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Gur Ofer

HEBREW UNIVERSITY OF JERUSALEM

*Macroeconomic Issues of Soviet Reforms**

1. Introduction

Five years into the "Gorbachev era," economic reforms appear to be entering a period of retrenchment, if not actual retreat. This is probably a response to the disarray prevailing in the Soviet economy in recent years, which ensued when the steps taken toward "marketization" not only failed to deliver the expected results but were even charged with responsibility for the crisis. The main features of this crisis are, on the supply side, the failure to increase production (especially of consumer goods) and, on the demand side, the creation of excess demand through increased government budget deficits and other sources of income and monetary expansion. So far, only part of the resulting disequilibrium has been reflected in open inflation, at estimated recent annual rates of between 7–11% or more (see Peel 1989; *PlanEcon Report*, November 24, 1989, p. 7). Most of the disequilibrium takes the form of repressed inflation and consequent market shortages. A so-called overhang of monetary assets has accumulated in the hands of households and enterprises, most of it recently. In view of the above-mentioned developments, this overhang is often considered an immanent threat of further economic deterioration (see, for example, Ryzhkov 1989b).

The disappointing results to date have led to widespread disillusion with the prospects of the reforms and has eroded their popular and professional appeal. They also fomented some antagonism toward the embryonic legal private (cooperative) sector. With excess monetary incomes and balances on the demand side, and difficulties in obtaining

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supplies at official prices, prices in the very narrow private sector shot up; private operators were branded “speculators” (one of the worst expletives in the Russian and Soviet lexicons), forcing the authorities to impose restrictions and controls that held back the potential contribution of a private sector.

Three major policy choices now face the Soviet leadership: (1) leaping headfirst into the turbulent waters of radical reforms (in the hope that this will both restore stability and increase consumer welfare), (2) attempting a frontal assault on the stabilization problem and the shortages of consumer goods (separately from other reform issues), and (3) embarking on a longer-term, more thorough process of preparing the infrastructure for marketization and “privatization” reforms. One illustration of this dilemma is the choice between, on the one hand, a radical price reform—near complete price liberalization (emulating Poland)—which could serve as a major means of achieving stabilization and a proper supply response, or, on the other hand, the postponement of price liberalization until after the successful implementation of a fiscal and monetary stabilization program.

The Soviet leadership seems to have opted for the latter strategy—conservative, even “revisionist” policies are used to achieve stabilization and increase the supply of consumer goods, while a program of reform is being prepared. Last September, Leonid Abalkin (a leading economist and now head of the government committee on economic reform and vice-chairman of the Council of Ministers) called for a new start toward orderly and gradual reform over a period of at least ten years (Abalkin 1989a). The first phase of the reform is essentially a macrostabilization program, designed largely to correct many of the mistakes of partial reforms since 1985, and proposed to create a sound macroeconomic financial infrastructure for future reforms. Even this modest program met with substantial opposition; it was eventually replaced by a more conservative program presented last December by Nikolai Ryzhkov, chairman of the Council of Ministers (Ryzhkov 1989b). Ryzhkov’s plan (which is now being implemented) concentrates on the achievement of restoration of macroeconomic equilibrium via three main efforts. The first is to rebalance the state budget, mostly using traditional fiscal instruments and taxes. The combination of reform steps and policies since 1985 created a dangerous budget deficit that was partly responsible for the macrodisequilibrium and most market shortages in recent years.

The second effort is directed at tightening the (somewhat relaxed) central control over previously delegated, though limited, authority—to enterprises with respect to the determination of wages and prices, and to

banks with respect to credit. The main goal of this effort is to limit the flow of nonbudgetary monetary resources to the economy, a flow that has also contributed to inflationary pressures in recent years.

The third effort seeks to restore equilibrium in the consumer markets on the supply side through the reallocation of resources from investment and defense to increased production of consumer goods. While focusing on resource reallocation is an innovation (it is a major shift in the objective function of the leadership), the proposed means to be used are the familiar ones of central physical planning and control. Unlike the recent tendency to release enterprises from the obligation to fulfill central production orders ("State orders") and divert an increasing proportion of their production capacity to free markets, such orders, often covering the entire production volume, are now being reintroduced. Both Abalkin's and Ryzhkov's proposals, and indeed previous schemes as well, postpone the long-awaited price reform for a number of years.

