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USSR: Sharply Higher Budget Deficits Threaten *Perestroyka* [redacted]

A Research Paper

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June 1988

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Summary

Information available as of 4 June 1988 was used in this report.

The Soviet state budget deficit has increased dramatically over the last three years. 1987's deficit, six times the level recorded in 1984, was equivalent to some 7 percent of Soviet GNP. (For comparison, the highest US Government budget deficit represented 3.5 percent of US GNP in fiscal year 1986.)

Moscow is essentially financing its deficits by printing money, and the resulting inflation is clearly visible. There has been a marked increase in the prices of consumer goods sold in collective farm markets, for example, along with higher prices and increased shortages of consumer goods in state stores. Excess purchasing power also has probably led to an expansion of the underground economy, which results in resource diversions from the state sector. Moreover, increased inflation has undermined current attempts to spur state worker productivity by higher wages and salaries.

Leadership concern over the issue is mounting. Earlier this year General Secretary Gorbachev acknowledged the problem, stating that the economy's "serious financial problem" requires "enormous and extraordinary efforts."

The General Secretary's concern is clearly warranted since his programs for economic revitalization—*perestroyka*—are partly responsible for the deficit rise:

- State spending has risen substantially as a result of the boost in state investment and the rise in state subsidies on food and livestock products.
- Receipts from stiff sales taxes on alcoholic beverages are down substantially as a result of the regime's antialcohol program.
- Revenues from the large markups imposed on the retail prices of imported food and consumer goods have fallen sharply as a result of the cutback in such imports.
- Proceeds from enterprise profit taxes grew slowly last year because of production problems due to retooling, reforms, and quality control measures.

Moscow has taken a number of steps over the last year to absorb excess purchasing power or to manage the resulting shortages of goods and services, including rationing and issuance of a new series of savings bonds. These policies, however, do not address the budget deficit itself and thus ignore the source of the purchasing power problem.

Nominally, Gorbachev has a wide range of policy options available for bringing the deficit under control:

- Substantial price increases for consumer goods and key industrial materials, such as fuel and raw materials, would both increase tax revenues and reduce government subsidies. Indeed, doing away with food subsidies alone would bring the budget back into balance. But the specter of Polish unrest weighs heavily on the leadership, with good reason.

- Several high-ranking political and military spokesmen have stated publicly that the Soviet Union plans to reduce spending on defense. These statements could be largely propaganda, but might also reflect the budget situation. The level of cuts needed to make a major impact on the budget deficit are unlikely, however, although any reduction would be helpful financially.

- State investment outlays could be trimmed, but investment requirements remain high.

- Higher tax rates are a possibility, particularly in the context of increased wage differentiation and the expansion of private-sector activities. But the increases would have to be large to make a dent in the deficit, and they would have their own disincentive effects.

- If Moscow becomes willing to relax the antialcohol campaign, increased state sales of alcohol would reap large tax revenues.

- Much greater consumer-good imports sold at high prices domestically would raise substantial tax revenue and soak up purchasing power.

- A currency revaluation (for example, 1 new ruble for 10 old rubles) could effectively wipe out much of the savings overhang and devalue cash hoards. Although not without precedent, this would appear to be an especially heavyhanded and politically risky approach. Moreover, unless accompanied by price revisions, increased taxes, or reduced state spending, currency reform would not solve the budget imbalance.

The General Secretary is unable to implement most of the measures just outlined without impinging on the welfare of the population or key interest groups, such as the military, just when he needs as much political support as he can garner. Only large-scale imports of consumer goods or relaxing the antialcohol campaign offer Moscow opportunities to address the budget deficit without gouging an important interest group:

- In early May, the Soviet central press called for a reassessment of the antialcohol campaign. The leadership reportedly now is considering lengthening store hours for liquor sales.

- Importing large amounts of consumer goods also is under debate. Such imports could be easily financed through foreign borrowing. Moscow, however, has taken a conservative approach so far, preferring to reserve foreign loans for investment uses that expand domestic production capacity rather than for current consumption. The leadership is concerned that five or 10 years hence the Soviet Union would have to service a much larger debt with little to show for it. In discussions with Soviet officials about this policy, a recent visitor to the USSR was told time and again, "We do not want to become another Poland."

Gorbachev must act quickly. Because the inflationary impact of the budget deficit exacerbates current consumer problems, the leadership is fighting an uphill battle in trying to improve the quality of life for average citizens. If the budget deficit is not brought down, it could lead to inflation much worse than the Soviets have experienced in the postwar era.

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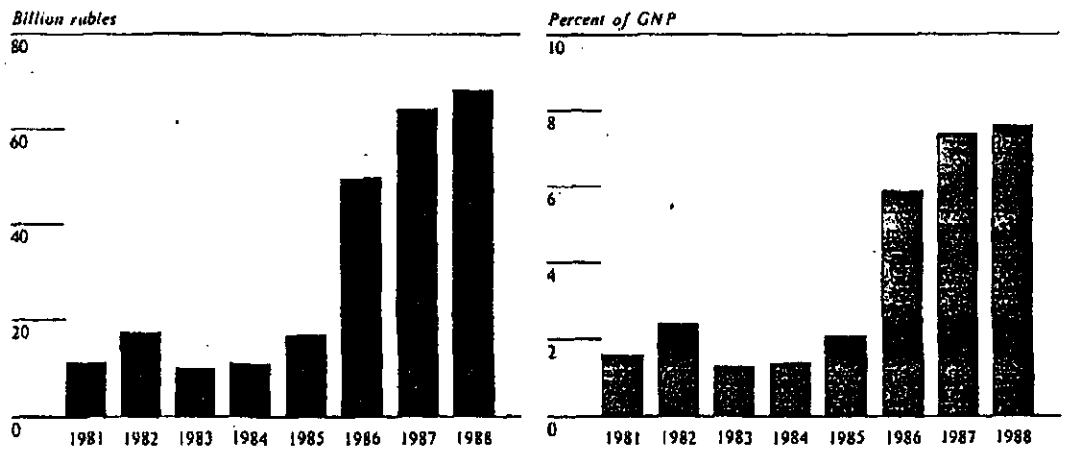
Appendixes

Scope Note

Using Soviet official data and statements of Soviet officials and economists, this paper documents the existence of sharply higher state budget deficits in the Soviet Union that are being financed to a large extent by money creation. This deficit, and resulting inflationary pressures, constitute a major problem for General Secretary Gorbachev as he attempts to reform the Soviet economy and do more for consumers. Gorbachev's consumer policies and their effectiveness are examined in the DI Research Paper [redacted] June 1988, *Gorbachev's Policy Toward the Consumer: Crossing the Rubicon?* [redacted]

Figure 1
USSR: Estimated State Budget Deficit, 1981-88



USSR: Sharply Higher Budget Deficits Threaten *Perestroyka*

. . . all of our radical reforms are doomed to failure if we are unable to realize success in our financial policies.

Vladimir Il'ich Lenin
18 May 1918

Budget Deficit Balloons Under Gorbachev

General Secretary Gorbachev's policy of greatly increased state spending on investment, coupled with the tax losses from his antialcohol campaign, has intensified other negative fiscal trends and produced large budget deficits. Indeed, we estimate that the Soviet state budget deficit increased from 11 billion rubles in 1984 (1.4 percent of Soviet GNP) to 64 billion rubles in 1987 (7.4 percent of GNP) (figure 1 and inset).[1] In contrast, the peak US Government deficit in fiscal year 1986 of $148 billion represented 3.5 percent of US GNP. Relative to GNP, the Soviet deficit is roughly two times the size of the peak US deficit in 1986.[2]

State Spending Surges

General Secretary Gorbachev assumed power in March 1985 in time to push for faster investment growth in the 12th Five-Year Plan (FYP), then being drafted. He did not have an easy time convincing the planners to accept his program, suggesting that they believed his investment objectives would push the economy beyond its capabilities. Nonetheless, he won out. According to the FYP, budgetary outlays on

[1] Throughout this paper we define the budget deficit as the amount of total government spending per year not met through ordinary revenues (tax revenues and service fees) and which therefore must be financed through government borrowing. The percentage shares of GNP are rough estimates derived by adjusting CIA estimates of Soviet GNP in constant 1982 established prices, using an assumed average annual rate of inflation equal to 2 percent.

[2] The Soviet state budget is a consolidated budget that takes into account incomes and spending of the central government, the republics, and local governments. A comparable figure for the United States thus includes not only the federal deficit ($205 billion in 1986) but also the surplus run by the 50 states ($57 billion in 1986).

