on a survey of a small sample of Soviet emigres that has been extended, using adjustments of unknown reliability, to the entire population of the USSR. We think there are substantial grounds for concern that those emigres participated in the second economy to a greater extent than the rest of the Soviet population.

Whatever its share of GNP, we believe the second economy has played an important role in relieving the economic strains on consumers. It has increased the supply of goods and services over and above the amounts provided by the state, and it has promoted the movement of goods to areas experiencing the most acute shortages. Sometimes, however, activities in the second economy, while helping consumers, have led to increased social tensions--such as protests against the large earnings of cooperatives and middlemen.

10. How much western aid has been given to the Soviet Union in the past several years, and which countries are the major suppliers of aid?

Foreign governments committed about $52 billion in economic support to the USSR between early 1990 and the time of the failed coup, of which about $11 billion is in the form of grants, most of this German payment for Soviet troop withdrawals.

The remaining $41 billion is in the form of various types of government-backed credit lines. Of this, $5 billion is untied loans amounting to balance-of-payment financing, and roughly $2.5 billion is to fund future development projects. Another $2 billion is the form of special bilateral credits to offset the arrears of Soviet firms to suppliers in the lending country, and the rest are credit lines to finance lending-country exports.

Germany accounts for the bulk of this government backed lending, providing over 40 percent of the total. Other major lenders include Italy, the United States, the EC, Spain, France, and the Netherlands. The USSR also has recently received substantial credit from some of the wealthier non-Communist countries outside the developed West. Since mid-1990, pledges from this group have totaled more than $8 billion, with about half scheduled to be disbursed by the end of this year. Arab states and South Korea are providing the bulk of the credits.

About $18 billion of the financial assistance that has been pledged was originally scheduled for disbursement in 1991. In the wake of Moscow's turn to authoritarian measures and its crackdown in the Baltics in early 1991, however, some Western aid was put on hold and several Western governments slowed action on promised credit packages. These problems plus internal Soviet economic disarray and arguments between the republics and the center over responsibility for future repayments of new credits are estimated to have held Soviet credit drawings in the first half of 1991 to roughly $6 billion--about twenty-five percent lower than anticipated. In the wake of the dissolution of the Union, at least some of the remaining credits are likely to be put on hold, at least until the authority between the center and republics over who will be responsible for the debt is worked out.

Financial Aid Extended to the USSR, 1990-91[1]

Donor	Commitment (Billion $US)	
FRG	24.8	($9.5 Unification grant)
Italy	5.3	
United States	2.8	
France	1.6	
Canada	1.9	
Japan	0.1	
United Kingdom	0.1	(technical assistance grant)
Total G-7	36.6	
EC	1.9	($1.3 in food and technical grants)
South Korea	3.0	
Gulf Council	4.0	
Other[2]	6.9	
Total Other	13.9	
Total	52.4	

Disbursement is scheduled over 2-5 years.

1. Date of information: 1 August 1991.

2. Includes Argentina, Australia, Austria, Finland, Greece, India, the Netherlands, New Zealand, Norway, Oman, Pakistan, Spain, Thailand, Turkey, and Uruguay.

11. One of the most important tools for comparing US and Soviet defense spending and trends has been the dollar estimates provided by the CIA. What is the rationale for discontinuing the dollar estimates?

We think the time is right to curtail our dollar cost comparison work:

o

[Security deletion]

o in a period of rapid change in global security affairs, Soviet-US comparisons that focus on historical trends in strictly financial terms are less relevant than in the past. Simultaneously, we are increasing our effort on higher priority military-economic issues. (See answer to question 13.)

12. Will it not become more and more difficult to compare US and Soviet defense spending levels, and to understand changes in Soviet levels of effort concerning the structure of military forces and the military services, if dollar estimates are not made?

Yes, by definition, it will be more difficult to compare US and Soviet defense spending levels if dollar estimates of Soviet defense spending are not calculated. However, we believe that in a period of rapid change in global security affairs, Soviet-US comparisons that focus on historical trends are less relevant than in the past. Moreover, we will continue to focus substantial effort on analysis of the resource commitment within the former republics to defense (in ruble price terms) and on the structure of their military forces and services. Dollar cost estimates of Soviet defense activities shed little if any light on these issues. Finally, CIA does not analyze US force structure and resource commitment to defense.

13. If you believe there are higher priorities for the use of intelligence resources than making the dollar estimates, discuss what they are.

The fundamental changes underway in the Soviet economy and military have caused us to examine how we can best serve the policy community. In our view, the most important issues are those that deal with new Soviet claims about the size and structure of their defense budget, the defense industry conversion program, analysis of future force developments within the republics, and the burden of defense on the their economies. To help address these issues, we have established a Defense Costing Center that has developed new tools to improve our weapons costing capabilities, and we have streamlined our methodology for estimating defense spending, giving us greater flexibility to analyze alternative futures. Specifically, we can now closely integrate our defense spending estimates with our force projections process, looking at both the military and resource implications of a range of alternative force options.

14. Why has there been so little progress in the Soviet effort to convert military production to civilian purposes, and what are the prospects for the next several years?

While the USSR had reduced weapons production prior to the failed coup, they had had little success in converting these reductions into gains in civil production. The conversion effort was slowed by several factors:

- o <u>Leadership gridlock.</u> The central leadership was preoccupied with other issues, such as the composition of the union, the division of power between the republics and the center, and the future course of the nation's economic system--all of which impacted heavily on defense industry and the conversion program.

- o <u>Disruptive economic reforms.</u> The defense industry, like the rest of Soviet industry, was struggling with a series of disruptive economic reforms. The impact of new market-oriented reforms, such as self-financing, wholesale trade, and price reform, has been particularly painful for defense industry, which was accustomed to subsidies, guaranteed orders, and priority access to supplies.

- o <u>Supply disruptions.</u> The major disruptions in the economy, particularly in the supplies of steel and other basic industrial materials, hampered defense industry, particularly their civilian production. Moreover, as state orders were replaced by intra-plant agreements, defense plants struggled to locate, arrange, and guarantee supplies for their new or increased civil output.

- Shortage of funds. Conversion is expensive, and the reductions in military orders have left defense industries with less capital for expanding civilian output. The USSR created a stabilization fund in late 1990 to cover the costs of conversion, among other objectives. Shortly before the coup, however, this fund appeared to be nearly insolvent. As of June 1991, according to Izvestiya, republics had contributed only one out of the 68 billion rubles planned. In July Ukrainian leaders and defense managers met and expressed their desperation, concluding that the republic's defense industry was on the verge of bankruptcy.

Despite these difficulties, a small but growing subset of defense industrial managers had begun to take matters into their own hands even before the turmoil created by the failed coup, rather than awaiting leadership decisions. In particular, they had become more assertive about what they would produce, including rejecting some military orders as unprofitable.

<u>Outlook</u>

In the near-term the defense industrial sector is likely to continue to suffer from declining weapons orders. In this environment, we expect many defense plants will continue to try to minimize conversion's impact and to meet their civil obligations through increasing production of their traditional civil goods and transferring some unused capacity to produce new civil goods. As weapons production continues to decline, however, defense industrial plants are likely to be forced to expand their role in civil production to remain solvent. Over the longer term, the success or failure of conversion will depend on what type of union emerges, how rapidly privatization is pushed, and how defense industrial assets are divided between whatever remains of the center and the republics. As long as those overseeing conversion continue to rely on a top-down, centrally-managed approach--whether they be officials at the center or in the republics-- progress will be sluggish at best.

GLOBAL ECONOMIC AND TECHNOLOGICAL CHANGE: THE CHINESE ECONOMY

FRIDAY, JUNE 28, 1991

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON TECHNOLOGY AND NATIONAL SECURITY
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The Subcommittee met, pursuant to notice, at 9:00 a.m., in room SD–628, the Dirksen Senate Office Building, Honorable Jeff Bingaman (chairman of the Subcommittee) presiding.

Present: Senator Bingaman.

Also present: Richard F Kaufman, general counsel.

OPENING STATEMENT OF SENATOR BINGAMAN, CHAIRMAN

Senator BINGAMAN. The hearing will come to order.

This is the second hearing in the series that we began in May on centrally planned economies in this Subcommittee. This is a Subcommittee of the Joint Economic Committee, and we have been holding annual hearings on China's economy for several years now. Our purpose has been to monitor economic trends and developments in this important region, and to try to improve our understanding of the economic policies that China pursues and that our country needs to respond to.

We observe with great interest China's efforts to reform its inefficient system of central planning and have been pleased to report the successful results of its reform initiatives. In some ways, China continues to take a reformist approach, but many experts believe that the momentum for change has been slowed or interrupted in recent years, and there have been disturbing aspects to the economic policies and other policies that China has pursued. China's policies with regard to human rights; its actions in Tibet, and its exports of missiles and nuclear materials have been a cause of concern for quite sometime.

Now, there may be a new reason to be concerned about China's policies and that is it's export-led growth strategy, combined with the import restrictions, which seem very prevalent, and which, of course, combine to produce large surpluses at the expense of China's major trading partners, particularly the United States.

The new CIA report on China seems to confirm the existence of such a policy. According to the report, the leadership's continued emphasis on export growth, without import liberalization, risks foreign protectionism. The large U.S. bilateral trade deficit with China needs to be seen in the context of China's export promotion and import restriction policy. China's one-sided policy may not fully explain the U.S. deficit with China, but it does go a long way toward providing an explanation. It surely accounts for a large part of that deficit. There are, therefore, some profound implications for the United States in the present trade policy that China is pursuing. This hearing presents a good opportunity to examine those implications and other aspects of China's policy, and its recent economic performance.

The report that I referred to, of course, is the report that was released today by the CIA, entitled "The Chinese Economy in 1990 and 1991: Uncertain Recovery.

The CIA has asked not to appear in public session to discuss that, but it will be discussed in the closed session later in the day.

We do have several distinguished witnesses from the Administration here. Let me go ahead and introduce the first panel.

We have an interagency group of Administration spokesmen. We have—I guess Mr. Johnston is not here. But we have Joseph Massey, who is the Assistant U.S. Trade Representative for Japan and China, in the Office of the U.S. Trade Representative. And we have Ken Wiedemann, who is the Director of the Office of China and Mongolia for the Department of State. We received written statements from Mr. Johnston and Mr. Massey, and they will be inserted in the record in their entirety.

I would like each of the witnesses to summarize their views.

And joining us, I hope, before we conclude this panel's work, will be Mr. Richard Johnston, Jr., who is the Deputy Assistant Secretary for International Economic Policy in the Department of Commerce.

Following this panel, I will have some questions. Then after that, we have another panel—two scholars who have specialized in China. And following that, we will go into a closed session to discuss the CIA report more directly with them.

Why don't you go right ahead, Mr. Massey, and begin. We'll hear from you and then from Mr. Wiedemann, and if Mr. Johnston arrives, we will hear from him too.

[A paper by the Central Intelligence Agency presented to the Subcommittee follows:]

NOT RELEASABLE WITHOUT PERMISSION OF THE CHAIRMAN

Directorate of
Intelligence

**The Chinese Economy in 1990 and 1991:
Uncertain Recovery**

June 1991

NOT RELEASABLE WITHOUT PERMISSION OF THE CHAIRMAN

The Chinese Economy in 1990 and 1991: Uncertain Recovery

Intelligence Assessment

This paper was prepared by the Central Intelligence Agency for submission to the Subcommittee on Technology and National Security of the Joint Economic Committee, Congress of the United States.

This report will be released to the public following the appearance of the Deputy Director of the Office of East Asian Analysis, Directorate of Intelligence, CIA. The draft is not to be released without permission of the Chairman.

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Summary

Information available as of 27 June 1991 was used in this report.

China is emerging from its austerity-induced economic slump with strong, if uneven, industrial growth. A large infusion of credit begun in late 1989 had a palpable stimulative effect on industrial production; after posting no growth during the first quarter of 1990, the value of industrial output steadily increased until it reached a 14.2-percent annual rate during the fourth quarter. Annual grain output increased almost 7 percent to a record 435 million metric tons—China's second consecutive bumper crop—because of good weather and higher state procurement prices.

Beijing relied heavily on export growth, which reached more than 18 percent in 1990, to help stimulate its economic recovery. Unlike its Asian neighbors Japan, South Korea, and Taiwan—which during the last several years have looked to domestic markets to generate economic growth and reduce trade surpluses—China has turned its economy outward. The export surge combined with Beijing's tight lid on imports improved China's external finances; Beijing posted a record $8.7 billion trade surplus in 1990—compared with a $6.6 billion deficit in 1989—and a record current account surplus estimated to be about $10 billion.

China's rapidly growing budget deficit has led the leadership to implement pragmatic measures to ease financial pressures. For example, Beijing has raised prices for cooking oil and food staples. It has also effectively devalued its currency approximately 25 percent in real terms since late 1989. This has increased the profitability of exporting which is allowing Beijing to reduce export subsidies while maintaining competitiveness; Beijing began early this year to eliminate direct export

subsidies, a move that could save approximately $940 million in 1991, according to China's Finance Minister. In addition, this year, for the first time, Beijing is marketing government bonds through an investment syndicate headed by the People's Bank of China; a limited secondary market for bonds will also make bond purchases more attractive.

China's provinces are responding very differently to local economic pressures; some local authorities are experimenting again with market reforms, while other provincial leaders are embracing recentralization. For example, Sichuan Province is experimenting in one locality with free markets in grain trade and agricultural inputs; at the same time, however, Hebei and other provinces are turning the clock back by more aggressively controlling agricultural inputs and socializing services to farmers. Financial reform experiments have slowed in Shenyang, but stock markets have opened in Shenzhen and Shanghai. As Beijing relinquishes more and more of its management role at the local levels and as rapidly growing exports weaken provincial ties to domestic markets, the central leadership appears less able to influence local policy.

At the national level, we see little appetite for reform in the style of the early 1980s—when communes were abolished and agricultural production was liberalized—or of the mid-1980s—when significant enterprise and trade reforms were implemented. Since gaining control of the economic agenda in late 1988, orthodox leaders in Beijing have "tilted" economic policies in favor of large state-owned enterprises to compensate these firms for costs that have risen because of reforms. Despite preferential access to credit and raw materials, however, state-sector output grew less than 3 percent last year, compared with the 7-percent and 12-percent growth rates posted, respectively, by collective and rural enterprises. Moreover, production costs in state-owned firms rose 22 percent last year, while labor productivity increased less than 1 percent. At least one-third of state enterprises operated at a loss, according to government statistics—which may understate the problem. The lagging performance of the state sector poses a special challenge to orthodox leaders, who want to enhance its preeminent role in the economy.

Beijing's reluctance to proceed with comprehensive productivity-enhancing reforms reduces the likelihood China can sustain inflation-free growth. Rather than solve the underlying problems of over-reliance on monetary policy and declining economic efficiency, Beijing's credit antidote will hinder the transition of inefficient firms to more productive activities. Abundant grain supplies, ample stocks of consumer goods, and strict controls on prices over the past year have contained inflationary pressures so far. Inflation will be difficult to control, however, if Beijing's credit spigots remain open, particularly because there is a high liquidity overhang from last year. Recent price increases for cooking oil and food staples and China's currency devaluations are also adding to inflationary pressures. Late last year, inflation began to rise and reached double digits in some urban areas.

The leadership's continued emphasis on export growth without trade liberalization also risks foreign protectionism. Even without comprehensive domestic reforms, China's export promotion policies could allow it to achieve at least 10-percent average annual growth in exports over the coming decade. Beijing will doubtless continue to focus domestic resources on producing for the foreign market, and will continue to employ a blend of administrative and market-oriented policies to encourage factories to export. The complexity of China's trading system and Beijing's renewed manipulation of import controls may foster increasing resentment from China's trading partners, more and more of which are facing growing trade deficits with Beijing.

The Chinese Economy in 1990 and 1991: Uncertain Recovery

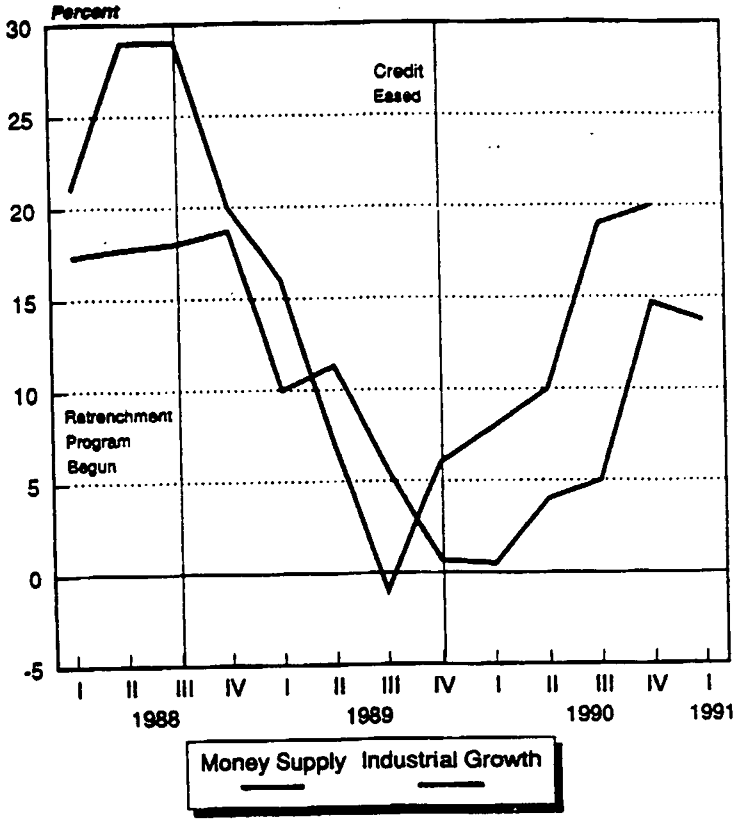
Stimulating Economic Recovery

China reversed its economic policy course again last year as the austerity program implemented in late 1988 began to strangle the economy. Although successful in dampening overheated industrial output from an annual rate of 17 percent in 1988 to 7 percent in 1989, and in reducing inflation from 27 percent in the first quarter of 1989 to 7.4 percent in the fourth quarter, austerity-mandated cutbacks in bank credit created massive debt defaults among cash-starved enterprises, depressing demand and causing inventories to soar.[1] Slower industrial growth also prevented government revenues from keeping pace with increased subsidies to workers and financially ailing state enterprises, sharply increasing Beijing's budget deficit in 1989 by 40 percent to nearly $7 billion. Growing inventories and lagging labor productivity contributed to rising production costs and idled scores of factories, pushing up unemployment.

As economic costs mounted, in early 1990 Beijing increased credit to large state firms, lowered interest rates on bank loans, and loosened restrictions on capital construction. Beijing also eased access to credit and raw materials for the nonstate sector, which had borne the brunt of Beijing's policies that targeted preferential

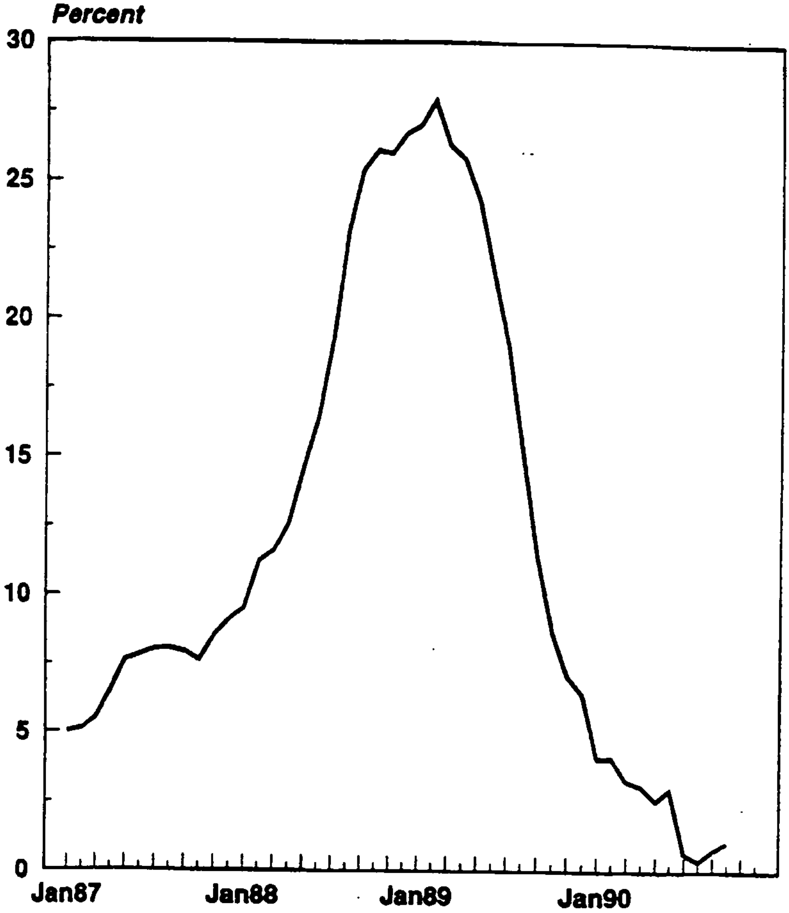
[1] Most figures cited in this paper are official Chinese statistics. They are reported because they provide useful indications of the direction and magnitude of economic performance even though collection techniques are sometimes crude, local officials have been known to deliberately distort data, and some estimation techniques are questionable. For example, annual estimates for retail price inflation probably understated the true rate in 1988 and 1990 and overstated the true rate in 1989 because authorities apparently averaged monthly inflation rates (calculated by comparing the price index in each month with the index in the corresponding month of the previous year) to derive the annual estimates. Also see appendix A for a discussion of estimating China's GNP. For a discussion of the reliability of Chinese statistics, see "Allocation of Resources in the Soviet Union and China," Part 14, executive sessions April 14 and July 7, 1989, Subcommittee on National Security Economics, Joint Economic Committee, pages 208-212.

China: Money Supply and Industrial Growth, Quarterly



Source: Official Chinese Statistics and
IMF International Financial Statistics

China: Inflation, 1987-90



treatment for state enterprises. By yearend, Beijing had pumped a record $44 billion in new bank credit into the economy. The stimulative effect of the increased credit on industrial production was palpable; after posting no growth during the first quarter, the value of industrial output increased 4.1 percent in the second quarter, 5 percent in the third quarter, and 14.2 percent during the fourth quarter; for the year as a whole, industrial output grew 7.6 percent. During the first five months of this year, industrial output has continued to register double-digit growth, increasing 13.3 percent. Overall, the economy registered 5-percent real growth in 1990, up from the nearly 4-percent GNP growth posted in 1989, but still the second-lowest growth in a decade. Inflation fell to an annual rate of 2.1 percent in 1990, down from an annual rate of 18 percent in 1989.

Bumper harvests—the result of good weather and higher state procurement prices—contributed to the country's economic recovery as production of all major farm products increased in 1990. Grain output increased almost 7 percent to a record 435 million metric tons, China's second consecutive bumper crop; output of cotton increased 18 percent, oil-bearing crops expanded 26 percent, and sugar crops were up 24 percent. Overall, the gross value of agricultural production increased nearly 7 percent for the year, almost twice the government's 4-percent growth target.

Turning to Export-led Growth

Rapid export growth has also spurred the economic recovery. Unlike its Asian neighbors Japan, South Korea, and Taiwan—which during the last several years have looked to domestic markets to generate economic growth and reduce their trade surpluses—China has turned its economy outward. In 1989, Beijing exempted the export sector from austerity policies and spurred exports by giving factories that produce for export priority access to credit, raw materials, and energy.

Likewise, Beijing devalued its currency against the US dollar 21.2 percent in December 1989 and 9.6 percent in November 1990.[2] As a result, China's exports increased more than 18 percent to $62.1 billion in 1990, making China the 14th-largest exporter in the world, up from 23rd place at the beginning of the decade. Over the past decade, China's exports have expanded on average 13 percent annually—a rate matched during the period only by South Korea, Hong Kong, and Taiwan among major traders.

The December 1990 central committee plenum communique stated unequivocally that the task of promoting exports would remain a top priority during the coming decade. In addition, China apparently adopted a new round of trade reforms as of January 1991 designed to stimulate exports while reducing the state export subsidy burden. Details are scant and often contradictory, but the initiative reportedly permits exporters and local authorities to retain up to 80 percent of their foreign exchange earnings; the norm previously was 25 to 35 percent in most sectors, with higher rates prevailing in China's special economic zones and in priority industries such as textiles and electronics.

The United States—crucial to China in the first half of the decade primarily as a source of technology and training—has emerged as China's foremost export market. China's exports to the United States expanded on average more than 30 percent yearly throughout the 1980s, 10 times as fast as China's purchases from the United States. Last year, Chinese exports to the United States increased 27 percent to $15.2 billion—accounting for nearly one-fourth of China's foreign sales—while US

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[2] Beijing has devalued its currency roughly 80 percent in real terms over the past decade; one-third of this was accomplished with these two devaluations. Beijing's state-set rate now differs from the quasi-market rate in China's foreign exchange swap centers by less than 10 percent.

China, Hong Kong, and Taiwan: The Integrated Economy

Hong Kong and Taiwan businesses have invested about $9 billion in south China during the last four years, almost three-fourths of the total foreign investment paid in during the period. Much of Hong Kong's $7 billion investment has gone to labor-intensive light industries producing consumer goods—such as textiles, footwear, electronic products, and toys—that the territory can no longer produce at competitive prices because of labor shortages and rising production costs. Taiwan firms are grappling with similar problems, plus environmental restrictions and a 30-percent appreciation of the Taiwan currency against the US dollar since 1987. About three-fourths of these firms' investment in China last year was in labor-intensive, low-technology industries.

Hong Kong and Taiwan investments are a key ingredient to China's growing trade success. The transfer of labor-intensive industries to China is also partially responsible for the $3 billion drop in total Taiwan and Hong Kong exports to the United States since 1987. The shifting export pattern is more dramatic in particular product lines. For example, China's share of US footwear imports rose from 2 percent to 15 percent in the last four years, while Taiwan's share fell by half to 16 percent. At the same time, China's market share of baby carriages, toys, and sporting goods doubled to 25 percent, while Hong Kong's plummeted from 11 percent to 3 percent.

The use of southern China as an export platform is spurring rapid growth in trade among the three economies. Hong Kong firms last year exported more than $6 billion worth of goods to China—primarily raw materials and semifinished components—for use in producing exports. Taiwan's exports to China jumped 13 percent last year to $3.3 billion; almost 70 percent were industrial raw materials and components, such as electric motors.

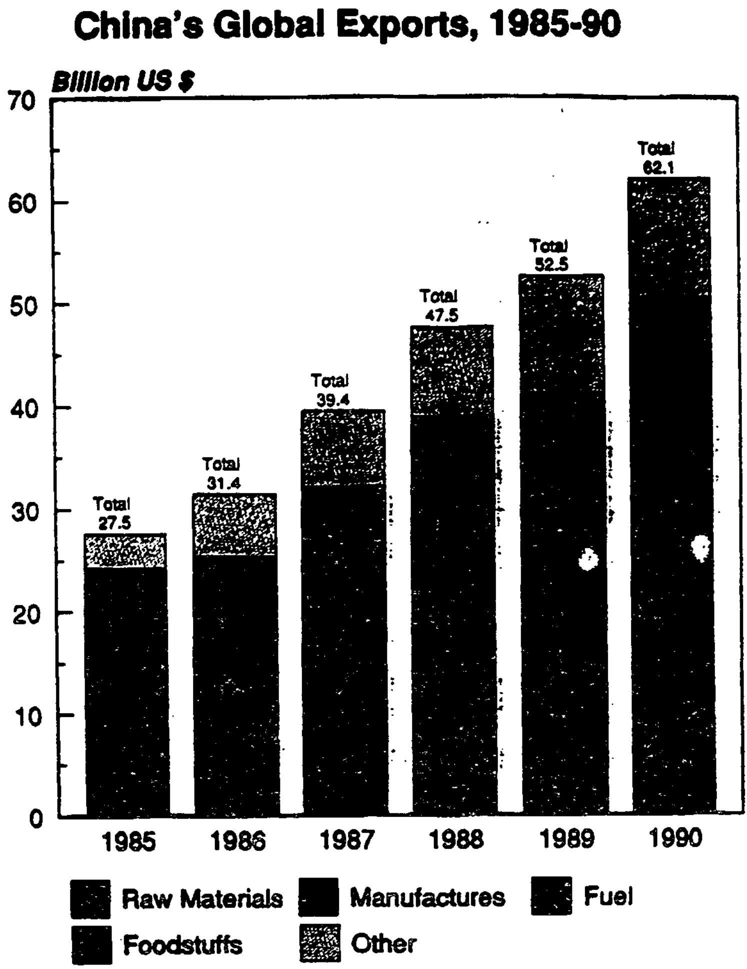
The groundwork for further economic integration is being laid. The Hong Kong-Taiwan Chamber of Commerce, for example, is providing trade and investment information and financial assistance to Taiwan firms interested in doing business in China. Taipei will soon allow Taiwan's private banks to establish branches in Hong Kong that would give it a key role in fostering trade after the 1997 transition, and Taiwan investors are reportedly preparing to establish a bank in Hong Kong with Chinese partners to finance Taiwan investment in China.

Although Taiwan and Hong Kong have shifted a portion of their trade surpluses with the United States to China, the gains from merging their capital, technology, managerial skills, and marketing expertise with low-cost Chinese labor will probably cause the combined trade surplus of the three economies with the United States to grow during the 1990s. Last year their combined trade surplus with the United States of $27 billion was equivalent to 60 percent of Japan's. In addition to increasing the quality and variety of Chinese exports, labor-intensive investments in China will free up Taiwan labor for high-technology industries such as semiconductors and aerospace parts, and Hong Kong labor for marketing, design, engineering, and financial services.

merchandise exports to China fell 17 percent to $4.8 billion, boosting the US trade deficit with China to $10.4 billion. (See appendix B for an overview of China's bilateral trade ties.)

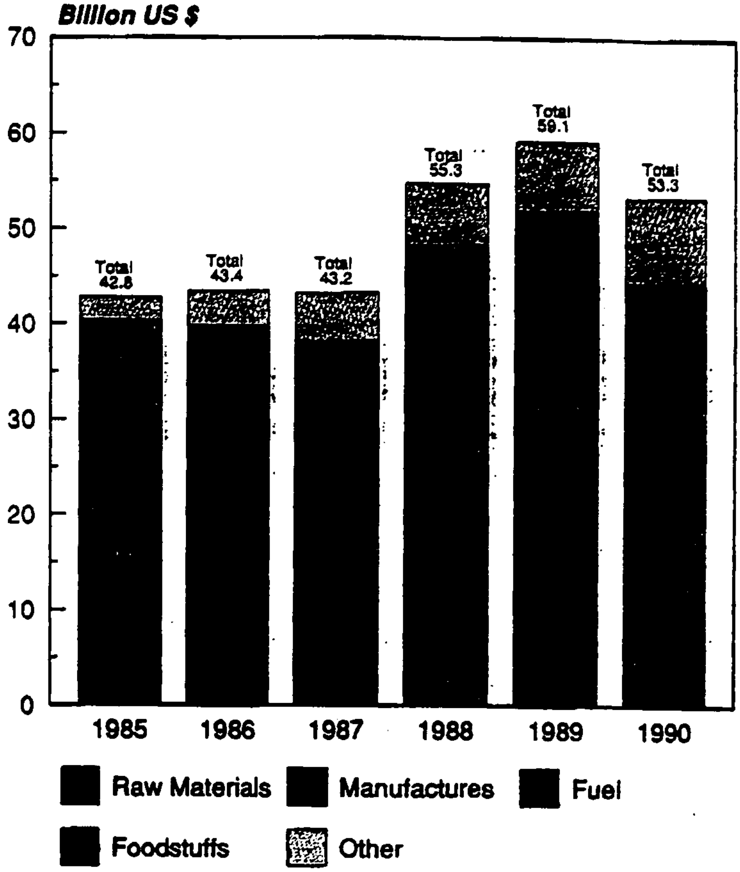
Beijing began building a strong export base with the introduction of productivity-enhancing agricultural and industrial reforms in the 1980s, the dismantling of much of the central trade bureaucracy, and the provision of financial incentives—such as the ability to retain foreign exchange—that encouraged manufacturers to export. Moreover, imported goods raised factory productivity and product quality; Chinese statistics indicate that during the past decade China imported nearly $30 billion worth of technologically advanced machinery, shifting gradually from direct purchases of complete sets of equipment to technology-licensing arrangements and cooperative-production ventures that transferred foreign technical and managerial know-how as well as hardware. The impact of China's open door has been particularly pronounced in coastal areas, where 90 percent of the foreign investment and more than three-fourths of China's trade activities are centered.

The leadership's desire to push exports almost certainly was a factor in easing the 1989 austerity measures aimed at reining in rural enterprises, whose foreign sales accounted for one-fifth of China's total exports last year. Indeed, Beijing's incentives—such as preferential access to credit for rural enterprises that export—are encouraging specialization in labor-intensive light industrial goods and are fueling an expansion of rural industries that specialize in consumer goods. The dynamic nonstate sector has become an increasingly important source of exports; according to the official press, China now has more than 300,000 export-oriented rural enterprises, up from just 1,500 in 1980. Rural enterprises are particularly



Source: China Trade Data

China's Global Imports, 1985-90



Source: China Trade Data

important to the textile sector and, according to Chinese press reports, in 1990 produced nearly three-fourths of China's exported garments.

Last year China's overall imports contracted 10 percent to $53.4 billion, as Beijing increased import restrictions to protect faltering domestic industries from outside competition. Beijing began reasserting central control over imports in 1988 to improve its worsening trade deficit. For example, Beijing reduced by one-third the number of authorized foreign trade corporations and began to require central approval for purchases of key commodities such as grains, sugar, steel, fertilizer, petroleum, timber, cotton, and pesticides. The number of goods requiring import licenses or subject to import bans was increased, and tariffs on more than 100 items—mostly consumer goods—were boosted. Beijing also broadened the scope of import substitution regulations. (See appendix C for a chronology of Beijing's trade recentralization measures.)

The export surge combined with Beijing's tight lid on imports in 1990 to improve China's external finances; Beijing posted a record $8.7 billion trade surplus—compared with a $6.6 billion deficit in 1989—and a record current account surplus estimated to be about $10 billion. China's foreign exchange reserves by yearend reached $28.6 billion, more than double the level posted immediately after the Tiananmen crisis in June 1989. Continued strong export growth during the first quarter of 1991—foreign sales rose 24 percent—despite a 12-percent rise in imports helped boost China's foreign exchange holdings more than $7 billion in the first three months of this year to nearly $36 billion—equal to more than 8 months of import coverage and twice what Beijing needs for exchange rate management.

China's external accounts were also strengthened by increased foreign investment and a resurgence of tourism receipts. Last year, China signed more than

7,000 new investment contracts valued at $6.6 billion, surpassing previous annual records for both volume and value. Investors from the United States, Japan, and Western Europe remain cautious about large Chinese projects, but contracts signed by Taiwan businessmen have made up for much of the slack. Hong Kong remains China's foremost investor, accounting for nearly two-thirds of the foreign investment, though new investments from Hong Kong fell 36 percent last year. Foreign exchange receipts from tourism also rebounded last year and increased 19 percent to $2.2 billion, rallying to match the level posted in 1988.

Lending from international financial institutions has also increased, improving China's access to official and commercial financing. World Bank lending is expected to reach $1.5 billion by the end of the Bank's fiscal year—exceeding the level reached before Tiananmen—and lending from the Asian Development Bank has resumed. Lending from concessional and commercial sources also rebounded last year. Japan is China's largest source of credit; Tokyo supplied nearly three-fourths of the official development assistance funds China has received and 70 percent of the funds borrowed from commercial sources. Japan's $5.7 billion credit package, which had been postponed because of the post-Tiananmen sanctions, is now being disbursed. Concessional lending from West European sources has also picked up dramatically. Chinese entities, joint ventures, and PRC companies in Hong Kong borrowed the equivalent of $5.5 billion from overseas commercial lenders in 1990, a 187-percent increase over 1989. Commercial lending is not back to "normal," however, with country risk as estimated by bankers higher than before Beijing's crackdown on the mid-1989 prodemocracy demonstrations—although lower than during the immediate aftermath.