Oscillations of one kind or another in the reform process should not come as a surprise. But they do present an opportunity, if one needs an excuse, to reassess the reform process, review and analyze some of its basic present and past problems, and evaluate options for the future. This paper concentrates on macroeconomic aspects of the reforms with reference to their microeconomic foundations. On the real side of macroeconomics, this paper ignores the underlying reasons for the reforms, namely the exhaustion of growth potential and the disappearance of productivity growth under the old economic regime with its "extensive" growth strategy. Basic indicators of past growth and the structure of the economy appear in Appendix Table A1 (parts a-c). Section 2 discusses the legacy of supply of real resources and its structural allocation on the eve of the reforms, the constraints it imposes and the opportunities it offers. Most of this paper deals with problems related to the absence and creation of appropriate fiscal and monetary institutions and instruments in the transition from the old, centrally planned system to a more market-oriented one. We examine the recent introduction of new micro- and macroeconomic instruments and their effect on production and macroeconomic equilibrium.

Some facets of macroeconomic problems in a Soviet setting go far beyond those found in ordinary mixed-market economies. First, the Soviet economy lacks many institutional tools and infrastructural elements that make up a fiscal and monetary system. The state budget is unfamiliar to Western eyes; for years the production sector was excluded from the monetary system—now it must be incorporated into it; there is no credit system in the market-economy sense of the term, and no legislation per-

taining to market operations; one cannot even find any acceptable and consistent lexicon of terms to be used in this new environment; and there is very limited knowledge of (and even less experience in) economics and business. Furthermore, there are no traditional patterns of government action in these spheres that can serve as a benchmark for assessing credibility or a record upon which to form expectations.

Next, we encounter strongly entrenched traditions geared to the old system. Suffice it to note the emphasis on quantity targets rather than profits, the hothouse environment of the "soft budget constraint," and the unwillingness to take risks. Constraints on private and enterprise holdings of assets, the low-interest rate, other structural factors affecting the savings function and the demand for money are all about to change radically. The change may prompt equally radical changes in the shape of these functions, and consequently in the basic building blocks of the new macroeconomic regime.

The main policy emphasis has lately been on problems of transition and disequilibrium associated with the topics listed above. But the main structure envisioned for the Soviet economic model of the future and the time frame for its implementation are yet to be determined. This includes, *inter alia*, the extent of the market domain, the nature and structure of property ownership and rights, the character of future capital markets, and the system of external economic relations. In the absence of a clearly defined target, households and enterprises are understandably skeptical about the likely efficiency of instruments and policies.

Taking some of the above problems into account, the discussion of past macroeconomic developments and policies, and of present and future options, will proceed as follows: Section 2 presents a discussion of the consequences of past "extensive" growth strategy that exerted great pressure on inputs and resources in order to catch up with the West. In Section 3 we analyze options for fiscal and budgetary policies.¹ Section 4 is devoted to macro- and related microeconomic aspects of the production sector—its monetization and the decentralization of enterprise decision making, and an analysis of the new decentralized credit system. Section 5 deals mainly with liquidity problems of the household sector—problems of flows and stocks (the overhang) with emphasis on the analysis of the changes in demand functions for wealth and savings, and for money. In the concluding section the pieces are put together in a framework of general equilibrium and various reform itineraries, and policy options are examined. The relationships between a short-term stabilization program and long-term reforms are examined by analyzing similarities and differ-

1. Based on a longer study of the topic (Ofer, 1990).

ences between the Soviet Union and several market economies in need of stabilization programs.

Three further comments are warranted. First, the Soviet economy still operates almost entirely with fixed, centrally determined prices that seriously distort relative scarcities. Almost every step on the way to reform suffers from the existence of such (almost completely nonflexible) prices. The issue of sequencing a price reform early on in the reforms has always been on the agenda, but the present decision is to postpone it for several more years. As we shall see, the timing of the price reform is a major element in the discussion of most issues.

Second, this paper addresses mainly the “upper” part of the business cycle, that is above full employment. The fact that the reforms may generate unemployment is widely recognized, and tends to retard their progress. Initially, such unemployment is mostly structural; it results from a hardening of the budget constraint on loss-making enterprises and from moving personnel from the bureaucracy into the production sector.