Estimating the Budget Deficit

Soviet official budgets almost invariably show a surplus because, by Soviet convention, short-term loans from the State Bank (which are the equivalent of printing money) are counted as a revenue. Consequently, the officially reported surpluses have little economic or financial meaning and are extremely misleading concerning the extent of money creation. A Soviet economist acknowledged this in a December 1987 interview in Izvestiya, *stating: "In my opinion, the formation of a significant share of budget revenues using short-term loans from the State Bank was intended to ensure the deficit-free functioning of the state budget. As a result, the budget no longer reflected the true state of affairs in the national economy."*

Our estimates of Soviet state budget deficits are based on a complete accounting of ordinary budget revenues (nonloans) (see appendix A). Essentially:

- *We assumed Soviet official data on total state spending are accurate.*
- *We calculated total Soviet ordinary revenues using official data on tax revenues and estimates of state revenue from foreign trade (see appendix B).*
- *We calculated the deficit as the difference between total spending and total ordinary revenues.*

The key uncertainty in the calculations is the estimates of revenue from foreign trade. We believe, however, that they are accurate enough to reflect substantial changes. Moreover, comparing the estimates of such revenue for 1985 and 1987 shows a decline of 11 billion rubles, which is roughly consistent with Gorbachev's statement in February 1988 that such revenue fell by 9 billion rubles.

Weakened Workers' Incentives

State workers' incentives and productivity are likely to suffer when purchasing power is rising but supplies of goods and services are not. At state stores, longer queues and greater shortages will result in more absenteeism from work, as working wives and mothers especially struggle to ensure that food is on the table. Recently the official *Literaturnaya gazeta* reported that 65 billion hours are spent each year in shopping—about 32 million man-years representing 25 percent of total annual employment.[9] Moreover, while rubles can always be spent in the second economy on food, services, and handicraft items, longer waiting lists for such big-ticket items as cars, appliances, housing, and furniture could result in a greater sense of futility. This will be especially true if such goods come to be recognized as being rationed through nonmoney means such as political connections.

Excess purchasing power will also undermine Gorbachev's wage reform, which is predicated on Soviet workers' wanting to earn more rubles. Under this reform, workers' wages and salaries are to increase about 30 percent, but at the same time pay is to correspond much more closely to productivity. But if desired goods are not readily available, rubles are worth less and the incentive effects of the wage reform will be blunted.

Price Reform Constrained

Most Western analysts and many Soviet economists agree that reform of the price-setting mechanism is essential for the success of Gorbachev's effort to revitalize the economy. The decree on the price reform published in July 1987 makes clear that one of its major objectives is to reduce the role of state authorities in establishing prices and give greater freedom to enterprises to set prices through negotiations. Given strong inflationary pressures, however, any relaxation of state controls will lead to large price increases across the board. Reform advocates, aware that price reform rather than excess money creation would be blamed for this inflation, have called for resolving the financial problem before relaxing state controls on prices.

Price reform in China has run into just such difficulties. On several occasions, price controls have been relaxed only to be tightened again when rapid price increases occurred, even though rapid money supply growth was a key factor behind the increases.[10]

Gorbachev's Options

Gorbachev indicated in his February 1988 speech that "extraordinary efforts"—"radical" reform and greatly increased production of consumer goods and services—were needed to bring the "financial problem" under control. Depending on the details, these steps could contribute to bringing the deficit under control by raising additional tax revenues and reducing government outlays.

Removal of Food Subsidies

Gorbachev's reference to radical reform could imply raising food prices. Under the forthcoming price reform announced last year, retail prices are to be revised although major changes are to be preceded by a public debate. Removal of subsidies on food products could result in large savings of government expenditures. Meat and dairy products alone cost the government 60 billion rubles—roughly the size of the current deficit. Moreover, the effective price increases would devalue much of the accumulated purchasing power in savings accounts and cash hoards.

Although the price reform as a whole is supposed to be completed before the beginning of the next five-year plan in 1991, the pricing decree does not set a specific target date for the politically sensitive task of revising retail prices (reducing subsidies), as it does for

[redacted]

[9] Much of this time does not represent absenteeism because it includes shopping by retirees and housewives, as well as shopping after work hours. Nonetheless, since most state stores are not open in the evenings or on weekends, a large proportion of these hours must involve absences from work.

state workers to second-economy participants, greater resource diversions, and in general a growing loss of state control of the economy. Moreover, rising prices in the second economy coupled with more empty shelves in state stores will cut into the living standards of citizens on fixed incomes, including pensioners, bureaucrats, and many state workers. Worker incentives will weaken further and efforts to increase support for *perestroyka* could be thwarted.

Resource Diversions From the State Sector

Increased purchasing power of Soviet consumers does not affect production activity in the state sector of the economy, at least directly. In the state sector, enterprises producing consumer goods and services take their marching orders from ministries and other administrative authorities—not consumers. Prices are administered from the center and largely fulfill an accounting function rather than serve as a guide to production.

The Soviet "second economy," however, is a different story.[*] Since it is based on private initiative responding to market demand, increases in consumer purchasing power will result in some combination of higher prices and greater supply of goods and services in this sector, often at a cost to the state of rising theft and corruption.

Labor. Higher prices translate into higher incomes of second-economy participants, which in turn will draw in more participants. For example, pensioners, working mothers, and students—some of whom might be employed in the state sector—will have greater incentive to take up work in the second economy. More full-time state workers also could be increasingly tempted to work in the second economy, even if just on a part-time basis. For example, the potential to earn large incomes producing and selling moonshine has clearly drawn in much more labor into this activity. One measure of this shift is the number of arrests for moonshining. Interior Minister Vlasov announced in November 1987 that there had been 390,000 arrests so far that year, as compared with less than 70,000 in 1985, suggesting roughly a fourfold increase in labor supply.

Consumer Goods. Higher prices in the second economy will tend to result in a greater supply of goods and services as producers respond to greater profit potential. Some of the supply increase will come exclusively through increased application of labor. Some of it, however, will come through increased diversions from the state sector. Theft of consumer goods at the factory and throughout distribution channels, whether for own consumption or resale in the second economy, is a frequent occurrence. Recently the Ukrainian procurator's office reported that over 54,000 workers were caught pilfering in the meat, dairy, and food industries of that republic in 1987. In light industry, where the differential between state and second-economy prices is much lower, 6,000 workers were caught pilfering.

Producer Goods. Higher second-economy prices will also draw in more raw materials and other producer goods from the state sector, primarily through theft. Diversions of such goods as gasoline, textiles, tools, and other products will increase as profit opportunities expand in the second economy. For example, a recent Soviet radio report said that 242,000 kilograms (242 metric tons) of sugar was stolen in 1987 partly as a result of the spread of "home distilling." A recent Soviet article on the second economy observed that the main advantage of a "private operator" is usually his access to shortage goods—"spare parts for cars, components for household equipment, Finnish wallpaper and toilet bowls, construction materials, and so forth."

[*] As defined here the Soviet "second economy" includes the whole of the private economy (legal and illegal) as well as illegal state activities (theft, cheating of state store customers, resale of state goods at black-market prices). Estimates of the size of the second economy vary, but there is little doubt that it is substantial. Soviet economists V. Rutgayzer and V. Kostakov of the Gosplan Economics Research Institute recently estimated that by the mid-1980s, 17-18 million people participated each year in the underground service sector at least part-time, providing some 5-6 billion rubles of everyday services—from car repairs to tailoring—annually. This amounts to almost a third of all such purchases by Soviet consumers.

wholesale and procurement prices. And there is considerable evidence of a continuing strident debate about this issue.[redacted]

The timing of the introduction of higher food prices is an especially difficult problem. Removing the subsidies gradually seems to make the most political sense. But from an economic perspective, this would greatly dilute the effectiveness of the policy. Not only would deficit reduction take longer, but also announcement of a policy of gradual reductions in subsidies would set in motion a number of responses by the populace. Hoarding would increase. Savers would start drawing out their deposits to turn them into material goods. Owners of cash hoards would do the same. The result would be rampant price increases in the second economy, including collective farm markets, and mostly empty shelves in state stores.[redacted]

On the other hand, an overnight removal of subsidies maximizes its economic benefits (since consumers and savers have no chance to adjust) but carries higher political risks. As reform economist Nikolay Shmelev recently wrote: "We must not forget the lamentable experience of Poland, where, in 1976, they tried to change prices overnight, and were then forced to retreat." The recent unrest in Poland tied to a 45-percent increase in prices since the first of the year is a pointed reminder, if one was needed.[redacted]