China's Sick State Sector

Despite the rebound in overall industrial production, China's state enterprises performed poorly in 1990. Annual output growth at state-owned firms increased less than 3 percent last year compared with the more than 10-percent average annual growth registered between the introduction of enterprise reforms in 1984 and the implementation of austerity in 1988. Annual production at the country's "double guarantee" enterprises—select firms that are provided preferential access to inputs of raw materials and energy by the government, along with other assistance, in return for pledges of specified output and taxes to the state—fared only slightly better, posting an increase of 3.5 percent. Overall, state-sector output growth significantly trailed that of collectively owned industrial enterprises and rural industries, which posted annual growth rates of 7 percent and 12.5 percent, respectively, in 1990. Despite efforts during the 1980s to invigorate state-owned firms—which produce over half of China's industrial output value—by reforming management and decentralizing decisionmaking authority, production growth at these firms has consistently lagged behind growth at collectively owned and foreign-funded enterprises.

Moreover, state-sector losses more than doubled last year; one-third of China's state-owned enterprises operated in the red, up from roughly one-tenth in 1985. During the first five months of this year, nearly 40 percent of state-owned firms incurred losses. Industrial growth among state-owned firms rose nearly 9 percent during this same period, while state-sector profits declined more than 20 percent, indicating the absence of real productivity gains. These trends—common to socialist economies—pose a special challenge to Beijing's orthodox economic leaders who want to enhance the state sector's leading role in the economy.

Preferential access to credit and raw materials prevented state enterprises from posting an even more dismal performance. Since gaining control of the economic agenda in late 1988, orthodox leaders in Beijing have "tilted" economic policies in favor of large state-owned enterprises to compensate these firms for costs that have risen because of reforms. Competition for energy and raw materials under reform has driven up input costs, and some state firms have even had to occasionally shut down because of material shortages. The large number of pensioners state firms must support and the generally higher worker benefits they offer—including housing and medical care—have also driven up labor costs at behemoth state industries compared to the smaller, locally controlled firms.

Last year's lethargic output growth at state-owned firms was due, in part, to a "consumption strike" by China's households. After falling 7.6 percent in real terms in 1989, the real value of retail sales in 1990 was nearly stagnant as savings deposits continued their record climb, increasing by more than one-third overall to more than 700 billion yuan. Institutional purchases accounted for almost three-quarters of the increase in consumer goods sales, a response to Beijing's call for accelerated buying early in the year as part of a campaign to stimulate consumer demand. But a majority of state firms continue to produce unmarketable products for consumers who are becoming more cautious and demanding better quality, leading to record levels of unsold goods piling up in enterprise warehouses and stores. In April 1991, Beijing announced a three-month price reduction on stockpiled consumer goods to boost retail sales; price reductions ranged up to 30 percent.

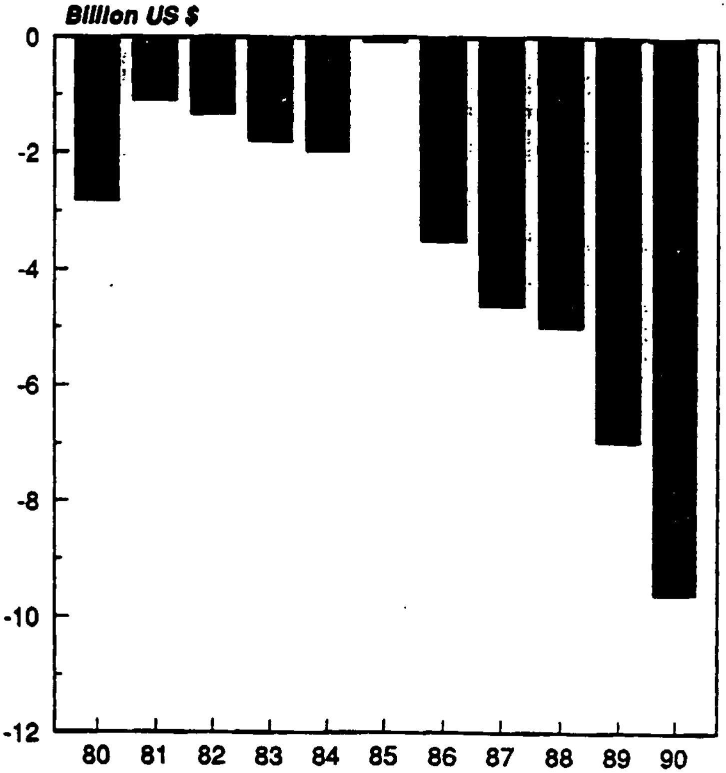
State-sector operating deficits have been exacerbated by increases in wages that far exceeded improvements in labor productivity, as Beijing assured urban workers of its intention to protect their living standards and financed wage increases for state workers early last year. According to Chinese statistics, the costs of production in state-owned firms rose more than 22 percent in 1990—partly because of long-overdue price adjustments for energy and transportation and new enterprise taxes—while labor productivity increased less than 1 percent. The downward trend in labor productivity growth—it grew only 1.6 percent in 1989—compares unfavorably with the 8.5-percent average annual increase recorded in 1987-88.

Budget Problems Mount

Declining performance at state firms contributed to Beijing's worsening budget deficit and increased pressure on China's banking system to keep chronically debt-ridden state firms afloat. Profit remittances from state enterprises fell more than 18 percent and forced Beijing to squeeze other sectors of the economy for taxes and to boost domestic borrowing to cover the budget shortfall. The 1990 budget deficit soared 38 percent to a record $9.6 billion; direct bailout costs to money-losing state firms absorbed 18 percent of total government revenues. The large 22-percent growth in total domestic lending last year was probably partly earmarked to cover enterprise losses not redressed by direct subsidies. State firms also relied on loans to finance bloated inventories, pay debts to other firms, meet payrolls, and fulfill tax obligations.

The central government's budget projections for 1991 indicate that expenditures will grow only 5.2 percent this year, more slowly than Beijing's projected 8-percent increase in GNP. Since 1989, expenditures have been expanding faster than the economy, rising 33 percent and 13 percent in 1989 and 1990, respectively, suggesting the assumption that expenditures can actually be kept down is probably overly optimistic. The projected decline in subsidies will be especially difficult to accomplish. Committed to protecting consumers and ailing firms from

China's Budget Deficit*, 1980-90



*1 US $ = 5.32 yuan.

The State Budget and Spending Priorities

China's government budget deficit grew 38 percent in 1990 to $9.6 billion. This follows a 40-percent jump in 1989. China's official deficit remains low by international standards, representing less than 3 percent of GNP in 1990, but taking account of bank loans needed to bail out inefficient firms would raise the share substantially. Although revenues exceeded original targets last year as Beijing strengthened tax collection efforts, expenditures also surpassed projected levels, pushing the deficit to almost twice the anticipated level. Beijing financed the deficit by issuing domestic bonds and borrowing from abroad.

China's 1991 budget calls for a 6.5-percent reduction in the budget deficit. Originally slated to shrink by only 5 percent, delegates to the National People's Congress in March agreed to trim this year's budget deficit by an additional $189 million—half of which will be generated by an increase in revenues and the remainder saved by an unspecified reduction in expenditures.

The original state budget for 1991 calls for a 6.7-percent increase in revenues—garnered primarily from *higher taxes*. At the same time, expenditures are slated to increase 5.5 percent with higher spending on defense, key construction projects, agriculture, education, and science. For the second consecutive year, Beijing will postpone payments due on government bonds held by enterprises, public institutions, administrative units, and banks; bonds held by individuals will be honored.

Beijing *will increase state funding for the military* this year by more than 12 percent to 32.5 billion yuan (almost $6.2 billion). This marks the second consecutive year of real increases in the military budget. Actual Chinese defense spending, however, will probably be twice the announced figure. Profits from arms sales and the earnings of several thousand military-run commercial enterprises represent revenues for the military of several billion dollars annually. Moreover, a large portion of the military's research and development costs are subsidized by state-run research institutes or paid out of funds earmarked for civilian organizations. The military also supplements its living expenses through sideline production of agricultural commodities such as grain, vegetables, and meat.

Subsidies for prices, enterprises, and exports *are all projected to decline* during 1991, according to this year's budget projections. Last year Beijing spent more than $7 billion in subsidies to shield workers from price increases and nearly $11 billion to subsidize state enterprises. This year, increases in state prices for select commodities will reduce price subsidies by more than 12 percent, reflecting a decline of $870 million. Subsidies to state enterprises are expected to fall nearly 4 percent this year, saving the state treasury more than $400 million. Another $940 million will be saved from the reduction in export subsidies, according to Finance Minister Wang Bingqian.

inflationary pressures, the central government will most likely attempt to shift subsidization responsibilities onto enterprises, the banking system, and local authorities—a financial shell game that minimizes the impact on the state budget.

An Opening for Modest Reforms

The economic expediency of reversing the state's growing budget deficit has forced the orthodox leadership to accept some pragmatic measures in an effort to narrow the deficit:

Export subsidies. Trade reforms introduced in early 1991 set the stage for a reduction in Beijing's export subsidy bill by eliminating direct operating subsidies to money-losing trade corporations and to unprofitable export-producing factories. Beijing has acknowledged that direct export subsidies were equivalent to 4 percent of China's export earnings in 1987 but has provided no estimate of the magnitude of indirect export subsidies. In his budget speech to the National People's Congress in March, Finance Minister Wang Bingqian noted that changes in Beijing's export subsidy policy would save the government roughly $940 million this year. The series of currency devaluations Beijing has phased in since late 1989 will help accomplish these objectives—the devaluations have brought the official exchange rate, now 5.32 yuan to the US dollar, somewhat closer to the actual cost of producing for export.[3] In the past, devaluations were done infrequently, but with fairly large jumps—often accompanied by considerable advance speculation that contributed to destabilizing cash movements on the quasi-private foreign exchange swap markets. Between early April and mid-May 1991, however, Beijing effected a nearly 2-percent devaluation through a series of small exchange rate adjustments.

[3] The devaluations have increased the profitability of exporting and allowed Beijing to reduce direct export subsidies without sacrificing competitiveness.

Price adjustments. In a bid to reduce the financial burden of urban consumer price subsidies, last fall Beijing increased prices for cooking oil, sugar, and cotton cloth. These price increases were followed in the spring of 1991 by substantial price increases for rationed rice, wheat flour, cornstarch, edible oil, and several other staples sold in state stores. Although urban workers are receiving a small direct cash subsidy to lessen the impact of these higher food prices, the upward price adjustments will reduce Beijing's subsidy burden. Last year, price subsidies exceeded $7 billion, equivalent to 74 percent of China's budget deficit. The increased price for edible oil, for example, puts it on a par with the procurement price—essentially eliminating any consumer subsidy—while the price hikes for rice and wheat flour wipe out about one-third of Beijing's per-unit subsidy. Prices for some key industrial materials have also been adjusted. Earlier this year, the State Council raised prices for assorted steel products and cement 25 to 55 percent. Beijing also abolished the multiple pricing system for steel and cement; steel products are now governed by only two prices—state and local—while cement is governed by a single, nationwide price.

Financial reforms. This year, a newly formed investment syndicate composed of nearly 60 financial institutions headed by the People's Bank of China will issue roughly one-fifth of China's 1991 treasury bond issue, according to the Chinese press. The syndicate will market the bonds through retail outlets throughout the country; in the past, Beijing relied on compulsory bond purchases by enterprises and workers. To increase the bonds' marketability, Beijing will also expand the nascent secondary bond market and allow bond holders to sell their bonds before maturity. To integrate securities trading nationwide, in November 1990 China opened its first centralized, computer-based securities exchange in Shanghai, the Securities Trading

Automated Quotations System, which will attempt to eliminate the wide disparity nationwide in the buying and selling prices of treasury bonds and other securities.

In December 1990, the Shanghai Securities Exchange (SSE) also began operation. Although primarily a bond-trading facility, the SSE links licensed corporations in six cities and has 30 securities available for trading. During the first four months of 1991, the SSE registered a turnover of more than $500 million—surpassing the level of over-the-counter securities trading volume in Shanghai for 1990. A stock exchange also operates in the Shenzhen Special Economic Zone. The Shenzhen exchange has five enterprises and 12 stock trading companies listed.

Beijing has also bowed to pressure from various interest groups because it is increasingly dependent on the revenues generated outside the state sector. Premier Li Peng endorsed faster growth for some regions in his economic work report to the National People's Congress in March; these areas most likely include the export-oriented coastal area with the special economic zones and the newly established Pudong Development Zone outside Shanghai. The current leadership is also promoting export-oriented rural industries, limited experiments with stock and securities markets, and expansion of the service sector.

Central Planning and State Ownership Still Linchpins

Despite these pragmatic economic moves to ease financial pressures, comprehensive, market-oriented reforms remain on hold. Unlike many of its East Asian neighbors, moreover, the general thrust of Beijing's policies is to reduce competition. Party plenum documents issued in late 1990 and speeches at the National People's Congress in March 1991 underscore Beijing's determination to maintain a socialist economic framework and to tip economic policy toward the large state industries—at the expense of the nonstate sector, which enjoyed booming growth during the 1980s. The leadership's increased emphasis on central planning for credit, energy, and raw materials provides Beijing an opportunity to reduce sharply inputs to locally run industries. Orthodox leaders in Beijing appear anxious to shield state enterprises from competition with collectives and private firms for materials and markets, at least for the time being.

While anointing the state sector to lead the economy, the leadership has yet to formulate practical prescriptions that address the chronic problems afflicting the large state enterprises. One of the key issues in China's economic policy debate is reorganizing the state sector, for example, into enterprise groups that economically integrate various state firms into Chinese-style conglomerates; this effectively sidesteps the more difficult task of improving the internal workings of state enterprises. Orthodox leaders view enterprise groups as a means to ensure key state-owned enterprises a leading position by incorporating smaller firms as subsidiaries. One danger of this course is that grouping large, healthy firms with weaker entities may create regional or national industrial monopolies that will further undermine competition in the domestic economy and weaken the dynamic role of the nonstate sector. Although some Chinese enterprise groups have already become significant players in the domestic economy and are gaining recognition in international markets as well, many Beijing-orchestrated mergers accordingly have short-term financial objectives rather than economic efficiency goals.

Center-Provincial Relations

The leadership's passive approach to reform at the national level has given local authorities a green light to pursue their own reform agendas. Earlier this year Premier Li Peng invited localities to embark on some "major reform measures" as

Reviving the State Sector: "Quality, Variety, Efficiency"

Chinese leaders have declared 1991 the year of "quality, variety, and efficiency"—a campaign aimed at boosting state-owned enterprise productivity and adjusting products to meet market demands. The campaign is an interim fix that relies heavily on jawboning to encourage factory managers to cut losses and boost productivity. Beijing is calling for enterprise managers to reduce material consumption by 3 percent, pare administrative expenses by 5 percent, and cut operational losses by half during 1991.

To help meet these targets, Beijing announced 11 measures to improve the business environment, including lowering interest rates on state enterprise loans, forming 100 new enterprise groups to improve production coordination, and giving a few dozen key firms and enterprise groups more foreign trade authority in the longer term. Beijing is also counting on new investments in technical upgrading to eventually improve enterprise competitiveness; Chinese banks have promised to issue more loans over the next five years to support technical upgrading projects at key state firms.

Even before kicking off this campaign in late 1990, Beijing was tilting economic policies in favor of the state sector, diverting resources and credit to state firms—particularly key large and medium-sized enterprises—at the expense of the dynamic semiprivate and rural enterprises. Although these efforts helped pull state firms out of a production slump—state sector output increased 9 percent in the first quarter of 1991—one-third of all state industrial firms continue to operate in the red, according to Chinese press reports. This proportion is roughly the same as reported last summer despite the improvement in output, suggesting that state enterprise difficulties reflect systemic inefficiencies, not just a sluggish economy. The falling profits and revenues at state firms, moreover, are putting pressure on state revenues. Large and medium-sized state-owned enterprises are a chief source of government revenue, and firms are increasingly dependent on bank loans to cover both operating costs and revenue remittances to Beijing.

Without fundamental changes in enterprise operations, managers of state-owned firms are unlikely to achieve efficiency campaign goals. Manager attitudes are still largely shaped by decades of producing according to plan orders rather than market demands. Moreover, managers face a variety of constraints and pressures—some of which reward inaction and inefficiency—that hold priority over Beijing's efficiency admonitions. For example, managers strive to keep labor relations on an even keel and, in many instances, try to maintain shopfloor peace with bonuses and other welfare benefits, even if these incentives are not justified by production gains or enterprise finances.

Managers are also confronting the results of years of eroding finances and shortsighted investment choices. For example, management contracts, implemented since 1987, encourage short-term behavior since managers tend to neglect maintenance and upgrading of plant facilities in order to maximize profits during the contract period. Many state firms, moreover, lack the infrastructure to identify and develop more competitive products—fewer than half of China's large state enterprises have ties to research and development institutes—and many lack experience with market studies that are needed to identify potential niches for their products.

The regime apparently hopes that limited measures—such as the efficiency campaign—will boost state enterprise performance enough that it can avoid more drastic steps, including shutting down deficit-ridden firms, streamlining the state enterprise work force, or privatizing state firms. The accumulated problems of state firms, however—including a bloated, undisciplined work force, aging equipment, and bureaucratic and political interference—may make state managers less responsive to efficiency calls than Beijing recognizes. The limited reform measures the leadership is touting to reform state firms are reminiscent of the approach some East European countries attempted before renouncing the underpinning of socialist public ownership, and they may similarly fail to boost the performance in China's state enterprises.

long as they conformed to the "national reform plan." In an attempt to regulate the various regional reform initiatives, in early 1991 the State Council's Commission for Restructuring the Economic System was assigned the role of coordinating reform proposals and experimentation throughout the country. Two consecutive bumper harvests also provided an opening for agricultural reforms:

Commodity Futures Markets. Since October 1990, China has opened grain futures markets in Henan, Jiangxi, and Hubei Provinces. Postponed when Beijing instituted its retrenchment policies in late 1988, the impetus for opening grain futures markets was rekindled when grain prices dropped sharply after the 1989 bumper harvest and huge amounts of grain were wasted because of poor marketing channels and inadequate storage facilities. Futures trading will offer farmers an important signal for crop planting decisions. Although only wheat and rice are currently traded, wholesale markets for other crops, such as corn, soybeans, and cotton, and sideline products such as pork, will also be opened soon. Several provincial governments are also planning to establish small-scale commodity markets for locally produced agricultural products.

Reform Testpoints. After a hiatus, Beijing may again be allowing some local reform experiments. For example, this year in Guanghan County, Sichuan Province—where in 1978 China's groundbreaking rural reforms were first introduced—farmers will be allowed to sell any amount of their grain production on the free market or at the government-set protection price. Until now, a minimum of 11 percent had to be sold to the State Grain Bureau at the fixed state price. In exchange for this freedom, the farmers must give up subsidies for agricultural inputs—fertilizer, pesticides, plastic sheeting, diesel fuel—and purchase inputs at market prices. Urban residents in Guanghan County will also lose their grain ration coupons—eliminating their access to subsidized prices at state stores—and will have to buy their grain on the free market. To compensate for the higher prices they will pay, however, many urban workers will receive direct cash subsidies roughly equivalent to the value of the grain coupons they had been receiving.

Provincial decisionmaking authority on a wide range of issues is the consequence of Beijing's unsuccessful attempts to recentralize authority and not through design as during the decade of reform. Last fall, the party plenum was delayed until late December, probably as a result of provincial intransigence over Beijing's proposed revisions to revenue-sharing schemes.

In some regions, greater autonomy has allowed local leaders to experiment not with reform, but with recentralization. For example, in Hebei and other provinces, the authorities have recollectivized agricultural support; services have been socialized and inputs more aggressively controlled by local authorities. Early this year in Beijing Municipality, local officials published regulations highlighting the pivotal role of agricultural collectives and promoting preferential treatment for rural collectives in credit, raw materials, and energy.

As Beijing relinquishes more and more of its management role at the local levels—for example, making localities underwrite a larger share of their own investment projects—the central leadership will be less able to influence local policy. Beijing's leverage with the provinces will also weaken as provinces reduce their dependence on the domestic market and increase exports.

Risks to China's Future: Inflationary Pressures Growing

Beijing's reliance on credit rather than productivity-enhancing reforms to fuel industrial growth risks renewed inflation. Abundant grain supplies, ample stocks of consumer goods, and strict controls on prices over the past year have dampened some of the inflationary pressures. This year, however, inflation may be more difficult to contain because of the high liquidity overhang from last year and pent-up domestic demand. At yearend, savings deposits reached the equivalent of 40 percent of China's 1990 GNP. Also adding to inflationary pressures are Beijing's modest price reforms—in particular the price increases for cooking oil and food staples implemented over the past few months—and the currency devaluations.

Inflationary pressures will be difficult to contain if Beijing's credit spigots remain open; late last year, inflation began to rise and reached double digits in some urban areas. In the first four months of 1991, China's urban cost-of-living index rose at a 5.6-percent annual rate, almost twice the rate last year. But the need to prop up large state enterprises and the widening fiscal deficit suggest credit allocations in 1991 may surpass last year's level as Beijing's continues to rescue inefficient producers. Losses at state firms continue to mount, and Beijing appears unable to unravel the growing gridlock of interenterprise debt. In May 1991, Chinese officials acknowledged that the debt problem among enterprises is getting worse despite the government's two-year campaign to check its growth.

Without sufficiently developed monetary and fiscal levers to fine-tune the economy, Beijing will remain dependent on credit and exports to maintain industrial growth. Dependence on credit to fuel production may kick off another boom-bust cycle as increased credit is followed by a clampdown on credit when inflationary pressures mount. The credit antidote also hinders the transition of inefficient firms to more productive activities; credit rescues inefficient producers, worsens inventory stockpiles, and further adds to inflationary pressures. It does not solve the underlying problems of declining economic efficiency and overreliance on monetary policy.

Beijing would probably react to rising inflation with tighter administrative controls—expanded central planning, tough restrictions on investment, tight quotas on bank credit, and price controls—which would further reduce enterprise efficiency, undermine productivity, and slow economic development. Moreover, Beijing's strategy of merging essentially bankrupt companies—with their bloated work forces—with healthy enterprises is likely to introduce an additional drag on efficient production. Preferential policies toward the state sector will also drain resources from the dynamic nonstate sector and lower its contribution to economic growth.

The Uncertainties of Export-Led Growth

The leadership's continued emphasis on export growth without import liberalization risks foreign protectionism. Even without productivity-enhancing domestic reforms, China's export promotion policies could allow it to achieve at least 10-percent average annual growth in exports over the coming decade. Beijing will continue to employ a blend of administrative and market-oriented policies to encourage factories to export:

- Wages in China remain low, and the dynamic nonstate sector has demonstrated its ability to maintain rapid growth even under the adverse conditions of domestic austerity.

- China has immense and still largely untapped potential as a high-volume producer of labor-intensive products at prices well below those offered by South Korea, Taiwan, or Hong Kong. The urban labor force of China's export-oriented coastal area is larger than the labor forces of Japan and the Asian newly industrializing economies—South Korea, Taiwan, Hong Kong, and Singapore—combined.

- China also has 120 million unemployed, or underemployed, agricultural workers who could be shifted to rural export-producing factories.
- Finally, China's export prospects will be enhanced by the infusion of foreign funds, technology, and marketing expertise it has received in recent years.

Domestic pressures on Beijing to step up imports are mounting. Sharp increases in domestic credit in late 1990 have fueled investment spending and heightened demand for imported capital equipment and raw materials. The record current account surplus and unprecedented level of foreign exchange held in early 1991 may lead to more rapid import growth this year; imports increased at an annual rate of 15.5 percent to $15.7 billion during the first five months of this year. However, we anticipate that import policies over the course of the coming decade, will vacillate between periods of liberalization and tight central control. Following periods of retrenchment, such as in 1988-89, foreign purchases will probably pick up sharply as Beijing loosens controls over imports and foreign exchange to satisfy the demands of domestic industries for raw materials and machinery, or to absorb excess liquidity in the economy. Beijing is likely to retain tight central oversight of imports, however, even as it steps up foreign purchases, expecting that, if it eased controls, imports would surge uncontrollably, prompting a deterioration in the trade balance and a drawdown in foreign exchange reserves. China's five- and 10-year development plans announced earlier this year stipulate that Beijing will strengthen oversight of imports to curtail purchases of luxury goods, avoid imports of products that can be supplied domestically, and eliminate duplicate purchases.

The complexity of China's trading system and Beijing's renewed manipulation of import controls may foster increasing resentment from China's trading partners, more and more of which are facing growing trade deficits with Beijing. Last year, China's trade surplus with the European Community soared 121 percent to $4.9 billion while its trade surplus with Japan nearly doubled to $5.2 billion.

Appendix A: Estimates of China's GNP

Efforts to measure China's GNP in the 1980s illustrate the difficulty of estimating the size of a Communist economy undergoing market-oriented reform. While few would doubt that China was one of the world's fastest growing economies during the decade, efforts to calculate its size relative to other economies have produced estimates that vary by a factor of 10. The problem is not just that China employs inadequate statistical collection and sampling techniques, but also that rapid, reform-driven changes in the composition and quality of production allow for a wide range of subjective evaluations comparing Chinese and US output. Conventional economic techniques thus probably cannot produce a "right" estimate of the US dollar value of China's GNP, and intuitive approaches are even more suspect.

Over the coming decade, the quality and scope of China's economic statistics are likely to improve significantly. Beijing's support for improving data collection methods, reforms that decontrol prices and increase the role of market forces, and the growth of China's foreign trade will enhance the accuracy of Chinese-currency GNP estimates. Improved estimation techniques, however, may inflate growth rates as Beijing more accurately gauges the dimensions of the large and rapidly expanding nonstate sector. Despite more accurate data, moreover, the debate over US dollar estimates of China's GNP will continue as researchers contend with persistent estimation problems, such as how to account for differences between the quality of Chinese products and similar US goods, and remaining relative price distortions caused by state controls.

Broad Agreement That China Has Grown Rapidly...

If figures from China's State Statistical Bureau can be believed, China had one of the world's fastest growing economies during the 1980s. Inflation-adjusted GNP more than doubled from 1980 to 1989, and national income corrected for price increases grew by 120 percent during the same period. Industrial output also grew rapidly. According to official statistics, in the 1980s average annual growth of industrial output was 6 percent for the state sector, 15 percent for collective enterprises, and more than 100 percent for the dynamic individual enterprise sector. Foreign trade similarly expanded, with exports growing at a 12-percent average annual rate and imports rising 13 percent per year from 1980 to 1989.

Other indicators confirm that China's official statistics are broadly on target when taken as indicators of Chinese *growth*. For example, international trade data corroborate Chinese trade statistics; China became a net grain exporter in 1985 for the first time in more than 20 years because of productivity-enhancing agricultural reforms, and China's tremendous success exporting manufactures similarly could not have been accomplished without rapid growth of domestic light industrial production.[1]

Nonetheless, Beijing's crude statistical estimation procedures may have biased growth estimates upward somewhat during the decade of reform. For example, because of growing industrial specialization, steps in the production process that used to be internal to one firm may now be counted separately if part of the process is subcontracted, inflating gross industrial output measures. Moreover, managers of

[1] Academic economists writing about China generally quote official statistics without qualification, indicating they share the assessment that official statistics provide useful, if not precise, estimates of growth. To the extent Chinese statistics are casting a wider net over the economy, picking up economic activity previously ignored, official growth rates overstate the actual growth.

many rural factories and township and village enterprises may lack the accounting expertise to account for inflation in their production figures, inflating national growth rates. In addition, some cadres deliberately fabricate statistics to attract foreign investment or to avoid political pressure to reach growth targets. A Chinese press report stated that in 1985 pressure to meet agricultural targets forced some local officials to falsify grain production data to avoid losing face.

Reliable series of annual data are scarce, in part, because in 1984 China began to change from reporting economic information according to a socialist "net material product" accounting system—which forced analysts to use fragmentary data to estimate the dimensions of the service sector—to one that included services output. Finally, the rapid growth in nonstate sectors has been poorly monitored because managers of rural and private enterprises often keep fragmentary output records—to shirk their tax obligations or because of their lack of familiarity with sophisticated accounting systems—requiring researchers to make subjective estimates of industrial production outside the state plan.

Although Chinese data remain flawed, we believe that their reliability has increased during the last 10 years as Beijing has increased its ranks of trained statisticians and improved the data collection process. This year, for example, Beijing approved an information-access system that links data stored in the economic information centers of the central government, provinces, municipalities, and autonomous regions, which will speed the processing and distribution of statistical information and make national and local data series more consistent. Indeed, China's growing economic integration with foreign economies has expanded the quantity of its data and provided market-based evaluations of the quality of some Chinese output.

—But Estimates of the Size of China's Economy Differ Widely

China's flourishing foreign trade has made the country a significant force in the world economy, causing analysts to become increasingly interested in international comparisons of the *size* of China's market and its ability to generate further export growth. Some researchers have also used US dollar estimates of foreign economies' GNP as proxies for relative living standards and as social welfare measures. Finally, estimates of a Communist country's GNP in US dollars have traditionally been used as a measure of that economy's ability to support a military establishment.

Efforts to calculate a US dollar value for China's GNP, however, face formidable roadblocks. The need to rely on sometimes questionable Chinese data is a clear handicap; but worse, there is no universally accepted method for converting Chinese production data into US dollar values. Estimative techniques differ according to ease of calculation or intuitive appeal, as the following survey of methodologies indicates.

The **exchange rate conversion** technique—which transforms the official renminbi GNP figure into dollars using the official exchange rate—is popular because it objectively produces a value and is based on readily available official statistics.[2] According to this method, China's GNP last year was $330 billion. The exchange rate conversion method has one principal drawback, however, in that the renminbi is an inconvertible currency and the exchange rate for Foreign Exchange Certificates—the convertible currency foreigners use in China—is officially determined, applies to a narrow market, and can be revised significantly as Beijing devalues; it did so in December 1989 and November 1990. Many China scholars

[2] For an example of a variation on the exchange rate conversion technique, see The World Bank Atlas, Washington, D.C.: The World Bank, 1990.

believe the two devaluations have brought the renminbi closer to the level that the market would set—implicitly suggesting earlier GNP measurements by this method were too high—making exchange rate conversion a more acceptable method currently. Market-determined exchange rates, however, measure capital flows and the relative demand for imports and exports, but can be distorted by tariffs, quotas, and other trade barriers. Even under ideal conditions, bilateral exchange rates may fluctuate because of changes in consumers' preferences for imports and exports of goods and assets, causing US dollar GNP estimates to shift while the domestic rate of economic activity remains unchanged.[3]

The **physical indicators method** uses statistical analysis to determine the relationship between social and economic measures—such as infant mortality, adult literacy rates, televisions per capita, and steel production—and GNP in countries where it is believed to be measured accurately. The values of the same social and economic indicators are then used to predict the GNP of a country for which the indicator data are available, but for which GNP figures are not or are suspect.

The drawback of the physical indicators method is that it assumes the impact of each physical indicator on production is identical across countries—an invalid assumption in China's case. China's command economy has traditionally tried to guarantee a surfeit of profits for large state enterprises by keeping prices of energy and basic materials low and emphasizing output of manufactures. Further, China is a profligate energy waster and much of its steel is of such poor quality that it is not exportable and thus not comparable to that produced elsewhere. Comparisons between China and market economies using energy and steel as indicators would,

[3] Exchange rate conversions are also used for measuring components of GNP, such as defense spending or the budget deficit.

therefore, overestimate China's GNP. The physical indicators method also disregards quality differences among goods used as physical indicators in different countries, biasing upwards Chinese GNP.

The **purchasing power parity** (PPP) technique tries to measure the value of China's output in US dollars by applying US prices to the output of specific Chinese goods. For example, by multiplying China's total value of wheat production by the dollar/renminbi wheat price ratio, the researcher "transforms" Chinese wheat output into US dollars. The GNP figure then is calculated by summing the US dollar value of various Chinese products.[4]

Despite its seemingly straightforward approach, several scholarly independent studies of China's economy have produced aggregate PPP ratios for 1981 that differ by 200 percent.[5] Goods such as automobiles, clothes, and banking services are rarely identical, and the analyst must make subjective judgments concerning their relative quality. A PPP study that does not adequately account for the inferior quality of many Chinese goods vis-a-vis US output will overestimate the size of China's economy. The crucial role the analyst plays in determining which goods will be included in the study, in setting the level of detail, and in deciding which goods are similar and which are not allows thorough and well-done PPP studies to support strikingly divergent estimates.

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4 For examples of the PPP technique, see "Dollar GNP Estimates for China," CIR Staff Paper No. 59, March 1991; Arms Control Disarmament Agency, World Military Expenditures and Arms Transfers, 1987, Washington, D.C.: U.S. Government Printing Office, 1988; and Summers, Robert and Alan Heston, The Penn World Table (Mark 5): An Expanded Set of International Comparisons, 1950-1988," Quarterly Journal of Economics, May 1991, pp. 327-368.

5 For a more detailed discussion of potential discrepancies between PPP studies, see "China's Price Structure: An International Perspective," CIR Staff Paper No. 22, June 1986.

A PPP Study

A US Census Bureau study, for example, used the PPP methodology and estimated China's 1981 GNP at $418 billion.[6] The study's GNP series for China was produced by a model based on the 1981 input-output table constructed by the State Planning Commission and State Statistical Bureau. Because in 1981 Chinese statistics were based on a "net material product" accounting system that did not include the value of services in output data, the model was adjusted to include a service sector.[7] The study used the PPP price ratios to convert the data into US dollars, then calculated the 1981 GNP estimate for each sector by subtracting flows of intermediate goods in the input-output table that were double-counted in China's gross value of output statistics. The study used this benchmark figure for 1981 to generate estimates for succeeding years using official inflation-adjusted growth rates for each sector.

The major strengths of this approach are that US dollar GNP estimates for China are not affected by fluctuations in the exchange rate, and that benchmark estimates are easily updated using publicly released official growth rates, which probably are reasonably accurate. The methodology, however, may produce exaggerated 1981 benchmark and growth rate estimates. Although the PPP price ratios are derived from a thorough Sino-US price comparison study, the ratios may inflate the size of China's economy because they do not account for all quality differences in output. Moreover, the official growth rates used to move the benchmark figure forward are probably too large because they reflect the dramatic

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[6] For a detailed discussion, see "Dollar GNP Estimates for China," CIR Staff Paper No. 59, March 1991.

[7] The Census study based the estimates of output for nonmaterial services on work done in a World Bank study.

expansion in rural industries, which often fail to account for inflation in their growth statistics.[8]

Implications

The size and complexity of China's economy combined with the absence of a uniform accounting system will continue to complicate attempts to estimate GNP. Without far-reaching price reforms that rationalize the valuation of output and allow prices to measure quality differences, Chinese output will remain difficult to evaluate even if data collection improves. Conventional economic techniques thus probably cannot produce a "right" series of the US dollar value of China's GNP. Consequently, GNP estimates have differed by as much as a factor of 10 because of the lack of an agreed-upon methodology for estimating GNP and because of the problem of correcting quality differences between Chinese and US production.