Finally, this paper neglects of the role of external economic relations. The extended “functional” isolation of the Soviet economy from world markets contributed to inefficiency, distortions, and technological lags. Exposure may help make the Soviet economy more efficient through signals of world prices, competition, the challenges of imports and of exports, and a constant effort to make (and keep) the local currency convertible. In the present Soviet situation, foreign involvement can help transform the economy into a market system by example, joint ventures, direct investments, exchange programs, and so on. The extension of credit can assist both as a standby support for a stabilization program, and as a source for investment funds. However, the sheer size of the Soviet economy precludes massive assistance in relative terms. Finally, foreign currency can also serve as an important stable asset for firms and households, and even as a temporary currency and a vehicle of monetary reform.

2. Disequilibrium in the Real Sector: The Legacy of the Past

The Soviet Union arrived at the starting post of reform in a state of exhaustion—which is to say, with almost no potential reserves of real resources. Indeed, it had a very substantial internal debt, not in the ordinary meaning of the term, but in the form of a serious backlog of investments in infrastructure of all kinds, in modern technology, and in public and social services. It will be difficult to renew economic growth without addressing this backlog. The servicing of this debt has taken the

form of a declining level of economic efficiency and performance, as accumulating bottlenecks imposed more and more constraints and caused increasing disruptions. These factors, combined with transition difficulties, canceled out much of the productivity gains that were expected, at least according to the welcome with which the announced changes were received.

A backlog of needed investments developed despite the fact that under the "old" regime the share of investment in GNP and the rate of growth of capital stock had been exceptionally high (gross investment was about one-third of GNP, and the annual growth rate of capital stock was 6–8%; see Appendix Tabled A1, part c.). The policy of high investment rates is one aspect of the so-called extensive growth strategy: growth is input-intensive and, as it turned out, weak on technological change. The obverse side of this strategy was the maximization of labor-force participation. The labor contribution to this strategy, however, had already run its course (sinking to labor-force growth rates of around 0.7% per year). The extensive growth model gradually came to resemble a capital growth model with increasingly negative consequences of difficulties in capital-labor substitution, causing further declines in capital productivity (see below).

Extensive growth can be considered a key feature in the Soviet growth strategy of catching up with the developed West as rapidly as possible, maximizing growth rates in the shorter run at the expense of economic potential in the more distant future. This policy of "haste" can be defined as one driven by a high rate of time preference—much higher than the rate of return to investments made in order to achieve rapid growth. Haste reduces the rate of return to below what it would have been under less intensive pressure on the use of factor of production. Such a high time preference and high internal future discount rates stand in contrast to the traditional image of a high-investment low-consumption "socialist" growth model. The traditional image, however, is based on the assumption that initial high rates of investment reflect a very low time preference in order to assure higher rates of consumption in the (distant) future. The haste interpretation is consistent with a shorter-term goal of maximizing growth with a strong bias in favor of heavy industry and defense, rather than consumption. This, we believe, is a more accurate statement of the objective function of the old regime (Ofer, 1987, pp. 1798–1801; Berliner 1966).

The intensive growth model, with its slow improvement in productivity, gravitates over time toward low growth rates. With "haste" superimposed, the result was overutilization of labor, land, natural resources,

and the investment potential,² and at a much heavier cost in terms of future growth.

As for investment, the haste doctrine aimed at extremely high short-run output-to-capital ratios. This was accomplished by directing most of the available capital to key elements of the production process, to the detriment of auxiliary services and infrastructure, and so on.³

The pressure that was brought to bear on both enterprises and ministers to meet such demanding production targets, and the virtual absence of meaningful interest charges (0–2% on credits, and a 6% annual charge on the stock of fixed capital of enterprises) created excess demand for investment funds, which resulted in long gestation periods and a chronic (growing) stock of unfinished projects.⁴

The relatively low innovative and technological content of Soviet investments can also be interpreted, at least in part, as a component of the “haste” doctrine. True, a centrally planned command-and-control economy creates a systemic (comparative) disadvantage in technological innovation, but it is geared to foster short-term quantitative production and to dampen longer-term achievement through higher R & D activity (at the expense of current production targets). As a result, the typical profile of traditional Soviet investment reveals a high proportion of construction and of vintage equipment. A related point is the very low rate at which obsolete equipment is discarded, resulting in high maintenance costs (part of the “interest” payments on the “debt”).⁵