Lower subsidies of industrial goods also would reduce government spending. According to the price reform decree, subsidies for industrial output sold to the agricultural sector are to be eliminated. For example, agricultural enterprises are to pay the same rates as industry for electricity, heat, and natural gas.[redacted]

Price increases, however, would help the budget only if they do not result in compensating expenditures. For example, some Soviet economists have argued that consumers will need to be compensated for the expected retail price increases through such measures as reducing income taxes or providing supplements to wages and pensions. The relief to the budget from reduced subsidies would be diluted by any increases in expenditures for pensions or reductions in tax collections.[redacted]

Gorbachev's reforms also intend to reduce the budget's role in financing investment by increasing the role of enterprises. Spending on investment represents about a third of the budget. But it is not clear that this measure will reduce the budget deficit, since the share of state deductions from enterprise profits is to fall also so that firms are able to invest more.[redacted]

Increased Sales of Consumer Goods

Increased sales of certain consumer goods could raise substantial tax revenues.[1] Such manufactured consumer goods as appliances, automobiles, clothing, and shoes carry high tax rates, and thus increased production and sales of them would contribute to increased budget receipts. Gorbachev's push for the expansion of cooperatives that produce consumer goods and services could also contribute to state revenues to the extent they earn high incomes and meet their tax obligations.[redacted]

The quickest step Moscow could take to raise revenues through increased consumer goods production would be to back off the antialcohol campaign and permit legal sales of alcoholic beverages to increase. [redacted] the leadership is now considering revising this campaign by lengthening store hours for liquor sales.[redacted] [redacted] that a majority of the party leadership is now convinced by the strong public disenchantment and large expansion of home distilling that some early decisions in the campaign were hasty and not thought through. A 6 May *Izvestiya* article also called for a reassessment of the antialcohol campaign, stating that the grumbling it caused was more dangerous than drunkenness.[redacted]

[1] A number of Soviet officials and economists have proposed increased production of consumer goods and services also as the solution to the purchasing power overhang. Given the low state prices of many consumer goods and services, the supply increases needed to equate supply and demand would be extraordinary and essentially impractical. This proposal illustrates the Soviet predilection to focus on the supply side of market imbalances rather than demand and the role of prices.[redacted]

[1] See *USSR Review*, "Soviet Price Reform: Still a Tight Grip on the Reins," [redacted] March 1988.
[redacted]

Rationing

In a rather quiet manner, Moscow has granted republic governments greater authority to implement rationing. As reported by a Latvian radio program in July 1987, the USSR Council of Ministers granted the 15 republics in early 1987 the right to independently fix norms for rationed goods. Moreover, there were numerous reports of rationing on a variety of foods in 1987. Of 327 emigres interviewed by Radio Free Europe/Radio Liberty in the last four months of 1987 concerning food supply in urban areas, 29 percent reported rationing of beef, 52 percent reported rationing of butter, and about 50 percent said sugar was rationed. Sugar rationing has become more widespread in recent months, according to Soviet press reports.

Savings Bonds

As of 1 March 1988, Soviet citizens can purchase a new series of savings bonds redeemable after 10 years, paying an interest rate of 4 percent. Chairman of Gosbank Garetovskiy told Embassy Moscow that the purpose of these certificates is to soak up money from the population. The Soviet press indicates that the public has shown little interest in purchasing them to date and few have been sold.

Insurance

As of 1 January 1988, Soviet citizens may purchase a new form of insurance to supplement state old-age pensions. This appears to be another measure meant to absorb extra rubles in the hands of the populace. The State Insurance Agency (*Gosstrakh*) has also been pushing overall insurance sales (life, accident, property). According to the latest official data, the population's payments of premiums grew by over 7 percent in 1986.

Charity Funds

Since 1986, Soviet citizens have increasingly been pressured to contribute to newly formed "socialist" charity funds—for development of culture, for the victims of Chernobyl', for the care of orphans, and for improving health care.

Increased Role for Collective Farm Markets

A March 1986 decree on management of the agro-industrial sector allows farms to sell up to 30 percent of their fruits and vegetables to collective farm markets and the Tsentrosoyuz—the predominantly rural retail trade network, where prices are higher than in state stores. A Soviet economist admitted that one intent of this decree was to raise the average price of food by selling less in state stores and more through the other channels where prices are higher, and thereby absorb excess purchasing power. This measure has had little success so far, however: farms continue to market only a minor share of their produce through the CFMs or the rural retail trade network.

Cooperative Housing

Moscow is hoping that increased construction of cooperative housing will absorb some of the excess rubles in the hands of the populace. An April 1988 decree calls for formation of more housing cooperatives: associations composed of Soviet citizens who pool their money for the construction and maintenance of apartment buildings. An increased role for cooperative housing construction will require the backing of state housing construction organizations, which previously have given little priority to cooperatives.

Encouraging Private Business

The Gorbachev regime has launched a program encouraging the development of legal private businesses operated by individuals and small groups in an effort to satisfy consumer demand without large investments. New legislation has affirmed the legality of individual labor activity and fostered the establishment of member-run cooperatives. While the development of legal private business is proceeding more slowly than the leadership had hoped, Gorbachev continues to emphasize this program.

Costs of Continued Inaction

Moscow probably cannot stay the present course. Continued large deficits financed through monetary expansion will lead to an expansion of the second economy, a substantial redistribution of income from

cause of inflation. In a recent meeting with Westerners economist Aganbegyan said, "We do run state budget deficits, but not as large as the United States." (A true statement but misleading in terms of the relative size of the Soviet deficit, since the Soviet economy is only about half the size of the US economy.) Economist D. M. Kazakevich recently conceded that there was a sizable de facto budget deficit and "too much money." He suggested that enterprise funds exceed available material resources by 1.5 to 2 times.

there was a serious and growing "macroimbalance," which implied the need for a general rise in prices.

Nikolay Shmelev, perhaps the most provocative Soviet economist, provides the most graphic discussion so far of the budget deficit and its causes and effects in the April 1988 issue of *Novyy mir*. He writes:

> *Having handed over income from alcohol to the home distiller, the state has in the last two years seen a drastic exacerbation of the imbalance in the budget, in which the deficit is today covered by that supremely dangerous, unhealthy means—the mint.*

Shmelev returns to the problem of the budget deficit a number of times in this important article:

- *Perestroyka* requires increased government spending but traditional state revenues are not even sufficient to cover "today's gap in the budget."
- The financial system is "fundamentally based on largely inflationary methods of finance."
- State borrowing is being extended in an "unhealthy, covert way."
- Nontraditional means of raising state revenues should be considered such as bond sales and foreign borrowing.
- State expenditures on investment should be reduced with enterprises investing more from their own incomes. Subsidies of loss-making enterprises should be stopped. But the option of reducing defense spending "is a separate question."

Beyond suggesting that the budget deficit has grown substantially, Shmelev does not provide numerical estimates of its current size or increases over time.

Official Acknowledgement

In late May, *Pravda* published the proposals to be considered at the June party conference. Included in the proposals was the following sentence:

> *The commodity-money imbalance and state budget deficit are having an adverse effect on current production and the course of the reform itself.*

This is one of the few times in the post-war period that Moscow has officially acknowledged the existence of a budget deficit and indicates the seriousness of the problem. In early June, the Soviet press reported a roundtable discussion on the proposals that noted the past practice of masking the actual budget position:

> *Our readers have learned a very important thing from the theses for the first time: our state budget has a deficit. However, each year the Supreme Soviet approves a report on budget implementation in which income exceeds expenditure. This recurs every year. Of course, specialists know that the real situation is different. But who is fooling whom?*

Now that the deficit has been acknowledged officially, in effect calling into question official budget statistics, we may see some substantial revisions in such data in the near future.

Limited Policy Measures So Far

Moscow has taken a number of steps over the last couple of years to soak up excess purchasing power or to otherwise manage the resulting shortages of goods and services. These policies, however, do not address the budget deficit itself, and thus ignore the source of the purchasing power problem.

Gorbachev particularly takes the Brezhnev regime to task for relying too heavily on generating state revenues through high taxes on alcoholic beverages and enterprise profits, as well as sales of oil and other fuels on the world market.