Using US dollar estimates of China's GNP to describe aspects of the country's social welfare are particularly suspect. Although GNP figures are frequently used to make standard-of-living comparisons among various countries, such analogies are valid only between nations with similar property right distributions, degree of market orientation, and environmental standards. Production in market-driven economies is geared to meet consumer demand and enhances living standards more directly than does output in command economies. Production by the Chinese state sector, which accounts for almost 60 percent of the country's industrial output, is

[8] The Census study partially corrected the biased growth rates. Chinese agricultural consumer prices are relatively lower compared to US figures than are Chinese manufacturing consumer prices; consequently renminbi/dollar price ratios inflated China's agricultural sector more than its manufacturing sector. During the 1980s, official growth rates for the agricultural sector were lower than those for the manufacturing sector, producing a slower total growth pattern in the Census study. As a result, average annual growth from 1978 to 1989 was 8.6 percent in the study, compared to an official estimate of 9.1 percent.

determined by central government planners and is unlikely to reflect consumer preferences or make the most efficient use of China's scarce resources.

China's Future GNP Data: Slowly Improving

The quality and scope of China's economic statistics are likely to improve over the next decade. The push to improve collection techniques is receiving strong support from such leading policymakers as Premier Li Peng who recognize the importance of better information in guiding economic decision making. Even modest progress on economic reform will probably improve the quality of economic data by allowing market forces to play a greater role in adjusting relative prices, allocating resources, improving the quality of output, and influencing production schedules. Reform may also improve statistical reliability by "monetizing" more economic activity. Foreign exchange reforms that allow barter trade with the Soviet Union to be based on hard currency would improve estimates of an economic activity that is growing rapidly—border trade jumped one-third last year in Heilongjiang Province, which has the lion's share of Sino-Soviet barter trade, according to official statistics. In general, trade-sector growth will enhance Chinese economic data by producing a relatively larger portion of the economy that is measured directly in US dollars. Moreover, the increase in direct foreign investment will provide a growing source of economic data that conforms to Western accounting methods.

Although more reliable data will increase the quality of renminbi-based GNP estimates, Beijing's increasing ability to cover sectors that have been poorly measured—such as the village and township enterprises, the domestic economy's fastest growing component—could initially inflate annual growth rates. Indeed, we believe that—although Beijing will probably more accurately account for inflation in the coming decade—because of the loose bookkeeping practices of many nonstate firms and because of their rapid and diversified growth, the quality of official estimates of this sector may not stabilize until near the end of this decade.[9] In addition, grain-to-livestock ratios suggest that China's agricultural crop is significantly larger than official figures indicate. Thus more accurate accounting of farm production also may tend to overstate growth rates.

Finally, GNP comparisons based on anecdotal "evidence" of standard-of-living comparisons will continue to mislead because China devotes a relatively large share of resources to consumer goods. China's vibrant private sector will probably continue to specialize in producing food and consumer products, raising average quality of life toward that available in countries at similar levels of per capita income. Although scholarly debate over the size of China's economy will continue, higher quality data and a more open economy will probably reduce the researcher's calculation burden and may eventually narrow the range of GNP estimates for China.

[9] During high-inflation years in the 1980s, we believe that the upward bias in growth rates caused by combining nominal and real production figures could have outweighed the downward bias caused by Beijing's failure to correctly measure all sectors of the economy. Over the next decade, Chinese statisticians will probably more accurately account for inflation; however, growth rates may continue to be artificially inflated as officials more accurately measure the dimensions of local, nonstate output.

Table 1

China's GNP: Various Estimates[10]

(in billion US$)

Year	Census PPP Study	Penn World Table (Mark 4)	Penn World Table (Mark 5)	Arms Control and Disarmament Agency	World Bank	Official Exchange Rate Conversion
1978	351	—	—	216	212	123
1979	377	—	—	231	254	132
1980	398	1,598	—	246	296	142
1981	418	—	—	257	320	149
1982	456	—	—	281	325	162
1983	502	—	—	311	329	178
1984	574	—	—	356	343	204
1985	640	2,567	—	400	347	230
1986	690	—	—	430	330	249
1987	761	—	—	471	335	277
1988	837	—	2,530	—	373	307
1989	868	—	—	—	—	319
1990	—	—	—	—	—	333

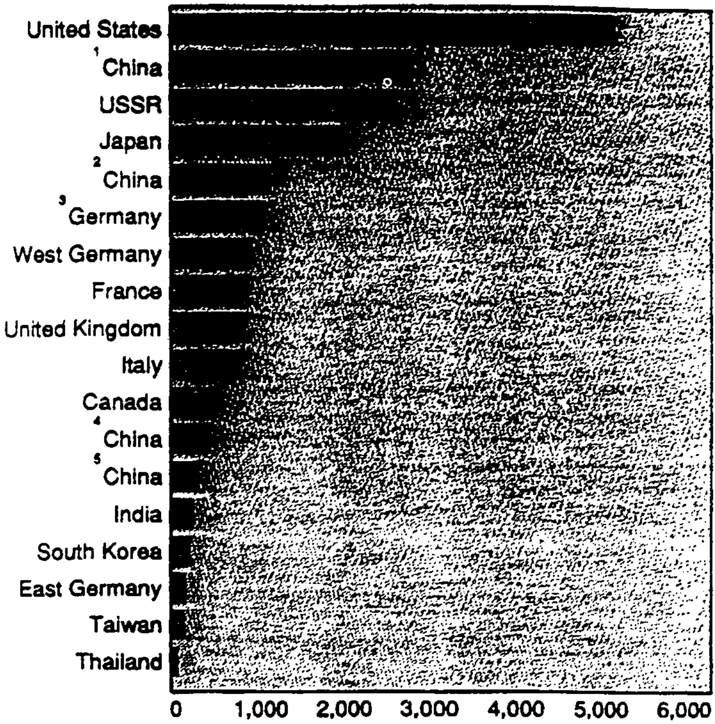
The Census study, Penn World, and Arms Control and Disarmament Agency (ACDA) numbers are based on various PPP studies. The Penn World estimates are derived from work on the United Nations International Comparison Project (ICP), under which researchers collected price information from 56 countries. With this data, researchers built price ratios to convert each country's GNP into a common currency unit—international dollars—avoiding the statistical bias caused by basing estimates on a single country's currency.[11] The ACDA price ratios also incorporated data from the ICP, but the results are expressed in 1987 US dollars.

World Bank estimates are similar to exchange rate conversions, but the analysts have attempted to account for the impact that domestic inflation relative to that in rest of the world would have had if Beijing allowed its exchange rate to float. Numbers in the last column are official data converted at the exchange rate of 5.23 renminbi to the dollar.

[10] All figures were produced by multiplying per capita GNP levels by population estimates.

[11] International dollars have the same purchasing power over total GDP as US dollars–that is, 100 billion international dollars of GDP can "purchase" $100 billion of US GDP. The purchasing power of international dollars over components of GDP, however, is determined by average international prices rather than US prices. Researchers employ international dollars in an effort to create a "country neutral" currency. Index number theory and empirical studies indicate that choosing one county's currency as the basis for international comparisons produces relatively lower national income account estimates for that country.

International Comparison of 1989 GDP
(Billion US $)



Source for non-China estimates: Handbook of Economic Statistics

1 Calculated by multiplying the Penn World (Mark 5) estimate for1988 real GDP per capita by the official population figure, to achieve a total GDP estimate, then multiplying by the 1989 official Chinese GNP growth rate and the US GNP deflator.

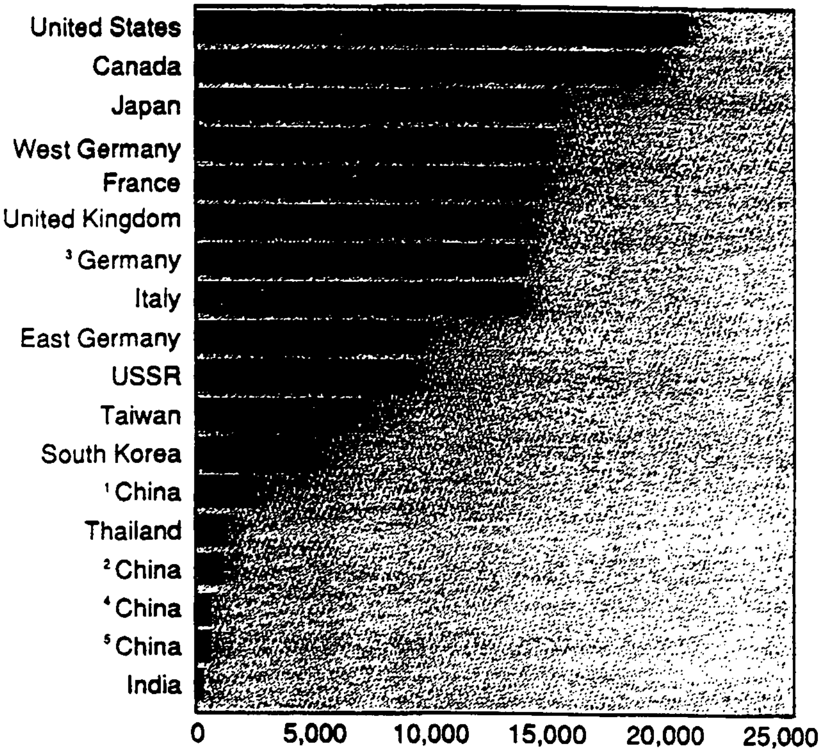
2 Calculated by multiplying the 1989 Census GNP estimate—expressed in 1981 US dollars—by the appropriate US GNP deflators.

3 The sum of East and West German estimates.

4 Calculated by multiplying the World Bank, Atlas Methodology, estimate for 1988 per capita GNP by the official population figure, to achieve a total GDP estimate, then multiplying by the 1989 official Chinese GNP growth rate and the US GNP deflator.

5 Exchange rate conversion.

International Comparison of 1989 Per Capita GDP (US $)



Source for Non-China estimates: Handbook of Economic Statistics

1 Calculated by multiplying the Penn World (Mark 5) estimate for1988 real GDP per capita by the 1989 official Chinese GNP growth rate and the US GNP deflator.

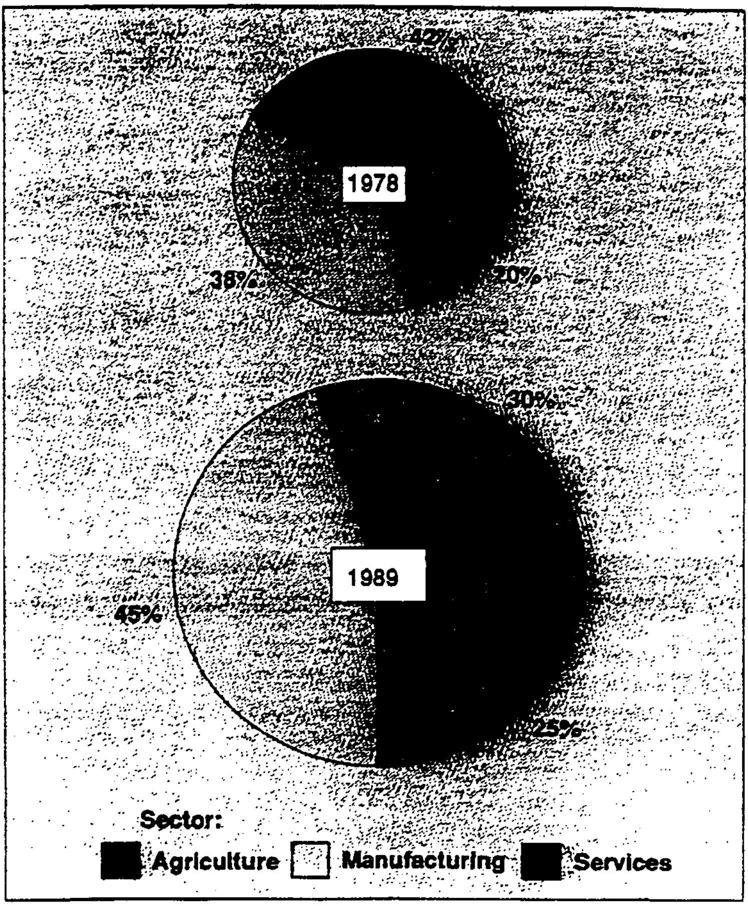
2 Calculated by dividing the 1989 Census GNP estimate—expressed in 1981 US dollars—by the official population estimate then multiplying the figure by the appropriate US GNP deflators.

3 The weighted average of East and West German estimates.

4 Calculated by multiplying the World Bank, Atlas Methodology, estimate for 1988 per capita GNP by 1989 official Chinese GNP growth rate and the US GNP deflator.

5 Exchange rate conversion.

Changing Structure of China's Economy



Source: Census Study

Appendix B: China's Bilateral Trade Relations

The United States

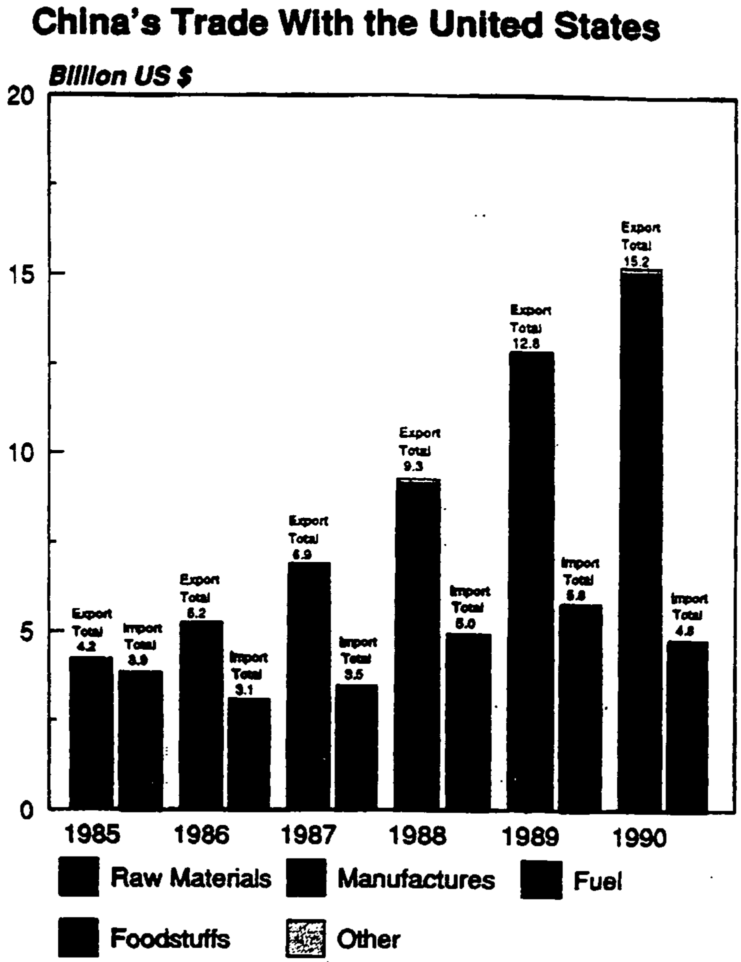
The United States remains China's primary export market, accounting for 24 percent of Beijing's total foreign sales. China's exports to the United States soared 27 percent last year, as demand in China's domestic markets remained stagnant and Beijing offered preferential access to credit and raw materials to export-oriented enterprises and increased enterprises' incentives to export. Footwear exports to the United States more than doubled, posting sales of $1.5 billion. Other labor-intensive manufactured goods such as televisions, stereo equipment, toys, and household appliances also continued to post strong gains in the US market. Sales of apparel increased almost 19 percent last year as China's apparel producers steadily moved into higher quality and higher priced articles. Apparel exports account for approximately one-fourth of total exports to the United States.

US exports to China fell 17 percent in 1990 to $4.8 billion as Beijing's tighter import controls disproportionately affected US sales; China's global imports contracted only 10 percent. Beijing's reassertion of central management over 13 import products in mid-1989—grains, sugar, steel, fertilizers, crude and refined oil, rubber, timber, polyester fibers, tobacco, cotton, pesticides, and farm-use plastic sheeting—affected commodities that had accounted for roughly half of the total value of US exports to China the previous year. US grain exports—which accounted for nearly one-fifth of US exports to China in 1989—fell 55 percent last year. US sales of iron and steel plummeted 91 percent last year, declining by more than $220 million.

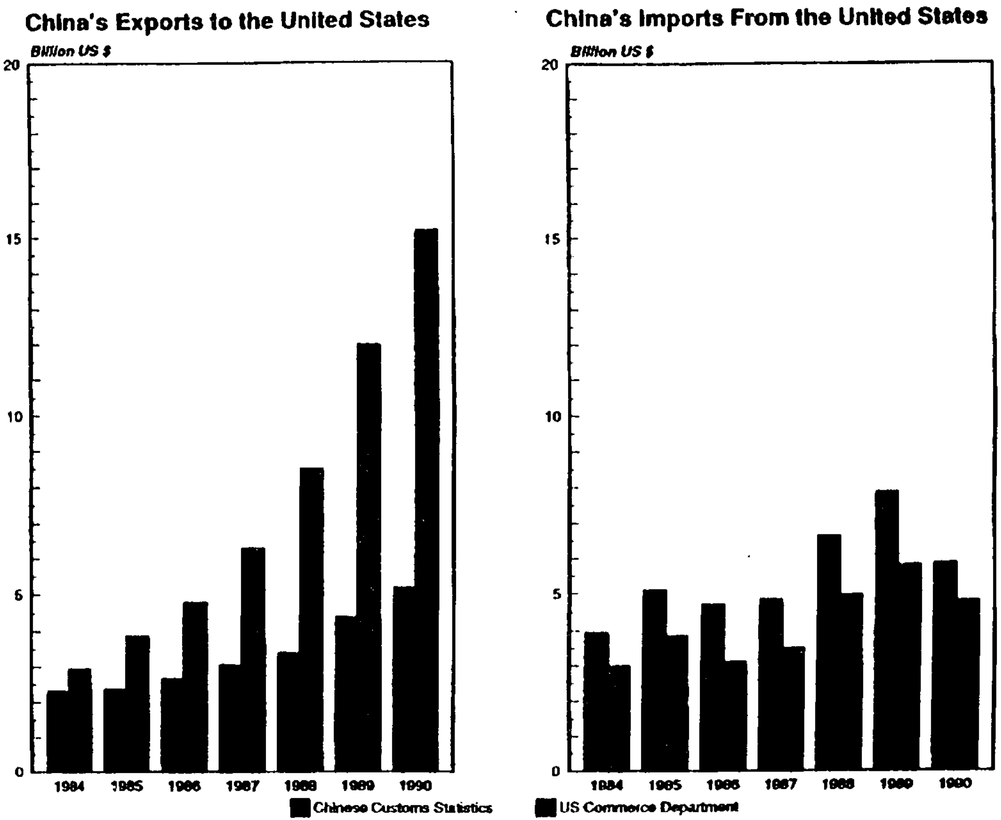
The drop in US exports to China combined with China's strong export performance to boost the US trade deficit with China 67 percent last year to

$10.4 billion, according to US Commerce statistics. China's Customs statistics, however, indicate that China posted a bilateral deficit of $1.4 billion. Both the US and Chinese trade statistics show parallel import and export trends over the past decade, however; the shortfall in Chinese statistics is largely due to Beijing's not counting Chinese products reexported through Hong Kong. The United States tallies all goods shipped to and from China, regardless of whether they are shipped directly or through third parties such as Hong Kong.

US firms are likely to benefit from Beijing's increased demand for foreign capital and raw materials and from Beijing's desire to deflect US concerns about the trade imbalance. Chinese officials have stated publicly that they will halt the fall in imports from the United States. US exports to China registered an 11 percent increase during the first quarter of 1991 as a result of strong growth in US sales of fertilizer and raw materials; Chinese global imports have increased 15.5 percent to $15.7 billion during the first five months of this year. Chinese exports to the United States increased 14 percent during the first three months, suggesting that the US trade deficit with China may increase to approximately $12 billion in 1991.



Source: UN Trade Data


China's Exports to the United States
Billion US $
20
15
10
5
0
1984
1985
1986
1987
1988
1989
1990
China's Imports From the United States
Billion US $
20
15
10
5
0
1984
1985
1986
1987
1988
1989
1990
Chinese Customs Statistics
US Commerce Department

Japan

Economic relations between China and Japan have largely returned to normal over the past year. During the Houston Summit in July 1990, Prime Minister Kaifu announced the resumption of Japan's third yen credit—a loan package valued at $5.7 billion that was sidelined following Beijing's crackdown on prodemocracy protesters in Tiananmen Square—designed to fund development projects in China over a six-year period beginning in 1990. Tokyo also advocated the early resumption of normalized lending to China by international bodies such as the World Bank and the Asian Development Bank. Japanese investment in China has also apparently picked up; during the first four months of 1991, Japanese businessmen signed over 100 new contracts in China, almost double the level of the same period last year. In 1990, the number of contracts approved involving Japanese investors was 341, up 16 percent from 1989, while the value of these projects actually dipped 11 percent to $457 million.

Both sides have tried to boost the relationship. Tokyo and Beijing agreed in December 1990 to a five-year extension of the long-term trade pact that has provided a framework for bilateral economic exchanges for more than a decade. The pact sketches out targeted levels of Chinese exports of oil and coal to Japan, as well as the transfer of Japanese technology and construction equipment to China. Japanese officials have expressed concern about their growing deficit with China, however, which reached nearly $6 billion in 1990, according to Japanese statistics.[1] The shortfall stemmed from a 24-percent decline in Japanese sales to $6.1 billion, while at the same time

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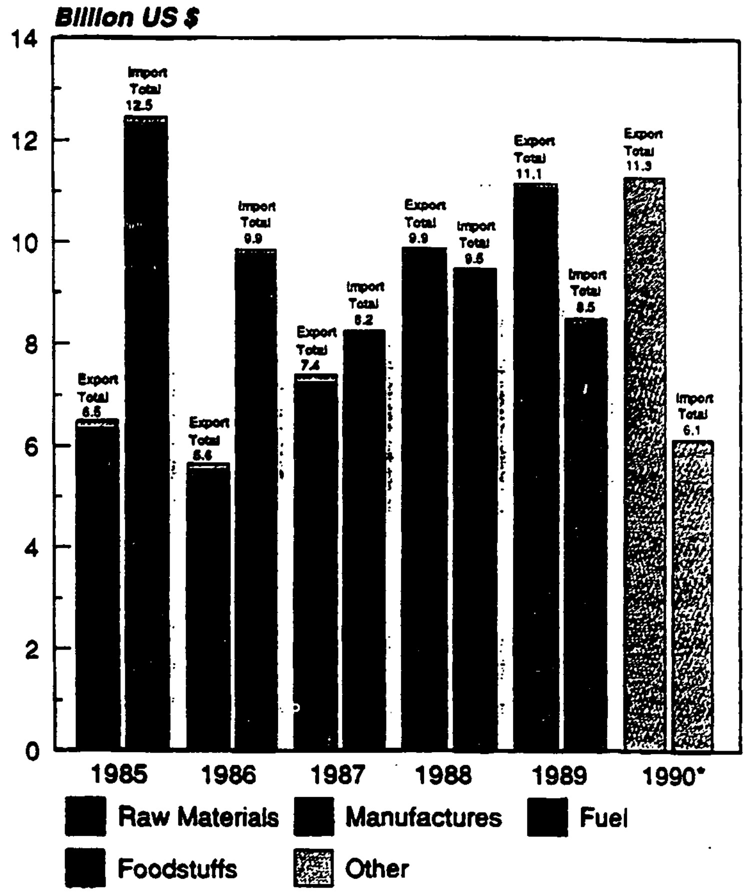
[1] Chinese statistics show a bilateral surplus on trade with Japan of only $1.4 billion in 1990, with sales to Japan growing 7 percent to nearly $9 billion, and imports of Japanese goods dropping 28 percent to $7.6 billion.

China's exports grew by 13 percent to nearly $12 billion. Japan's exports to China are concentrated in sales of machinery and transport equipment, categories adversely affected by austerity-driven import restrictions. Beijing's purchases from Japan have started to pick up this year and will probably accelerate following the signing of a steel accord in June in which Beijing agreed to more than double the volume of Japanese steel it purchases in the latter half of the year.

China's Trade With Japan



Source: UN Trade Data
*Commodity breakdown not available.

The Soviet Union

Sino-Soviet trade grew only 9.6 percent last year to $4.38 billion, compared with the 23-percent gain posted in 1989, and barely exceeded the modest 8-percent target set in the 1990 trade protocol. More than half of China's exports to the Soviet Union last year were manufactures, of which 57 percent were textiles and apparel. After increasing steadily for several years, Soviet exports to China dropped slightly in 1990 as export restrictions on raw materials—China's primary import—increased; in 1990, Beijing's imports of fertilizer and timber accounted for more than one-third of China's total purchases from Moscow. Out-of-plan, cross-border trade between China and the Soviet Union, which began in 1988, has become an increasingly important source of economic growth for China's border provinces; total trade transacted by a large number of small enterprises along the border amounted to about $560 million in 1990.

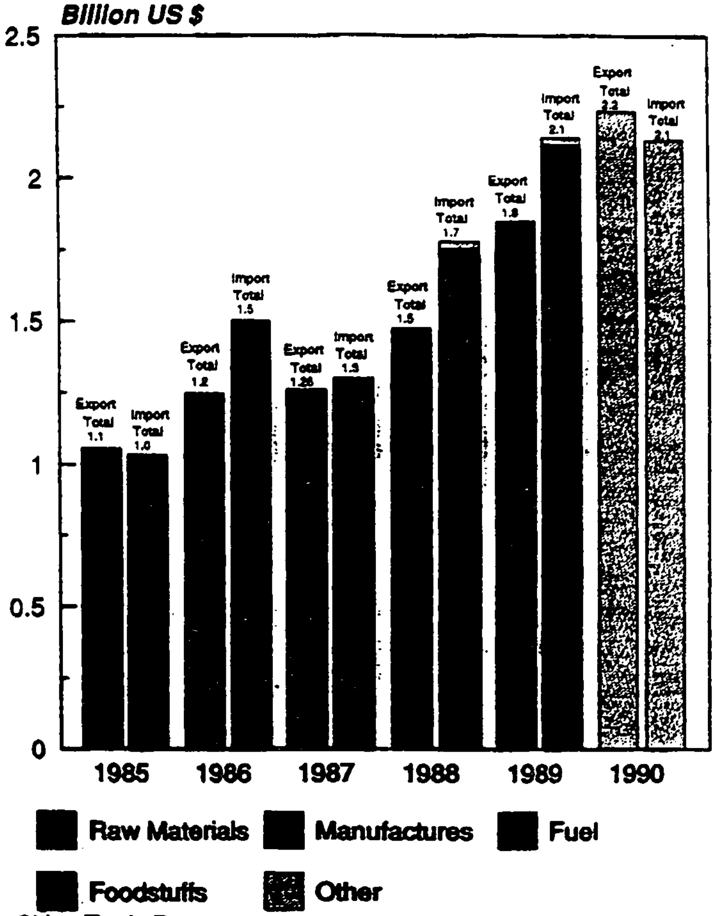
The economic dislocations in the Soviet Union cloud the future of trade relations, as does the transition this year from annual trade protocols negotiated on a barter basis to deals based on hard currency values. The annual trade agreements have been the centerpiece of economic ties for more than two decades. The more assertive role now played by the Soviet republics is also disrupting traditional trade ties between official Chinese and Soviet trade organizations. Although China's trade with the Soviets accounted for less than 4 percent of China's global trade in 1990, Beijing clearly values these ties as much for their political significance as for their economic value. Consequently, we expect Beijing to actively explore other forms of economic cooperation:

- China announced earlier this year that it would be providing the Soviet Union with its second commodity loan in as many years. The loan—valued at over $730 million—will provide the Soviet Union with scarce foodstuffs and consumer goods, repayable in Soviet goods and services over a five-year period.

- China is reportedly ready to make its first large military purchases from the Soviet Union since the Sino-Soviet split of the early 1960s. For example, according to the Soviet press, negotiations are reporteldy at the final phase for Chinese procurement of Su-27 fighter aircraft.
- Cooperation in the development of large industrial projects—generally based on barter arrangements that exchange Chinese consumer goods and services for Soviet technology and equipment—is also likely to be expanded. In December alone, Beijing purchased under barter arrangements six thermal power generators from the Soviet Union valued at nearly $1.5 billion. Negotiations for the purchase of several additional thermal generators, as well as two Soviet nuclear generators, continue.
- Beijing is also likely to push Chinese labor exports to the Soviet Union this year. According to the Chinese press, more than 40,000 Chinese workers have been sent to the Soviet Union thus far, and more than 10,000 are currently working there.
- Joint ventures will also be encouraged. In July 1990, Beijing and Moscow signed agreements to protect investments in each other's country and to avoid double taxation. According to the Chinese press, 20 Sino-Soviet joint ventures are currently operating in the Soviet Union, three in China, and negotiations are under way for approximately 100 additional projects.

Although these measures are likely to preclude a severe downturn in Sino-Soviet economic ties—and thus preserve the appearance that bilateral relations remain intact—over the longer term a failure to move away from barter could prevent more efficient trade. Chinese firms in Sino-Soviet trade will feel little pressure, for example, to improve the quality of the goods they produce, suggesting that these items will not become competitive on international markets. Moreover, China is likely to continue to prefer Soviet raw materials—which represent very little value-added from the Soviet perspective—to manufactured goods.

China's Trade With the Soviet Union



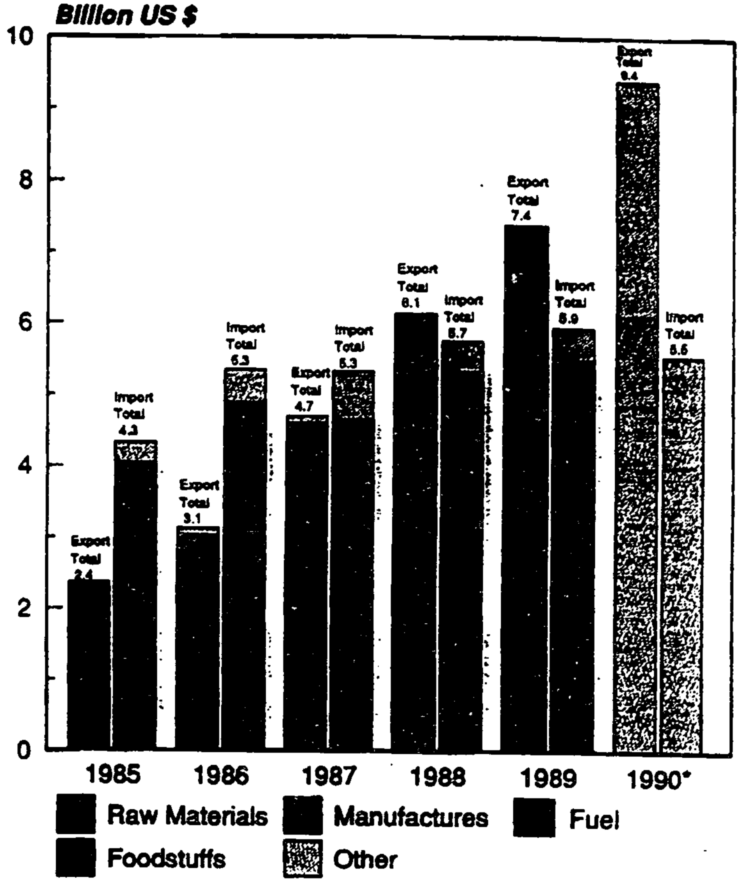
Source: China Trade Data

The Economic Community-4

The four primary European Community countries—the United Kingdom, Germany, France, and Italy—have collectively posted a trade deficit with China since 1988; between 1988 and 1990, the EC-4 trade imbalance with China tripled to $3.85 billion. More than three-fourths of China's exports to the EC-4 are composed of manufactures—primarily consumer goods and textiles—while machinery represents approximately half of China's imports from the EC-4.

Germany has the strongest trade ties to China among the EC-4, with total trade last year registering nearly $6.6 billion. Germany's imports from China increased 41 percent to almost $4.4 billion while exports to China fell 10 percent to $2.2 billion. Total trade between Italy and China increased 17 percent in 1990; exports to China increased 30 percent to $1.6 billion and imports from China increased 7 percent to $1.8 billion. French exports to China declined 40 percent to $930 million and Chinese exports to France rose 25 percent to $2.1 billion as total trade between France and China fell almost 6 percent last year. Total trade with the United Kingdom increased 19 percent to more than $1.8 billion in 1990, with a 21-percent increase in China's exports to the United Kingdom and a 16-percent increase in UK exports to China.

China's Trade With the EC-4 [1]



Source: UN Trade Data
[1] United Kingdom, Germany, France, Italy
* Commodity breakdown not available.

Appendix C: Measures Adopted To Strengthen Central Control Over China's Trade Sector, 1988-91

Over the last few years, Beijing has reasserted central authority over trade. The following chronology outlines some of these controls:

Jan 88	Beijing requires import licenses for 53 commodities, according to article in the Chinese press published in May 1990. The list includes steel, lumber, rubber, petroleum, wool, wood pulp, sugar, plywood, civil aircraft, electronics, instruments, automobiles, televisions, camcorders, and processing equipment. The commodities reportedly account for 45 percent of China's total imports. The Ministry of Foreign Economic Relations and Trade (MOFERT) will issue licenses for 16 categories; authorized provincial and municipal branches of MOFERT may issue licenses for the other categories. For purchases not specified in the state import plan, units applying for licenses must obtain consent from the Bank of China to use their foreign exchange. If the desired import is produced domestically, the unit must present documents from the ministry producing the substitute certifying that an import is required.
Jan 88	Beijing announces list of 173 products requiring export licenses. MOFERT must issue the licenses for 29 commodities, primarily resources, price-sensitive commodities that have a limited foreign market, or products subject to foreign quotas. MOFERT offices in port cities may issue licenses for 62 commodities, primarily animal products. Provincial and municipal branches of MOFERT issue licenses for 82 commodities.
2 Feb 88	Beijing implements new administrative rules governing the registration and testing of foreign drugs in China.
29 Apr 88	The Ministry of Machine-building and Electronics Industry (MMBEI) approves 100 products developed by the aeronautics industry as import substitutes, in effect banning imports of the products.
12 Aug 88	Beijing raises duties on imports of color televisions and motorcycles to over 300 percent.
15 Sep 88	Beijing doubles the customs duties on imports of consumer appliances--such as washing machines, radios, and cassette players--to 100 percent.
22 Sep 88	China recentralizes control over silk imports and exports.
1 Jan 89	MOFERT bans exports of copper, nickel, aluminum, platinum, yellow phosphorus, and their alloys. In addition, Beijing adds 16 items to the list of commodities that

require export licenses: newsprint paper, bone dust, polystyrene, polypropylene, ABS resin, chromium ore, molybdenum ore, ferrochrome, ferromanganese, magnesium metal, manganese metal, methylbenzene, dimethylbenzene, rubber, salted pine mushrooms, and Chinese medicinal herbs.

14 Jan 89	The China Tobacco Import and Export Corporation requires import licenses for cellulose acetate filter tips used in manufacturing cigarettes.
25 Jan 89	MOFERT sets up a new body, the Import and Export Permit Administration, to tighten control over the granting of import and export licenses.
Feb 89	Beijing raises import tariffs on 45 items and reduces rates on two items; also reduces export tariffs on silk and adds four nonferrous metal products to the list of nine export goods that require export tariffs.
1 Feb 89	Beijing centralizes control over pesticides production and sales.
1 Feb 89	MOFERT announces plans to reduce by one-third the number of corporations authorized to import wool in order to curb competition for imports that had bid up purchase prices.
10 Feb 89	Beijing designates China National Ferrous Metals Company sole agent for importing cold-rolled steel, carbon-sintered steels, tin-coated steel, and zinc-coated steel sheets.
20 Feb 89	Beijing announces that the importation of foreign cigarettes and liquor will be banned.
16 Mar 89	Beijing hikes duties on imports of refrigerators and refrigerator components.
19 Mar 89	The State Planning Commission announces an import quota system for timber imports and that purchases are to be reduced 40 percent; quotas are to be allocated to local governments, which can then determine what kind of timber they wish to buy.
6 Apr 89	Li Peng announces that the importation of all luxury cars is banned.
6 Apr 89	Beijing announces that no additional joint ventures producing canned beverages will be authorized, and that import licenses for canned beverages will no longer be granted.