All these created a trend of declining capital productivity and declining growth rates of GNP, down to virtual stagnation in the early 1980s, further diminishing potential real reserves. The gaps in the infrastructure and the lagging technology, combined with the desire (under the reform) to reallocate resources to the most neglected areas of the consumption sector, led to a difficult dilemma about the volume of invest-

2. Under extensive growth the capital stock is growing faster than output, causing the needed investment share of GNP to constantly rise in order to secure a given rate of growth of the capital stock—to the point of declining absolute levels of consumption.
3. The relative neglect of urban and other service-type investment in infrastructure was also dictated by the Marxian doctrinal bias against “nonproductive” investments.
4. For a discussion of Soviet investment policy problems see Cohn (1976, 1979) and a summary and other references in Ofer (1987, pp. 1805–1809). On recent trends in unfinished investment projects see *PlanEcon Report*, September 1, 1989, pp. 16–21; and November 24, 1989, pp. 3–5. The stock of unfinished investment may have reached R180 billion (almost 20% of GNP or about 80% of annual investment in fixed capital) by the end of 1989, an increase of R20–25 billion over the preceding year (*ibid.*).
5. See a survey discussion in Ofer (1987, pp. 1817–1819) and references there to Weitzman (1979, 1983) and others. Weitzman estimated an elasticity of substitution of about 0.4 for the 1960s, but the situation has deteriorated since then. See also Kontorovich (1985).

ment in the period of reform. On the one hand, there was the desire to reduce the rate of investment, both overall and with special emphasis on less-productive elements, and divert resources to increased consumption. On the other hand, there was an urgent need to overhaul the infrastructure and modernize the capital stock with equipment with more advanced technology. In the early years of the reform both goals were pursued simultaneously, but little was accomplished on either front (the stock of unfinished projects, for example, continued to grow at an accelerated rate; see Ryzhkov 1989b). The new Ryzhkov plan calls for an effort to concentrate mostly on reducing the volume of investment to free resources for consumption, an urgent need if the reforms are to be saved (more on this below).

The traditional "socialist" structure of resource allocation, high defense and investment and low consumption shares, was politically feasible only in a totalitarian regime, and even then, only up to a point. At least part of the blame for the decline in growth rates in the prereform era lies with the vicious circle of declining growth rates of living standards and lower quality of public services (education, health care, and the welfare state) that reduced work motivation. Democratization in its wide sense may have been the only way to restore the population's willingness to engage in reconstruction. But democratization also depends on there being a significant change in the social welfare function—switching resources from defense and investment to consumption. We have already touched on some of the problems associated with the a transfer of resources out of investment. Other problems, to be discussed below, are related to bureaucratic inertia and the decentralization of the investment decision process.

The transfer of resources out of defense was based on the "new thinking"—the new Soviet approach to international relations, the arms race, and competition between the big powers. A program of converting military production capacity to civilian uses started a few years ago, but real cuts in military expenditures and production started only during 1989. Such conversion has problems of its own, at least in the short run, among them the need for technological modernization. With roughly half of GNP devoted to defense and investment, and the other half to (private and public) consumption, each percentage point reduction in these uses can increase consumption by about the same fraction. A long-term cut (say, over ten years) in gross investment, down to 25% of GNP, and in defense from around 17% to around 8%, can release 15–17% of GNP and thereby raise consumption levels by up to 1.5% per year. This should be considered an upper limit, given the policy dilemmas and difficulties discussed above.

With respect to consumption, there are the significant gaps (created

mostly in the 1970s) in the infrastructure of the public services, housing and other urban services, and social welfare; at the same time, the population is entertaining rising expectations that relief from the long period of deprivation in the sphere of private consumption is in the offing. This may be considered part of the outstanding real internal debt discussed above. Expectations of higher consumption levels also reflect populist pronouncements made in the early stages of democratization—promises that will have to be kept, at least in part, until a measure of democratic responsibility evolves to balance unilateral populist-style demands.

The real sector of the economy is, therefore, under pressure of excess “need,” translated into overambitious annual production plans, which impose heavy fiscal and monetary burdens. Attempts to generate a supply response through the decentralization of decision making and the liberalization of various monetary and credit instruments failed to produce the desired results; instead, they increased the money supply and aggravated the general state of disequilibrium. Pressing demands, the lack of a fiscal infrastructure, and inexperience with the role of budgets under the new conditions joined to widen the budget deficit. Limited steps have already been taken to counteract monetary outflows and address the accumulating monetary overhang.