Gorbachev returned to this theme in his speech to the party leadership in February 1988, suggesting that without the effect of rising world oil prices and increased alcohol sales economic growth would have been much lower (see inset). In this same speech, he concluded that "the country's economy has come up against a very serious financial problem," that is, a much larger state budget deficit. For example, he stated:

> *As a result of reducing the sale of alcohol, in the last three years the state has suffered a revenue shortfall of more than 37 billion rubles. In addition to this, in comparison with 1985, revenue in 1987 from domestic sales of imported goods, the purchase of which we have been forced to limit due to a shortage of hard currency, fell by 9 billion rubles.*

Prime Minister Ryzhkov in his May 1988 speech to the Supreme Soviet indicated that "growing cash-backed demand of the population" remains an acute problem, adding:

> *The disparity between the income of the working people and their opportunities to use this income to buy goods is increasing. Unsatisfied demand is growing and that engenders the occurrence of inflationary processes in money circulation.*

In an offhanded way, he tied the purchasing power growth problem to budget stresses, remarking that a "neglected financial situation" existed at the start of the 12th Five-Year Plan period (1986-90) and that "It is not in a favorable state even now." Specifically, he blamed state subsidies to loss-making enterprises and the decline in world oil prices for the current financial situation.

Economists' Statements

The leadership's willingness to address the state budget issue is paralleled by increased openness on the part of Soviet economists. In an article published last September, Oleg Bogomolov (head of the Institute of the Economics of the World Socialist System) hinted at the existence of a budget deficit when he blamed "the deficit in the state bank cash balance" as a major

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Gorbachev's Statement on National Income: Justifying Slow Growth in 1987

Gorbachev estimated in his February plenum speech that the average annual increment in Soviet national income would have declined in the early 1980s if the influence of higher world oil prices and accelerated domestic retail sales of alcohol were disregarded. In doing so, he ratcheted up the contrast between economic performance in the Brezhnev "stagnation" period and performance under his tenure. He is saying in effect that the Soviet economy was on the way to decline in the early 1980s but for the influence of luck (higher world oil prices) and wrong-headed policy (accelerated retail sales of alcohol).

This formulation appears to be an attempt to put some of the negative consequences of Gorbachev's own policies in a better light. His antialcohol campaign and other policy initiatives have increased the gap between purchasing power and availability of consumer goods and services. Last year, the new quality control program and implementation of new reforms contributed to the lowest growth in Soviet national income since 1979. By telling the Party leaders at the February plenum that the average annual increment in national income would have declined in the early 1980s but for higher oil prices and greater alcohol sales, we believe Gorbachev was attempting "to level the playing field." He alleged that one must compare the results of his policies with Brezhnev's economic performance only after netting out the impact of increased alcohol sales and windfall profits from oil exports. As Gorbachev states at the end of this part of his speech, "This is the real picture, comrades. Only now is the economy beginning to grow on a healthy basis."

Central Committee "is flooded with letters complaining about shortages of livestock products in many of the country's regions."

- Letters in the central press complaining of widespread shortages of fruits and vegetables were also more frequent in 1987.

The 1987 Plan Fulfillment report (published in late January 1988) also details a litany of woes implying shortages may have increased:

. . . But the population's incomes increased faster than trade turnover and the consumption fund, and there was consequently an increase in unsatisfied demand.

An unsatisfactory situation developed in the supply of potatoes, fruits and vegetables for the population, and their range and quality often fail to satisfy the population's demands.

At the same time, the population's demand for many types of clothing and knitwear was not fully satisfied, while the shortage of footwear in the trade network remained acute. The situation is aggravated by the imbalance between demand and supply in terms of range and quality.

In 1987, various organizations concerned with the allocation of housing had registered and had on their lists 13 million families and individuals waiting for better housing.

Forced Savings Increase

Some Soviet and Western economists believe, in fact, that a substantial share of Soviet savings are "forced" in the sense that consumers save because desired goods and services are not available. They view the large stock of savings as an indication of repressed inflation. According to one Soviet economist, the research arm of the Ministry of Trade estimates that such deferred demand amounts to 60-65 billion rubles, about one-quarter of total savings deposits.

based on a survey study as much as two-thirds of savings represent frustrated purchasing power.

Soviet savers added record amounts to their savings deposits during 1985-87. The average addition to savings per year during 1981-84 was 11.4 billion rubles. In contrast, additions were 19, 22, and 24 billion rubles in 1985, 1986, and 1987, respectively. Through the first quarter of 1988, savings increased 8.1 billion rubles, implying an annual rate of 32 billion rubles. Some of these savings no doubt are voluntary, but much of the increased pent-up demand of Soviet consumers resulting from inflationary pressures probably is being absorbed through increases in forced saving.

Soviet citizens also maintain a portion of their financial assets in the form of cash hoards. Both Western and Soviet analysts have pointed to the phenomenon of large holdings of cash "under the mattress" as an indication of repressed inflation.[a] Our estimates of money expansion since 1985, along with trends in retail sales and savings deposits, suggest that cash hoards probably have increased substantially over the last two years.

Increased Soviet Recognition of the Problem

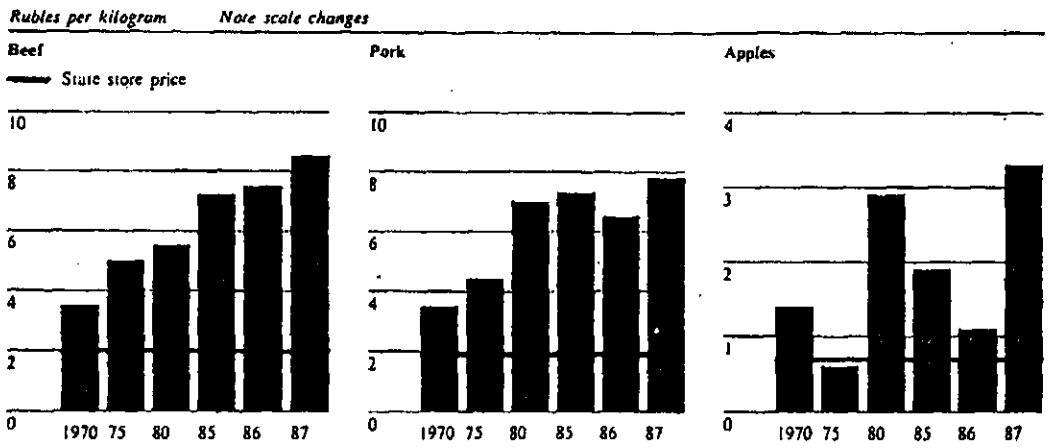
Leadership Concern

The General Secretary has severely criticized economic policy and performance under Brezhnev, repeatedly referring to the late seventies and the early eighties as a period of stagnation, a precrisis situation, or a period of growing contradictions. In his speech to the party leadership in June 1987, the General Secretary broadened his critique to include the state budget:

Take the state budget. Everything looked favorable on the surface. Expenditures were covered by revenues, but how was this achieved? Not through a growth in the efficiency of the national economy, but by other ways which had no economic or social justification.

[a] In a recent interview, economist Aganbegyan was asked whether vast amounts of money are lying unused—"260 billion rubles in the banks, plus a further 240 billion under mattresses?" He replied, "It is true, more or less."

Figure 3
Moscow: Collective Farm Market Prices of Selected Goods [a]



[a] Data are for purchases made in Moscow in August or September of each year.

statistics, average monthly wages increased 4 percent during January-March 1988. In contrast, in the first quarter of 1987, the increase was only 2 percent.

Shortages Intensify

Although the Soviet press almost invariably blames shortages in state stores on supply problems, current shortages largely reflect increases in effective demand as the money supply has grown quickly.[7] In the first instance, consumers' purchases of state goods increased. Even more important, store employees and others with access probably have increased their claims on state goods (whether through theft or purchase at low official prices) for resale in the black market.

Anecdotal evidence suggests that consumer complaints of shortages of a variety of goods have increased markedly since 1986, when money expansion increased dramatically:

- A study conducted by the Ministry of Trade's research institute and described in the Soviet paper *Trud* noted that shortages of toothpaste, women's panty hose, lotions, eau de toilette, sugar, cassettes, and batteries "broke records for being in short supply" last year.
- Food shortages in particular appear to have worsened in 1987. In his March 1988 speech to the Collective Farm Congress, Gorbachev said that the

[7] Two other factors also have contributed to the current shortages. First, Moscow cut back consumer goods imports by about 1 billion rubles (foreign trade prices) in 1986. Second, the antialcohol campaign probably has caused drinkers to shift some of their purchasing power from vodka to other goods. However, this is not likely to have been a major shift since vodka consumers are probably much more inclined to turn to purchases of homebrew rather than purchases of more food and clothes.