24 Apr 89	Beijing imposes strict controls over the importation of color television components and levies a special consumer tax on domestic TV sales.
26 Apr 89	Beijing strengthens inspection, approval, and management of imports of electromechanical products to encourage the substitution of domestic products.
1 May 89	Beijing requires quality licenses for imported products that involve safety, public health, and environmental protection, including, automobiles, motorcycles, motorcycle engines, refrigerators, refrigerator compressors, air conditioners, air conditioner compressors, color television sets, and kinescopes.
14 May 89	Guangdong Province bans imports of cigarettes, alcohol, cosmetics, canned foods, frozen fish, meat, fruit, candies, biscuits, vegetables, clothing, shoes, scented soap, shampoo, beverages, household electrical appliances, and plastic daily essentials.
Jun 89	Guangdong officials confirm that restrictions exist on the importation of electric power generating equipment.
1 Jun 89	MOFERT creates the Plywood Import Coordination Group consisting of nine corporations with the exclusive right to import plywood. Only three among the nine can participate in price negotiations.
6 Jun 89	Beijing announces exports of copper, zinc, lead, manganese, iron, and nickel must be reported to the China Nonferrous Metals Import and Export Corporation for examination and approval.
10 Jun 89	Beijing requires export licenses for six metal ores: copper, zinc, lead, manganese, iron, and nickel, with approval granted by one of two central bodies.
27 Jun 89	MOFERT empowers the Plywood Import Coordination Group to negotiate and sign all contracts for the importation of plywood.
4 Jul 89	Beijing requires import licenses for purchases of refrigerators, air conditioners, and video recorders.
13 Jul 89	MOFERT extends central management to 13 kinds of imports ("Category 1 goods") to control competition among importers. Products that may be imported only by state-owned specialized foreign trade corporations include grains, sugar, steel, fertilizers, crude and refined oil, rubber, timber, polyester fibers, tobacco, cotton, pesticides, and farm use plastic sheeting. Beijing announces the formation of "import coordination groups" to unify negotiations with foreign suppliers over import prices for

other controlled products ("Category 2 goods.") The products in this category include: wool, wood pulp, plywood, craft paper, corrugated paper, cigarette filters, chemical materials, scrap ships, and TV tubes.

22 Jul 89	Beijing further recentralizes imports of canned drinks, imposing 40-percent tariffs on imports of materials used in the production of pop-top cans. In addition, government institutions, mass organizations, and enterprises are prohibited from using public funds to purchase canned drinks.
24 Jul 89	Beijing requires import licenses for 22 medicinal products and export licenses for seven traditional Chinese medicinal products.
25 Jul 89	MOFERT revokes the import rights of seven wool importers, requiring representatives from the companies to form an import coordination group to conduct unified negotiations.
1 Aug 89	MMBEI bans the importation of 20 electronic and machinery products, including computer hardware, TV sets, tape recorders, video equipment, VCR units, and integrated circuits. The ministry also restricts imports of assembly lines for televisions, tape recorders, fiber-optic and microwave communications equipment, printed-circuit boards, and other electromechanical products.
4 Aug 89	Beijing adds 106 goods in 44 different categories to the list of items subject to inspection.
11 Aug 89	Beijing raises import duties on six items: coffee, syrup, vacuum cleaners, electronic games, cosmetics, and soap and levies export duty rates of 50 percent against lead and zinc exports.
22 Aug 89	Beijing requires export licenses for computers and peripheral equipment.
22 Aug 89	The State Council reportedly issues a secret directive that future contracts for telephone switches be reserved exclusively for Siemens (Germany), Alcatel (France), and NEC (Japan), in effect banning US companies. Information about the directive is leaked to a US telecommunications firm and subsequently published by a Western business journal in late 1990.
28 Aug 89	Beijing imposes new standards for the inspection of guidelines for TV imports.
1 Sep 89	Beijing increases tariff levels for various imports: medical instruments, scientific research apparatus, medicines, drugs, and perfumes are subject to 20-percent tariffs;

	household appliances (excluding VCRs), cameras, watches, bicycles, textile products, and cosmetics 100 percent; VCRs and motorcycles 150 percent; cigarettes, liquor, and limousines, 200 percent.
21 Sep 89	Beijing limits the right to export canned mushrooms to 18 approved entities.
Oct 89	China Animal and Plant Quarantine Headquarters imposes strict controls on imports of all tobacco leaf as a result of the detection of live tobacco blue mold on a shipment of Greek oriental tobacco. The regulation is not publicized.
23 Oct 89	Beijing publishes a list of 148 varieties of import commodities subject to inspection under a new commodity inspection law to be implemented on 1 May 1990.
26 Oct 89	Guangdong Province establishes minimum export prices for 29 goods, including lithopone, yuanming powder, potassium permanganate, cassia, cassia oil, paper products, cattle hides, feather and down, rattan products, black wood furniture, red bricks, sea sand, fresh water sand, canned fish, soy sauce, lychee, mandarin oranges, shelled peanuts, sesame, dried rice vermicelli, blanched peanuts, electric fans, fluorescent lamp stands, glazed wall tiles, pocket knives, padlocks, plastic products, mosaic, and precious ink stone.
4 Nov 89	The State Administration of Technology Supervision requires three levels of approval for imports of measuring devices: design approval, import approval, and inspection.
28 Nov 89	Beijing centralizes exports of tungsten, giving sole trading rights to three corporations.
1 Dec 89	Beijing raises import tariffs on film for medical and scientific uses on and certain printed circuits, eliminates export duty on prawns, and introduces an export tax of 50 percent on tin and tin concentrate.
15 Jan 90	Beijing raises tariffs on consumer goods such as coffee, sweetener, cosmetics, soap, electronic games, and small vacuum cleaners.
17 Jan 90	The Ministry of Agriculture stipulates that all organic and inorganic fertilizers, soil conditioners, and plant growth-regulating agents must be inspected and registered prior to importation.
25 Jan 90	Beijing reduces import tariffs on cattle hides and raw materials for tire production, and eliminates a 50-percent import regulatory tax on television picture tubes.

13 Feb 90	The State Planning Commission approves new import restrictions on building materials such as marble, granite plates, certain types of glass, plastic carpeting, plastics, glass fiber, flax or cotton wallpaper, wall or floor bricks, plaster stone plates, and aluminum alloy doors and windows.
22 Feb 90	The State Council promulgates regulations requiring MOFERT to submit applications for import and export of 20 types of materials to the Ministry of Materials.
24 Feb 90	Beijing recentralizes exports of paraffin wax.
26 Feb 90	Beijing bans exports of yellow phosphorous and polyvinyl chloride.
Apr 90	Beijing bans the importation of small-scale electric power-generating equipment.
May 90	Beijing requires quality licenses from the State Administration of Import and Export Commodity Inspection for nine additional imported commodities: automobiles, motorcycles and their engines, refrigerators and air conditioners and their compressors, television sets, and kinescopes.
1 May 90	Beijing increases the number of products subject to export licensing from 173 to 185. Additional products include canned broad beans and asparagus, walnuts, sorghum, rabbit meat, cotton liners, silicon-manganese alloys, and certain pharmaceuticals.
1 Jun 90	Beijing raises the range of import tariffs on certain film-developing chemicals from 25 to 35 percent to 80 to 100 percent and reduces the export tax on certain ferroalloys from 50 to 20 percent.
Aug 90	The Ministry of Chemical Industry announces it will limit the amount of fertilizer imported and require an import license for each purchase.
1 Sep 90	Beijing raises duties on 11 items, including chemicals, pesticides, and pharmaceuticals. These increases followed lobbying by Chinese manufacturers who faced growing inventories of chemicals because sales to the domestic market dropped as a result of the economic slowdown. Tariffs on metal containers for compressed or liquified gas were raised from 12 to 17 percent to 50 to 70 percent, and those on ultrasonic equipment were raised from 12 to 17 percent to 25 to 35 percent. The tariffs on certain optical lenses were reduced from 30 to 40 percent to 12 to 17 percent.

Oct 90	Beijing increases tariffs on seven chemicals, pesticides, and medical instruments.
20 Nov 90	The Customs Tariff Commission of the State Council raises duties on seven imported commodities, including soybean oil, sesame oil, rapeseed oil, palm oil, palm kernel oil, and coconut oil. The change is undertaken to raise prices on imported goods, which were lower than domestic vegetable oil prices.
10 Jan 91	The Customs Tariff Commission announces increased import tariffs on nine commodities to promote industrial production. The products include air conditioners, walkie-talkies, pagers, and sorbitol. Tariffs are simultaneously lowered on 40 imported commodities, including chemical fertilizers and some raw materials related to agricultural and industrial production.

STATEMENT OF JOSEPH MASSEY, ASSISTANT UNITED STATES TRADE REPRESENTATIVE FOR JAPAN AND CHINA, OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

Mr. MASSEY. Thank you very much, Mr. Chairman. I am pleased to have the opportunity to testify before the Subcommittee this morning. In doing so, I would like to focus on what the Administration is doing to improve United States access to the Chinese market, and the potential effect that rescinding or conditioning most-favored-nation (MFN) tariff treatment to China might have on our efforts.

My colleague, Mr. Wiedemann, will address a number of the other concerns the Administration has in the area of human rights, foreign policy, etc.; but I want to focus on trade, if I may, and to argue that our trade with China is not an issue between the Administration and Congress. The Administration and Congress share the goal of open markets in China. The issue is whether that goal is helped or hurt by no or conditional MFN.

RESCINDING OR CONDITIONING MFN TARIFF TREATMENT TO CHINA

Since 1980 there has been change for the better in China's economic systems and in its outlook on the world. We still have serious problems. U.S.-China trade has grown eightfold, from $2.3 billion in 1979 to over $20 billion in 1990. The United States is now China's third largest trading partner and its largest export market. China is our tenth largest trading partner, up from 15th in 1981. In 1990, the United States exported $4.8 billion to China, despite China's austerity program. Over 1,000 U.S. firms have made commitments to invest over $4 billion in China itself and another $5 billion in Hong Kong, related primarily to China trade.

These commercial relations with the United States have exerted positive influences on China's business and economic practices. Since 1980, China has shifted away somewhat from total reliance on a strongly centralized economy; has shown great tolerance for experimentation, including limited use of market mechanisms in its domestic economy and some gradual decentralization and liberalization of foreign trade practices; and China has begun to participate in a global trade economy.

Since 1988, however, China has skewed its trade policy into a more protectionist mode. As a result, we and many of China's trading partners now have a substantial and growing deficit with them. China's barriers to imports take a variety of forms and cover a broad spectrum. China requires import licenses on a significant number of products and excessive inspection standards and reviews. Import bans and quotas cover products, ranging from electronic equipment and machinery to timber and grains.

Under the 1988 austerity program that I mentioned, China expanded centrally managed planning, fixed import prices and quotas covering about two-thirds of its trade, and unilaterally hiked tariffs on many items, including items of interest to the United States

On the textile front, Chinese companies have used false country of origin documentation to transship textiles and apparel to the United States through third countries.

In the field of intellectual property, China's policies, laws and practices—the whole intellectual property regime—does not provide adequate and effective protection for U.S. authors, software developers, and inventors.

To deal with these problems, Mr. Chairman, the Administration has taken a number of positive and aggressive steps. We launched in May a broad market access initiative, and in April USTR identified China as one of the three priority foreign countries under the special 301 provisions of the 1988 Trade Act. Two weeks ago, I led a U.S. Government delegation to Beijing for meetings with senior Chinese officials on market access and intellectual property issues.

We continue to press the Chinese with all the means at our disposal, and the Chinese continue to sit and negotiate with us. They do that because they have an incentive to do so under the framework of our bilateral relationship, and MFN underpins that relationship.

Mr. Chairman the loss of MFN would do damage to a number of U.S. economic interests. First, it would hurt our businesses and consumers here. Tariffs on the 25 most important U.S. imports from China would rise from their present average rate of about 8.8 percent to an average rate of about 50.5 percent. Some tariffs on imports from China could rise tenfold. These increases would mean higher prices for lower end Chinese goods. Larger importers and retailers could weather that, but smaller companies, dependent on Chinese suppliers, might not. If business would suffer, so would the consumer, especially low-income Americans, who are primarily consumers of low-cost Chinese products.

In China itself, our interests would also suffer. U.S. joint ventures in China exporting to the United States would also be subject to non-MFN U.S. tariff rates, raising the risk of investment loss in an already challenging operating environment.

For our exporters to China, the damage would be real as well. The granting of MFN status is reciprocal. If the United States rescinds China's MFN trading status, China would rescind ours, and U.S. exporters will be subject to prohibitive import duties under China's non-MFN tariff schedule. Some of our major U.S. exports at stake would include cereals, which amounted to $512 million in exports in 1990; aircraft and aerospace equipment, $749 million in 1990, but an average at $500 million over each of the past years; fertilizer, $544 million in 1990; cotton yarn and fabric, another $281 million; wood and wood pulp, $238 million; electrical machinery, $264 million; scientific equipment, $227 million; chemicals, $273 million; all were at or over $200 million a year.

These market shares lost to U.S. producers would not be easily regained. Foreign competitors not hampered by non-MFN status would be quick to exploit our departure.

Of the many countries worldwide granting MFN status to China, we are the only country considering rescinding it. Mr. Chairman, the loss of MFN would also—I, as a trade negotiator believe—hurt our ability to negotiate the opening of Chinese markets. MFN has enabled us to engage Chinese leaders in consultations on bilateral and multilateral issues important for U.S. economic and commercial interests, even during periods of tension. For that reason, it is not a greater lever to withdraw MFN, Mr. Chairman. It seems to me, without MFN China may lose perhaps half its exports to us, which it will try to make up in time in Japan and Europe. We may lose almost all our exports to China, which we may not make up at all. That doesn't leave us with much room or much leverage in negotiation.

We would do better to use our trade leverage in specific areas rather than all at once, which would happen with the denial of MFN. Conditioning of MFN has almost the same effect on our business exports and trade negotiation as does rescission of MFN. A threat of disruption in trade, for reasons unconnected with Chinese trade performance, puts our companies at a disadvantage against other foreign competition, and makes the Chinese reluctant to close with us in market access, intellectual property, or other trade negotiations.

Finally, and I think this is key, Mr. Chairman, loss of MFN would probably not influence China to reform but rather retard economic liberalization. The burden of denial of MFN would fall on the primary engine of economic reform in China—the economies of the southern and coastal provinces. Loss of MFN would hurt this most progressive part of China's economy; deal a severe blow to Hong Kong as well; and, in the process, strain the commercial and personal interchanges between individual American and Chinese businesses and people that can help liberalize trade practices in China further.

Thank you very much, Mr. Chairman.

[The prepared statement of Joseph A. Massey follows.]

PREPARED STATEMENT OF JOSEPH A. MASSEY

Continuation of Most Favored Nation (MFN) trading status for the People's Republic of China has broad policy implications for our trade and foreign policy relationship with China. At USTR, our focus is on trade and market access. I would like to focus on what we are doing to improve this market access and the potential effect that discontinuing China's MFN trading status would have on our efforts.

Since 1980, there has been change for the better in China's economic systems and its outlook on the world, but there are serious problems.

THE BILATERAL TRADE RELATIONSHIP

Formal establishment of bilateral trade relations and the reciprocal granting of MFN trading status occurred in 1980 with the signing of a U.S.-China trade agreement. Since then, the

U.S.-China trade and economic relationship has grown into significant commercial ties between the two countries that have helped to bring China into the global trading system. Viewed in easily quantified terms, such as trade volume, the evolution of the bilateral trade relationship is striking.

Over the last decade, U.S.-China two-way trade has increased almost 770 percent, from 2.3 billion dollars in 1979 to over 20 billion dollars last year. Over the last five years, China has become a significant force in regional and world trade. Foreign trade as a percentage of China's GNP rose from 14 percent in 1981 to 33 percent in 1990. The U.S. is now China's third largest trading partner and its largest export market. China is the United States' tenth largest trading partner, up from fifteenth in 1981. Americans imported over 15 billion dollars worth of goods from China in 1990.

The United States exported 4.8 billion dollars in goods to China in 1990, despite a severe austerity program that cut drastically into Chinese global imports in 1990. China continues to be a major purchaser of U.S. wheat, aircraft, timber, chemical fertilizers, and computers and other electric products. Over 1,000 American companies have committed investments of more than 4 billion dollars to long-term, U.S.-Chinese joint ventures. Approximately 500 American companies have representative offices in China conducting liaison and trading activities, and Beijing is now home to one of the newest American Chambers of Commerce abroad. This American business presence in China is augmented by the American Chamber of Commerce in Hong Kong, one of the largest in the world, with over 900 members, many of whom are involved in trade with China.

Less obvious but equally striking is the positive influence that increased commercial relations with the U.S. has exerted on China's business and economic practices since the early 1980s. Over the last decade, China shifted perceptibly away from total reliance on a strongly centralized economy with a high incidence of planned international trade and began showing a greater tolerance for experimentation. This included limited introduction of some market mechanisms into the domestic economy and a gradual decentralization and liberalization of foreign trade practices.

Greater exposure to U.S. business practices, through both joint-venture activity and normal merchandise trade transactions, has led to changes in Chinese perceptions of how to conduct business. Many Chinese firms, including some state enterprises, began actively seeking to acquire U.S. business management techniques.

Also during this period, China began paying serious attention to establishing a body of laws aimed at protecting and encouraging international business relationships. China codified laws on contracts; passed its first foreign investment law and tax laws, and enacted its first patent and trademark laws. China also began to seek entry into international organizations such as the GATT and the World Intellectual Property Organization (WIPO). In the space of only ten years, China emerged from self-imposed isolation to become a participant in the global trading community, aware of the community's rules and increasingly sensitive to its criticisms. This transformation is due in large part to the many channels of communication that opened up as a result of China's receiving MFN trading status in 1980.

Over the last two years, however, China's trade policies have skewed the bilateral trade relationship increasingly in China's favor. As made clear by a growing chorus of criticism in the United States, China's policies have made the relationship less mutually beneficial, as China has intensified and proliferated barriers to imports, making it more difficult for U.S. firms to gain fair access to its domestic markets. In 1990, China was the only major market for U.S. goods and services in which sales experienced an actual and appreciable decline. The United States now runs a substantial, and growing, trade deficit with China. But, more important than the existence of the deficit is the fact that the deficit reflects a decision to resort to protectionist measures.

China's barriers to imports take a variety of forms and cover a broad spectrum. These include the following: China requires import licenses for a wide range of products; quality licenses for items defined as affecting the environment, health and public safety; and excessive inspection standards and reviews for certain imports. Import bans and centrally-managed plans cover products ranging from selected electronic equipment, production machinery and assembly lines to timber and grains. Under the 1989 austerity program, centrally-managed or "guidance" planning, which Beijing uses to fix import prices and quotas, expanded to cover an estimated two-thirds of China's trade. Tariffs and duties have also been raised on numerous items, such as scientific apparatus, cosmetics, selected processed foodstuffs and consumer appliances.

Chinese textile and apparel transshipments to the United States through other countries, in violation of our bilateral textile agreement, is another substantial trade problem we have with China. The U.S. Customs service has done a superb job of detecting and detaining Chinese shipments entering the United States under false country of origin documentation. China has taken some significant steps to end this fraudulent practice; unfortunately, fraudulent transshipments continue. We are working with those countries through which such transshipments occur to strengthen enforcement. We expect that China will make greater efforts to deal with this important issue; but, if China is unable or unwilling to do so, we will take the measures necessary to stop this practice.

Merchandise trade and the deficit tend to be highly visible, often overshadowing another contentious aspect of the U.S.-China relationship, the inadequate protection given foreign intellectual property rights within China. Despite the gains to be had from the legitimate acquisition of intellectual property from the United States and others willing to share, China remains one of the world's premier violators of others' intellectual property rights.

China's predatory behavior is a source of great concern to us. Many in the United States are frustrated with China's slow, and as yet, inadequate progress in protecting the intellectual property rights of U.S. authors, composers, software designers, and others who create and own intellectual property. Many U.S. business and intellectual property associations have complained about China's poor record in protecting rights for copyrights, trademarks, patents and trade secrets owned by Americans.

We have been actively pressing the Chinese to make changes that will give Americans access to Chinese markets and protect their intellectual property rights. Over the last six months, we have met with senior Chinese trade and intellectual property officials on at least five occasions; most recently in Washington

April 10-12 and again on May 21. In a demonstration of our resolve to see progress in intellectual property issues, USTR, on April 26, identified China as a priority foreign country under the special 301 provisions of the 1988 trade act. The special 301 investigation was launched on May 26 and, from June 11- 15, a United States Government delegation, headed by Assistant USTR for Japan and China Joseph A. Massey, was in Beijing meeting with senior Chinese officials on intellectual property and market access issues.

We continue to press the Chinese with all the means at our disposal, and the Chinese continue to be willing to sit down and negotiate with us because they have an incentive to do so under the framework of a stable bilateral relationship. MFN underpins this relationship. We believe, therefore, that discontinuing MFN reduces our leverage in our market access negotiations and ultimately hurts our trade interests for the following reasons.

IMPLICATIONS FOR U.S. DOMESTIC COMMERCIAL AND CONSUMER INTERESTS

American importers and retailers would suffer serious business disruptions should China not continue to receive MFN tariff treatment. Loss of MFN duty rates would increase tariffs on imports from China as much as ten-fold, essentially bringing back the protectionist tariff levels of the 1930s Smoot-Hawley Tariff Law for Chinese goods. For example, tariffs would rise from 6 percent to 35 percent on certain sweater imports, from 12 percent to 70 percent on dolls, and from 14 percent to 110 percent on watchbands. In general, tariffs on the 25 most important U.S. imports from China would rise from the present average tariff rate of 8.8 percent to an average tariff rate of 50.5 percent.

Large duty rate increases would mean higher prices for Chinese goods in the U.S. market. Rather than attempt to market goods from China at substantially higher prices, many importers would simply be forced to look for alternative sources of supply. Larger importers and retailers would likely weather the difficult and costly adjustment. But numerous small companies dependent on Chinese suppliers might find themselves strapped for suppliers and, ultimately, forced out of business. Thousands of retail jobs could be at risk.

Denial of MFN trading status for China would also mean that U.S.-invested joint ventures located in China would be subject to non-MFN tariff rates. Loss of MFN could impede sales for those joint ventures exporting goods to the U.S., compelling them to consider other markets and raising the risk of investment loss in an already challenging operating environment. Many of the American partners in these joint ventures made major commitments in China over the years, based on the assumption that a long-term presence would be to each nation's mutual benefit based on an economic relationship of increasing stability.

Change in China's MFN status would also result in substantial costs to American consumers, especially less affluent Americans who are the primary consumers of low-cost Chinese products. China supplies 48 percent of the toys sold in the United States, 14 percent of the imported apparel, 15 percent of the footwear, and a rapidly increasing volume of electronic products. Estimates are that, on average, non-MFN tariffs would increase landed costs of Chinese products by approximately 40 percent. It is likely that a large percentage of the increased cost of these products will fall on the consumer. A reduction in imports from China in some categories of goods might lead to consumer shortages and higher retail prices in the near and intermediate term.

IMPLICATIONS FOR U.S. EXPORTERS TO CHINA

The granting of MFN status is reciprocal. If the United States decides not to renew China's MFN trading status, it is a certainty that Beijing will respond by rescinding MFN tariff treatment for the United States. This would severely disadvantage U.S. exporters, who would be subject to prohibitive import duties under China's non-MFN tariff schedule. Major U.S. exports at stake include:

- cereals (512 million dollars in 1990);
- aircraft and aerospace equipment (China has imported an average of close to half a billion dollars worth of U.S. aircraft in each of the last five years, 749 million in 1990);
- fertilizer (544 million dollars) ;
- cotton yarn and fabric (281 million dollars);
- wood and wood pulp (238 million dollars);
- electric machinery (264 million dollars);
- scientific equipment (227 million dollars);
- chemicals (238 million dollars);

Substantially higher tariffs on U.S. exports to China would effectively exclude U.S. exporters from China's domestic markets. The costs would be devastating to U.S. companies attempting to compete with other foreign vendors for market access in China. Over the last decade, many of these companies have invested heavily in time, money and human resources in building viable businesses in China and in cultivating commercial and professional contacts in China. Other foreign vendors competing in identical or similar product lines would be the beneficiaries since they would not be laboring under the burden of prohibitive import duties. The position of U.S. firms operating in China without MFN status could be made even more difficult by official spending constraints imposed by Beijing on all purchases involving foreign exchange transactions.

Market share thus lost would not be easily regained. In order to maintain any market position in China, U.S. firms would constantly be compelled to develop new markets in areas where they had initial technological advantages and little real competition. Foreign competitors, not hampered by non-MFN status, would be quick to exploit such markets. Under such conditions, U.S. firms would find themselves serving as little more than pathfinders for competitors seeking entry into new China markets, while enjoying only limited benefits from their efforts. President Bush has consistently made American trade and competitiveness a top priority of his administration. Denial of MFN status for China would undoubtedly undermine that important policy objective.

IMPLICATIONS FOR U.S.-CHINESE GOVERNMENT COMMERCIAL RELATIONS

MFN has been an important tool for helping the United States to achieve economic policy objectives with China. The significant role played by bilateral trade and U.S. investment in China's economy have enabled the United States to engage Chinese leaders in consultations on bilateral and multilateral issues important for U.S. economic and commercial interests, even during periods of extreme tension. For example, on the multilateral side, we have used China's application for GATT membership as a means of urging China to continue its market-oriented reforms and to accept international trade norms. We have also used China's observer status in the recent TRIPS negotiations to nudge China closer to conforming with international standards of intellectual property protection and to accelerate China's joining international intellectual property conventions, such as Berne. These are long-term processes that are of enormous importance for U.S. businesses and the continuation of an open and orderly international trading system. Our ability to continue to exert a positive influence on Beijing for many multilateral issues would be virtually nil if we were to effectively sever our bilateral trade relationship with China.

The existence of a continuing stable commercial relationship with China has enabled us to engage China on a variety of bilateral trade issues, as well. As I noted earlier, improving market access for U.S. business is a top trade priority. Because China is not a GATT member and not bound by GATT trade disciplines, it is important to have a lever that enables us to engage the Chinese in a meaningful dialogue on trade issues. MFN gives us that leverage.

I would like to reiterate: one of our highest priorities is to secure from the Chinese Government commitments to improve intellectual property rights (IPR) protection for U.S. works within China. U.S. software producers and other high-tech companies encounter serious IPR problems in China. Bilateral consultations on these issues have been difficult and progress slow; as a result, the United States Trade Representative has identified China as a priority foreign country under the special 301 provisions of U.S. trade law on April 26, 1991. A six-month special 301 investigation is now in progress. Although this remains an extremely contentious area between the U.S. and China, the stability of our bilateral relationship has provided the incentive necessary for continuing consultations.

We continue to have serious concerns about other Chinese trade practices and obstacles to foreign investment. These include mandatory export quotas for foreign-invested enterprises, import substitution policies, restrictive quality requirements for and quotas on imports of consumer goods, and protectionist regulations that deny U.S. service industries fair access to the Chinese domestic market.

We are also concerned about all these problems, as well as about the growing U.S. trade deficit with China that has resulted from market access problems, and China's current policy of economic retrenchment. But, removing China's MFN status would not resolve these problems. To the contrary, withdrawing MFN would undermine the entire bilateral relationship and result in a serious loss of leverage that would make it exceedingly difficult for the United States to obtain any concessions from China on these and other trade and commercial issues. We are more likely to make progress in resolving these difficulties within the framework of a sound commercial relationship, for which MFN is essential, than in a deteriorating relationship that would result if we withdraw MFN.

IMPLICATIONS FOR THE U.S. AS AN INTERNATIONAL TRADE LEADER

Damage to America's reputation as a reliable trade partner may be another consequence of withdrawing MFN status from China. As President Bush has stated, our economic competitors will not join us in denying MFN status to China. Although approximately 100 nations grant China MFN trading status, we are the only country considering rescission of MFN. Other Chinese trading partners, including several Asian countries, have urged that China's MFN status be retained because their economic interests would be adversely affected by a denial. They are concerned that a denial would hinder China's integration into the regional economy, and they see such an integration as important for political stability in Asia.

THE HONG KONG-U.S. TRADE RELATIONSHIP

The extensive Hong Kong-U.S. trade relationship would suffer greatly from a denial of MFN status for China. Hong Kong's economic prosperity is inextricably linked to the growth of trade in China's southern provinces, which, economically speaking, are the most liberal and progressive areas of China precisely because of their close relationship to Hong Kong. China is Hong Kong's largest trading partner and Hong Kong companies are the largest investors in China, employing about 2 million people in Guangdong Province alone. Thus, many of the most successful "Chinese" exporters are actually businesses based in Hong Kong.

Reexports of Chinese goods through Hong Kong underpin Hong Kong's overall trade performance. The total value of Chinese goods reexported through Hong Kong, which grew 20 percent in 1990, accounts for 39 percent of Hong Kong's total trade and 42 percent of Hong Kong's total reexport trade. The value of Chinese goods reexported to the U.S. in 1990 was 10.5 billion dollars, accounting for about 34 percent of Hong Kong's reexports of Chinese-origin goods. Most of the 900 American firms based in Hong Kong depend directly or indirectly on China trade.

The economic costs that Hong Kong would suffer as a direct result of China's losing MFN status are staggering. The Hong Kong Government estimates that, in the first year alone, reexport trade in Chinese goods could fall as much as 44 percent from current levels (affecting trade flows totalling as much as 4.6 billion dollars), resulting in an 8.7 percent drop in Hong Kong's total reexport trade. The change in China's MFN status would cost over 43,000 jobs in Hong Kong's import/export sector, almost 1.5 percent of Hong Kong's total labor force, and result in direct revenue losses of about 1.2 billion dollars. Hong Kong's GDP growth could be curtailed by as much as 1.8 percent.

CHINESE ECONOMIC REFORM

In China itself, a disproportionate burden of the MFN denial will fall on the primary engine of economic reform in China--the economies of the southern and coastal provinces. In Guangdong Province, for example, over 40 percent of the value of the province's industrial output goes for export and over half of that is destined for U.S. markets. Managers of Guangdong's export-oriented ventures advocate faster economic and commercial reform because their profits depend on their successes in integrating China into the world economy and making Chinese goods competitive in world markets. Most of these ventures are either joint ventures, usually with American or Hong Kong partners, or province-owned and controlled; they are rarely associated with China's state sector economy, controlled by the central government in Beijing. The regional export-oriented ventures of the southern and coastal provinces are examples of the benefits that market-oriented practices bring to the Chinese economy. Loss of MFN tariff treatment would cripple this most progressive, vibrant part of China's economy. It would also put severe strains on those very commercial and personal interchanges between American business people and their Chinese counterparts that have helped to liberalize trade practices in China over the past decade.

CONCLUSION

By maintaining a stable commercial and economic relationship, we help those in China who embrace our market and trade principles to quietly advance their and our cause. Terminating MFN will have adverse consequences. China should remain a significant market for our products. Those who engineered the violence of June 1989 in China and the continuing repression are unlikely to bear the economic costs associated with a denial of MFN. Instead, those who suffer will be American businesses and their employees, American consumers, the people of Hong Kong and the progressive areas in China.

Senator BINGAMAN. Thank you very much. Mr. Wiedemann, please proceed.

STATEMENT OF KENT WIEDEMANN, DIRECTOR, OFFICE OF CHINA AND MONGOLIA, U.S. DEPARTMENT OF STATE

Mr. WIEDEMANN. Thank you very much, Mr. Chairman. It is indeed an honor for me to be able to appear before your Subcommittee this morning and address this important issue. I am, in fact, going to be picking up on the last remarks of Mr. Massey, which focused principally on how most-favored-nation (MFN) trading status or nondiscriminatory trade status has contributed to the process of reform in China, particularly over the past decade or so; and, indeed, how it will continue to support that process in the long run.

HOW MFN HAS AFFECTED ECONOMIC REFORM IN CHINA AND WHY IT SHOULD CONTINUE

With Congress now considering renewal of China's MFN trade status, I would like to direct my remarks to the importance of MFN, and of China's relations with the United States, and to the process of continued economic reform in China. When the United States normalized relations with China in 1979, Beijing had just embarked on an ambitious and what was truly becoming a dramatic decade of economic reform.

China's decision to open its doors to the outside world reflected more than just a realization that the socialist pattern of development that it followed wasn't working. China's leaders recognized that access to the U.S. market and to U.S. advanced technology management expertise and investment could accelerate. China's modernization program, based on a fundamental shift from an inward-looking, "iron rice bowl," position of self-sufficiency and egalitarianism to an outward-oriented policy, which emphasized export development, foreign investment and allowing for income differentials to provide economic incentive, brought about dramatic results.

Our granting of MFN in China in early 1980 was an important factor in accelerating China's opening to the West. MFN has served as an increasingly powerful force to integrate China's economy into the global market economy, and to diminish the centripetal pull in China toward centralization and state control.

During the decade of the 1980s, China's economy achieved truly dramatic results, in spite of China's policy of economy retrenchment launched in 1988, and the negative international fallout China brought upon itself as a result of the massacre in Tiananmen Square in 1989.

Real gross national product increased at an average rate exceeding 8 percent per year. In the decade from 1978 to 1988, growth rate exceeded

10 percent per year. This growth rate is commensurate with that of the "Four Asian Tigers"—Singapore, South Korea, Hong Kong, and Taiwan.

Absolute poverty in China receded. In 1981, some 17 percent of rural households fell below the poverty line. By 1988, the latest year for which we have figures, the percentage had dropped to 13 percent, and in agriculture, which was the first sector of the economy to benefit from the reform program, the communes were dismantled. The farmers were free to grow more of what they wanted to sell above quota output in free markets, and to reinvest profits in shops and small industries outside state control.

Industrial enterprises were given far more authority to handle their own affairs, instead of government decisions mandating how much of what goods should be produced and where they should be distributed. A range of goods was permitted to be allocated by market forces. Much of the decisionmaking that was previously made in Beijing was transferred to provincial and local bodies, who were better informed about the local situation and strongly motivated to promote development.

A lively, nonstate sector emerged, accounting for an increasingly higher percentage of industrial output and overall economic activities. The percentage of industrial output produced by state-controlled enterprises dropped from nearly 80 percent in 1980 to about 54 percent in 1990. The rapid growth of nonstate enterprises is ensuring that the relative share of state sector production will continue to decline in the years ahead.

China's exports to the West are booming, as Chinese firms respond to the profit incentive. With total trade of $110 billion in 1990, China now ranks as the 16th largest trading country worldwide, and one of the largest developing country traders. Fully one-fourth of China's increasingly diversified exports are absorbed by the U.S. market.

The reform-driven prosperity and China's unprecedented openness to Western influences brought with them a flood of new ideas, a new demand for political reforms to match those in the economy. China has entered the information revolution, and we believe will never be the same again.

Just as we foresaw in 1979, MFN has played a vital part in building this momentum for change. By making it profitable to produce for export, it generated a tremendous eagerness to absorb Western technology and management methods. Contacts with suppliers of technology, teachers of management, and former investors and buyers have augmented the influx of new ideas.

MFN gave momentum to China's own policy of economic opening to the West. Vast regions of eastern and southern China now depend on export markets. Approximately 15,000 enterprises in South China do export assembly work for Hong Kong, as an example. In Guangdong Province alone, over 2,500 Hong Kong enterprises have established export production facilities.

Foreign joint ventures in China now number over 21,000, with foreign investment commitments of nearly $40 billion. A little more than a decade ago China took pride in its economic self-sufficiency. In 1991, China is a major participant in the global economy.