*Fiscal Policies and Budgetary Deficits*⁶

Table 1 presents data on historical and recent developments in the Soviet federal budget. The budget is “comprehensive” in the sense that it covers all levels of government; but it also has some specific and system-related peculiarities that affect different aspects of its fiscal impact on the economy. First, much of the government’s investment activities are not recorded in the budget. Second, some budgetary activities in investment (both revenues and expenditures) are system-specific and result from the role of government as the owner of most enterprises. Finally, some (especially defence-related) expenditures are not straightforwardly reported in the budget. We discuss some of these biases as we go along.

Not only are the statistics influenced by the socialist economic system, so are basic concepts, such as the role of the budget in the economy and its impact on it. In addition to the much higher volume of direct intervention

6. This section is based on Ofer (1990, Section 3). It draws on CIA (1988), *PlanEcon Report*, various issues, 1988–1989, and articles and speeches by Gostev (1988, 1989), Pavlov (1989), Yureyev (1989), Abalkin (1989a), Ryzhkov (1989a,b) and others. See also the sources to the tables.

Table 1 STATE BUDGET DATA: 1971-1990

	1971-75		1981-85		1989			1990		
	(1)	(2)	Original plan (3)	Revised plan (4)	plan (5)	(3)-(2) (6)	(5)-(3) (7)	(5)-(2) (8)		
<i>Percent of GDP</i>										
1 Total expenditures	43.0	49.5	53.2	51.7	48.8	3.7	-4.4	-0.7		
2 Investment	10.3	8.9	8.7	6.5	5.3	-0.1	-3.4	-3.6		
3 Ordinary expenditures	32.7	40.7	44.5	45.2	43.5	3.8	-1.0	2.9		
4 National economy ^a	11.3	12.6	10.5	12.7	11.5	-2.0	1.0	-1.0		
5 Subsidies ^b	5.8	9.1	11.1	11.1	12.0	2.0	0.9	2.9		
6 Social welfare	13.9	14.3	15.4	5.5	15.9	1.1	0.5	1.5		
7 Defense ^c	n/a	9.1	8.3	8.3	7.1	-0.8	-1.2	-2.0		
8 External expenditures	1.4	2.5	3.4	3.2	2.6	0.8	-0.8	0.1		
9 Total revenues	39.8	47.2	39.9	41.6	42.8	-7.3	2.9	-4.4		
10 Profit taxes	14.3	15.1	13.0	12.1	12.3	-2.0	-0.8	-2.8		
11 Above normal profit taxes ^d	5.3	6.6	2.7	1.9	1.9	-3.9	-0.8	-4.7		
12 Turnover taxes	13.8	14.2	11.3	11.9	12.2	-2.9	0.9	-2.0		
13 Foreign trade revenues	4.0	9.5	6.5	6.5	5.8	-3.0	-0.7	-3.8		
14 Taxes on individuals	4.0	4.2	4.2	4.6	4.8	0.0	0.5	0.6		
15 Social security taxes	2.3	3.1	3.4	3.5	4.0	0.3	0.6	0.9		

16	Total deficit	3.2	2.3	13.3	10.1	6.0	11.0	-7.3	3.7	
17	Ordinary deficit	-7.1	-6.5	4.6	3.6	0.7	11.1	-3.9	7.2	
18	Ordinary deficit (adj.)	-7.1	0.1	7.3	5.5	2.6	7.2	-4.7	2.5	
19	Net taxes on goods and services	11.0	14.6	6.7	7.4	6.0	-7.8	-0.7	-8.5	
20	Net taxation	26.2	30.6	21.1	22.4	22.5	-9.5	1.4	-8.1	
21	Net taxation (adj.)	20.9	24.0	18.5	19.7	20.6	-5.6	2.2	-3.4	
<i>Billions of current rubles</i>										
22	Total expenditures	186.7	353.0	494.8	481.0	488.2	141.8	-6.6	135.2	
23	Total revenues	172.6	336.3	371.0	386.8	428.2	34.7	57.2	91.9	
24	Total deficit	14.0	16.7	123.8	94.1	60.0	107.1	-63.8	43.3	
25	GDP	433.7	712.8	930.0	930.0	1,000.0	217.2	70.0	287.2	

^aExcluding expenditures on investment and defense.