Table 2
USSR: Selected Measures of Retail Price Changes

Average annual growth, percent

	1981-84	1985	1986	1987	1988
State retail prices					
Official [a]	1.0	0.7	1.8	1.6 [b]	NA
CIA estimate	2.2	1.7	3.4	NA	NA
Collective farm market prices					
Official [c]	2.6 [d]	NA	−0.1 [e]	9.3 [f]	8 [g]
Derived [h]	2.2	4.3	−3.1 [e]	NA	NA

[a] *Narodnoye khozyaystvo SSSR* (hereafter referred to as *Narkhoz*) for various years.
[b] Estimated by comparing Soviet data on retail sales through October in nominal terms with corresponding data in constant terms.
[c] *Narkhoz za 70 let* (1987), p. 485.
[d] 1981-85.
[e] The decline in collective farm market prices in 1986 may reflect large supply increases in a year of good growing conditions, as well as a likely timelag between the increase in the budget deficit that year and the resulting expansion of money demand.
[f] Based on collective farm market prices for 12 commodities in 264 cities, weighted with Moscow collective farm market shares of those commodities sold. *Vestnik statistiki*, No. 3 (1988), p. 61.
[g] January-March 1988 as compared with January-March 1987, *Pravda* (26 April 1988).
[h] CIA estimates using *Narkhoz* data.

Prices Increase

Evidence on Soviet retail prices show a marked acceleration since 1985 (see table 2). Although Soviet official price indexes have long been criticized by both Soviet and Western economists as understating actual price changes, recent data suggest the official retail price index grew 1.7 percent per year during 1986 and 1987, almost double the average 0.9 percent per year recorded during 1981-85. Moreover, CIA's estimates of inflation in retail prices also show an acceleration in 1986 to 3.4 percent compared with 2.1 percent per year during 1981-85.

Similar trends are evident in collective farm market (CFM) prices. Official Soviet data on prices in CFMs in 264 cities suggest prices rose by 9 percent in 1987 contrasted with an annual average of 2.2 percent during 1981-86. The official plan fulfillment report for January-June 1987 contained a rare reference to higher prices in CFMs:

> *As a result of shortages of potatoes, fruit and vegetables, meat, and butter in the trade network, high prices were established and are being maintained in the kolkhoz markets at levels 2.5 to 4 times higher than state retail prices.*

Despite improvements in meat supplies in 1986 and 1987, prices of meat in Moscow's collective farm markets were 18 percent higher in September 1987 than in September 1985, according to Embassy reporting (see figure 3). Moreover, the most recent plan fulfillment report for January-March 1988 again made reference to rising prices in collective farm markets, indicating they were 8 percent higher than in the same period in 1987.

The absence of free markets for industrial goods and services as well as lack of information concerning the extent of shortages make it very hard to determine whether inflationary pressures have risen in the largely noncash producer goods and services sector of the Soviet economy. We expect, however, eventually to see evidence such as the bidding up of workers' wages, increased prices of machinery and other goods, increased hoarding of industrial materials, and declines in product quality.[a] Already, according to official

[a] Results from [redacted] research on inflation in official Soviet investment statistics strongly suggest the presence of significant inflationary tendencies in the investment sector of the economy. Producers are able to meet production targets through price increases and customers with plentiful funds are willing to pay premiums to obtain producer durable goods that are in short supply. The system is particularly vulnerable to this inflationary process when prices are set for new and custom-made machines which, according to one Western authority, represent "a large proportion" of investment equipment. The [redacted] study reports Soviet estimates of the annual rate of inflation in investment at up to 2 percent in the 1960s, 2 to 3 percent during 1971-75, and 2 to 4 percent during 1976-85.

Monetary Expansion in the USSR

The Soviet State Bank (Gosbank) maintains and monitors the accounts of the government (Treasury), state enterprises and farms, and the population. The bank takes in cash from state retail stores and issues cash to state enterprises for payments of wages. The bank debits and credits the accounts of state enterprises and the Treasury to reflect the millions of noncash monetary transactions that take place throughout the economy. The bank attempts to keep cash balances segregated from noncash balances but is not always successful.

Like any bank, Gosbank has assets and liabilities that must be in balance. Its assets largely consist of short-term loans to enterprises and also to the Treasury. Its liabilities largely consist of the deposits of the Treasury, enterprises, and the population.

The Treasury takes in taxes and other revenues and deposits them in its account at Gosbank. Similarly, as the government makes expenditures, Gosbank debits the government's account and credits the accounts of the payees or, as in the case of pensions, pays out cash.

When state revenues are less than expenditures, Gosbank makes short-term loans to the government that are then credited to the government's account. The government can then pay its bills for procurement of weapons, pensions, education expenditures, and investment just as if the money came from tax revenues. Gosbank's balance sheet is undisturbed by this transaction: the increase in its short-term loans to the government (an asset) is exactly duplicated by an increase in liabilities (some combination of increased cash in circulation and deposits of enterprises and the population). Money has been created from thin air.

A portion of the short-term loans used by the government to cover its deficit is balanced by additions to the population's savings accounts. The population's willingness to increase its savings deposits reflects a mix of factors: interest rates of 2 to 3 percent per year, absence of consumer credit and hence the need to save for big-ticket items such as cars, and lack of desirable consumer goods. In the short run, the population's willingness to set aside funds in savings accounts, rather than attempt to spend them, relieves some of the inflationary pressures of government deficit financing on the consumer sector. On the other hand, the population's accumulated savings accounts represent an enormous purchasing power overhang over the longer term, since savings are subject to immediate withdrawal by their owners.

allowances, and other purposes.[1] While taxes and sales of long-term government bonds result in reductions of consumers' purchasing power, government loans from the State Bank effectively result in many more rubles chasing roughly the same amount of consumer goods and services.

[1] For example, spending on weapons procurement or state housing or new factories all result in incomes for workers and managers responsible for producing these goods and services.

Impact on Prices, Shortages, and Savings

The impact of rapid monetary expansion on consumers' purchasing power is confirmed by recent trends in prices, shortages, and savings, which indicate rising inflationary pressures.

- Planning mistakes, retooling, implementation of reforms, and establishment of a new quality control system disrupted industrial performance in 1987, slowing growth of revenue from enterprise profit taxes. In the context of discussing strains on the state budget in 1987, Finance Minister Gostev remarked in his speech on the 1988 Budget (October 1987) that the machine-building, petrochemicals, and light industry sectors all had failed to meet their profit targets in 1987.

- The collapse in world oil prices in early 1986 led to a sharp fall in state revenue from foreign trade as hard currency oil exports fell from an average of $15 billion during the period 1982-84 to just $7 billion in 1986 (see appendix B). Moreover, Moscow's decision to reduce consumer goods imports by 10 percent that year contributed substantially to the overall fall in state revenue from foreign trade.

1988 Budget Plan: No Relief in Sight

According to the current budget plan, total state spending is to rise 8 billion rubles in 1988. However, in line with Gorbachev's new emphasis on the consumer, spending on "social-cultural measures" (education, science, and health care) is to rise 9.2 percent—an increase of 13 billion rubles.[4] Apparently finally recognizing its tight revenue constraint, Moscow plans to cut spending for "financing the national economy" (capital investment, capital repair, increased circulating capital, and subsidies) by 6 billion rubles. This would be the first time in over 25 years that this spending category actually declined.

On the revenue side, Finance Minister Gostev said in October 1987 that the 1988 budget contemplated a further reduction in foreign trade revenue. Turnover tax receipts also are scheduled to fall; Gostev stated, "Income is built on a healthier footing—revenue from the sale of alcoholic beverages is *reduced* by 11.5 billion rubles (compared with the 1987 plan)." The Finance Minister did not make clear how these shortfalls, which—along with the planned spending level—imply a 1988 budget deficit of some 70 billion rubles, would be made up. His vagueness is understandable, however, since we believe the revenue shortfall will be made up by money creation.

[4] The average annual increase was 4.9 percent during 1981-85 and 6.4 percent in 1986. The state science budget, however, is believed to finance a large portion of military and civilian research. Thus, some of the increase in spending on social-cultural measures may be for defense and investment purposes.