Provincial officials, who see their positions linked to the economic prosperity of their region, have developed strong vested interests in maintaining good ties with the West. They also have an unprecedented level of influence in Beijing over how the regions are governed.

Take Guangdong Province, again, as an example. Guangdong far outpaced the rest of China in economic growth in 1990, and shows signs of even faster growth in 1991. Guangdong's success has been largely driven by export growth, which accounted for about 32 percent of provincial industrial output in 1990. Exports from foreign invested firms in Guangdong earned $5.5 billion last year. Accounting for 70 percent of total earnings by foreign investment firms in China, Guangdong's economic success has greatly lessened its need to rely on Beijing for investment funding. It has become bolder as a result, resisting attempts at centralization, and continuing at the leading edge of those in China advocating new reforms.

There is no question that the withdrawal of MFN would disproportionately harm Guangdong and other coastal provinces, whose extraordinary growth has been largely due to the very access to the U.S. market that MFN provides. It is difficult to see the moral value in taking a policy step that would destroy the livelihood of millions of innocent workers in China and tens of thousands in the United States; that would lower living standards in what is already a poor country; and that would undercut the very people and forces that promote the reforms we endorse; and that would erode the prosperity and confidence of our friends in Hong Kong, who are already shaken by the uncertainties concerning return to Chinese sovereignty in 1997.

MFN has helped hold back pressure from hard-liners to take China's economy back to the more traditional road of Socialist development and greater state control. Despite the pressure from hard-liners in the immediate aftermath of Tiananmen, hard-liners in the government have not, in fact, succeeded in turning the clock back on economic reform.

Major efforts in China's reform remain, and the effort to continue reform, stalled by Tiananmen, seems to be building again. Senior leaders, including Premier Li Pong, have spoken out recently to continue economic reform, albeit at a slower pace. Even in Beijing, probably the most conservative city in China, there seems to be realization that gains in Guangdong, Fujian, or other dynamic coastal provinces are not necessarily the North's loss.

Others may envy the economic performance of the Southeast, but the trends toward joining rather than fighting the outward looking provinces seems clear. The demonstration effect is a powerful inducement for continued change.

Notwithstanding its cautious attitude on reform, Beijing has taken some significant steps in the right direction of late. These include devaluation of China's currency to bring it more in line with market values; upward

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price adjustments in key food staples and commodities; announcement of plans to reduce and eliminate government subsidies; and efforts aimed at strengthening the legal and tax system.

In the process of pursuing our policy to promote further economic and political change in China, we need to keep in mind that there is no blueprint that provides a guide for how to transform a Socialist commodity economy into one that is fully market-oriented. China and the international community fully expected that there would be zigs and zags along the road to reform. The events of June 1989 have cast a long shadow over that process. What is abundantly clear is that commerce serves as a vital force for economic reform and positive social change in China. It is the primary channel for contact between Americans and Chinese, and for the sharing of ideas and values that contribute to progressive development within China.

MFN should be retained for China without conditions, because it promotes these and other vital U.S. interests. We should not allow the reaction of a small group of hard-line leaders in Beijing to determine whether we keep this vital link to the Chinese people and the Chinese economy in place.

Mr. Chairman, thank you very much.

Senator BINGAMAN. Thank you very much.

Mr. Johnston, I went ahead and introduced you prior to your arrival. If you could summarize your statement, we'd appreciate it. We'll put the entire statement in the record, and we'd be glad to hear from you.

STATEMENT OF RICHARD JOHNSTON, JR., DEPUTY ASSISTANT SECRETARY FOR INTERNATIONAL ECONOMIC POLICY, U.S. DEPARTMENT OF COMMERCE

Mr. JOHNSTON. Thank you very much, Mr. Chairman. I apologize for being late.

I appreciate the opportunity to appear before you today to discuss U.S. trade relations with China. These hearings come at a critical juncture in U.S-Chinese relations, as the renewal of China's MFN status has emerged at the center of congressional and public debate about the U.S. policy toward China. The balance of benefits in our economic relations has, itself, become a prominent factor in that debate.

In my presentation I will attempt to give you my assessment of past trends and future outlook. Let me begin by describing the development of bilateral trade during the past decade very briefly.

HOW U.S.-CHINA TWO-WAY TRADE HAS EXPANDED

The formal establishment of bilateral trade relations in 1980, with the signing of the U.S.-China trade agreement, was followed by a dramatic expansion in two-way trade. Trade between the United States and China increased from $2.3 billion in 1979 to more than $20 billion in 1990. China was our 10th largest trading partner last year, compared to 35th in 1979. Last year the United States surpassed Japan to become China's second largest trading partner.

The U.S. exports to China have fluctuated widely since 1979, largely due to fluctuations in agricultural sales. U.S. exports totalled $4.8 billion last year, a decrease of 16.5 percent from 1989 levels. In recent months, U.S. exports to China have shown some increase—a total of $1.8 billion was recorded for the first four months, representing an increase of 13 percent over the same period of 1990.

U.S. import trade with China has grown almost without interruption, from $592 million in 1979 to $15.2 billion in 1990. In the first 4 months of this year, U.S. imports from China reached $4.67 billion, up 14 percent from January to April 1990 levels.

Since 1979, there has been a parallel growth in U.S. investment in China. Over 1,000 American companies have committed to more than $4 billion in long-term investments, spread among a large number of diversified economic activities. U.S. investment has taken a variety of forms—joint equity ventures, contractual joint ventures, wholly-owned subsidiaries, and joint development of offshore oil resources. The electronics sector has attracted the largest number of U.S. investment projects, followed by a variety of light industrial establishments and food processing, chemicals, resource development projects, tourism, and transportation.

As a result of expanding business activities, approximately 500 American companies set up representative offices in China to conduct liaison and trading activities. In addition, hundreds of American companies in Hong Kong either became involved in or expanded their trade or investment relations with China.

The dramatic growth in the volume of U.S.-China trade has been accompanied by an equally dramatic change in the composition of that trade. For the first several years following normalization, U.S. exports to China dominated, and the United States maintained an annual trade surplus. Between 1979 to 1982, U.S. exports totalled $20 billion, while imports from China were valued at $5.8 billion. During that period, U.S. exports were largely agricultural, with wheat and corn accounting for the major portion—about 50 percent. Since then, sales of U.S. manufactured goods and industrial materials have begun to expand and diversify.

Machinery and transport equipment shipments have risen most dramatically, reaching a peak of $1.94 billion in 1985, or 50 percent of total U.S. exports to China. Since then, these shipments have declined, largely due to competition with European and Japanese competitors, and since 1989, economic retrenchment policies. However, machinery and transport equipment still constitute the most important component of U.S. exports to China, as of 1990. The leading exports in this category were aircraft and parts, specialized industrial machinery, power generating equipment, electrical machinery, and automatic data processing equipment.

Other major U.S. export commodities included fertilizers, wood and plastics, resins, synthetic fibers, and cotton yarn and fabric. Nonagricultural products now comprise about 80 percent of total U.S. exports to China.

Let me move on briefly to describe some of China's barriers to imports that have been a major concern of ours recently.

CHINA'S TRADE BARRIERS

China's barriers to imports take a variety of forms and cover a broad spectrum. I would like to summarize the most significant trade barriers faced by exporters to China.

First, managed trade and lack of transparency. This remains a primary tool of China's national economic and trade policy. It is often promulgated in State Council and other official directives. These unpublished directives, which can effectively exclude certain companies from the market or severely restrict their activity, are not known to the traders they affect, and constitute a severe barrier to trade.

Import licensing requirements. Exporters to China consider import licensing a principal means of import regulation. Imports are denied entry even when they are of higher quality and lower price than domestic substitutes.

Import substitution policies. The Chinese government maintains a list of products for which it deems there are acceptable domestic substitutes. It is often impossible to receive authorization to import an item if the government feels that there is a domestically produced alternative, even though the quality and price of the foreign product may be more competitive.

Import bans, quantitative and other market-limiting restrictions. Most import decisions, regardless of whether or not the import requires a license, are determined at the annual state planning conference. These restrictions are often adopted contrary to market demands.

Standards, testing and certification. China's State Administration of Import and Export Commodity Inspection requires inspection for 148 import categories, a 30 percent increase over prior years. These requirements place a burden on importers that is not placed on domestic producers of comparable products.

Tariffs and other charges. Imported products seeking entry into China's markets faces tariffs of up to 200 percent. From 1988 through late 1990, China raised tariffs on 90 items, mostly consumer products, but also on chemicals, pesticides, and pharmaceuticals, areas where U.S. companies are particularly competitive. The new tariff rates range from 120 to 170 percent. Tariffs were decreased on a much smaller number of items. China also used an import regulatory tax as a separate surcharge over and above applicable tariffs.

Discriminatory customs rates. Particularly disadvantageous to American companies is the customs exemption for imports financed by concessionary loans, which virtually precludes U.S. companies from winning bids based on superior technology, price, and creative financing arrangements.

Government procurement and tendering regulations. Competitive bidding does not take place in the great majority of Chinese Government procurement contracts. Where competitive bidding does occur, there is no transparency in the bidding and decisionmaking process.

Mr. Massey has already covered intellectual property protection and some of the shortcomings there. We have ongoing discussions with the Chinese in that area, including U.S. copyright concerns, so I won't add anything on that.

Investment barriers. China's investment regime, which has always presented obstacles to investment, has recently become even more restrictive. The Chinese Government authorities are demanding compliance with guidelines that permit approval only of "productive" investment—quote, unquote—or other projects that advance policy goals and increase export requirements.

These trade barriers and other impediments have had a serious effect on U.S. exports. Since 1989, leading U.S. exports to China have declined significantly. Of the 13 major product categories in 1990, exports increased in only four. Of the remaining nine, exports were flat in one and declined everywhere from 6 to 84 percent in the remaining eight. Some of these that are of particular concern involve chemicals, chemical fertilizers, wood products, and a number of others.

In the investment area, few U.S. investors have pulled out since 1989, in spite of a more restrictive environment in China. Some existing U.S. investments have been expanded, and a number of new investments have been made. However, U.S. investors' confidence in China has been adversely affected. In 1990, although the number of contracts that U.S. companies signed for new investment was up 17 percent, the total value of new investment fell by 54 percent. Many U.S. firms seeking to sell or invest in China found that 1990 was the most difficult year in recent memory. The trade and investment climate has shown some improvements so far in 1991, with an upturn in China's domestic economy.

WHAT IS THE FUTURE OF U.S.-CHINA TRADE RELATIONS WITHOUT MFN

I mentioned earlier that U.S. exports were up 13 percent. Admittedly, over a reduced base in 1990. What then are the future prospects, the future direction of U.S.-China trade relations? This will depend largely on the outcome of the current debate over United States MFN in China.

There is no doubt that overall two-way trade would suffer should China lose MFN tariff treatment. Chinese imports would suffer most dramatically, since loss of MFN duty rates would increase tariffs on Chinese goods as much as tenfold. In general, tariffs on the 25 most important U.S. imports from China would rise from the present average tariff rate of 8.8 percent to an average tariff rate of between 45 and 50 percent by our calculations.

However, U.S.-invested joint ventures located in China would also be affected, since they would be subject to non-MFN tariff rates as well. Loss of MFN could impede sales for those ventures exporting goods to the United States, compelling them to consider other markets and raising the risk of investment loss in an already challenging operating environment.

In addition U.S. exports would also be affected since it is a certainty that Beijing will respond by rescinding MFN tariff treatment for the United States. This would severely disadvantage U.S. exporters who would be subject to even higher import duties under China's non-MFN tariff schedule; Mr. Massey has already explained how that would affect U.S. exports.

Perhaps, even more important, denial of MFN to China could seriously undermine our efforts to engage China in a constructive dialogue on a wide range of bilateral and multilateral issues important for U.S. economic and commercial interests; a dialogue that has taken place even during periods of extreme tension. For example, on the multilateral side, we have used China's application for GATT membership as a means of pressing China to resume its market-oriented reforms and to accept international trade norms.

On the bilateral side, we have been actively pressing the Chinese to open their market and protect U.S. intellectual property rights. We have used the vehicle of the Joint Commission for Commerce and Trade and other bilateral discussions to achieve this. Over the last 6 months, we have met with senior Chinese trade and intellectual property officials—Mr. Massey having just come back from an important trip—on at least five occasions, and have discussed these major market access and intellectual property issues.

We have also worked with the Chinese Government on the problem of illegal Chinese textile and apparel transshipments to the United States in violation of their agreements, and there's been some progress on that. We continue to press the Chinese, and the Chinese continue to be willing to sit down and negotiate with us, because they have an incentive to do so under the framework of a stable bilateral relationship. MFN underpins this relationship.

IF MFN IS CONTINUED?

If MFN is continued, what do we envision for American exporters and investors?

China's economy has developed largely in cycles over the past 40 years—a period of expansion is followed by periods of readjustment, recovery, and then another expansion. In this cyclical process, the development of foreign trade, especially imports, has proceeded in a corresponding fashion—imports usually decline during the retrenchment period and begin to grow in the recovery period, and increase, sometimes rapidly, in the expansion period.

As China's economy is showing signs of recovery from the recent retrenchment, imports have begun to grow since the final quarter of 1990 and increased 12 percent in the first quarter of this year. As mentioned earlier, China's imports from the United States have also shown increases so far this year.

China's ability to expand imports is supported by its current record level of foreign exchange reserves, estimated at $36 billion as of March 1991, partly resulting from the largest global trade service in PRC history.

Recently, the Chinese Government inaugurated a 10-year development program and the eighth 5-Year Plan, to begin this year. To achieve the goals set out in the plan, China will need to import substantial quantities of high technology and capital goods for the development of priority sectors. These are energy, power generating equipment, transport and telecommunications, electronics, and the raw materials sector. While important opportunities exist in these sectors, U.S. exporters will often face stiff competition from third country suppliers, whose sales will be backed in some cases by government subsidies.

Traditionally, China has long been a major purchaser of U.S. wheat, aircraft, timber, chemical fertilizers, cotton and polyester fibers, pulp and paper, computers, and various scientific and professional equipment. These products are needed to make up for domestic shortfalls, and to meet industrial and agricultural production targets.

Despite the austerity program that sharply reduced China's global imports in 1990, China continued to purchase these products from the United States in significant quantities. The United States is likely to remain a major supplier in these product areas.

U.S.-China trade resumed in 1972, after a 20-year hiatus, and flourished in the 1980s to become a pillar of overall bilateral relations. This long-term commercial relationship, while it's had some problems—and I have enumerated a number of them—has been nurtured and developed through five successive Administrations. It is now facing a number of difficult issues. We believe the mechanisms are in place—on the commercial side, for example, the Joint Committee on Commerce and Trade—to enable us to solve a number of these problems that have existed.

The Administration is committed to working with China to resolves these issues and to foster a positive balance of benefits in our commercial relations.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Johnston follows.]

PREPARED STATEMENT OF RICHARD JOHNSTON

Mr. Chairman and Members of the Committee:

I appreciate the opportunity to appear before you today to discuss U.S. trade relations with China. These hearings come at a critical juncture in U.S.-China relations and as the renewal of China's Most-Favored-Nation (MFN) status has emerged at the center of Congressional and public debate about the United States' policy toward China. The balance of benefits in our economic relations has itself become a prominent factor in that debate.

In my presentation I will attempt to give you my assessment of past trends and future outlook. Let me begin by describing the development of bilateral trade during the past decade.

U.S.-CHINA TRADE AND INVESTMENT TRENDS

The formal establishment of bilateral trade relations in 1980 with the signing of the U.S.-China trade agreement was followed by a dramatic expansion in two-way trade. Trade between the United States and China increased from $2.3 billion in 1979 to more than $20 billion in 1990. China was our 10th largest trading partner worldwide last year, compared to 35th in 1979.

Last year the United States surpassed Japan to become China's second largest trading partner.

U.S. exports to China have fluctuated widely since 1979, largely due to fluctuations in agricultural sales. U.S. exports totalled $4.8 billion last year, a decrease of 16.5 percent from 1989 levels. In recent months, U.S. exports to China have shown some increases - a total of $1.8 billion was recorded for the first four months, representing an increase of 13 percent over the same period of 1990.

U.S. import trade with China has grown almost without interruption, from $592 million in 1979 to $15.2 billion in 1990. In the first four months of this year, U.S. imports from China reached $4.67 billion, up 14 percent from January-April 1990 levels.

Since 1979, there has been a parallel growth in U.S. investment in China. Over 1,000 American companies have committed more than $4 billion to long-term investments, spread among a large number of diversified economic activities. U.S. investment has taken a variety of forms - joint equity ventures, contractual joint ventures, wholly-owned subsidiaries, and joint development of offshore oil resources. The electronics sector has attracted the largest number of U.S. investment projects, followed by a variety of light industrial establishments and food processing, chemicals, resource development projects, tourism, and transportation.

As a result of expanding business activities, approximately 500 American companies set up representative offices in China to conduct liaison and trading activities. In addition, hundreds of American companies in Hong Kong either became involved in or expanded their trade or investment relations with China.

COMMODITY COMPOSITION AND IMBALANCE OF TRADE

The dramatic growth in the volume of U.S.-China trade has been accompanied by an equally dramatic change in the composition of that trade. For the first several years following normalization, U.S. exports to China dominated, and the United States maintained an annual trade surplus. Between 1979 and 1982, U.S. exports totalled $~~20~~ 12 billion, while imports from China were valued at $5.8 billion. During that period, U.S. exports were largely agricultural, with wheat and corn accounting for the major portion (about 50 %). Since then sales of U.S. manufactured goods and industrial materials have begun to expand and diversify.

Machinery and transport equipment shipments have risen most dramatically, reaching a peak of $1.94 billion in 1985, or 50 percent of total U.S. exports to China. Since then these shipments have declined largely due to competition with European and Japanese competitors, and since 1989, economic retrenchment policies. However, machinery and transport equipment still constituted the most important component of U.S. exports to China in 1990. The leading exports in this category were aircraft and parts, specialized industrial machinery, power generating equipment, electrical machinery, and automatic data processing equipment. Other major U.S. export commodities included fertilizers, wood, plastics and resin, synthetic fibers, and cotton yarn and fabric. Non-agricultural products now comprise about 80 percent of total U.S. exports to China.

In 1983, the composition of imports also began to shift. Although U.S. exports to China continued to expand somewhat, growth in two-way trade increasingly was the result of gains made by Chinese exports to the United States. China became a major supplier to the U.S. market of low-cost goods, including toys, clothing and apparel, footwear and a wide range of consumer goods. Many of these goods have been produced by U.S.-invested joint ventures located in China, and by a large number of export-oriented processing and assembly plants relocated from Hong Kong and Taiwan to the Chinese mainland.

A rapid rise in China's exports to the United States, coupled with slow growth in U.S. exports to China, has led to a large and growing U.S. trade imbalance with China. The U.S. deficit with China grew to $10.4 billion last year, the third largest bilateral deficit worldwide. The large growth in the trade imbalance is the result of several factors, including austerity measures which reduced imports from all sources, expanded use of trade barriers, and Chinese economic policies which boost exports.

The economic reform and open-door policies, which the Chinese government initiated in 1979, have led to rapid growth in China's export capabilities. The dynamic nonstate sector has become an increasingly important source of China's exports. For example, China now reportedly has more than 300,000 export-oriented rural enterprises, up from 1,000 in 1980. Last year, these enterprises exported $12.5 billion worth of goods, one-fifth of China's total exports. In order to reverse its overall trade deficit, China has, over the last few years, used a variety of means, including subsidies, to promote exports. A significant portion of Chinese export growth has been targeted at the U.S. market. In 1990, China's exports to the United States increased by 27 percent in contrast to an increase of 18 percent in China's global exports. Last year, China's exports to Japan and the European Economic Community increased by 7 percent and 16 percent, respectively.

Meanwhile, the decline in China's imports from the U.S. was more severe than from many other countries. Last year China's imports from the United States decreased by 16.5 percent, compared to a decline of 9 percent in its global imports. There are several reasons for the sluggish U.S. export performance.

The Chinese Government has attributed the decline in China's imports to economic retrenchment policies initiated in late 1988. In China, economic readjustment has usually been accompanied by tightened import controls. This was true during the retrenchment period of 1982-83 and 1985-86, and was especially so in the recent phase of the austerity program. Since late 1988 China has greatly expanded central control over foreign trade and certain industries, and has recentralized the economic decision-making process, with greater reliance on administrative controls. The number of corporations authorized to import certain products was reduced; the number of products subject to licenses, quotas, or outright bans was increased; and control over the use of foreign exchange was strengthened.

Over the last two years, we have observed a pronounced increase and proliferation in tariff and non-tariff barriers to imports that have effectively denied imported goods fair access to China's domestic market. The transparency of China's trade regime has also worsened with stepped-up use of unpublished guidance on import and export policies.

In fact, China's policies have made it increasingly difficult for U.S. firms to gain fair access to its domestic markets. In

1990, China was the only major market for U.S. goods and services in which sales experienced an actual and appreciable decline. More disturbing than the substantial and growing U.S. trade deficit with China, is the fact that the deficit reflects a decision by China to intensify protectionist measures as a way of managing imports.

CHINA'S IMPORT BARRIERS

China's barriers to imports take a variety of forms and cover a broad spectrum. I would like to summarize the most significant trade barriers faced by exporters to China.

Managed Trade and Lack of Transparency -- This remains a primary tool of China's national economic and trade policy, and is often promulgated in State Council and other official directives. These unpublished directives, which can effectively exclude certain companies from the market, or severely restrict their activity, are not known to the traders they affect, and constitute a severe barrier to trade.

Import Licensing Requirements -- Exporters to China consider import licensing a principal means of import regulation. Imports are denied entry even when they are of higher quality and lower price than domestic substitutes. The scope of China's import licensing system has grown steadily since its introduction in the early 1980's. Fifty-three product categories now require import licenses, accounting for 45 percent of China's trade by value in 1989. In most cases, the ministry that oversees the manufacture of the same product in China is involved in the import approval process.

Import Substitution Policies -- The Chinese Government maintains a list of products for which it deems there are acceptable domestic substitutes. It is often impossible to receive authorization to import an item if the government feels that there is a domestically-produced alternative even though the quality and price of the foreign product may be more competitive. The Eighth Five-Year Plan (1991-95) calls for reduction or elimination of imports of items which can be produced in China.

Import Bans, Quantitative and Other Market-Limiting Restrictions -- Most import decisions, regardless of whether or not the import requires a license, are determined at the annual state planning conference. These restrictions are often adopted contrary to market demands. Import bans cover approximately 80 types of products and materials.

Standards, Testing and Certification -- China's State Administration of Import and Export Commodity Inspection requires inspection for 148 import categories, a 30 percent increase over prior years. These requirements place a burden on importers that is not placed on domestic producers of comparable products.

Tariffs and Other Charges -- Imported products seeking entry into China's markets face tariffs of up to 200 percent. From 1988 through late 1990, China raised tariffs on 90 items, mostly consumer products, but also on chemicals, pesticides and pharmaceuticals. The new tariff rates range from 120 to 170 percent. Tariffs were decreased on a much smaller number of items.

China also uses an import regulatory tax, imposed as a separate surcharge over and above applicable tariffs. As in the case of tariffs in general, the import regulatory rate is frequently changed, often without public announcements. This additional administrative process leads to longer delays in completing import procedural formalities.

Discriminatory Customs Rules -- Particularly disadvantageous to American companies is the customs exemption for imports financed by concessionary loans, which virtually precludes

U.S. companies from winning bids based on superior technology, price, and creative financing arrangements.

Government Procurement and Tendering Regulations -- Competitive bidding does not take place for the great majority of Chinese Government procurement contracts. Where competitive bidding does occur, there is no transparency in the bidding and decision-making process.

OTHER FACTORS

In addition to these specific barriers, there are several other factors which impede U.S. trade with and investment in China.

Lack of Intellectual Property Protection -- Despite the gains to be had from the legitimate acquisition of intellectual property from the United States and others willing to share, China remains one of the world's premier violators of others' intellectual property rights. China was recently designated a "Priority Foreign Country" under the Special 301 provision of the 1988 Trade Act.

Of particular concern to the United States are China's failure to provide immediate protection for U.S. works under its recently promulgated copyright law; failure of the copyright law to meet minimal U.S. standards for protection; and lack of patent coverage for chemical and pharmaceutical products. Piracy of intellectual property is rampant. U.S. copyright industries have estimated losses from copyright infringement alone at $410 million annually.

Investment Barriers -- China's investment regime, which has always presented obstacles to investment, has recently become even more restrictive. Chinese Government authorities are demanding compliance with guidelines that permit approval only of "productive" investment or other projects that advance policy goals, and increase export requirements. Original investment disincentives such as difficulties in repatriating profits, restrictions on interregional trade within China, and problems with sourcing of raw materials remain.

EFFECTS ON U.S. TRADE AND INVESTMENT

These trade barriers and other impediments have had a serious effect on U.S. exports. Since 1989, leading U.S. exports to China have declined significantly. Of thirteen major product categories in 1990, exports increased in only four. Of the remaining nine, exports were flat in one and declined anywhere from 6 to 84 percent in the remaining eight.

Take chemical exports as an example. The overall decline in U.S. chemical exports to China during 1990 was roughly

27 percent and parallels a significant expansion in market access barriers in China. Since late 1988, the Chinese government has taken a variety of measures to reassert central control over production, acquisition and sales of certain chemical products.

Another example may be found in wood exports. China has been a major market for U.S. wood products, with U.S. exports reaching $450 million in 1988, equivalent to 9 percent of U.S. sales to China that year. In March 1989, the Chinese government imposed a quota system for timber imports on local governments. This was followed by formation of a plywood import coordination group consisting of nine corporations with exclusive authority to import plywood. In July 1989, management of timber imports was recentralized under the control of a central state trading corporation. These measures led to a 60 percent drop in U.S. exports in 1989, to only $181 million. Log exports remained flat at $180 million in 1990.

In the investment area, few U.S. investors have pulled out since 1989 despite a more restrictive environment in China. Some existing U.S. investments have been expanded, and a number of new investments have been made. However, U.S. investors' confidence in China has been adversely affected. In 1990, although the number of contracts that U.S. companies signed for new investment was up 17 percent, the total value of new investment fell by 54 percent. Many U.S. firms seeking to sell or invest in China found that 1990 was the most difficult year in recent memory. The trade and investment climate has shown no significant improvements so far in 1991, despite signs of an upturn in China's domestic economy.

FUTURE PROSPECTS

The future direction of U.S.-China trade relations depends to a large degree on the outcome of the current debate over continuation of MFN for China.

There is no doubt that overall two-way trade would suffer should China lose MFN tariff treatment. Chinese imports would suffer most dramatically since loss of MFN duty rates would increase tariffs on Chinese goods as much as ten-fold. In general, tariffs on the 25 most important U.S. imports from China would rise from the present average tariff rate of 8.8 percent to an average tariff rate of 50.5 percent.

However, U.S.-invested joint ventures located in China would also be affected since they would be subject to non-MFN tariff rates as well. Loss of MFN could impede sales for those joint ventures exporting goods to the United States, compelling them to consider other markets and raising the risk of investment loss in an already challenging operating environment.

In addition, U.S. exports would also be affected since it is a certainty that Beijing will respond by rescinding MFN tariff treatment for the United States. This would severely disadvantage U.S. exporters who would be subject to even higher import duties under China's non-MFN tariff schedule. Substantially higher tariffs on U.S. exports to China would effectively exclude U.S. exporters from China's domestic markets. Other foreign vendors competing in identical or similar product lines would be the beneficiaries since they would not be laboring under the burden of prohibitive import duties.

Perhaps even more importantly, denial of MFN to China would seriously undermine our efforts to engage China in a constructive dialogue on a wide range of bilateral and multilateral issues important for U.S. economic and commercial interests, a dialogue which has taken place even during periods of extreme tension. For example, on the multilateral side, we have used China's application for GATT membership as a means of pressing China to resume its market-oriented reforms and to accept international trade norms.

On the bilateral side, we have been actively pressing the Chinese to open their market and protect U.S. intellectual property rights. Over the last six months, we have met with senior Chinese trade and intellectual property officials on at least five occasions, and earlier this month a U.S. Government delegation went to Beijing to meet with senior Chinese officials on market access and intellectual property issues. We have also worked with the Chinese Government to resolve the problem of illegal Chinese textile and apparel transshipments to the United States through other countries, in violation of our bilateral textile agreement.

We continue to press the Chinese and the Chinese continue to be willing to sit down and negotiate with us because they have an incentive to do so under the framework of a stable bilateral relationship. MFN underpins this relationship.

If MFN is continued, what do we envision for American exporters and investors?

China's economy has developed largely in cycles over the past forty years - a period of expansion is followed by periods of readjustment, recovery, and then another expansion. In this cyclical process, the development of foreign trade, especially imports, has proceeded in a corresponding fashion - imports usually decline during the retrenchment period, begin to grow in the recovery period, and increase, sometimes rapidly, in the expansion period.

As China's economy is showing signs of recovery from the recent retrenchment, imports have begun to grow since the final quarter of 1990 and increased 12 percent in the first quarter of this year. As mentioned earlier, China's imports from the United States have also shown some increases so far this year. As the Chinese economy approaches another expansion phase, imports are expected to grow more rapidly. Recently, senior Chinese trade officials have stated that China will significantly increase its level of imports during the next few years, especially from the United States.

China's ability to expand imports is supported by its current record level of foreign exchange reserves ($36 billion as of March 1991), partly resulting from the largest global trade surplus in PRC history ($8.7 billion for 1990). China's import ability also has been enhanced by the resumption of some multilateral and bilateral concessionary loans, such as those from the World Bank, the Asian Development Bank and Japan's Overseas Economic Cooperation Fund.

Recently, the Chinese government inaugurated a ten-year development program and the Eighth Five-Year Plan, to begin this year. To achieve the goals set out in the plan, China will need to import substantial quantities of high technology and capital goods for the development of priority sectors - energy, transport, telecommunications, electronics, and the raw materials sector. While important opportunities exist in these sectors, U.S. exporters will often face stiff competition from third country suppliers, whose sales will be backed in some cases by government-subsidized soft loans.

Traditionally, China has long been a major purchaser of U.S. wheat, aircraft, timber, chemical fertilizers, cotton and polyester fibers, pulp and paper, computers, and various scientific and professional instruments. These products are needed to make up for domestic shortfalls and to meet industrial and agricultural production targets. Despite the austerity program that reduced sharply China's global imports in 1990, China continued to purchase these products from the United States in significant quantities. The United States is likely to remain a major supplier in these product areas.

As China's economy grows, new investment opportunities will increase. Since the Tiananmen crackdown in June 1989, the Chinese government has consistently emphasized that its open door policy on foreign investment will not change. In fact, some officials have claimed that the door will open even wider. It is difficult at this stage to accept these claims unreservedly. In general, however, Chinese actions in support of troubled ventures and efforts to introduce limited improvements in the investment laws and regulations suggest a genuine commitment to encourage foreign investment.

Aside from general preferences for high-technology and export-oriented investments, Chinese authorities have identified several priority areas for foreign investment. These include transportation, communications, energy, metallurgy, petro-chemicals, pharmaceutics and medical equipment, and electronics.

CONCLUSION

U.S.-China trade resumed in 1972 after a twenty-year hiatus, and flourished in the 1980s to become a pillar of overall bilateral relations. This long-term commercial relationship, nurtured and developed throughout five successive Administrations, now is facing a number of difficult issues. The Administration is committed to working with China to resolve these issues and to foster a positive balance of benefits in our commercial relations.

TRADE RELATIONS WITH CHINA UNBALANCED

Senator BINGAMAN. Thank you very much. Let me give you my perspective from having heard your testimony and having read the CIA report last evening. I guess my impression is that I think everybody has to agree that our trade relations with China are terribly unbalanced at the present time, and in the CIA report, they point out that the United States has emerged as China's foremost export market. I think, Mr. Wiedemann, I believe that we buy a quarter of what China exports.

Mr. WIEDEMANN. Right.

Senator BINGAMAN. It says "China's exports to the United States expanded on the average more than 30 percent yearly through the 1980s, 10 times as fast as China's purchases from the United States." So, that's what's happened to us in the 1980s. We've seen a growing imbalance, which in 1990 was over $10 billion by our calculations. According to the CIA, it's going to be $12 billion this year, and I've heard estimates that are higher than that.

So that's the situation. The trends do seem to be continuing to worsen. The size of the deficit continues to worsen. I notice in here, at least the CIA's statement that at the national level we see little appetite for reform in the style of the early 1980s or the mid–1980s. So they do not, at least, project some kind of vast change in policy. They talk about China's 5- and 10-year development plans that were announced earlier this year, and that stipulated that Beijing will stimulate exports and curtail imports of luxury items. Essentially, we not only have a bad situation but one in which the Chinese are planning to exploit even more through more controlled imports and through more promotion of exports to us. I guess my concern on this is that we seem totally helpless in any practical way to deal with it.

Mr. Massey, you said in your statement, and I believe this is a direct quotation: "We continue to press the Chinese with all the means at our disposal." If that is true, if we are doing everything we can under the law today, then how can you argue that the Congress should not go ahead and refuse to deny MFN status, if that's all that's left to us?

I would agree—I spoke to your colleague, Carla Hills earlier this week. She was making the point that dealing with the trade deficit is a different issue, and should not be dealt with by denial of MFN status. If we can't deal with it any other way, how do you suggest we deal with it? What are we going to do to change the situation? It looks like the United States is one of the biggest chumps in the Western World. Just hearing the testimony that you folks have given us this morning, we seem to just be patsies for whatever the Chinese are willing or desirous of doing to us.

Mr. MASSEY. Senator, I will start backwards with respect to your question.

CHINA'S TRADE WITH OTHER COUNTRIES

We are not the only trading partner of China to be suffering these setbacks in our exports to their market. This is something that has happened to the Europeans, the Japanese, and others, as the Chinese have clamped down on imports.

Senator BINGAMAN. Let me just clarify that. Our trade deficit in 1990 with China was $10.4 billion. The trade deficit of the entire world with China was 8-point-something-billion dollars. So, the rest of the countries combined had a surplus with China, which we more than make up for with our deficit.

PROLIFERATION OF TRADE BARRIERS—SPECIAL 301 PROVISIONS

Mr. MASSEY. That's true, but one of the reasons the Administration prefers to focus on expanding U.S. exports and unravelling foreign trade barriers is that bilateral deficits in and of themselves are the function, as you yourself, Mr. Chairman, pointed out, of a number of factors. Unfortunately, in the Chinese case, we believe that the proliferation of specific trade barriers, particularly since January 1988, has been a prominent reason for the decline in our exports, and what we have been trying to signal to the Chinese is that we will, indeed, where we find the need to do so, use the means at our disposal to induce change. I can point first to the fact that we have—after a long period of negotiation on the intellectual property front, which led, under the special 301 provisions of the 1988 Trade Act, to a set of negotiations that eventuated in a Memorandum of Understanding in April of 1989—moved to identify China as a priority foreign country under those provisions of the Trade Act. And demonstrated, I think, where we think the time is appropriate and is necessary, we will make use of the trade leverage available to us.

Senator BINGAMAN. Why don't we start a Super 301 proceeding against China? I can't conceive of what more you would need in the way of evidence of bad faith in trade relations, other than what has been testified to today in the CIA report.

Mr. MASSEY. We are, as you know, engaged in consultations with the Chinese now. As I said earlier, I was just back from Beijing, where we spent three days in intensive discussions with Chinese leaders. We laid out for them the problems that the United States sees in China's trade regime; the barriers that we believe are impeding access to the market; the need for them to remove or reduce substantially those barriers; and we will be meeting with them again. We've invited them back to Washington to continue those consultations, and we will need to make an assessment of where we stand and the progress we are making as those consultations proceed.

On the Super 301 point, of course, as you're aware, the Super 301 provisions of the 1988 Trade Act have expired. We have used the Special 301 provisions on intellectual property.