^bThe figure for 1981-85 is estimated by applying the same ratio between food and total subsidies as in 1989.

^cThe figure for defense in 1981-85 was estimated by assuming real annual growth of 3% between 1983 and 1989.

^dProfit taxes in excess of 40% of profits.

Sources: Ofer (1990), Appendix Table 1; 1989 revised plan (column 4) revised on the basis of *PlanEcon Report*, February 21, 1990, p. 13 (based on *Ekonomicheskaja Gazeta*, No. 40, 1989).

in economic activity, socialist governments also tend to tilt resource allocation in favor of public and collectively supplied goods and services.⁷

In view of the government's intensive involvement in ordinary investment activity, it makes sense to revert to classical definitions of budget deficits. We use three such concepts: the total of *fiscal deficit*—the excess of expenditures of all kinds over *ordinary* (tax) revenues; the *ordinary deficit*, or the inverse of government savings—the excess of ordinary, *public consumption* expenditures over ordinary revenues; and the *monetary deficit*—the increase in monetary expansion caused by the budget (this has to do with how the fiscal deficit is financed). In addition to the ordinary budget deficit, I also calculated an adjusted ordinary deficit by subtracting part of the profit tax on enterprises from ordinary revenues. The adjustment was performed because part of the profit tax can be regarded as dividends paid to the government in its capacity as the owner (a holding company) of the enterprises for investment purposes. A 40% tax on enterprise profit was arbitrarily set as the “normal” profit tax rate, and all taxes above this rate were excluded from ordinary revenues to calculate the adjusted ordinary deficit.⁸

As for the monetary deficit, two comments are warranted. First, note the distinction between monetary expansion into the production sector—which, until the reforms were neutralized or eliminated at the end of every year, and monetary expansion into the household or cash sector—where it had the regular expansive effect. Second, the Soviet government has so far failed (or did not try) to create long-term financial assets to be held by households, thereby eliminating the option of open market operations. The two main financial assets available for the purpose of saving are (1) cash and (2) 2–3% (passbook) saving deposits in state banks, which are also very liquid. Thus, while any financing of the deficit into the household sector is technically a monetary expansion, its monetary impact is not as clear-cut as a monetary expansion in an ordinary market system if people *conceive* of their savings as long-term (see Section 5 below).

The following three points summarize the main budgetary trends revealed in Table 1. First the relative size of the budget (around half of GNP and much larger than in market economies; see Blejer and Szapary

7. This tendency is partly offset by transfer payments: at least where wages are concerned, the government, which determines them, can set them as *net* payments in advance, thereby reducing the need to collect personal income taxes and repay part of them in the form of transfers and reducing the gap between gross and net taxation.

8. The “normal” profit tax rate of 40% was determined on the basis of recent actual U.S. rates (based on U.S. Department of Commerce, 1988, p. 43) and on a declared target for profit tax rates in the Soviet Union under the reforms (Senchagov 1989).

1989) started growing long before the reforms (since 1971 to 1975), and has continued to grow under the first five years of the reform. The revised plans for 1989 and the plans for 1990 include the first declared intent to start reducing the relative size of the budget (line 1). Budget expansion occurred despite declines in both investment and defense spending. As expected, no declining trend as part of the destatization of the economy is yet apparent.

Second, fiscal deficits before the reform were relatively small (2–3% of GNP), but have expanded significantly since then. The original budget presented for 1989 included a planned deficit of 13.3% of GNP (line 16). The emerging alarm, once the consequences of the recent monetary expansion were discerned, caused a reverse of policy aimed at reducing the deficit within a number of years. The revised deficit for 1989 is around 10%, and for 1990 around 6% of GNP.

Third, the prereform period was characterized by a substantial *ordinary budget surplus*, or a more-or-less balanced *adjusted ordinary budget* (lines 17, 18). The government financed budgetary investments from what we shall call “above normal” profit taxes. Since 1985 the ordinary deficit grew by 11 GNP points and the adjusted ordinary deficit by 7.2 points. The entire increase in the fiscal deficit is credited to the ordinary budget, not to the expansion of investment. The budget plan for 1990 seeks to eliminate the ordinary deficit almost completely.