Table 1
USSR: Sources of Finance of the State Budget Deficit

Billion rubles

	1984	1985	1986	1987	1988 [a]
Budget deficit	11.0	17.0	49.8	64.4	68.4
Known sources of finance					
Long-term borrowing (bond sales)	1.0	1.4	1.9	2.2	2.5
Short-term borrowing from the State Bank (savings receipts)	15.2	18.7	22.0	24.0	32.4
Residual					
Implied other short-term borrowing from the State Bank	−5.2	−3.1	25.9	38.2	33.5

[a] Estimated.

Source: Appendix A, table 5.

Money Creation Finances the Deficit

By necessity, the large deficits since 1986 have had to be met by government borrowing from the State Bank (see table 1). In the past, Moscow also relied on large-scale sales of long-term bonds to the population as a means of finance. But sales of mass subscription bonds were stopped in 1958 because of the leadership's concern about rising debt service charges.

The government's large levels of borrowing from the State Bank since 1986 are equivalent to injecting like amounts of money into the economy and therefore are highly inflationary (see inset). The money creation takes place when the government uses these loans to pay for pensions, teachers' salaries, military pay and

investment were to increase a huge 10 percent in 1986, although followed by much smaller average annual increases during the period 1987-90 (1.2 percent per year).

Soviet planners were probably concerned about the budget-busting implications of Gorbachev's investment push, since other budget commitments were not relaxed:

- Under Brezhnev's Food Program, procurement prices paid to farms were raised on 1 January 1983. Since retail prices for the most part were not raised, unit subsidies increased. But higher unit subsidies, coupled with increased meat and food production, have greatly increased the burden of this expenditure on the state budget. State appropriations for the subsidy of food prices increased from 24 billion rubles in 1980 (8 percent of state expenditures) to 58 billion rubles in 1986 (14 percent of state expenditures), according to a Soviet agricultural official.

- We estimate defense expenditures also have been increasing since 1985 by about 3 billion rubles annually.[1] Perhaps reflecting the unevenness in weapons procurement cycles, these increases have been largely driven by procurement of such major strategic systems

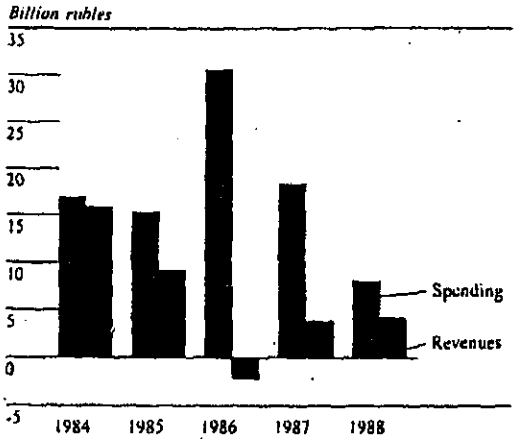
The costs of Afghanistan also increased steadily from an estimated 1 to 2 billion rubles in 1980 to about 3 billion rubles in 1987.

- Budget spending on social-cultural measures (education, health services, pensions) increased an average 7.5 billion rubles per year during 1986 and 1987.

- While certainly unanticipated, the Chernobyl' disaster is estimated to have cost the state budget an extra 2 billion rubles annually during 1986 and 1987.

[1] Based on CIA estimates of Soviet defense spending in 1982 factor cost prices, which represent *minimum* increases in current price defense spending levels.

Figure 2
USSR: Annual Changes in State Spending and Revenues, 1984-88



Consequently, given the leadership's decision to push investment spending at all costs, total government spending rose by a record 30 billion rubles in 1986 and by another 18 billion rubles in 1987 (figure 2).

Revenue Shortfalls

Meanwhile, Soviet state revenues have had to absorb a number of major impacts which have held growth of revenues during 1986 and 1987 to less than 5 billion rubles:

- Until 1985 the Soviets increasingly counted on a hefty indirect tax on retail alcohol sales to generate substantial budget revenues, but a major impact of the antialcohol campaign has been to cut this inflow by some 30 percent.

Imports. Moscow could use its high credit rating in the West to finance consumer good imports. Because of the large price markups on domestic sales of imported goods, such a policy could earn the state large revenues—amounts equal to 3 to 4 times the values of foreign loans. While this option makes a lot of economic sense and is apparently under discussion in Moscow policymaking circles, that the Soviet consensus currently is not to pursue this policy time and again, "We do not want to be another Poland," apparently referring to that country's problems after its foreign borrowing splurge in the 1970s.

Spending Cuts on Defense and Investment

Since the June 1987 plenum, several high-ranking political and military spokesmen have stated publicly that the Soviet Union plans to reduce spending on defense. For example, last August in an interview with a Spanish reporter, Gen. Yuriy Lebedev said that, although the Soviets must be careful not to ignore the armed forces' needs, "nevertheless, our plans include a reduction of military spending in order to allocate the money to other areas." While this statement and similar ones could reflect a propaganda motive, they might also reflect the budget situation.

Reduced outlays on investment would also trim the budget deficit, but it is not clear which areas could afford to be cut back:

- Growth of energy production requires continued large investments.
- As a key element of the modernization program, the machine-building industry is scheduled to receive large amounts of investment through the rest of the five-year plan period (1986-90).
- The rest of heavy industry, agriculture, and transportation all are in need of large investments for modernization, new projects, and upkeep of existing plant and equipment.
- Gorbachev's new emphasis on the consumer implies large investment flows to both housing and industries producing consumer goods and services.

While the most likely short-term target for reductions probably would be nonpriority sectors in industry and elsewhere, neglect of these for more than a couple of years might produce severe bottlenecks. Moreover, the economy is structured to produce large amounts of investment goods. Any substantial reduction in investment spending would imply shutting down some of heavy industry.

Currency Reform

Gorbachev may need to undertake a currency reform to take care of the problem of excess purchasing power, although by itself such a reform would not help the deficit. As in the case of removing consumer subsidies, a currency reform would have to be implemented overnight so that consumers and savers could not take evasive actions that would result in large increases in demand for goods.

Currency reform is not unprecedented in the Soviet Union. The inflation in World War II greatly increased collective farm market prices, resulting in large cash accumulations by peasants. Concern about the resulting pent-up demand caused Moscow to decree a currency reform on 14 December 1947 (with no advance notice). The reform consisted of the following elements:

- New currency was issued at a rate of one new ruble to 10 old ones which had the effect of devaluing cash holdings by a factor of 10 (or to one-tenth their previous value).
- State bonds were converted at an exchange rate of 1-to-3 and thus lost two-thirds of their value.
- Savings accounts less than 3,000 rubles were converted at an exchange rate of one-to-one. Thus savings of urban workers, who were much more likely to use banks than peasants, were treated favorably.
- Wages and prices were not changed. Thus the primary effect of the currency reform was a substantial confiscation of the wealth of peasants.

According to Soviet economist Nikolay Shmelev, currency reform is a "hot topic of discussion" among Soviet economists today. In his most recent *Novyy*

mir article, moreover, he points out that "Strong rumors are circulating about a possible monetary reform and the consequent confiscation of a proportion of investments in savings banks." To avoid a bank run and other adverse reactions, the authorities naturally are quick to deny these rumors. When the US Embassy recently raised the issue of recurring rumors of a currency reform with Gosbank Chairman Garetovskiy, the Chairman categorically denied that such plans are being made.

Outlook: *Perestroyka* Threatened

General Secretary Gorbachev, other Soviet leaders, Soviet economists, and others have in the last several years frequently pointed out the serious nature of Soviet economic and financial problems, even at times suggesting that a crisis situation existed. Politically this probably is a useful tactic for justifying the many policy shifts, reforms, and other changes Gorbachev has initiated. However, there is also a tone of real concern in many of the comments, which is reflected in the hurried and heedless nature of many of Gorbachev's initiatives.

However, the rush to put new policies in place has if anything exacerbated the economy's problems. Such key initiatives as sharply increased investment and the antialcohol campaign not only have failed to accomplish key objectives, but also have contributed to the drastic increases in the state budget deficit and money creation. The cost of living is higher, shortages have intensified, modernization is proceeding at a snail's pace, and the economy's fastest growing industry is moonshining.

The General Secretary needs to come to grips with the budget deficit. Most of the options open to him, however, impinge on the welfare of the population or key interest groups, such as the military, just at a time when he needs as much political support as he can garner. Indeed, the leadership apparently has made a decision to do more for the consumer quickly as a means of obtaining the population's backing for *perestroyka*. This decision in turn probably means that consumer subsidies will not be reduced soon, despite the large potential this offers for reducing the deficit, nor—for the same reason—are taxes likely to be raised.