Senator BINGAMAN. Are you suggesting that you would want to take stronger action against China, but Congress is holding you back? Is that the suggestion?

Mr. MASSEY. I was just making a point about the law. As a negotiator, I like to have available to me the appropriate levers. I think we have the levers. I think there is a question of the timing for the use of the appropriate levers. We are at that stage on intellectual property now. We have had discussions with them on very specific intellectual property issues over a number of years that have not produced sufficient progress to justify continued consultation outside the framework of the law. It seems to me that we are not yet at that point in our discussions with them on market access. That's not to say that we won't be, or that I would be reluctant, or I think the Administration would be reluctant to consider taking the appropriate steps under the law. We are not there now. We are engaged in consultations with them. We are going to have to make an assessment of our progress. We will make that assessment. We will do it in a timely fashion.

CURRENCY DEVALUATION

Senator BINGAMAN. I'm concerned about one point you made, Mr. Wiedemann. You listed the very hopeful signs, if I understood what you were saying about the things China had done, that were of a positive nature, and one of them that you mentioned was that they've devalued their currency. Isn't that part of the problem? Don't we now have a situation where they've devalued their currency several times here? And accordingly, their products are so cheap in our markets and in world markets, and our products are so expensive that, even if we had access to their market that we're denied, we're at a terrible disadvantage.

Mr. WIEDEMANN. Naturally, from an economic standpoint, devaluation of the currency does have an export stimulative effect. There is no question about it. And, clearly, that has contributed, I suppose, to the upsurge in Chinese exports to the United States.

I note that in a positive vein, as part of the overall process of structural reform in China, a process that has been going on now for sometime—the World Bank, the International Monetary Fund, and indeed, we ourselves at various points—have suggested to the Chinese that a principal element of structural economic reform is getting the prices right and, of course, getting the foreign exchange rate right as a key element of that process.

What I was suggesting is that the Chinese are moving toward a foreign exchange rate that is closer to a market clearing rate than anything they had before. It's also had the result, macroeconomically, of allowing the Chinese to produce and, in fact, now eliminate the export subsidies as noted in the CIA report. The CIA, I think, refers to that as a pragmatic step, principally necessitated by the Central leadership's desire to cut down on Central Government budget deficits. Nonetheless, whatever its motivation, that move is in the long-term reform process.

Senator BINGAMAN. Of course, you don't need export subsidies if you've got your exports growing at this type of tremendous rate compared to your imports. You've got the deck stacked against your trading partners in such a way that you don't need to subsidize your exports any more. Isn't that exactly what we are facing?

RULES OF THE GAME

Mr. WIEDEMANN. I think it is, Senator. From my view, we have to look at China as a country that has entered the global economy, the global finance and trading system rather recently, effectively going back only to the 1970s. It is a country, therefore, that needs, now that it has been much more integrated with our global economy, its foreign trade, now accounting for 33 percent of its overall GNP or so, to be educated as to the rules of the game. I think its strategy, as outlined in the CIA report with which I agree, clearly is an export-led growth strategy and is one that took a lead from the book of other economies, principally in East Asia which, during the period of the sixties and seventies, basically used that kind of strategy to underlie their economic growth. Those countries have since abandoned or modified that strategy, but China, nonetheless, just plugs on. What we need to do is get across to China that if it is going to be a member of this global economic community, that it adheres to the rules of it. The GATT, as Mr. Johnston said, is prospectively a very effective mechanism for imposing the necessary kinds of disciplines and respect for the rules on China that we all hope to bring about.

The bilateral negotiations that Mr. Massey has been involved in, which Mr. Johnston and the Commerce Department are also engaged in, and of course, the State Department, too, is another way to get at that problem.

Speaking of the State Department view, I think our effort over the past decade or so will continue to be on a broad front to bring China into the global community and make it play by the rules, whether it is with respect to the trading system—to trade fairly—or whether it is with respect to Chinese sale of arms, conventional as well as missiles.

EXPORTS OF WEAPONS AND SENSITIVE TECHNOLOGIES

Senator BINGAMAN. Let me ask about that. I think we've got a terrible problem there too, don't we? Aren't they selling missiles and weaponry of various kinds, nuclear materials, and sensitive technologies in various places and refuse to stop, in spite of our protestations?

Mr. WIEDEMANN. We have a very serious concern with respect to China's sales of missiles in particular, and to some extent, nuclear technologies. Since roughly the mid–1980s, we have engaged in a process with China to try to do in this proliferation area what we have been seeking to do in the trade area. That is, to get China to observe international standards of behavior with respect to such sales. There's been a certain evolution in China's policy since that time. It is the mid–1980s.

In 1984, for example, China accepted the International Atomic Energy Agency safeguards over its exports to other countries. It publicly declared at that time that it would not support proliferation of nuclear weapons or assist other countries' nuclear weapons programs.

In 1987, it was discovered for the first time that China was seriously in the international intermediate range missile market. We began talks, which in 1988, yielded a pledge by China not to sell intermediate range missiles to the Middle East beyond some that they had sold, beginning in 1987 to Saudi Arabia. Since that time, that is, the assurance of 1988, we have not had any evidence that China has delivered intermediate range missiles to the Middle East. Therefore, we have no evidence that it has broken its pledge. Nonetheless, we remain concerned with various reports that it is still out there marketing.

Therefore, this brings us back to my point that we want to bring China into international regimes. We are asking them to play by international rules in effect, and in this regard, focus on the missile technology control regime.

Last week, the Undersecretary of State for International Security, Peter Bartholomew, was in Beijing raising precisely these issues; raising the issue of China's adhering to the NTCR, as well as to the Nuclear Non-Proliferation Treaty; and for the first time, the Chinese indicated to us that they would at least seriously consider adhering to those two directives, multilateral regimes for controlling dangerous weapons.

We will be following up, I might add, in Paris in the context of the Five Power discussions over the Middle East Arm Control Initiative at the present.

We clearly hope that we are going to get progress on this issue. Just as we hope in the course of negotiations that we will be achieving some progress in convincing China that if it is to benefit from its participation in the global system, it has to accept some rules, particularly given that it's a major power; it's a member of the UN Security Council, a permanent member; it's a major supplier of weapons; its a major trading company now, as a result of its reforms and its own adopted strategy of export growth; and it has to begin to behave itself.

TIBET

Senator BINGAMAN. Have we ever raised the issue of Tibet in our discussions with China and the treatment of the Tibetans and various concerns that people in this country, including in my own state of New Mexico, have about what has happened and is happening to Tibet under Chinese occupation?

Mr. WIEDEMANN. Senator Bingaman, we have raised Tibet innumerably with the Chinese, going well back before the Tiananmen massacre, when the focus of this Nation was brought probably more to bear on overall human rights concerns with respect to China, but including the Tibet issue. Indeed, since 1987, when the process of improvement in China's administration of Tibet suffered a setback, there was an altercation between Tibetan monks, and the citizens of the City of Lhasa, and Chinese security forces, which resulted in some very tragic deaths. Clearly, the friction between the Tibetan people, particularly in Lhasa and Han Chinese security forces, since then has been much increased. We have, as signified by the President's recent meeting with the Dalai Lama, tried to convey, one, our respect for the Dalai Lama and his religious eminence, but also out of respect to the principles for which he stands, and that is the principle of nonviolent resolution of disputes. Our aim is that there be a reconciliation between Tibet, the people of Tibet, and the Chinese Central Administration; a process of dialogue between the Dalai Lama and the Chinese Government, which will settle whatever concerns that there might be.

CHINA'S RESPONSE TO CONCERNS ABOUT TIBET

Senator BINGAMAN. Do you have any indication from Chinese officials that they are receptive to our concerns or sensitive to our concerns about Tibet?

Mr. WIEDEMANN. I do, to the extent that they have responded to some of our questions concerning allegations of torture, abuse of Tibetans. They have, over the past year, permitted us diplomatic access to Tibet. That is, allowed our consular officials in Xiangdu, as well as from our Embassy in Beijing, to visit Tibet, including our former Ambassador, Jim Willey, who was there just a couple of months ago; and they've allowed us, for example, to visit Yapche Prison, the main prison in Lhasa, to see conditions there for ourselves, and see the monks and other prisoners who are incarcerated there.

Indeed, we have also started with the Chinese an unprecedented dialogue on human rights, going back to December of last year. At that time, I accompanied Assistant Secretary for Human Rights and Humanitarian Affairs, Greg Shifter, to Beijing and Shanghai. We undertook about four days of intensive discussions with Chinese authorities on a whole range of human rights issues, and of course Tibet was very prominent on our agenda. That dialogue led to the permission to our Ambassador to go from Beijing to Tibet to see how things were for himself.

We intend to follow up. We are also right now discussing with the Chinese the notion of congressional delegations going to Tibet to see for themselves what is going on there, and to make known both to the Chinese authorities, as well as the Tibetan leaders within Tibet itself, why it is that Americans are as concerned as we are about conditions there.

U.S. POSITION ON TIBET

It seems to me that the concern we have is the concern we have for all of China; that is, that people should enjoy certain basic rights, principally, freedom of assembly and freedom of basic discussions. Chinese authorities tend to treat these Tibetans as subversives. Tibetans have gone in the streets of Lhasa and other cities of Tibet to express, principally separatist, pro-independence sentiments.

Our position is that, although we—as all other governments around the world—recognize Tibet to be a part of China, we also recognize, as should all countries in the world, that people have a right to express whatever opinion they have, as long as they do it peacefully. And it is that message that we have conveyed forcefully to the Chinese Government.

BINGAMAN'S VIEWS

Senator BINGAMAN. You folks have been very generous with your time, and we have another panel here. But let me just say from my perspective, I think we may be approaching the whole issue somewhat too paternalistically. Our view that the Chinese need to be educated as to the rules, I think, is a misreading of things. I think they are very well educated as to the rules. They know very well the benefits that they can achieve economically from continuing to run a very, very substantial trade surplus with us, and they also realize that our resolve to deal with that is not great at this time for a variety of reasons. And I for one, at least, wish and urge that the Administration begin to be more aggressive. I know that you have indicated some things that you have done, but compared to the steps that they have taken to restrict imports, we have done very, very little to deal with this economic imbalance and to deal with these other issues—missile proliferation and sales, and human rights issues. And I hope very much that we can see some more concrete progress toward dealing with these issues before we have to have this vote on the most-favored-nation policy. I'm not certain where that vote comes out. I have not taken a position on it, but I would agree with the general proposition that there may be better ways of dealing with some of these problems than denying most-favored-nation status. I just haven't heard any of them described very precisely, and I haven't seen us pursue any of these.

I appreciate your being here very much. Unless any of you have any more you want to say, we will go ahead to the next panel.

Mr. MASSEY. Thank you very much, Senator.

Senator BINGAMAN. Thank you all very much.

Our next panel is made up of two professors who have focused on this set of issues—Nicholas Lardy, a professor at the Henry M. Jackson School of International Studies, University of Washington; and Mr. Naughton, who is a professor at the University of California at San Diego.

Professor Lardy, why don't you go ahead and summarize your statement, if you would. Your entire statement will be included in the record, as will yours, Professor Naughton. But if you could make the main points that you want to get across here, we would appreciate it.

Thank you for being here.

STATEMENT OF NICHOLAS R. LARDY, HENRY M. JACKSON SCHOOL OF INTERNATIONAL STUDIES, UNIVERSITY OF WASHINGTON

Professor LARDY. Thank you, Senator Bingaman, for inviting me to appear before this hearing on the Chinese economy. I have submitted a study, "Redefining U.S.-China Economic Relations," which was published earlier this month for the record.

In my prepared statement, I will summarize a few key findings of that study, and address a couple of issues of interest to the Subcommittee.

It is now more than 2 years since the Tiananmen tragedy of June 1989, and well over a year since the dismantling of most of the Communist regimes in Eastern Europe. These two developments led many to conclude that economic reform in China was dead, and that, in any case, China's incremental approach to economic reform provided no lessons for the Soviet Union or for the countries of Eastern Europe.

CHINA'S PROGRESS

My own view on this is somewhat different. I think China has made substantial progress in its economic reforms over the past 2 years, and that in many critical areas, China's reforms are substantially more advanced than those even in Eastern Europe, not to mention the Soviet Union.

I would like to highlight reforms that have supported China's increasing participation in the international economy, and then turn to economic issues in the bilateral U.S.-China economic relationship.

As is well known, China's trade turnover expanded from around $21 billion in 1978 to more than $115 billion in 1990. Over these years, China's foreign trade grew more rapidly than any other country, and China rose from about the 32nd to the 13th largest trading country in the world. By comparison, I might note that in the years just prior to the outset of reform in China, the hard currency exports of the Soviet Union were two to three times those of China.

But in the decade of the 1980s, Soviet exports to non-Communist countries were stagnant and by 1986 China overtook the Soviet Union in its hard currency trade, and its margin has expanded considerably since that time.

What is less well understood is the domestic economic reforms that have made this outward turn possible. I think there are essentially three major developments. The first of these is the decentralization control of foreign trade. The Chinese have gone from a system in which virtually all trade decisions were made at the Center by a handful of nationally controlled foreign trade corporations to one in which more than half of all exports and about 60 percent of imports are carried out outside of the scope of the state foreign trade plan, in most cases by one of the several thousand newly established foreign trade companies.

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Second, the Chinese have reduced the degree of over-valuation of the domestic currency substantially and have moved a long way toward achieving internal convertibility for trade transactions. It is no accident that one can look every day in the *Wall Street Journal* and find the exchange rate for the yuan. You will not find any listing of the exchange values for the zloty, the ruble, or any of the currencies of former Socialist states.

Chinese firms were compensated entirely in domestic currency. But since the exchange rate was overvalued, they have received too few units of domestic currency for each dollar's worth of exports.

The drawbacks have substantially been reduced. First, the devaluation of the currency gives them more units of domestic currency, and, second, producers of export goods have been given the right to use some of their foreign exchange earnings to import goods not included within the scope of the State Import Plan.

The move toward convertibility of the currency has been made possible by the introduction of a parallel market for foreign exchange. Exporters can sell their retained foreign exchange in this market to other firms wishing to import goods outside the Plan. When this parallel market was introduced in the mid–1980s, it was very small, but it has grown substantially, both in absolute terms and as a share of China's total export earning. In 1989, when some have argued that China's reforms were going backwards, the volume of transactions on this market rose almost 40 percent to reach more than $8.5 billion. Last year the volume increased more than 50 percent and exceeded $13 billion, roughly a fifth of all China's export earnings.

As the market has expanded and the official rate has been devalued, the spread between the parallel market and the official market exchange rate has shrunk. In 1986 the spread was almost 2 to 1. By the first quarter of this year, the spread had fallen to just about 10 percent.

The contrast with the Soviet Union, quite frankly, is very striking. In the very limited markets the Soviets introduced late in 1989, the premium between the official rate and the auction rate was more than 2,400 percent, and although the ruble has been devalued several times since then, the botched currency reform of early 1991 has reduced public confidence in the ruble even more; and the parallel and black market prices for foreign exchange currently are an even greater premium over the official rate than they were 2 years ago.

A third major reform that China has made to facilitate its outward turn is domestic pricing. At the outset of the reform process, China's domestic prices were unrelated to international market prices. They reflected arbitrary pricing policies of the Central Government and, particularly for industrial goods, had been largely uninfluenced by the forces of supply and demand for 4 decades. After a decade of reform of prices, the disparity between international and domestic prices has shrunk considerably. The domestic prices of more than 90 percent of their imports are now based on the international price, where previously they had been set at the price of comparable domestic goods, a process that insulated domestic producers from international competition.

BILATERAL IMBALANCE

Let me turn next to issues in bilateral U.S.-China relations. It seems to me the most salient issues in the bilateral relationship at the moment are the large Chinese trade surplus that we have already discussed, and the inadequate protection of intellectual property in China.

Since the latter is already being discussed under the Special 301 trade law, I would like to focus on the question of the bilateral imbalance. I believe that the view that the size of the imbalance should serve as a reason for discontinuing China's MFN status is wrong for at least three reasons.

First, to begin with, our trade accounting procedures somewhat overstate the size of our bilateral trade deficit. We rightly criticize the Chinese for not counting reexports of Chinese goods through Hong Kong that ultimately end up in the United States. But our trade statistics do not fully take into account the reexport of our goods through Hong Kong into the Chinese market. This problem is much more severe in the Chinese official data, since 64 percent of all Chinese exports to the United States in 1990 were reexported through Hong Kong, whereas only 19 percent of our exports to China were exported through Hong Kong. When this and another technical adjustment are made, our trade deficit with China in 1990 was probably something closer to about $7.9 million, rather than the officially reported U.S. figure of $10.43 billion.

Second, China's trade surplus with the United States probably has already peaked. China's overall trade surplus in 1990 was the result of two factors that in my judgment are now waning. First, Western economic sanctions substantially reduced China's access to international capital markets beginning in the second half of 1989. Thus, China took a number of steps to increase exports and cut back on imports. The goal, quite frankly, was very simple—to be able to generate the foreign exchange to be able to repay their international debts. The alternative would have been to default. But now that international financial organizations have resumed making some types of new loan commitments and commercial lending has resumed, the perceived need of the Chinese for a large trade surplus is waning. I expect that China will return to the pattern observed throughout the 1980s; that is, an annual trade deficit financed by increased borrowing from a variety of international sources. Second, the trade surplus in 1990 was, in part, the result of macroeconomic cycles, which I believe Professor Naughton is going to discuss in his presentation. With a substantial decline in economic growth in China in 1989 and 1990, compared to earlier years, China's demand for imports naturally fell, and export markets looked more attractive for many Chinese firms than they would have in conditions of more rapid domestic economic growth. This factor too is now waning as China's economic growth has accelerated remarkably since the second half of 1990. Industrial growth is back into the double digit range. China's GNP growth is likely to be at least 8 percent this year, a substantial increase over the 5 percent rate of last year.

The combined effect of these two developments; that is, the resumption of international lending to China, and a more rapid pace of domestic economic growth within China is already evident in China's trade statistics. China's imports fell significantly in 1990, but since December of last year import growth, has resumed. Compared to the same month a year earlier, imports rose 10 percent in December 1990; 20 percent in January 1991; almost 30 percent in March; 20 percent in April; and 15 percent in May. In several of these months, China's imports grew more rapidly than its exports. If these trends continue, China's overall trade surplus will be less in 1991 than it was in 1990——

Senator BINGAMAN. Are those imports from the United States?

Professor LARDY. Those are total figures. If these trends continue, China's overall trade surplus is likely to be less in 1991 than it was in 1990, and I would expect that the U.S. trade deficit with China would also shrink rather than expand to the $15 billion level that has been predicted by several U.S. Government officials and organizations.

The third reason I believe that one should not look at the bilateral trade imbalance in a determination of the continuation or the discontinuation of MFN, is that the bilateral trade imbalances are not really particularly useful for a country for which direct foreign investment has become so important as it has in China.

A large and growing share of Chinese exports are produced by joint venture firms. Exports of these firms have been growing very rapidly in recent years, rising from a few hundred million in the mid-1980s to about $7.8 billion in 1990.

Almost half the exports of foreign invested firms in 1990 originated in Guangdong Province in South China, just over the border from Hong Kong. Most of these export goods were formerly produced by entrepreneurs in Hong Kong, and previously would have shown up in our trade statistics as imports from Hong Kong. Now, these entrepreneurs have moved their production over the border into Guangdong Province. Obviously, when their goods are sold in the United States, as a large share of them are, they are counted as exports from China in our trade statistics, as indeed they should be.

This is also happening with Taiwanese entrepreneurs, who are moving their firms to the Xiamen Special Economic Zone in Fujian Province across the straits from Taiwan. The significance of the United States as a market for these Taiwanese firms in China has become increasingly obvious in recent months. The threatened loss of China's MFN status in the U.S. market is now the single greatest factor restraining the expansion of Taiwanese investment in the People's Republic of China.

So, I would say in summary on the MFN issue—I know you raised several issues with the first panel—that given the importance of foreign direct investment in China and the role of foreign investment firms in generating exports, bilateral trade imbalances are less useful than they might otherwise be. Second, I think it is quite likely that China's overall trade surplus is beginning to shrink and that the United States should benefit from that trend. And third, that in any case, our own data, which I think are greatly preferable to the data the Chinese release, somewhat overstate the magnitude of the bilateral deficit.

Thank you.

[The prepared statement of Professor Lardy, together with a study, follows.]

PREPARED STATEMENT OF NICHOLAS R. LARDY

Senator Bingaman, thank you very much for inviting me to appear before this hearing on the Chinese economy. I am submitting for the record a study, "Redefining U.S.-China Economic Relations," which was published earlier this month. In my opening statement I will summarize key findings of that study and address several issues of interest to the Committee.

It is now more than two years since the Tiananmen tragedy of June 1989 and well over a year since the dismantling of most of the Communist regimes in Eastern Europe. These two developments led many to conclude that economic reform in China was dead and that, in any case, China's incremental approach to economic reform provided no lessons for the Soviet Union or the countries of Eastern Europe.

My own view is somewhat different. I believe that China has made substantial progress in its economic reforms over the past two years and that in many critical respects China's reforms are substantially more advanced than those in Eastern Europe, not to mention the Soviet Union where significant reforms, in my judgment, have not yet even begun.

I would like to highlight reforms that have supported China's increasing participation in the international economy and then turn to economic issues in the U.S.-China bilateral relationship.

As is well known, China's trade turnover (imports plus exports) expanded from around $21 billion in 1978, on the eve of reform, to more than $115 billion in 1990. Over these years China's foreign trade grew more rapidly than any other country and China rose from about the 32nd to the 13th largest trading country in the world.

By comparison I might note that in the years just prior to the onset of reform in China the hard currency exports of the Soviet Union were two to three times those of China. But in the decade of the 1980s Soviet exports to noncommunist countries were stagnant. Indeed by 1989 they were shrinking in absolute terms. By contrast China's trade, almost all of which is with market economies, grew rapidly. By 1986 China's hard currency exports surpassed those of the Soviet Union. China's relative importance in international trade has continued to expand since then while the role of the Soviet Union has shrunk considerably.

What is less well understood are the domestic economic reforms that made China's dramatic outward turn possible. I would point to three major developments. First, the Chinese have substantially decentralized control of foreign trade. They have gone from a system in which virtually all trade decisions were made at the center and then implemented by a handful of nationally controlled foreign trade corporations to one in which more than half of all exports and about 60 percent of all imports are determined outside the scope of the plan and are carried out by one of several thousand newly established foreign trade companies.

Second, the Chinese have substantially reduced the degree of overvaluation of their domestic currency and moved a long way toward achieving internal convertibility for trade transactions. In the prereform era Chinese firms had little incentive to produce for the international market. The rigid system of exchange control deprived them of any of the foreign exchange earnings from their exports. They were compensated entirely in domestic currency. But since the currency was over-valued they received too few units of domestic currency for each dollar's worth of exports. Indeed the overvaluation of the Chinese currency was so extreme that most exporters could not cover the domestic currency costs of export goods and received additional subsidies from the central government to cover their losses. Such a system, of course, precluded the development of a decentralized system of foreign trade.

The drawbacks of this system have been greatly reduced by two reforms. First, the currency has been devalued from about 1.5 yuan to the dollar in 1978 to 5.2 yuan by the end of 1990. Secondly, producers of export goods have been given the right to use some of their foreign exchange earnings to import goods not included within the scope of the state import plan.

The move toward convertibility of the currency has been made possible by the introduction of a parallel market for foreign exchange. Exporters can sell their retained foreign exchange to other firms wishing to import goods outside the plan. When this parallel market was formally introduced in the mid-1980s the volume of transactions was quite small. But the volume subsequently grew rapidly in absolute terms and as a share of China's total export earnings. In 1989, when some have argued Chinese reforms were going backward, the volume of transactions rose almost 40 percent to reach more than $8.5 billion. Last year the volume increased more than 50 percent and exceeded $13 billion, about a fifth of all of China's export earnings.

As the market has expanded and the official rate has been devalued the spread between the parallel market and the official exchange rate has shrunk. In 1986 the spread was slightly more than two to one but by the end of the first quarter this year the spread had fallen to just ten percent. In addition the black market rate is now only a small premium over the parallel market rate. That suggests that the parallel market rate is not manipulated behind the scenes and reflects a market-like price for foreign exchange.

The contrast with the Soviet Union is striking. In the very limited parallel market introduced in late 1989 the premium over the official rate was initially 2,400 percent. Although the ruble has been devalued several times since then, the botched currency reform of early 1991 has reduced public confidence in the ruble even more and the parallel and black market prices for foreign exchange in the first half of 1991 rose to even greater premiums over the official rate.

The third major reform that has made China's turn outward possible is of domestic pricing. At the outset of the reform process China's domestic prices were unrelated to international market prices. Chinese prices reflected arbitrary pricing policies of the central government and, particularly for industrial goods, had been largely uninfluenced by the forces of supply in demand for four decades. After a decade of reform of prices, the disparity between international and domestic relative prices has shrunk considerably. The domestic prices of more than 90 percent of all imports are now based on the international price. Previously, imports were sold at prices that were set with reference to the prices of comparable domestic goods, a process that largely insulated domestic producers from international competition. Exporters too now receive prices that are more closely related to international prices rather than turning their products over to state foreign trade corporations at artificially set state prices. These developments may seem somewhat esoteric but they are critical. Without these reforms decentralized foreign trade decisions could be irrational and reduce, rather than improve, China's real welfare. And domestic producers would continue to be insulated from international competition.

Economic Issues in Bilateral U.S.-China Relations

The salient issues in bilateral relations are the large Chinese trade surplus and the inadequate protection of intellectual property in China. Since China has been cited under the special 301 measure of our trade law, bilateral discussions are already underway to strengthen China's copyright, patent, and trademark protection, particularly protection for computer software and pharmaceutical and chemical products. If China does not take adequate steps to improve its performance in these areas U.S. trade law provides for appropriate sanctions. Thus I do not believe that the issue of intellectual property protection should be mixed in with discussion about renewing China's MFN status.

The issue of the bilateral trade imbalance has received more attention and is more frequently cited as a reason for terminating China's MFN status. I believe that this is a mistaken judgment for at least three reasons. First, our trade accounting procedures overstate the size of our bilateral trade deficit. We rightly criticize the Chinese for not counting reexports of Chinese goods through Hong Kong that ultimately end up in the U.S. But our trade statistics do not take into account the reexport of our goods through Hong Kong into the Chinese market. The problem is much more severe in the Chinese official data since 64 percent of all of China's exports to the U.S. in 1990 were reexported through Hong Kong whereas only 19 percent of our exports to China were reexported through Hong Kong. When this and another technical adjustment are made our trade deficit with China in 1990 was $7.9 billion rather than the officially reported $10.4 billion.

Second, China's trade surplus with the United States probably has peaked already. China's overall trade surplus in 1990 was the result of two factors that are now waning. First, because western economic sanctions substantially reduced China's access to international capital markets beginning in the second half of 1989, China took a number of steps to increase exports and to cut back on imports. The goal was simple -- to generate a trade surplus sufficient to be able to repay debts coming due in the early 1990s. Now that international financial organizations have resumed making some types of new loan commitments and commercial lending has resumed, the perceived need to run a trade surplus is waning. I expect that China will return to the pattern observed throughout the 1980s -- that is, an annual trade deficit financed via increased borrowing from a variety of international sources.

Second, the trade surplus in 1990 was in part the result of the macroeconomic cycles discussed by Professor Naughton in his paper for these hearings. With a substantial decline in economic growth in 1989 and 1990 compared to earlier years, China's demand for imports naturally fell and export markets looked more attractive to many Chinese firms than they would have in conditions of more rapid domestic growth. But this factor too is now waning as China's economic growth has accelerated markedly beginning the second half of 1990. Industrial growth was back in the double digit range in the first half of 1991 and China's GNP is likely to grow at a rate of at least 8 percent this year in real terms, up substantially from the 5 percent pace of last year.

The combined effects of these developments -- a resumption of international lending and a more rapid pace of domestic growth -- are already evident in China's trade statistics. China's imports fell significantly in 1990. But since December of last year import growth has resumed. Compared with the same month a year earlier imports rose 10 percent in December 1990, 20 percent in January 1991, almost 30 percent in March, 20 percent in April, and 15 percent in May. In several of these months China's imports grew more rapidly than exports. If these trends continue China's overall trade surplus will be less in 1991 than it was in 1990 and I would expect that the U.S. trade deficit with China would shrink rather than expand to the $15 billion level that has been predicted in some quarters.

Third, I believe that bilateral trade balances are not particularly useful in a country for which direct foreign investment has become so important. A large and growing share of Chinese exports are produced by joint venture firms. Exports of these firms have been growing very rapidly in recent years, rising from a few hundred million dollars in the mid-1980s to $7.8 billion in 1990. Almost half of the exports of foreign invested firms in 1990 originated in Guangdong province in South China just over the border from Hong Kong. Most of these export goods were formerly produced by entrepreneurs in Hong Kong and previously would have shown up in our trade statistics as imports from Hong Kong. Now these entrepreneurs have moved their production over the border into Guangdong Province. When their goods are sold in the U.S., as a large share are, they are counted as exports from China. This is also happening with the Taiwanese entrepreneurs who are moving their firms to the Xiamen Special Economic Zone in Fujian Province, across the straits from Taiwan. The significance of the U.S. as a market for these Taiwanese firms in China has become increasingly obvious in recent months. The threatened loss of China's MFN status in the U.S. market is now the single greatest factor restraining the expansion of Taiwan investment in the People's Republic of China.

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Foreword

The recent conduct of the Chinese government has renewed calls in the United States for a tougher stance against China, in particular the withdrawal of China's most-favored-nation (MFN) trading status. As these calls intensify in the U.S. Congress and elsewhere, we present in this issue of *NBR Analysis* the views of one of the nation's top experts on the Chinese economy, Professor Nicholas Lardy. In a survey of the course of economic reforms leading up to and following the Tiananmen incident two years ago, Professor Lardy makes clear that contrary to popular assumptions economic reform in China has continued and even intensified in certain areas since June 1989.

The continuance of these market reforms in China stands in sharp contrast to the failure of most reform programs to take hold in the Soviet Union and Eastern Europe, which remain bogged down by the residue of their centrally planned economies. Furthermore, China is an active participant in the international economy, despite suspension of loans and additional economic sanctions imposed by the United States and other nations following the crackdown.

Professor Lardy's policy prescription is unambiguous, if unlikely to be embraced soon by the American public: the United States should lift the remaining economic sanctions it imposed on China following the Tiananmen tragedy. He argues that such an action will further China's integration into the world economy and will promote long-term political reform.

NBR is nonpartisan and does not advocate policy positions, but we do encourage effective analysis to promote sound foreign policy. Regardless of the steps taken in coming months by U.S. policymakers regarding China, we offer this essay as a thoughtful contribution to that process.

Richard J. Ellings
Executive Director
NBR

Redefining U.S.-China Economic Relations

Nicholas R. Lardy

In the immediate aftermath of the Tiananmen tragedy of June 1989, the United States, other members of the Group of Seven, and other Western countries imposed a variety of economic sanctions against China. They included the suspension of a planned further relaxation of COCOM (Coordinating Committee for Multilateral Export Control) restrictions on the sale of high-technology products to China; holding up approval of new loans from international organizations such as the World Bank and the Asian Development Bank (ADB); and the suspension of the negotiations that were expected to lead to China's accession to the General Agreement on Tariffs and Trade (GATT). These and other economic sanctions were imposed largely to register disapproval of the slaughter of unarmed Chinese citizens by the Chinese armed forces. But they were partly justified by the argument that China had abandoned the promising path of economic reform on which it had been embarked for more than a decade. As a result, it was argued, China was no longer entitled to all of the privileges normally accorded to members of the international economic system.

I believe that two years later it appears there was much less retrogression in economic reform after the Tiananmen tragedy than was perceived at the time. Reform has continued on a broad front, and in certain key areas it has actually accelerated. The evidence presently available reveals that China's economic reform program not only continues to be far more successful than that of the Soviet Union but in many ways continues to lead even the reform efforts of the formerly socialist states of Eastern Europe. Many aspects of China's reforms are of great relevance even for the states that have overthrown their communist parties but seem economically paralyzed, unable to escape the legacy of central economic planning.

In particular, China remains the only reforming socialist (or formerly socialist) economy to become a more significant participant in the world economy. None of the countries of Eastern Europe, much less the Soviet Union, has any prospect for following soon the path China has blazed. Moreover, increasing China's involvement in the world economy continues to be one of the most significant stimuli of long-term change in China's political system as well.

The United States should therefore lift its remaining economic sanctions against China. This would have several benefits. First, at the margin it would further China's integration into the world economy. Eliminating the remaining restrictions on World Bank and Asian Development Bank loans to China, for example, would have positive effects on both the availability and the terms of commercial credit for Beijing. It would also obviate China's

Nicholas R. Lardy is professor of economics and Chinese Studies at the University of Washington's Henry M. Jackson School of International Studies. He is the author of numerous articles and books on the Chinese economy, including *Agriculture in China's Modern Economic Development*. His forthcoming book from Cambridge University Press is entitled *Foreign Trade and Economic Reform in China, 1978-1990*.

perceived need to run a large current account surplus. Resuming serious negotiations on China's accession to the GATT would provide opportunities for discussions leading to further liberalization of China's international trade and payments regimes. Easing constraints on the commercial sale of high-technology products to China would further stimulate domestic growth in China and tend to reduce the U.S. trade deficit with China.[1]

Second, eliminating the remaining U.S. sanctions would enhance the prospects for long-term political change in China. The continuation of sanctions only plays into the hands of conservative forces in China that seek to limit the extent and nature of China's participation in the world economy largely because they fear its long-term political consequences.

Third, lifting sanctions would diminish the exaggerated sense of political isolation felt by China's leaders over the past year or so. The Chinese leadership is increasingly uncertain about China's role in the emerging post-Cold War international system. Continuing sanctions only heightens this sense of uncertainty and isolation. Removing sanctions and acknowledging China's continued economic reforms would reduce the sense in Beijing that the United States is seeking to diminish China's role in the international system.

Finally, ending sanctions would reduce potential friction between the United States and other governments, all of which ended their sanctions against China, some beginning as early as 1989.

Economic Reform Continuities

In at least three key areas, initial assessments that a new conservative political coalition was intent on rolling back economic reform now seem to have been wide of the mark. These are the role of the non-state sector; price reforms; and the decentralization of foreign trade. In addition, in other areas reform continued unabated or even accelerated in the late 1980s and in 1990.

The Non-state Sector

The dramatic rise of the non-state sector is one of the most notable accomplishments of the first decade or so of economic reform in China. By the end of the 1980s less than 40 percent of China's national income originated in the state sector. By that standard the role of the state in economic matters in China has shrunk to a level approaching that of both Italy and France, where state-owned firms produce a third of national output. The dramatic rise of the non-state sector has been central to increased employment in the nonfarm sector, to the dramatic increase in exports in the 1980s, and to improvements in productivity in the Chinese economy. Most importantly, it marks an area in which China has made substantially more progress than even the formerly socialist states of Eastern Europe.