Only large-scale imports of consumer goods and relaxing the antialcohol campaign offer Moscow opportunities to address the budget deficit without gouging an important interest group. Both steps are under discussion in Moscow. The leadership may follow through by allowing increased alcohol sales. Increased imports of consumer goods could be easily financed through foreign borrowing, but Moscow so far prefers to reserve foreign loans for investment uses that expand domestic production capacity rather than for current consumption. While in general this restriction makes sense, imports of investment goods do not help resolve the immediate problem of the budget deficit and Soviet conservatism on borrowing for current consumption may eventually be relaxed.

Gorbachev must act quickly. Because the inflationary impact of the budget deficit exacerbates current consumer problems, the leadership is fighting an uphill battle in trying to improve the quality of life for average citizens and gain support for *perestroyka*. If the budget deficit is not brought down, it could lead to inflation much worse than the Soviets have experienced in the postwar era.

Appendix A

Key Tables

Our information sources consist of published and unpublished data from the Center for International Research (formerly the Foreign Demographic Analysis Division) of the United States Department of Commerce, various issues of the annual Soviet economic and foreign trade handbooks (*Narodnoye khozyaystvo SSSR* and *Vneshnyaya torgovlya*), the Soviet five-year statistical budget handbooks, the laws on the state budget, and the annual budget speeches of the Soviet Minister of Finance to the Supreme Soviet. The analytical framework behind the tables follows the methodology developed by Mark Harrison in his article, "The USSR State Budget under Late Stalinism (1945-55): Capital Formation, Government Borrowing and Monetary Growth" in *Economics of Planning*, Vol. 20, No. 3 (1986).

Table A-1
USSR: Estimated State Revenues From Foreign Trade

Billion current rubles

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Foreign trade prices																			
Exports	11.5	12.4	12.7	15.8	20.7	24.0	28.0	33.3	35.7	42.4	49.6	57.1	63.2	67.9	74.4	72.7	68.3	68.1	68.0
Imports	10.6	11.2	13.3	15.5	18.8	26.7	28.7	30.1	34.6	37.9	44.5	52.6	56.4	59.6	65.4	69.4	62.6	60.7	61.0
Net exports	1.0	1.2	−0.6	0.3	1.9	−2.6	−0.7	3.2	1.1	4.5	5.2	4.5	6.8	8.3	9.0	3.2	5.7	7.4	7.0
Conversion ratios																			
Exports	1.59	1.50	1.40	1.28	1.12	1.04	1.00	0.98	0.96	0.83	0.74	0.66	0.77	0.74	0.70	0.69	0.69	0.69	0.69
Imports	2.36	2.36	2.36	2.44	2.21	2.04	2.08	2.06	2.06	1.97	1.86	1.74	1.90	1.95	1.90	1.93	1.93	1.93	1.93
Domestic prices																			
Exports	18.3	18.6	17.8	20.2	23.2	25.0	28.0	32.6	34.2	35.2	36.7	37.7	48.6	50.2	52.1	50.1	47.1	47.0	46.9
Imports	24.9	26.5	31.4	37.9	41.6	54.4	59.8	62.0	71.2	74.6	82.7	91.6	107.2	116.2	124.2	134.0	120.8	117.2	117.7
Net imports	6.6	7.9	13.6	17.7	18.4	29.4	31.7	29.4	36.9	39.4	46.0	53.9	58.5	66.0	72.1	83.9	73.7	70.2	70.8
Net exports in foreign trade prices converted to domestic prices	1.5	1.8	−0.8	0.3	2.1	−2.7	−0.7	3.1	1.1	3.8	3.8	3.0	5.2	6.1	6.3	2.2	3.9	5.1	4.8
Estimated foreign trade revenues	8.1	9.7	12.8	18.0	20.5	26.7	31.0	32.5	38.0	43.2	49.8	56.8	63.7	72.1	78.4	86.1	77.6	75.3	75.6

Notes:
1. Lines 1 and 2, 1970-86: Soviet foreign trade handbooks, *Vneshnyaya Torgovlya*, various years; 1987: Soviet foreign trade journal, *Vneshnyaya Torgovlya*, No. 3 (March 1988); 1988: estimated.
2. Line 3 = line 1 − line 2.
3. Conversion ratios, 1970-85: Center for International Research, US Department of Commerce printout; 1986-88: same values as 1985 assumed.
4. Line 6 = line 1 × line 4.
5. Line 7 = line 2 × line 5.
6. Line 8 = line 7 − line 6.
7. Line 9 = line 3 × line 4.
8. Line 10 = line 8 + line 9. See *Foreign Economic Report*, No. 20, Domestic Value of Soviet Foreign Trade: Exports and Imports in the 1972 Input-Output Table, (US Department of Commerce, October 1982), for discussion of methodology used to estimate special earnings from foreign trade.
9. Components may not add to totals shown because of rounding.

Table A-2
USSR: Miscellaneous State Budget Revenues

Billion current rubles

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Local taxes and collections	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.2	1.2	1.2
Forest income	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.8	0.8	0.8	0.7	0.7	0.7
Rent income	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other incomes	3.0	2.8	2.4	4.8	5.9	6.0	6.6	5.7	5.1	5.6	6.3	4.8	6.2	7.8	5.5	6.1	6.1	6.1	6.1
Total miscellaneous revenues	4.4	4.2	3.9	6.3	7.5	7.6	8.2	7.3	6.7	7.2	7.9	6.5	8.2	9.8	7.6	8.3	8.1	8.1	8.1

Notes:
1. Lines 1 through 4, 1970-85: the five-year statistical handbooks on the USSR state budget published by the Ministry of Finance: *Gosudarstvennyy Byudzhet SSSR*: various years; 1986-88: estimated as annual average of 1981-85.
2. Line 5 = sum of lines 1 through 4.
3. Components may not add to totals shown because of rounding.

Table A-3
USSR: Ordinary State Budget Revenues

Billion current rubles

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Turnover tax	49.4	54.5	55.6	59.1	63.5	66.6	70.7	74.6	84.1	88.3	94.1	100.4	100.6	102.9	102.7	97.7	91.5	90.0	89.0
Payments from profits	54.2	55.6	60.0	60.0	64.4	69.7	70.6	78.4	78.6	84.2	89.8	92.4	102.4	106.6	115.6	119.5	129.8	135.0	137.5
Taxes on individuals	12.7	13.7	14.8	15.8	17.1	18.4	19.6	20.8	22.1	23.2	24.5	25.5	26.6	27.6	28.8	30.0	31.2	32.4	33.6
Social insurance taxes	8.3	8.8	9.3	9.9	10.6	11.3	12.2	12.4	13.1	13.9	14.2	15.0	22.3	23.1	24.5	25.4	26.5	27.5	28.5
Income taxes paid by cooperatives and public enterprises	1.2	1.4	1.3	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.9	1.9	2.2	2.6	2.5	2.6	2.8	2.9
Miscellaneous revenues	4.4	4.2	3.9	6.3	7.5	7.6	8.2	7.3	6.7	7.2	7.9	6.5	8.2	9.8	7.6	8.3	8.1	8.1	8.1
Total revenues from domestic sources	130.2	138.2	144.9	152.6	164.6	175.1	182.8	195.1	206.2	218.4	232.2	241.7	262.0	272.2	281.8	283.4	289.7	295.8	299.6
Estimated foreign trade revenues	8.1	9.7	12.8	18.0	20.5	26.7	31.0	32.5	38.0	43.2	49.8	56.8	63.7	72.1	78.4	86.1	77.6	75.3	75.6
Total	138.3	147.9	157.7	170.6	185.1	201.8	213.8	227.6	244.2	261.6	282.0	298.6	325.8	344.3	360.2	369.5	367.3	371.1	375.2

Notes:
1. Ordinary domestic revenues, also called current revenues, are mainly forms of taxation. They accrue to the government without creating corresponding liabilities that require servicing or redeeming in the future.
2. Lines 1 through 5, 1970-86: *Narkhoz*, various years.
3. Line 1, 1987 and 1988: estimated. Revenues from turnover taxes began to fall sharply in 1985 as a result of the launching of Gorbachev's antialcohol campaign. Further revenue losses due to the antidrinking campaign occurred in 1986 when tax revenues were more than 10 billion rubles below plan. The 1987 plan called for 96.4 billion rubles, but Finance Minister Gostev said in October 1987, "The turnover tax will produce less than planned" in 1987. Gostev also said the plan figure for 1988 was 89 billion rubles, with planned revenues from the sale of alcoholic beverages reduced by 11.5 billion rubles, indicating a possibly more realistic assessment of the effect of the antialcohol campaign on tax revenues.
4. Line 2, 1987 and 1988: estimated as 31 percent of total planned revenues (435.7 and 443.6 billion rubles, respectively, during 1987 and 1988), the average share during 1984-86.
5. Line 3, 1987 and 1988: estimated by increasing previous year's value by 1.2 billion rubles, the average annual increment during 1985-86.
6. Line 4, 1987 and 1988: estimated by increasing previous year's value by 1 billion rubles, the average annual increment during 1985-86.
7. Line 5, 1987 and 1988: estimated as 0.65 percent of total planned revenues, the average share during 1984-86.
8. Line 6 = table 2, line 5.
9. Line 7 = sum of lines 1 through 6.
10. Line 8 = table 1, line 10.
11. Line 9 = line 7 + line 8.
12. Components may not add to totals shown because of rounding.

Table A-4
USSR: Estimated State Budget Deficit

Billion current rubles (except where noted)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Revenues from domestic sources	130.2	138.2	144.9	152.6	164.6	175.1	182.8	195.1	206.2	218.4	232.2	241.7	262.0	272.2	281.8	283.4	289.7	295.8	299.6
Estimated foreign trade revenues	8.1	9.7	12.8	18.0	20.5	26.7	31.0	32.5	38.0	43.2	49.8	56.8	63.7	72.1	78.4	86.1	77.6	75.3	75.6
Sum of ordinary revenues	138.3	147.9	157.7	170.6	185.1	201.8	213.8	227.6	244.2	261.6	282.0	298.6	325.8	344.3	360.2	369.5	367.3	371.1	375.2
Expenditures	154.6	164.2	173.2	184.0	197.4	214.5	226.7	242.8	260.2	276.4	294.6	309.8	343.1	354.3	371.2	386.5	417.1	435.5	443.6
Budget deficit	16.3	16.3	15.5	13.4	12.3	12.7	12.9	15.2	16.0	14.8	12.6	11.2	17.3	10.0	11.0	17.0	49.8	64.4	68.4
Budget deficit (as a percent of expenditures)	10.5	9.9	8.9	7.3	6.2	5.9	5.7	6.3	6.1	5.3	4.3	3.6	5.1	2.8	3.0	4.4	11.9	14.8	15.4

Notes:
1. Line 1 = table 3, line 7.
2. Line 2 = table 3, line 8.
3. Line 3 = table 3, line 9.
4. Line 4, 1970-86: *Narkhoz*, various years; 1987 and 1988: USSR state budget laws for 1987 and 1988, respectively. Almost always, actual expenditures turn out to be somewhat greater than expenditures given in the budget plan. Only twice in the past 20 years have actual expenditures been lower than the plan. The expenditure figures shown here for 1987 and 1988, therefore, are likely to represent conservative estimates of expenditures for those years. To the extent that expenditures are understated, given the estimate of current revenues, the estimate of the budget deficit will also be understated.
5. Line 5 = line 4 − line 3.
6. Line 6 = line 5/line 4 × 100.
7. Components may not add to totals shown because of rounding.

Table A-5
USSR: Sources of Finance of the State Budget Deficit

Billion current rubles

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Budget deficit	16.3	16.3	15.5	13.4	12.3	12.7	12.9	15.2	16.0	14.8	12.6	11.2	17.3	10.0	11.0	17.0	49.8	64.4	68.4
Known sources of finance																			
Long-term borrowing (bond sales)	0.5	0.3	0.3	0.4	0.4	0.6	0.6	0.6	0.6	0.7	0.6	0.4	1.0	1.0	1.0	1.4	1.9	2.2	2.5
Short-term borrowing from the State Bank (savings receipts)	8.2	6.6	7.5	7.9	10.3	12.1	12.0	13.7	14.5	15.1	10.3	9.2	8.6	12.6	15.2	18.7	22.0	24.0	32.4
Residual																			
Implied other short-term borrowing from the State Bank	7.6	9.4	7.7	5.0	1.6	0.1	0.2	1.0	0.9	−1.0	1.7	1.6	7.7	−3.7	−5.2	−3.1	25.9	38.2	33.5

Notes:
1. Line 1 = table 4, line 5.
2. Line 2, 1970-86: *Narkhoz*, various years; 1987-88: estimated.
3. Line 3, 1970-86: *Narkhoz*, various years; 1987: 1987 plan fulfillment report; 1988: estimated, based on 8.1-billion-ruble increase in savings deposits reported for first quarter of 1988.
4. Line 4: calculated as the difference between the budget deficit and long-term and short-term borrowing.
5. Components may not add to totals shown because of rounding.

Appendix B

State Revenue From Foreign Trade

State revenue from foreign trade is not completely understood by Western analysts.[1] Simplifying greatly, the mechanism seems to work in the following way:

- Soviet trade authorities try to keep exports and imports roughly in balance in terms of foreign currencies (or, what amounts to the same thing, in terms of "foreign trade" rubles).
- Moscow prices imports much higher domestically on average than what it pays for them in foreign markets. Accordingly, the value of imports in domestic rubles is now about twice what it is in foreign trade rubles.
- On the other hand, domestic prices for exports on average are set lower than foreign trade prices. Exports in foreign trade rubles are now about 40 to 50 percent higher than in domestic rubles.

The surplus obtained by selling imports to Soviet consumers and enterprises at high domestic prices, and selling exports at high world prices, constitutes the revenue from foreign trade. The Center for International Research (CIR), US Bureau of the Census, estimates that total revenue from foreign trade was 63.7 billion rubles in 1982, or 20 percent of estimated current budget revenues for that year. Consumer goods imports stand out as a source of this surplus because their domestic prices are especially higher than foreign trade prices. For example, according to CIR estimates, textile and apparel imports were priced at 4.3 times their foreign trade prices in 1982.

[1] For more details, see V. Treml and B. Kostinsky, *Domestic Value of Soviet Foreign Trade* (US Department of Commerce, October 1982), FER 20.

Appendix C

The Official Balance as an Indicator of the Estimated Deficit

Soviet official budget data almost invariably report a small budget surplus every year. While this surplus clearly is misleading concerning the true relationship between current government revenues and expenditures, at the same time it does vary somewhat from year to year. Harrison, in his study of trends in the state budget during 1945-55, carried out a statistical analysis that showed that his estimates of the budget deficit were strongly related to the official surplus.[1] In particular, he found that increases in the official surplus were strongly indicative of reductions in the actual deficit.

We carried out a similar analysis for the period 1970-86 using our estimates of the budget deficit and Soviet data on the official budget surplus. The regression results (table C-1) and the scatter diagram (figure 4) are consistent with Harrison's finding of a significant statistical relationship between the deficit and the official surplus.

[1] Mark Harrison, "The USSR State Budget under Late Stalinism (1945-1955): Capital Formation, Government Borrowing and Monetary Growth," *Economics of Planning*, Vol. 20, No. 3 (1986), p. 204.

Figure 4
USSR: Estimated Deficit Versus Official Surplus (Percent of state expenditures)

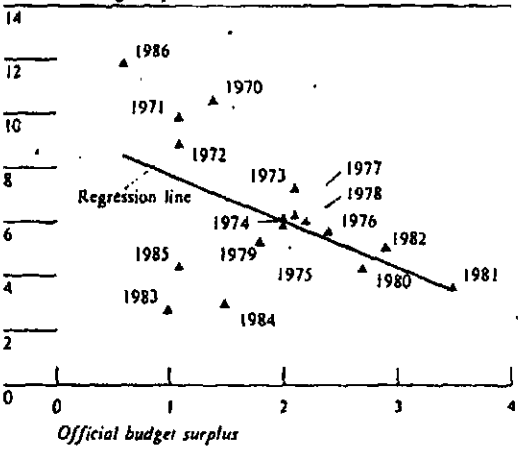


Table C-1
Regression Results

Key to Symbols	
Y =	estimated budget deficit as percent of state expenditures (from table A-4)
X =	Soviet official budget surplus as percent of state expenditures (derived from data in the *Narkhoz*, various years)

Estimated Equation

$Y = 9.42 - 1.68\,X \quad R^2 = 0.24$
(0.77)

Sample years: 1970 - 86
Number of observations = 17