The large role of the non-state sector in China's economy in the 1990s is not simply the result of the success of rural reforms that restored the control of land to private farm households and led to a much more rapid pace of growth of farm output than in the pre-reform

[1] With the demise of communist regimes in Eastern Europe and the dismantling of the Warsaw Pact, the significance of COCOM as a restraint on the flow of technology to Eastern Europe has ebbed significantly. This has indirectly reduced multilateral constraints on the flow of advanced technology to China as well. Thus the major constraint on such flows from the United States to China are now imposed unilaterally by the United States. The most important constraint is on the sale of items included on the munitions control list. Many items on the munitions list embody dual-use technologies that may have both civilian as well as potential military application. Relaxation of the unilateral controls is complicated by evidence that the Chinese have transferred technology to Algeria that would allow it to build a nuclear reactor for military purposes and that China may have sold new missiles to Pakistan that are capable of carrying nuclear weapons.

period. Even in manufacturing, which currently accounts for half again as large a share of national income as agriculture, the non-state sector has grown at extraordinary rates. This reflects the dramatic growth of what I call the entrepreneurial sector of the Chinese economy.[2] This sector includes urban collective firms, township and village enterprises, private firms, foreign-invested enterprises, and so forth—any manufacturing firm that is not subject to the economically suffocating direct bureaucratic management of the state. These firms accounted for only 20 percent of manufactured goods output in 1978, when reform was getting under way, but 45 percent of output in 1990. Entrepreneurship is also evident in the service sector and in construction, where the role of non-state firms grew markedly in the 1980s.

In short, in the period during which the Soviets have been debating whether and how to privatize state assets and the former socialist states in Eastern Europe seem unable to initiate privatization even though they have eliminated their communist political regimes, the share of state-managed industrial output in China has plunged. The rising share of output produced by entrepreneurial firms in China is all the more extraordinary because it occurred in a decade in which the average annual rate of industrial growth was well in excess of ten percent.

Although China's entrepreneurial firms do not meet the standard of purely competitive firms of economic models, they operate in a setting that is far more market-oriented than state firms. Entrepreneurial firms acquire a significant portion of their capital on informal credit markets, where interest rates reflect supply and demand rather than the subsidies in the form of low or even negative real interest rates available from the state banking system. In the case of foreign-invested firms, a significant source of capital is the foreign partner, who is paying a market-determined interest rate. Entrepreneurial firms also purchase almost all of their inputs on the market rather than through the state materials allocation system at artificially fixed prices. They pay wages that are a function of the productivity of labor and the profitability of the firm rather than according to the fixed wage scale used by state-owned enterprises. Finally, they sell almost all of their output on the market at prices determined by supply and demand rather than delivering it to the state's wholesale distribution system at state-fixed prices.

In the wake of Tiananmen it was widely charged that the state was trying to squeeze out private and cooperative firms, such as township and village enterprises. It is not clear to me that there ever was much effort by the state to curtail significantly the role of this dynamic liberalized sector. If there was, we certainly can judge such a policy to have been a major failure. The number of collective and private firms did decline slightly in 1989.[3] However, the rate of growth of output is a much more accurate gauge of the dynamism of this sector than is the number of firms. In both 1989 and 1990 the entrepreneurial sector of the Chinese economy continued to grow much more rapidly than the state sector. For example, in 1989 the growth of the state-owned industrial sector was only 3.7 percent while the collective sector grew by 10.7 percent overall, with a 12.7-percent increase for township and village enterprises. In the same year, the private sector grew by 24.1 percent and foreign-invested firms expanded by 44.7 percent.[4] These large differentials in favor of the entrepreneurial

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[2]Nicholas R. Lardy, "Is China Different? The Fate of Its Economic Reform," in *The Crisis of Leninism and the Decline of the Left: The Revolutions of 1989*, edited by Daniel Chirot (Seattle: University of Washington Press, 1991), p. 147.

[3]The number of collective firms in manufacturing, for example, fall about six percent from 1.853 million in 1988 to 1.747 million in 1989. The number of private manufacturing firms fell by about one-half of one percent from 6.148 million in 1988 to 6.124 million in 1989. State Statistical Bureau, *Chinese Statistical Abstract 1990* (in Chinese) (Beijing: Statistical Publishing House, 1990), p. 68.

[4]State Statistical Bureau, "Statistics for China's National Socio-Economic Development in 1989," *Beijing Review*, Vol. 33, No. 9 (February 26-March 4, 1990), p. 11.

sector of the economy actually widened in 1990. The output of state-owned firms increased by only 2.9 percent; the collective sector grew by 9.1 percent, of which township and village enterprises grew by 12.5 percent; the private sector grew by 21.6 percent and foreign-invested firms grew by 56 percent![5]

In short, there is little evidence that the state has retreated on its commitment to a significant liberalization of the ownership of assets in the manufacturing sector. It is true that no significant number of state firms have been privatized. But, as is now clear from the slow to nonexistent privatization of state-owned firms in Poland, Czechoslovakia, and Hungary, privatization is not the panacea that many once thought it would be. The key difficulty is that these states have not developed significant markets for producer goods, one of the most important preconditions for both the successful sale of state assets and the independent development of entrepreneurial firms. Without these markets, the value of state assets is unclear. Privatization under these conditions is problematic since assets may be sold at too great a discount to their real value, leading to enormous problems, both political and economic.

China has systematically expanded the market for machinery, equipment and other capital goods, and intermediate goods and industrial raw materials since 1983-84. These markets are now the outlet for a very large share of the producer goods manufactured in the state sector, and they have been critical to the dramatic expansion of the non-state sector. For example, three-fourths of all metal cutting tools were distributed via markets at the end of the 1980s.[6]

Price Reform

Some have argued that the conservative coalition in control of China since 1989 has abandoned the process of price reform. While the government certainly did reassert control of some prices in 1989-90 as part of its anti-inflationary policy, price reform has never been suspended. The relative prices of a number of important goods and services have been adjusted significantly in the past two years. In many cases these goods were greatly underpriced for two or more decades, and administered price adjustments were critical prior to allowing markets to determine prices. Moreover, according to the World Bank the state now fixes the prices of only one-fourth of all commodities in China. Half of all commodity prices are determined by supply and demand, and the remaining one-quarter is allowed to fluctuate within limits established by the state.[7]

Price adjustments in 1989-90 were significant in several areas. For example, huge price increases (up to 120 percent) were instituted for passenger and freight transport. These price increases are particularly important because basic transportation prices were last changed in the mid-1950s. As the prices of inputs used by the transport system—energy, labor, and other materials—increased markedly over the ensuing decades, the transportation sector was pushed into the red. Unable to invest to expand capacity, the sector became a bottleneck, dragging down the overall performance of the economy. Rate increases will add several billion yuan annually to the revenues of the rail, civil aviation, and water transportation systems. Thus the sector will be able to finance more of its own expansion, alleviating the bottleneck that has been created in recent years.

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[5] State Statistical Bureau, "Report on National Economic and Social Development in 1990," *China Daily Business Weekly*, March 4, 1991, p. 4.

[6] World Bank, *China: Between Plan and Market* (Washington, D.C.: World Bank, 1990), p. 60.

[7] *Ibid.*, p. 59.

In addition the price of crude oil was raised significantly in both 1989 and 1990, and there is the prospect for a large increase in the price of coal.[8] These energy sources have been underpriced in recent years, leading to excessively energy-intensive development and wasted resources.

Finally, in late 1989 the Chinese government returned to the policy of pricing foreign exchange on a more realistic basis. Between 1981 and mid-1986 it moved systematically to reduce the overvaluation of the domestic currency. The official exchange rate rose from 1.5 yuan per U.S. dollar as reform got under way in the late 1970s to 3.7 by June 1986. That dramatic devaluation, combined with other external sector reforms, was one of the most important stimuli to exports. However, in the ensuing years the official exchange rate remained unchanged. As price inflation in China relative to the world rose in the latter half of the 1980s, the real value of the Chinese currency appreciated. That made imports less expensive for a broad range of users in China and substantially reduced the incentive for Chinese enterprises to sell their goods on international markets. The appreciation of the real exchange rate was undoubtedly one of the major reasons for the growing deficit in China's current account in the latter 1980s.[9]

The appreciation of China's real exchange rate was halted on December 15, 1989, when the Bank of China announced a devaluation of more than 20 percent in the value of the yuan vis-à-vis the dollar. That brought the official exchange rate to 4.7 yuan. A further devaluation of about ten percent on November 17, 1990, moved the official exchange rate to 5.22 yuan per dollar. These changes offset the real appreciation of the yuan that had occurred between mid-1986 and late 1989. More recently, Chinese authorities have indicated their intention to adjust the official exchange rate more frequently but by smaller amounts. The first sequence of these adjustments led to a further slight depreciation of Chinese currency to 5.3 yuan per dollar by late April 1991.

Decentralization of Foreign Trade

Decentralization of foreign trade is another example of the continuity of Chinese economic reform in the past two years. The charge that China's conservative leaders are seeking to recentralize the state's control of foreign trade seems wide of the mark. It is true that the heavy hand of the state is evident in many trade decisions, on both the export and the import side. A substantial increase in 1990 in the number of products that could not be imported into China was a significant factor in the ten-percent reduction in imports recorded by China's customs administration in 1990, for example. But there is little evidence of a pullback from the process of foreign trade decentralization that has been under way since 1978 and has undergirded the dramatic rise in exports since then.

There is little doubt that the breakdown of the monopoly power of the handful of foreign trade corporations that controlled all trade in the late 1970s was one of the most significant decentralization measures of the 1980s. In the late 1970s the Ministry of Foreign Trade exercised direct control of all trade through these corporations. By the mid-1980s more than eight hundred independent foreign trade corporations had authority to enter into international transactions in specified product ranges. By the late 1980s the number had soared

[8]The state increased the price of crude oil distributed through the state materials distribution system from 103 yuan per ton in 1987 to 110 yuan in 1988. Much more significant upward adjustments were made in the following two years to 137 yuan in 1989 and then to 167 yuan in 1990. Ye Dongfeng, "An Analysis of and Suggestions Concerning a Plan for the Reform of Crude Oil Prices," *Jiage lilun yu shijian (Price Theory and Practice)* 1990, No. 10, pp. 32, 36.

[9]China incurred current account deficits in 1978-1981, 1985-86, and 1988-89. From a surplus of $300 million in 1987 the deficit rose to $3.8 billion in 1988 and then $4.3 billion in 1989, according to the State Administration of Exchange Control.

to more than five thousand. Some of these were controlled by national production ministries, others by provincial governments, and a few even by large enterprises with extensive foreign trade.

Competition among these firms, combined with reform of pricing of traded goods, provided Chinese enterprises with substantially more incentives to export by the late 1980s.[10] However, the dramatic expansion in the number of trading companies "meant the appearance in foreign trade circles of inexperienced newcomers who have sometimes signed contracts which they could not perform."[11] In order to deal with this and other problems, the State Council in March 1989 remanded to the central level the authority to approve new foreign trade corporations and announced a rectification campaign of existing corporations. This message was reinforced in November 1989 when the State Council approved a Ministry of Foreign Economic Relations and Trade (MOFERT) document calling for a reduction in the number of "unnecessary" foreign trade corporations.

However, the number of firms actually closed by this campaign appears to have been quite small, and new decentralization measures, introduced in 1991, have promised that more firms producing goods for export will be given direct trading rights.[12] By the spring of 1990 roughly 70 percent of all foreign trade corporations had been subjected to the scrutiny of the rectification campaign and only eight hundred had been closed down or forced to merge with another corporation.[13] If that survival rate of firms continued to the end of the campaign, China would still be left with around four thousand or more foreign trade corporations. In short, the campaign seems designed to eliminate the weaker firms and those that have violated various state regulations rather than to expand significantly the powers of the remaining national foreign trade corporations under the jurisdiction of MOFERT.

Moreover, the expanded role of the new foreign trade corporations during the 1980s constitutes one of the most important predictors of the long-term success of China's externally oriented policies. By the end of the 1980s, over half of all of China's exports were "category three" commodities that fell outside the scope of both the mandatory and the guidance trade plans. These exports were arranged on a decentralized basis, either on the initiative of one of the many foreign trade companies or by a producer who engaged the services of a trading company to act as the firm's agent. Moreover, the competition among these trading companies meant that by the end of the decade most producers were receiving the international price for their products rather than the state-fixed prices, as they had in the pre-reform foreign trade system.[14]

The dramatic expansion of decentralized exporting and the vigorous competition among foreign trade companies in China mark a distinct contrast with the most serious previous attempt at foreign trade decentralization by a socialist economy. A reduction in the monopoly trading rights of the handful of national trading corporations was a key feature of the New Economic Mechanism introduced in Hungary in 1968. But in Hungary the producing firms that were granted trading rights remained administratively isolated and were unable to expand their share of trade turnover beyond ten percent. By the mid-1970s the Hungarian

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[10]Nicholas R. Lardy, *Foreign Trade and Economic Reform in China, 1978-1990* (Cambridge: Cambridge University Press, forthcoming), Chapter 3.

[11]Stanley Lubman, "Investment and Export Contracts in the People's Republic of China: Perspectives on Evolving Patterns," *Brigham Young University Law Review* 1988, No. 3, p. 557.

[12]Chang Hong, "Enterprises Given Rights in Foreign Trade Deals," *China Daily*, February 8, 1991, p. 1.

[13]"Pay Close Attention to the Work of Rectifying Various Kinds of Foreign Trade Corporations," *Guoji Shangbao (International Business)*, March 20, 1990, p. 1.

[14]Nicholas R. Lardy, *Foreign Trade and Economic Reform in China, 1978-1990, op. cit.*, chapter 3.

government had reasserted the traditional principle that foreign trade was a state monopoly, a decision that was not reversed until 1987.[15] By contrast in China there has been a steady expansion in the number of new, decentralized trading companies, and the share of exports that they control has expanded enormously. Thus there is a large constituency for the continuity of foreign trade decentralization.

Finally, this brief survey of external sector reforms would not be complete without touching on the continued relaxation of exchange control over the past few years. The process of using the market to allocate foreign exchange, rather than continuing to rely on the foreign exchange plan to allocate all export earnings as in the pre-reform era, began as early as 1980-81.[16] The Bank of China and its local branches began to facilitate the unplanned redistribution of foreign exchange among state units at prices diverging from the official exchange rate. More formal foreign exchange markets were established in major urban centers and several special economic zones in the mid-1980s to allow foreign-invested firms to buy and sell foreign exchange among themselves. These markets were opened up to domestic firms in 1987-88. The volume of transactions on these markets, small at first, grew rapidly in absolute terms and as a share of China's total export earnings. Turnover rose from $4 billion in 1987 to $6.264 billion in 1988.[17] In 1989, when some argued reform was in full retreat, the volume of transactions rose almost 40 percent to reach $8.57 billion.[18] And in 1990 the volume literally exploded to $13.16 billion, an increase in excess of 50 percent.[19]

I believe that the parallel market price in 1990 and 1991 is beginning to be a reasonable approximation of an equilibrium price for foreign exchange, as determined by the demand and supply for traded goods. The large premium over the official exchange rate that purchasers of foreign exchange were willing to pay on the market in 1988 and most of 1989 had dwindled by late 1990 and the first quarter of 1991 to around ten percent.[20] Thus most importers, whether they receive their foreign exchange via the plan or purchase it on the market, appear to be paying something close to the opportunity cost for foreign exchange. And exporters by and large are receiving something close to the market price for foreign exchange. The pre-reform system, in which importers were heavily subsidized and exporters were heavily taxed by an official exchange rate that called for too few units of domestic currency per unit of foreign currency, is largely gone.

Among the former socialist states in Eastern Europe only Poland comes close to China in its decontrol of foreign exchange and the move close to internal convertibility of the domestic currency for trade transactions. That has stimulated the growth of Polish exports—but largely from the farm sector. Exports of manufactured goods expanded only modestly, despite the staggeringly large devaluation of the zloty, which by the beginning of 1990 was worth only about five percent of its value just a year earlier.[21] That pattern is perhaps not surprising. Polish agriculture was never collectivized and remains responsive to market incentives. In contrast, Poland has few entrepreneurial manufacturing firms. Ninety percent of

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[15]Peter Naray, "The End of the Foreign Trade Monopoly: The Case of Hungary," *Journal of World Trade*, Vol. 23, No. 6, pp. 88-92.

[16]Ezra Vogel, *One Step Ahead in China: Guangdong Under Reform* (Cambridge, MA: Harvard University Press, 1989), p. 353.

[17]"Initial Steps in the Establishment of China's Foreign Exchange Market," *Jinrong shibao (Banking News)*, February 15, 1989, p. 1.

[18]Zhang Guanghua and Wang Xiangwei, "Swap Centers will be Updated," *China Daily Business Weekly*, May 6, 1990, p. 1.

[19]Ying Pu, "China Tightens Control Over Foreign Debt," *China Daily Business Weekly*, March 4, 1991, p. 1.

[20]In November 1990 the swap market rate in Shanghai was 5.27 yuan per dollar and in other cities stood between 5.5 to 5.7 yuan, as compared to the official rate of 5.2 yuan. Wang Xiangwei, "U.S. Dollar May Face Tumble in China," *China Daily*, November 20, 1990, p. 2. In late April 1991, the swap market rate was 5.83 yuan, as compared with the official rate of 5.3 yuan.

[21]In January 1989 the official exchange rate was 506 zlotys per U.S. dollar. By January 1990 the rate stood at 9,400 zlotys per dollar. Peter Havlik, "Die Wechselkurspolitik der RGW-Länder und Problem der Konvertibilät," Research Report No. 162, March 1990, Vienna Institute for Comparative Economic Studies.

all Polish manufactured goods are produced in state-owned firms that, by all accounts, remain highly inefficient and, for the most part, are incapable of competing on international markets and responding to changing world market conditions.

The Soviet Union has made even less progress in reforming its foreign exchange system. Although the ruble was devalued in late 1990, it remains grossly overvalued. In late 1989, when a limited auction market for foreign exchange was introduced by the Vneshekonom Bank, the price of a dollar was 15.2 rubles, 25 times the official rate.[22] The regularization and expansion of these auction markets to cities other than Moscow, which had been promised for 1991, appears to have been delayed by the growing shortage of hard currency and the increasing number of cases of nonpayment in commercial transactions with the West.

Conclusion

China is the only socialist or formerly socialist state to become a more significant participant in the international economic and trading system. It has provided increased incentives for export by decentralizing its control of foreign trade and adopting a more realistic official exchange rate. Furthermore, it has substantially relaxed its system of exchange control and may be on the verge of achieving internal convertibility for trade transactions. Finally, it has permitted the dramatic expansion of the entrepreneurial sector of the economy that has responded to these reforms. Exports of township and village enterprises, at $12.5 billion, and of joint-venture firms, at $7.8 billion, accounted for a third of China's exports in 1990.[23] Moreover, despite the fact that several billion dollars in new loans from international agencies were withheld in 1989 and 1990, China has continued to meet nearly all of its international financial obligations.[24]

The contrast between China on the one hand, and other formerly socialist states and the Soviet Union on the other, is remarkable. During 1989 and 1990 the United States committed about $2 billion in grants, debt relief, and other assistance to Central and Eastern Europe. And the more recently concluded debt-forgiveness program negotiated with Western governments will relieve Poland of the obligation to repay more than half of its $33 billion debt to Western governments.[25] According to the U.S. government this assistance was granted "in order to support the transformation of centrally planned economies to market-based economies led by the private sector and integrated into the world economy."[26] Yet most of these states have done little to marketize their economies. Privatization is not a reasonable prospect for these economies until after markets for capital goods are adequately developed, a process that will take several years. Poland, which according to the World Bank's figures has a per capita income seven times that of China, seems particularly insistent in its demands for relief from its international financial obligations rather than creating the conditions that are most likely to lead to the growth of its exports and its eventual ability to meet its international financial obligations.

Much has been made of the fact that the U.S. trade deficit with China has burgeoned in recent years, reaching $10.4 billion in 1990, making it the third largest deficit nation. Some

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[22]"Ruble Shrinks Again," *Wall Street Journal*, November 13, 1989.

[23]"Exports Boom for Foreign Funded Firms," *China Daily*, January 21, 1991, p. 1. "China Sees Good Years in Rural Industry," *China Daily*, December 7, 1990, p. 1.

[24]Officials of the State Administration of Exchange Control have acknowledged that by the end of 1989 Chinese borrowers failed to pay back $150 million in contracted debt, most of which was owed by joint venture hotels. In the same year China repaid a total of $17 billion in foreign debt, most of which was short term. "Foreign Debts Amount to $45 b," *China Daily*, November 28, 1990, p. 2.

[25]The Polish government hopes to negotiate similar reductions on roughly $15 billion in commercial debt.

[26]U.S. Department of State, Bureau of Public Affairs, "Focus on Central and Eastern Europe," No. 31, February 8, 1991, p. 1.

have gone so far as to suggest that this deficit is among the factors that should be taken into account when Congress considers whether to renew China's most-favored-nation (MFN) trading status. I believe that the bilateral deficit is not relevant to the issue of China's MFN status, that the deficit is at least in part of our own making, and that in any case it is likely to shrink in coming months and years.

When economic sanctions were imposed on China in mid-1989, China's external debt was around $40 billion.[27] Unless we expected that China would follow the example of Poland, which suspended all payments of state-guaranteed credit in 1981, and default on its external obligations, we should have anticipated that China would reverse the pattern of most of the 1980s and begin to run a current account surplus rather than a deficit. Put simply, unless China achieved a surplus it would have to default on its international obligations. It did not. Administrative measures, combined with two successive devaluations of the currency in 1989 and 1990, achieved their intended result—China achieved a record trade surplus in 1990, paid its external obligations, and added to its foreign exchange reserves.[28]

The shift from a current account deficit to a surplus was reinforced by macroeconomic developments. In 1987-88 excess aggregate demand in China fueled inflation and pulled in imports on a vastly increasing scale. The program of economic retrenchment begun in the fall of 1988 cut the real growth of the economy in 1989 and 1990 to less than half its former rate. That shift in the macroeconomic picture reduced China's demand for imports and made export markets more attractive for many producers.

Since about the third quarter of 1990 economic growth has picked up somewhat in China and the demand for imports has risen. For example, following several months in which imports declined in absolute terms over the previous year, imports in December 1990 and January 1991 rose about 10 and 20 percent, respectively, over the same month a year earlier.[29] Although the growth of imports faltered in February, it resumed with an expansion of almost thirty percent in March. That trend is likely to continue for most of the first half of 1991, reducing the size of China's trade surplus with the rest of the world in 1991 compared with 1990. *Ceteris paribus*, that trend eventually should reduce the U.S. bilateral trade deficit with China. Of course, other things never are the same. The United States remains the only major advanced industrial country without a concessional loan program to promote the sale of its goods to China.[30] After sanctions were imposed in mid-1989 this longstanding disadvantage of U.S. exporters was eliminated since these bilateral programs all were suspended. But, since all countries except the United States have now lifted their sanctions against China and resumed these programs of concessional aid and subsidized credit, U.S. exporters may not participate fully in the renewed growth of Chinese imports that is almost certainly under way. □

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[27]Wang Xiangwei, "China Pledges to Pay Debt," *China Daily*, January 8, 1990. The article quotes Tang Gengyao, at the time the general director of the State Administration of Exchange Control, that the external debt of China at the end of June 1989 was $40 billion.

[28]Although China has not yet released its 1990 foreign trade data compiled according to standard international practices, there is no doubt China achieved a significant current account surplus. Its trade account, far and away the largest component of the current account, registered a surplus of $13.1 billion, its first surplus since 1984. By comparison, the trade account showed a deficit of $5.6 billion in 1989.

[29]Based on the data of the Chinese General Customs Administration.

[30]Nicholas R. Lardy, *Economic Policy Toward China in the post-Reagan Era*, National Committee on U.S. China Relations, Inc. China Policy Series, No. 1, January 1989, p. 8.

Senator BINGAMAN. Thank you very much.

Professor Naughton, why don't you go ahead and summarize your testimony.

STATEMENT OF BARRY NAUGHTON, DEPARTMENT OF ECONOMICS, UNIVERSITY OF CALIFORNIA AT SAN DIEGO

Professor NAUGHTON. Thank you, Mr. Chairman. It is an honor to be here today.

Since I have the privilege of going last, and you have also seen the excellent report by the CIA, I will just try and make four brief comments that I think will highlight a few slight differences of interpretation individual points.

ECONOMIC CONDITIONS IN CHINA

I want to stress once again that China's economy is highly cyclical. Thus, any time we wish to discuss China's economic conditions, it is very important that we stress the point that we are in the economic fluctuations that China has gone through repeatedly for many decades. Right now, we are in a position where an exceptionally severe recession occurred in China during 1989 and 1990. We are currently in a phase of recovery.

We should use that, I think, to make two conclusions. First is that the short-run economic prospect for China is quite favorable, as we heard from the Government. We can expect to see very rapid growth. Second, we should, as Professor Lardy noted, interpret many of the things that occurred in the economy last year as the result of a short-run sharp recession in the Chinese economy. In particular, there is substantial evidence that the Chinese authorities implemented an austerity program in order to control serious inflation, and this austerity program during 1989 and 1990 was considerably more effective than the Chinese anticipated. That is to say, they overshot their targets and engineered essentially a sharp recession and actually a period of declining prices, which certainly was not their intention.

One of the ways that is important to us, I think, is that this had an impact on the Chinese imports. It is true that Chinese imports declined by 10 percent in 1990, but I think it should be noted that total domestic sales in China also declined about 5 to 6 percent during 1990.

So, in other words, the decline in import was not solely the result of import restrictions, although they certainly are important, but were in addition, to a very large extent, driven by macroeconomic conditions. As macroeconomic conditions change, I think I would allow myself Professor Lardy's view that these overall Chinese trade surpluses, I think, will not increase this year. Whether or not the surplus with the United States increases, of course, depends on the performance of the joint ventures inside of China.

But I think it is important to see that the most striking economic fact about China in 1990 is not really the result of trends that we would necessarily expect to see continued, but are rather the result of a very sharp, relatively short economic cycle that resembles the economic cycles that have occurred in China in the past.

Second, during the past decade of economic reforms, macroeconomic cycles have been accompanied by cycles of reform. When times are good, reform progresses; when times are bad and we have austerity programs, there is a retreat and retrenchment from reform.

During 1989 and 1990, we, therefore, would have expected to see just such a reform cycle. That is to say, we would have expected to see a retreat from reforms. However, there was reason to fear much more after the Tiananmen tragedy. A whole group of reformists was purged from the leadership, swept out of power, and the strength of the hard-liners was increased to a degree unprecedented in the last decade. Therefore, there were substantial reasons to fear and, indeed, expect a significant rollback of economic reform.

I think it is important for us to recognize now, as we reach the end of 1990 and the beginning of 1991, not only has there not been a significant rollback of reform, but in many respects, reforms have been reaffirmed, and there has been significant new progress in economic reform.

Many of these are touched on in the CIA report. I think I would give a slightly different emphasis. The CIA report refers repeatedly to forced concessions—little appetite for reform. I think, in fact, if you take a look first at the experience of 1990, you see that all of the elements of the hard-line program to roll back reforms were progressively discarded during 1990. At the end of 1990, when we see the orientation in economic policy, it reaffirms virtually every aspects of the Chinese economic reform strategy during the 1980s, with a few exceptions here and there.

In particular, in the eighth 5-Year Plan, which has been referred to a number of times by the previous panelists, there are some very clear, encouraging, explicit statements about the need to move forward—marketplace regimes to reduce the scope of economic planning and to move forward with capital markets as well as product markets. I think these statements have been given insufficient attention.

In addition, during 1991 we have seen concrete measures, difficult concrete measures that indicate a real willingness to move in this direction; in particular, reforms of low-state subsidized prices, such as grain and housing; movement in terms of reviving capital markets and experiments with enterprise stock exchanges. All of which I think we should give due attention to and move forward.

My third point, however, is that in spite of these encouraging signs, we should not be overly optimistic about the future of China's economic reforms in the long run. There are a number of very serious problems that it seems to me the Chinese have really not begun to face up to. The first of these is a prolonged fiscal crisis. Essentially, what is happening in

China is that after many years of relying on state monopolies or industries as the primary source for budgetary revenues, the Chinese have relaxed their monopoly and allowed much more entry, much more competition by nonstate firms. The result has been a steady decline in the profits that these state industries turn over to the national government. As a result, China's budgetary revenues, as a share of GNP, have declined every year since 1978. And currently, the Chinese Government's revenues are actually less than the median for low- and middle-low-income developing countries. Very striking, when you consider how large and intrusive China's state sector is. This chronic fiscal crisis creates long-run problems in the Chinese economy that can only be resolved by fundamental restructuring of the Chinese tax system. Again, they haven't tackled this problem.

Second, there are long-run energy problems that are reasserting themselves in China. Extraction of primary energy has decelerated, and increased costs are highly evident in both petroleum and coal mining. During the 1980s, China's energy crisis was eased somewhat by the rapid growth of small-scale coal mining, in particular. But I think 3 or 4 years down the line, we are going to see increased energy problems in China.

And finally, we clearly have a situation in China in which political problems are intensifying. There is a kind of political gridlock that is setting in as the succession struggle to follow Deng Xiaoping approaches. This makes it much more difficult for people to advance and push bold and successful economic reform programs. It is increasingly dangerous for individual political entrepreneurs to push for bold programs that will expose them to attack in the political environment, which I predict will grow increasingly dangerous for these political entrepreneurs over the next couple of years.

So, I think for these three reasons, even though the Chinese have accepted the need to move ahead with further economic reforms, their problem is not their willingness to go forward. The problem is, however, that there are an increased number of stumbling blocks in the road forward. And I think, therefore, over the long run, there are a number of problems that confront Chinese policymakers, and we shouldn't overlook them.

However, my final point is that in the next couple of years these long-run problems are not likely to be dominant. In the next couple of years, the dominant fact will be that the economy is emerging from recession. It is true, as the CIA pointed out, that there is a kind of liquidity overhang in the economy. But what the CIA report doesn't point out is that there is also a counterpart to the liquidity overhang, which is a very large buildup of reserves of all kinds in the short run. There are very abundant supplies of consumer goods, energy stocks, and, of course, foreign exchange, a number of speakers have mentioned. Therefore, this liquidity overhang might potentially be a long-run problem. It is not at all like the liquidity overhang in the Soviet Union, where there are large stocks of money because the consumers simply don't have commodities to buy.

That is not the case in China. As anyone can see going to China, there are very abundant supplies of consumer goods. The problem is rather that there have been certain mistakes and inconsistencies in macroeconomic policy that have led to the simultaneous buildup of liquidity, along with stocks of goods that people are not yet buying.

So in summary, I would like to say that we should look at China's economy in the short-run context as very healthy, but certainly not lose sight of the very serious long-run problems that the economy faces. Thank you very much.

[The prepared statement of Professor Naughton follows:]

PREPARED STATEMENT OF BARRY NAUGHTON

SUMMARY: Four Main Points.

1. China's economy is highly cyclical. As a result, assessment of China's current economic situation and short-run prospects always depends on understanding what phase of the cycle the economy is currently in. Right now, the economy is emerging from a recession, and will grow vigorously for the next couple of years. Short-term prospects are favorable.

2. For more than a decade, macroeconomic cycles have been accompanied by cycles of reform. During good times, reform progresses; in hard times, retrenchment occurs. During 1989-90, we would have expected the government to retreat from reforms temporarily, because it was emphasising policies of austerity and controlling inflation. Moreover, the defeat of reformists after the Tiananmen tragedy certain led us to fear--and expect--a significant rollback of reforms. It is important to recognize that there has *not* been a significant rollback of economic reform. As the economy emerges from recession, essentially all fundamental elements of China's reform to date are still intact, and government policy has clearly shifted in favor of further reforms.

3. Nevertheless, underlying problems remain severe and it is difficult to be truly optimistic. Three problems are potentially most severe:

A. Fiscal problems. China's budgetary revenues have declined every year (as a share of GNP) since 1978, and the government is having trouble funding education, health, and public infrastructure needs. The government has increasingly relied on bank credits to fund its ambitious programs, and this threatens to destabilize the economy.

B. Energy and pollution problems. Growth of primary energy has decelerated, and increasing costs are evident in petroleum and coal mining. China already produces prodigious amounts of energy, but uses it wastefully. Temporary easing of energy supplies in the mid-1980s was due primarily to small-scale rural coal mining, and this source of growth now seems largely exhausted.

C. Political gridlock and increased ideological taboos. A number of approaches to economic reform have been ruled out, making development of a feasible reform package more difficult. Moreover, as the struggle over the succession to Deng Xiaoping heats up, advocacy of any program becomes more dangerous. Economic and policy risk-taking declines and potential entrepreneurs seek safety instead of contributing to the economy.

The above problems are not insurmountable, but require vigorous and intelligent policy responses, which may not be forthcoming.

4. In the next couple of years, there is nothing intrinsic to the economy that will obstruct successful economic performance. On the contrary, important successes have been achieved in the past year that will smooth growth over the next couple of years. These include taming inflation, reaping a bumper harvest, and rapid expansion of exports and foreign exchange reserves.

DISCUSSION

1. Recovery from Recession.

During most of 1990, the Chinese economy was in a recession. The recession was initiated by austerity measures adopted in response to the inflation that developed under Zhao Ziyang in 1988. However, China's planners implemented an austerity program that was overly strict. Not recognizing that inflation had already eaten away at the effective purchasing power of both households and factories, planners clamped down hard on investment from the banks and government budget, and pushed the economy into a deep recession. In doing so, they overshot their objective of stabilizing the economy and taming inflation, and instead engineered an economic downturn bigger than they had bargained for.

Austerity policies were abandoned at the end of 1989, and during most of 1990, planners were pumping money into the system in order engineer a recovery from that recession. Generous credit extension also served to prop up state sector factories, and keep workers in the factories and off the streets, thus defusing potential social unrest. Total bank credit increased 22% in 1990, a remarkably high rate considering that prices increased by only a few percent and the economy hardly grew at all. Factories were ordered to produce regardless of whether there was demand for their output: bank credits were used to finance the accumulation of unsold output. Unsold inventories of completed industrial products increased by 45 billion yuan during 1990. By comparison, the increase in net industrial output from the large-scale sector was only about 32 billion yuan, so essentially all of the increased industrial output went into warehouses.

The flood of bank credits into the enterprise and the stress on social stability meant that worker wages began to rise again. The government allowed wages to rise, catching up with losses caused by inflation, in order to purchase support from the urban working class. During 1990, real urban wages grew 10% (after accounting for inflation), even though labor productivity did not increase at all. This contrasts fairly sharply with trends in rural incomes. Rural incomes were depressed by the recession in rural non-agricultural occupations through most of the year. Moreover, when a big harvest did come in at year-end, weak demand caused a rapid drop in free market grain prices, so that farmers gained little benefit from the bumper crop. Overall, Chinese household surveys show real rural incomes creeping up by only 1.8% during the year.

China's planners expected that the increase in credit to enterprises would quickly bring the economy out of recession, but they were surprised. Credit policy was not consistent with overall demand policy. Paradoxically, planners during 1990 were keeping a tight rein on investment projects while pumping credit over to the enterprises that produced investment goods. The factory that wanted to install a machine in a new plant couldn't get bank credit to finance its purchase, even though the factory that produced the machine had access to bank credit to produce it. The result was that the machine simply sat idle in the warehouse of the producing factory. Even more significantly, China's consumers continued to react cautiously. Notwithstanding a 10% increase in real urban incomes, purchases of consumption goods did not increase at all. The modest increase in consumer goods prices of 2.1% was enough to wipe out the small 1.9% increase in nominal consumer good sales. Household saving, by contrast, skyrocketed, increasing a whopping 37%. Consumer goods were abundant, but nobody was buying. For most of the year, the economy continued to limp along on sluggish and inadequate market demand.

Nevertheless, eventually the shift to expansionary policies trickled down to the marketplace. Consumer demand increased slightly in the fourth quarter of 1990, and then vigorously during the first quarter of 1991. As demand revived, industrial production--particularly production of consumer goods--also began to pick up. Quarterly industrial growth rates reveal this pattern clearly. During the first quarter of 1990, industrial output was exactly equal to that of a year previous: growth was zero. During the two succeeding quarters, output growth inched upward to 4% and 5% respectively, and then surged to 14% during the fourth quarter. The 14% growth rate was sustained through the first quarter of 1991.

Ironically, some of the first beneficiaries of the revival of consumer demand were the private and rural enterprise sectors. Private businesses regained nearly two million jobs during 1990. The current total of 22.7 million workers, while still below the 1988 peak, nonetheless represents a significant recovery. A similar picture emerges with respect to rural industry. While employment data are not yet available, output was growing strongly again by year-end. In the first quarter of 1991, revived market conditions had returned rural industry to its status as the fastest growing segment of industry. In that quarter, rural collective industries grew 29% over the year previous period, compared to 10% for state-run factories.

2. Changing attitudes toward economic reform.

The hardliners who came to power during 1989 claimed allegiance to a general ideal of economic reform and opening to the outside world, but in fact, they were hostile to some of the key components of the reforms that had been carried out through 1988. Moreover, it seemed that hardliners had the political power to carry out a major retrenchment in economic policy. It has traditionally been true in China that during periods of economic austerity, hardliners are strengthened and are able to impose limits on the reform process. But such limits have repeatedly proven to be transitory, and have been swept away by further reforms after austerity is abandoned. Initially, it seemed that this pattern would be broken during 1989-90. Not only were the hardliners strengthened, but in addition, a whole group of reformers associated with Zhao Ziyang had been swept out of the leadership following the tragic events of June 1989. The balance of power in Beijing seemed to have decisively shifted in favor of economic hardliners.

Moreover, those hardliners--led by party elder Chen Yun and his only slightly less elderly protege Yao Yilin--felt confident enough to promulgate an explicit program for the recontrol of the economy. In November 1989, the Communist Party Central Committee passed a resolution on economic rectification, known as the "39 Points," which called for a significant retreat from economic reform. However, none of the changes called for in the 39 Points was carried out in 1990. We can trace the gradual abandonment of most elements of the hardline agenda through

1990. In the spring, Premier Li Peng called for continuance of the coastal development strategy, reaffirming a policy closely associated with the reformist former Premier Zhao Ziyang. At about the same time, the attitude toward rural industries expressed in the official press began to change: instead of stressing competition with state enterprises, the media began to stress the indispensable role of rural industry in the national economy. Li Peng also gradually accepted the continuance of "enterprise contracting" (*chengbao*), under which the government signed long term contracts with state factories. This controversial program--also closely associated with Zhao Ziyang--had been criticized by hardliners for being overly generous to state factories, and amounting to a give-away of state resources.

The proposal to expand the central plan was also abandoned early in 1990. Indeed, the proposal had become meaningless. With demand for most commodities weak, and market prices falling, state factories had no difficulty obtaining the the inputs they needed. Moreover, production levels were changing in unpredictable ways that made it impossible for planners to draw up meaningful output and supply plans. In fact, the central plan was not expanded to cover additional commodities, and the proportion of key commodities allocated by planners continued to decline. For example, the proportion of total finished steel allocated by the central government dropped to 31%, its lowest level ever, and other key commodities such as coal, lumber and cement showed similar trends. Finally, proposals to increase budgetary revenues was also unrealized, although this decision was more politically contentious. During 1990, total government revenues (including all subsidies) slipped to 20% of GNP from 21% the year before, and there was no significant increase in the central government's share.

By the end of 1990, the pendulum had clearly swung in favor of a tentative re-endorsement of further reforms. In December, the Communist Party approved an outline for the Eighth Five Year Plan (1991-1995) that included a section on economic system reform which reverses nearly all the concrete positions outlined in the 39 Points. Most fundamentally, the Plan Outline advocates continued movement toward a market economy. It asserted that except for a very small number of crucial commodities that would remain price controlled, China would attempt to gradually place all other commodities under a market price regime. The possibility of moving to world market prices for some commodities was endorsed.

Why was the hardline program for the economy so decisively repudiated? Political maneuvering at the top was important. As early as June 9, 1989, Deng Xiaoping proclaimed that the Tiananmen incident should not mean the end of reform, and that reforms should instead be accelerated. Nevertheless, this had not prevented the adoption of a hardline program a few months later. Subsequently, Premier Li Peng, doubtless thinking of the ultimate succession to Deng Xiaoping, clearly distanced himself from the extreme hardline program and endorsed key elements of the economic reform program. In a number of these cases, and particularly in his endorsement of enterprise contracting and the Coastal Development Strategy, Li Peng seems to have been trying to build support by attracting some members of Zhao Ziyang's reformist coalition.

Nevertheless, the more important reasons for the shift were economic. The hardline program was entirely based on the need to restore control to the economy. It made some sense while inflationary imbalances were severe, but its rationale evaporated once the economy was brought back into balance and inflation tamed. Under the new economic conditions prevailing in 1990, the hardline program called for sacrifices from nearly everybody for no clear purpose. Under these conditions, it is not surprising that reasonably astute politicians quickly abandoned the program, for it had turned out to be both infeasible and unnecessary.

As China's economic condition took a decided turn for the better in 1991, the leadership began to feel sufficient confidence to embark on further reforms. Strikingly, the most significant reforms to emerge during the first half of 1991 were politically sensitive increases in urban prices that had remained unchanged throughout the previous reform decade. The price of state-supplied grain and edible oils as well as rental rates of state housing were both increased during the spring of 1991. In both cases, low prices had required extensive subsidies. In raising prices, planners hoped to reduce subsidies while also creating conditions for further marketization of housing and staple foods.

Urban rents had been unchanged since the late 1950s. The average monthly rent per square meter was 0.13 yuan, and rent amounted to less than one percent of urban household expenditures. Rents will be increased in stages, at first gradually being raised to 0.6-0.8 yuan per square meter, which would cover current costs and depreciation of housing. In a further step during the 1990s, rents are to be raised again to around 1.5 yuan per square meter, to cover interest and real estate tax. Implementation is in the hands of local governments, and is thus progressing unevenly in different parts of the country. Newly built housing will immediately adopt the new rent schedules, but implementation will be gradual for existing housing. In any case, it appears that substantial adjustment of rental rates has already occurred. Moreover, housing reform has been accompanied by steps toward ownership reform. Sales of housing can now be outright, in which case all rights revert to the purchaser; or they can be controlled sales of public housing to state workers, in which case some rights over resale prices remain with the government.

Prices of staple grains and edible oils were raised between 25% and 50% in May 1991, after remaining unchanged since the mid-1960s. Increased grain and oil prices were also passed through in the cost of processed products such as noodles and bread. This measure by itself raised the urban consumer price level by 4.5%, and pushed the inflation rate for May up to 8.9%, by far the highest rate in over a year. In both these cases, urban workers have been compensated in advance. Urban wages grew 16% during the first four months of 1991, which should be more than enough to cover the price increases. Thus, while the price increases will reduce the overt subsidy burden on the state, they will not lead to any net increase in state financial resources. Perhaps the greatest limitation to these changes is that they occur after several years of steady inflation, in which the overall urban price level has more than doubled. Thus, while the relative price of grain has been increased relative to last year's prices, it is still lower than it was in 1980, relative to the overall price level.

3. Latent Problems.

Potential financial imbalances remain serious. The government faces a persistent budgetary crisis. Central government leaders have been complaining of declining revenues for so long it is a little hard to appreciate that this has become a genuine problem that threatens to destabilize the economy. The total size of China's budgetary revenues, relative to GNP, are now less than the average of lower-middle income developing countries. Revenue shortfalls are seriously threatening China's ability to maintain adequate programs of public education and health, to say nothing of public infrastructure construction. Measures taken in 1991 to increase enterprise financial resources will tend to further erode budgetary resources in the absence of major improvements in state enterprise profitability. Persistent fiscal crisis tempts the government to rely on expansion of bank credit to satisfy their needs for financial resources. During 1990, large increases in household saving were adequate to offset the expansion in bank lending that occurred. But if China's hóusehold decide to reduce their remarkably high saving rates, serious economic imbalances and a revival of inflation would result. The rapid expansion of bank credit since early 1990 has led to a build-up of cash reserves among both households and enterprises. This liquidity buildup could destabilize the economy.

Problems are also apparent in China's primary energy production. Petroleum output has been stagnant for several years, and extraction costs are rising rapidly. China's coal output was swelled through the 1980s by rapid expansion of small-scale rural mining, but this source of growth seems to have run out of steam since 1987. Thus, China's persistant energy shortages, which receded somewhat in the mid-1980s, threaten to become critical again. Only major improvements in the efficiency of energy utilization can fundamentally solve this problem, and such improvements require dramatic further steps in economic reform.

Although China moved ahead with economic reforms in 1991, prospects for the future are not exceptionally favorable. Pumping credit into the state-owned industrial sector caused a regression in the level of market orientation that will hold back future progress in this critical area. Most important, though, is the fact that the current leadership has erected numerous obstacles to further progress in economic reform. The renewed stress on political orthodoxy and the revival of direct political controls will hobble attempts to advance reform in bold and systematic fashion. At the current time, reformers must attempt to devise practical reforms while avoiding a whole series of taboos established since June 1989. For example, privatization of state-owned assets has become taboo, and now cannot even be openly discussed in the official press. Excess "unfair" income differentials are still criticized. This creates a situation in which options for future economic reforms are severely restricted, and the difficult task of devising successful reform programs may become impossible.

Ultimately, the current political situation makes both economic and political risk-taking more dangerous. Economically, potential innovators and entrepreneurs face much greater dangers that their activity will be considered politically suspect. As a result, individuals in the government and in business become reluctant to take risks, and search for safer but less economically productive niches. In the political arena, the bitter but concealed struggle for power in the post-Deng Xiaoping era makes potential reformers vulnerable to charges of ideological deviation. Political competition has the potential to become vicious and dangerous at any time, and this naturally discourages promotion of vigorous reform schemes. There is thus a clear danger that the pace of economic change will slow down as individuals postpone risky choices and wait for a more certain political atmosphere.

In the more than a decade since 1978, China has come a long way down the road of economic change and revitalization. The years from 1984 through 1988, in particular, stand out as a period of remarkable progress and accomplishment. During the years 1989-90, there was no retreat, but policy-makers certainly lost momentum and at times lost their sense of direction altogether. As of 1991, policy-makers are once again facing in the right direction, contemplating further progress in economic reform. Nevertheless, there are more stumbling blocks in the road today than there were a few years ago. Those stumbling blocks were mostly placed there by the Chinese leaders themselves, and represent ideological taboos and foreclosed policy approaches. It is difficult enough to find a smooth approach to economic reform without self-imposed stumbling blocks, and it may be impossible in a landscape littered with ideological obstacles and political pitfalls.

4. Short run Prospects.

The short-run economic outlook for China is relatively good. Modest economic growth over the past two years has allowed the build-up of crucial reserves. Supplies of most commodities are abundant, including vital agricultural supplies and stocks of energy. Total grain output in 1990 reached 435 million metric tons, the largest harvest ever, and the first time that the historic 1984 bumper harvest of 407 million tons has been substantially exceeded. Moreover, significant increases in cotton and oilseed production were also registered. By year-end, stocks of agricultural products were abundant.

Moreover, planners had some success in increasing investment in the energy and transport sectors. During 1990, total fixed investment grew at the extremely modest pace of 4.5% from 1989's low levels, but investment in state-owned enterprises increased 10%, and the share of state investment devoted to energy and transport increased. Investment in those sectors increased by 16% and 46% respectively, raising their combined share from 39% to 44% of total state investment. This should help to ease energy and transport bottlenecks for the next year or two. China ran a large trade surplus during 1990. With a combination of direct controls and indirect market incentives, China was able to quickly reorient production to transfer resources abroad, generating a large export surplus. According to Chinese figures, exports increased 18%

to $62 billion, while imports dropped 10% to $53.4 billion. The $9 billion trade surplus--augmented by traditional surplus on non-trade items--swelled China's foreign exchange reserves by $11 billion. Significantly, China was also able to keep direct foreign investment from declining substantially afater Tiananmen. Actual direct foreign investment in 1990 was $3.4 billion, and new commitments of foreign capital (both loans and direct investment) amounted to $12.3 billion. Both these were about the same level as 1989. The most significant development was the large inflow of capital from Taiwan, which reached really large proportions during 1990. At the end of 1990, the Institute of Economic Research in Taiwan surveyed investments on the China mainland by Taiwan firms and concluded that they totalled about $2 billion, a sharp increase from previous estimates. If accurate, this figure would imply that Taiwan investment is now roughly equivalent to that of the United States and Japan, each of which owns about $2 billion worth of assets in China. (Investments managed out of Hong Kong are much larger, amounting to perhaps $10 billion in total.) Taiwan and Hong Kong investment has typically been in relatively low technology sectors targeted to export markets. Investment has grown rapidly precisely because Taiwan and Hong Kong businesses already have expertise in these areas and are familiar with the relevant export markets. As a result, it has been relatively easy for them to move production out of Taiwan and Hong Kong--where wages are growing rapidly--and into low-wage Southern China. Exports from these foreign invested enterprises have doubled annually since 1986, and amounted to 13% of China's total exports during 1990. Thus, increasing economic integration between China and its Chinese-speaking neighbors has been responsible for a significant portion of China's impressive export performance.

Thus, for the present, China is blessed with abundant reserves of agricultural goods; stocks of most consumer and intermediate goods are ample; energy production capacity is adequate for the next few years; and foreign exchange reserves are near historic highs. In spite of the serious problems and challenges the Chinese economy faces over the long term, the basic requirements for steady growth over the next few years are in place.

Senator BINGAMAN. Thank you very much.

HONG KONG, TAIWAN, AND CHINA

Professor Lardy, as I understand the point you are making—or at least part of the explanation of the trade deficit as you see it—is that the trade deficit we used to have with Hong Kong has shifted over to China, and maybe to some extent the same in Taiwan. The trade deficit we used to have with Taiwan is being shifted to China. Would it be fair to say that you anticipate a substantial continuing trade deficit with those Far Eastern countries?. It is just that they are trading around. Is that what is happening?

CHINA'S GLOBAL TRADE BALANCE

Professor LARDY. I think there has been some shifting of the Hong Kong, Taiwan, and, to some extent, South Korean deficits from those individual countries to China. I don't think that means China is going to continue to enjoy a large trade surplus with the United States. I think it is quite likely that it is going to shift. I think as we heard the first panel, and we talked about all these protectionist measures that the Chinese have in place, and we can spend hours, if not days, going over the details of those, we lost sight of the fact that Chinese imports went from about $10 billion in 1978 to $60 billion in 1989, an extraordinarily rapid rate of growth of imports. They had a trade deficit with the rest of the world in every year but one during that period. So, China's normal pattern during this period of rapid domestic economic growth and rapid foreign trade growth had been to have a trade deficit financed by borrowing from abroad. That is why China is an external debtor to the tune of roughly $50 billion U.S. dollars.

1990 was an exception, in that they ran a large trade surplus and a large current account surplus, and I think the single most important factor in explaining that is the one Professor Naughton has referred to as to where China is in the macroeconomic cycle.

EXPORT-DRIVEN ECONOMY?

Senator BINGAMAN. I understood the CIA report to be making the case that the 5- and 10-Year Plans, which they are engaged in now and are at the beginning of, state their policy throughout the 1990s is to maintain this export-driven economy and continue to maintain restrictions on imports. So, is not what may have been an aberration in 1990, that you describe, their official policy now going forward into the 1990s?

Professor LARDY. I don't think so. I would differentiate very clearly between China's opening up policy—that is, an externally-oriented policy—and an export-driven policy. I think China has been engaged for a decade or more in a policy of opening up its economy to the outside world. It has not engaged in a policy of export-led growth, as several other East Asian countries have historically done; nor do I think it is going to be in the 1990s. The reasons are quite simple. Exports as a share of China's GNP, by any reasonable measure of its GNP—the CIA report goes into this in some detail in one of its appendices—are a relatively small share of China's GNP. Something on the order of 5, 6, maybe 7 percent. Foreign trade is not 33 percent of GNP, as Mr. Wiedemann stated in his presentation. It is less than half that.

So, they cannot rely on export-led growth. They are going to rely primarily, as they have historically, on domestic demand to fuel their economy. Second, I think given the opportunities for technology transfer from the West, that China is likely to continue to be, on balance, a net trade deficit nation. They will continue to borrow from abroad. We have already seen the signs of that. They have increased their commercial borrowing abroad. They have now indicated they are going to be back in the international bond market with a sale of yen-dominated bonds in the Japanese market, probably before the end of the year. It is a market they have been shut out of for the last 2 years. Every indication is that China will continue to be a net borrower, contributing to the international economy.

RISK OF FOREIGN PROTECTIONISM

Senator BINGAMAN. Let me just go over this once more, because I think it is an important point. You disagree with the CIA's basic conclusion. Here on pages 17[new 3] and 18[new 3], they say,

> The leadership's continued emphasis on export growth without import liberalization risks foreign protectionism. The urban labor force of China's export-oriented coastal areas are larger than the labor forces of Japan and Asia's newly industrialized economies combined.
>
> China's Five- and Ten-Year Development Plans announced earlier this year stipulate that they will strengthen the oversight of imports to curtail purchases of luxury goods, avoid imports of products.

Do you disagree with that?

IMPORT LIBERALIZATION

Professor LARDY. I agree with almost everything that is there. I do believe China will continue to emphasize exports. I believe that is going to continue to be the case. I would not agree with the statement that there has been no import liberalization. As I indicated, their imports expanded very dramatically. In almost every year since their outward turn began, they've been importing more than they have exported. I don't think it is fair to say that there has been no import liberalization.

Quite frankly, there is great difficulty in measuring the extent to which they have decentralized the control of imports. In the pre-reform system, it was a big black box, and all we saw was the net result of whatever the imports were. There were no quotas explicitly. There were no licenses, and so forth. Everything was done according to the plan. Now, as they tried to decentralize imports, and as I indicated in my opening statement, about 60 percent of all Chinese imports are decentralized. They are attempting to control them by such things as import licensing regimes. We normally regard import licensing regimes as being not free trade-oriented, but I think in the Chinese context that going toward a licensing regime is actually a step forward from the previous system in which everything was determined by the State Planning Commission and rigidly controlled from the top.

TRANSITION PERIOD

I think we are in a transition period in which we are going to see a lot of government intervention on the import side, and I agree with much of the description in the CIA paper of the form that it has taken. But I think they are in a transition toward the system in which imports have been substantially liberalized over the past decade. There was a major effort made to recontrol imports in the second half of 1989 and in 1990. As I indicated, I think the reason was the macroeconomic cycle, and the fact that with curtailed access to international credit markets they had to run a surplus. And the way to do that was to continue to push exports as they have in the 1980s, but to cut back on imports. That is what we saw in 1990.

U.S. INVESTMENT IN CHINA

Senator BINGAMAN. The very substantial increase in U.S. investment in China, as I understand it, has been almost exclusively investment in plants for purposes of export. They do not welcome U.S. firms investing in China for sale on the domestic market. They do welcome you as firms investing in China for export. Is that accurate, Professor Naughton?

Professor NAUGHTON. My impression is that that is not entirely accurate. American firms, in particular, have generally been essentially bargaining for domestic market access in exchange for the kind of technology they bring in. An example would be someone like Hewlett-Packard, who has been given rights to sell a substantial number of computers in China in return for bringing in the technology that the Chinese like. It is the Hong Kong and Taiwan investment that has been overwhelmingly export-oriented.

Senator BINGAMAN. So, you don't believe most of the U.S. investment has been export-oriented?

Professor NAUGHTON. No. My impression is that, according to the U.S. General Business Council, most of it has required some sort of access to the Chinese domestic market.

Professor LARDY. I think we can point out many examples. S.C. Johnson is producing a range of products in China being sold largely in

China. The Xerox joint venture in Shanghai is another one where they are servicing the domestic market with copying machines. Several U.S. pharmaceutical companies have major joint venture projects in Shanghai; again, largely serving the domestic market, although some portion of their output is being sold in international markets.

I might mention that the very rapid growth of the parallel market for foreign exchange in China is one of the things that makes it possible for American and other joint ventures to sell largely on the domestic market, and still be able to sell their domestic currency on the swap market and repatriate the profits. As I mentioned, it is a very large market, in excess of $13 billion last year. So, the old constraint that you really can only count a success in China if you export enough product to earn foreign exchange is no longer binding.

JAPAN-CHINA TRADE

Senator BINGAMAN. Let me ask if you could, either one of you, just make a brief comparison between the way we are being treated with regard to access to Japan's domestic market—I mean, China's domestic market and the way Japan is being treated with regard to access to the Chinese domestic market. It is clear that we are running by far the largest trade deficit of any country with China today. Is it clear that the Japanese are doing better in maintaining some kind of balanced trade relationship between themselves and the Chinese than the United States is?

Professor LARDY. I would like to comment on that. I think that the deterioration in the Japanese position in the Chinese market has been much more substantial than that of the United States. You mentioned that our surplus—excuse me, our deficit with China exceeds China's global trade surplus, implying that Japan is in a favorable position. In fact, the Japanese position in the Chinese market has deteriorated much more dramatically than ours during this current downswing in Chinese imports.

Japan previously had a very large surplus in its trade with China, and is now in a very significant deficit according to Japanese figures. They have actually suffered a bigger deterioration in their relative position in the market than we have. I don't believe it is the case that their overall deficit is bigger than ours, but they started from a large surplus position, all of which was wiped out. They are well into the deficit range.

Senator BINGAMAN. Is it your thought that, in fact, they are having the same difficulties in trying to gain access to the Chinese markets that we are?

Professor LARDY. I think so. I think the suggestions that are made in some quarters that somehow these restrictions on imports recently in China are directed exclusively against U.S. firms is simply not correct; that China cut back on imports across-the-board, and other countries, other major partners, such as Japan, took very big hits in the latter part of '89 continuing into 1990 in the sale of their goods into the Chinese market.

Senator BINGAMAN. Did you have a comment?

IMPORT RESTRICTIONS ON CONSUMER GOODS

Professor NAUGHTON. Yes. And I could link that with the previous question about the direction of Chinese trade policy in the 1990s. I think there is a sense in which the Chinese are trying to have their cake and eat it too; and that is to say, they want to expand the total level of exports and imports, but they do want to restrict imports of consumer and luxury goods. Now, that is definitely an issue between the countries. It certainly affects Japan more than it affects the United States. The United States doesn't export very much consumer goods to China, whereas Japan traditionally has. I think the outlines for the 1990s in these long-run plans, what they stress is increased total imports, a shift in the composition of imports more toward industrial materials and technology by restricting consumer goods imports. There is no intention to move toward perpetual export surplus, but there is an attempt on the part of the Chinese to restrict consumer good imports.

TIBET

Senator BINGAMAN. I think you've been helpful. I appreciate you both being here, and I think it has been a useful hearing.

Let me ask either of you if you have a comment on what the United States should be doing relative to Chinese treatment of the Tibetans. Is that an issue that we should continue to press or leave it outside our trade relations? There are things we can do to raise that issue in the consciousness of the leaders of China. Do you either of you have thoughts on that?

Professor LARDY. I certainly can't speak for the State Department or other government agencies, but certainly my impression is that we have been pressing very hard on Tibet on a broad range of human rights issues, and I think we have made some progress. I don't think one can say that the problems are anywhere near being solved, but I think it is something we are going to have to work on steadily for a long period of time, and that the MFN issue is not the issue to use. If we took away MFN from China, we would have substantially less leverage on this and all other issues.

Senator BINGAMAN. Professor Naughton, did you have a thought?

Professor NAUGHTON. Basically, I agree with that. I think that it is very important that we continue to raise our concerns with the Chinese on this issue, because it really is essential that we demonstrate a consistent, unwavering position. I think the only way we can convince the Chinese of our sincerity is not take extreme actions in the short run, but rather to be consistent and continue to press this issue over a long period of time. And I think it is important to recognize that the Chinese are facing a leadership transition. I think we have more influence with them by being consistent than we do by attempting to influence them in the short run, where I think our leverage is really extremely limited.

Senator BINGAMAN. Again, thank you very much. We appreciate your being here.

The hearing will conclude.

[Whereupon, at 11:40 a.m., the open session was concluded, thereafter, the Committee entered into a closed session.]

EXECUTIVE SESSION (CLOSED SESSION)

Senator BINGAMAN. Did you get to set in on the other?

Mr. PETERSEN. My colleagues did.

Senator BINGAMAN. I've read the report. I think you have some good information. I guess what would be most helpful from my perspective would be to have you folks make any comments you want supplemented, or to respond to things that were said in the open part of the hearing, and then, maybe, I will have some questions.

Mr. PETERSEN. Mr. Chairman, I have a very brief opening statement, and we can just go from there.

STATEMENT OF MARTIN PETERSEN, DEPUTY DIRECTOR, OFFICE OF EAST ASIAN ANALYSIS, CENTRAL INTELLIGENCE AGENCY

Mr. PETERSEN. I am Martin Petersen, Deputy Director of the Office of East Asian Analysis. It is a pleasure for me to be here again.

With me today are Mr. lee Zinser, Chief of our Economic Assessment Branch and [security deletion], our Senior Economic Analyst. Both were here last year. Also accompanying me is Mr. Paul Heer, our Senior Political Analyst.

My brief opening remarks will place this year's testimony in the context of political and economic developments that have been under way in China since the Tiananmen Square crackdown two years ago.

When we testified one month after the crackdown, we said that the events accompanying it elevated leaders who endorse political and social controls to maintain stability and who generally advocate economic reform strategies that emphasize improved central planning rather than market-oriented liberalization measures.

We also warned that those orthodox leaders would try to chip away at reform under the guise of austerity policies, but that local officials would strongly resist efforts to recentralize financial and planning authorities.

Last year, we discussed how austerity policies pursued by orthodox leaders sharply reduced inflation but also caused China's worst economic slump in nearly a decade. And we warned that the failure of planning-oriented policies to spur growth would generate political pressures forcing Beijing to expand credit quite rapidly, renewing inflationary pressures.

This has, in fact, happened. By late last year, Beijing had abandoned its austerity policies and turned to rapid credit expansion to spur growth. Consequently, industrial output has grown at double-digit rates since the fourth quarter of 1990. Rapid expansion of Chinese exports has also been instrumental in spurring growth.

But the recovery is clouded by lingering economic problems. China's government budget deficit grew two-fifths to a record of almost $10 billion last year, and about 40 percent of state enterprises are operating in the red. Moreover, despite rapid increases in wages and bonuses, labor productivity in state factories has been anemic.

Budget pressures have forced Beijing to implement pragmatic economic policies. For example, it has devalued its currency, allowing it to maintain export competitiveness, even though it cut subsidies to exporters. Moreover, it sharply raised retail grain prices in May—no small feat for a Communist country—but not an indication of a commitment to the market, in our judgment.

We believe the economic trends during the past 2 years underscore the problem Beijing is having trying to generate stable growth without comprehensive market reforms. Beijing is trying to tackle lagging industrial productivity by setting up large state-run industrial conglomerates. Similar arrangements were unsuccessful in Eastern Europe because they reduced competition.

The lack of progress on reform has allowed some local governments to renew experiments with agricultural and financial reforms. For example, the Shenzhen Special Economic zone opened a stock market, reportedly without first getting Beijing's approval, and Sichuan Province allowed all grain produced in one county to be sold at market prices. Local authorities have probably been emboldened by their successful opposition last fall to the Beijing proposal to reduce the amount of revenues they can retain.

The payoff from these measures will be limited, however, without a national commitment to market reforms. Indeed, some of them have taken advantage of greater autonomy to experiment with schemes to recollectivize distribution of agricultural inputs, giving them more control over peasants' planting decisions.

We believe that Beijing will have difficulty controlling inflationary pressures this year unless it cuts credit sharply, but that could endanger the recovery. The leadership's emphasis on export growth without trade liberalization also risks foreign protectionism. Beijing would react to growing inflation or increasing protectionism with increased central controls.

In summary, we see an economy that can grow rapidly, but which will be increasingly erratic without the market-oriented policy liberalization that would spur productivity growth of the kind that China realized in the 1980s. Furthermore, we see a Chinese economy that will be increasingly dependent on exports—especially to the United States—to stimulate growth, as erratic demand at home leads to a search for stability outside China's market.

Finally, Mr. Chairman, I would like to call your attention to Appendix A of our report that discusses the problems of the methods in estimating China's GNP.[1]

You expressed considerable interest in this issue last year. During the course of our discussion, we noted that we were looking into various methodologies and promised to report our results.

Appendix A summarizes that work. As you are well aware, China's economy is very complex, stuck somewhere in the reform process. In our 1989 report, we discussed the reliability of Chinese statistics, and last year we reflected on how to interpret China's economic instability. We will continue to share with the Committee, not only the results of our work, but also our views on such issues as those that affect the quality of the work.

Thank you very much, Mr. Chairman. We will be happy to take any questions.

Senator BINGAMAN. Thank you very much.

Senator BINGAMAN. Let me go into a couple of issues that were really not dealt with in your report,but which are issues we have an interest in and continue to have an interest in.

One is the arms export issue, particularly related to missiles and nuclear materials. Do we have decent database as to what happens in this area? What is the extent of this is, to what extent is this all anecdotal information, or to what extent are we really on top of it.

Mr. PETERSEN. Mr. Chairman, I really can't get into that area at this hearing. I believe our folks have offered you a separate briefing on this area. If you would like to take advantage of that, we can go ahead and arrange it for you. [Security Deletion.]

Senator BINGAMAN. Okay. And that's true as to any question on arms issues?

Mr. PETERSEN. Yes. [Security deletion.]

Senator BINGAMAN. How is the decision made to maintain all of this information at such a high classification level? Why isn't this more public information?

Mr. MARKS. Senator, I am with Congressional Affairs. I have worked with the issue a while. [Security deletion.]

If you would like, I can go back, and we can certainly arrange a meeting.

Senator BINGAMAN. I guess what my concern is, first on the issue of the classification of this information, it seems to me that the effect of keeping it all classified, of course, is to resist or minimize congressional and public pressure to deal with the issue. It has the effect of keeping it

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[1] See Appendix A of report on p. 323.

so tightly held. I wonder if that is not a greater motivation for keeping it classified than the concern about sources.

Mr. MARKS. At the risk of being the piano player who is playing the music here, let me just describe to you at least the logic as I understand it. [Security deletion.]

I don't know what else to say besides that, Senator, except that that has been Agency policy. I can certainly bring that question back to the Agency. We would be delighted to do so, and make sure that they understand your concerns.

Senator BINGAMAN. I wish you would because we are in an important debate about this MFN status. The President feels that it is very important. He invited a group of us to come to the White House earlier this week. I went up there and discussed this issue, this and trade issues and a variety of these issues with him and Secretary Baker and various people. But it seems to me that with this being such a significant part of our concern, we cannot ... I think that our policymaking process is substantially impeded by our not being able to discuss it publicly. You may have people voting against continuing MFN status because of this concern, and not be in a position to discuss it at any length to explain their position.

Mr. MARKS. At the risk of too much presumption on my part, Senator, does the Senator feel that there are a number of Senators up here who might be interested in a Senatorial briefing on this subject. [Security deletion.]

Senator BINGAMAN. Let me explore that. We may decide to do that because it is a set of issues that I know I am concerned about, and I think a lot of people up here are. I think it does have an impact on MFN status, even though some have argued that that is a separate issue.

Let me ask about another one that is not in your report,and I hope you can respond to it, and that is with regard to Tibet. I asked a few questions in the other hearing.

Do we have any good intelligence about the extent to which the allegations of human rights abuses and all are justified, the extent of the problems that the Chinese have perpetrated there in Tibet?

Mr. HEER. [Security deletion.] The Chinese Government certainly has maintained strict control on the movement of persons and activities in Tibet out of fear of a separatist movement. This was particularly the case during the anniversary celebrations last month. Beijing staged an anniversary celebration in the capitol of Tibet, which was the 40th anniversary of what the Chinese refer to as the "Peaceful Liberation of Tibet." They really clamped down on public access and the activities of potential dissident groups, particularly exiled groups that had returned to Tibet for this event. They also clamped down somewhat on foreign access, especially foreign journalists' visits to Tibet. [Security deletion.]

Senator BINGAMAN. I have a small but very vocal group of constituents in my state who believe strongly that the Chinese are using Tibet as a place to dump nuclear waste, that it is dumped from planes over the mountains of Southern and Northern Tibet. Do we have any information?

Mr. HEER. I don't believe we have any information with which to confirm that, no.

Senator BINGAMAN. If that were occurring, would we have sources that would inform us of that?

Mr. PETERSEN. [Security deletion.]

Senator BINGAMAN. Are there nuclear facilities in China that are producing significant amounts of nuclear waste?

Mr. PETERSEN. Well, they have reprocessing capabilities. They also produce nuclear waste.

Senator BINGAMAN. But they have several nuclear power plants.

Mr. PETERSEN. They are building nuclear power plants; that's correct.

Senator BINGAMAN. Do we know how they are disposing of that waste?

Mr. ZINSER. [Security deletion.] They have been constructing a power plant with Western help at Daya Bay in southern China. They also have an indigenous project under way at Qinshon. Both of those are for electrical generation purposes. Neither of them are operating. They are still in the construction phase. [Security deletion.]

Senator BINGAMAN. What about nuclear weapons?

Mr. PETERSEN. We do not have an expert here on that subject, Senator.

Senator BINGAMAN. If you folks encounter information on this, as I say, I don't vouch for any of it. I'm just telling you that part of my job is to go back and meet the public, and the public tells me that this a problem. In fact, when the Dalai Lama was in my state earlier this year, during the introduction in Santa Fe, this allegation was made as a matter of actual fact, that this is what the Chinese were doing to Tibet. So, I would be interested in knowing if there is any truth to it.

Mr. PETERSEN. We have seen these same accusations and stories. We attempt to follow events in Tibet as we do elsewhere. [Security deletion.] So, we keep an eye on it. Senator, and when we see charges like this, let me assure you, we do not dismiss them. We look into them, and that is why I think that if there were more substance to these things, I suspect we would have more information to support it.

Mr. HEER. [Security deletion.]

Senator BINGAMAN. Who is the State Department official who visited Lhasa? According to some of the testimony in the open hearing, one of our officials had visited Lhasa two months ago.

Mr. HEER. Our ambassador to China was in Tibet, I think it was during that period, and he [security deletion] visited prisons and some other facilities there.

Senator BINGAMAN. Have you had congressional delegations travel to Tibet?

Mr. HEER. I'm not sure if we have had congressional delegations.

Mr. PETERSEN. I think the State Department is better able to answer that one for you. I can't think of one off the top of my head recently.

Senator BINGAMAN. Okay. I think those are the main issues. On the economic imbalance between ourselves and China on trade, I think that your report makes the case very well for a serious problem. These last two witnesses disputed your conclusion that it is going to continue to grow. Their claim is that it has peaked, and we are now going to see the trade deficit in China decrease. If any of you have a comment on that, I would be anxious to hear it.

Mr. ZINSER. Let me first say that I thought both of your academic witnesses were very insightful and made some good points. On the issue of the trade deficit, through the first four months of this year, our trade deficit increased 11 percent, according to the U.S. Commerce Department's statistics. So to say it peaked in 1990 is, I think, premature.

On the broader issue of the trend over the 1990s, we see a very concerted Chinese effort to maintain exports globally. The United States is their best market, because it is in some ways the least protected market, and they will continue to funnel exports here. Chinese imports will fluctuate according to their domestic macroeconomic cycles. [Security deletion.] We agree that there was an import liberalization through most of the decade of the 1980s, but the import restrictions put in place in the last two years give the Chinese increased control over the imports of goods that we tend to export most to China, such as grains, fertilizers, organic chemicals, [security deletion]. So, they have the capability of keeping their import growth under control, even though it may fluctuate according to the macroeconomic cycle. Thus, we believe that the bilateral trade deficit will increase.

Senator BINGAMAN. That certainly seems to be supported by everything you have in the report.

Thank you all very much. I think this is very useful, and it comes at a good time, particularly with this MFN discussion.

We will probably have some questions that we will submit to you in the next few days, if you get a chance to respond.

Thanks again.

[Whereupon, at 11: 20 a.m., the Committee adjourned, subject to the call of the Chair.]

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