From these three points above we conclude that most of the budget deficit was created during the reform years, and was not carried over from the old regime (when an increase in the ordinary budget deficit was the main culprit). The development of the deficit was accompanied by an expansion of the relative size of the budget, that is, increased expenditures were not followed by a commensurate rise in revenues.

We now turn to the individual budget elements that contributed to the above developments.

One of the major reform moves affecting the budget was the decentralization of investment decisions and their financing sources. Until 1987 there was no decline in the level of investment financed by the state budget (in terms of percentages of GNP), compared with the prereform period, which was 8–9% (line 2). Indeed, only about half of what is considered “state centralized investment” was financed directly through the budget, while the other half (the bulk of the depreciation funds of enterprises) was determined and redistributed among enterprises by the corresponding ministries.⁹ For most practical purposes this other half

9. Another part of the “centralized” investment was allocated through credit arrangements (see Ofer 1990, Table 3).

should also be included in the budget. Since 1987 this extrabudgetary part of investment started to be decentralized and gradually reverted to the enterprises themselves. A similar gradual process of relieving the budget of direct investment expenditure started a few years later (Table 1, line 2). The delay was connected with the rise in the general level of investments in the first years of the reforms, and the decline corresponds with efforts to reduce this level. According to the 1989 (revised) and 1990 plans, the share of direct budgetary investment should drop to around 5% of GNP (and that of extrabudgetary centralized investment from 12 to around 8% of GNP).

The planned decline in the burden of investment on the budget was accompanied by a slightly smaller decline in profit taxes (line 10), thereby contributing only marginally to the narrowing of the (planned) fiscal deficit. If we concentrate on "above normal" profit taxes, however, these are scheduled to decline more steeply than investments (line 11), and will therefore finance less and less of them. The net contribution of the gradual withdrawal of investment from the budget to reducing the deficit depends on the definition of the proper net concept. It also depends on the degree to which the plans are realized. If history is any guide, investment expenditures tend to be overfulfilled while profit tax revenues fall short of the target.¹⁰ While this is a possible scenario, matters have not yet developed the way they did in China, where the decentralization of investments was a major factor in the development of a budget deficit (Blejer and Szapary 1989). The danger in the Soviet Union lies more in the inflationary impact of the decentralization decision through nonbudgetary instruments.

According to official data (Ryzhkov 1989a), defense expenditures stood at about 9% of GNP in the 1980s, but are scheduled drop sharply in the coming years (the planned level for 1990 is 7.5%). While these figures are far higher than anything revealed hitherto, most Western estimates are higher still, ranging from 12.6 to 15–17% (*PlanEcon Report*, September 1, 1989, p. 11, and Hanson 1989a, respectively; see also Appendix Table A1, part c). The differences are ascribed to less-than-full disclosure of all expenses (in other budgetary items or outside the budget), incomplete accounting of the cost of the conscript army, and subsidization by way of price manipulation. The remaining difference between the estimates underlines the limitations of the official budget data in

10. The decentralization of out-of-budget funds is financed mostly by the release of an equivalent amount of the depreciation funds to the enterprises.

presenting the full fiscal picture.¹¹ Regardless of the debate over the relative defense burden, it is generally agreed that defense budgets have been going down and can decline further.

Expenditures on social welfare (including social services such as education and health) and transfer payments (mostly pensions) have stood at around 14% of GNP (Table 1, line 6). Greater openness and the limited democratization since 1985 revealed the very poor shape of the entire sector, resulting in political pressures and a real need both to revamp the services and improve the pension and other income support programs. The Soviet Union has discovered that it lags behind most developed Western states in the provision of social services (Ofer 1989). But despite this realization, by 1989 less than one GNP point was added to these budgets, and another half a point is planned for 1990. This sphere will be the main expenditure obstacle to balancing the budget.

A major and growing source of social welfare spending not referred to so far is the budget for subsidies of basic foods, housing, and some other goods and services (line 5). This budget, which stood at 6% of GNP in the early 1970s, has been climbing steadily, and is expected to reach 12% of GNP by 1990. The increasing inflationary pressures on costs and the need to preserve minimum incentives for farmers to increase food production will make it necessary to continue raising this budget under the present system. As in many other countries, subsidies have developed into a sensitive social and political issue, despite their low effectiveness as a progressive income-maintenance program. In the Soviet Union subsidies also add to the highly distorted structure of relative prices. In my opinion, this budget item harbors considerable potential for solving both the deficit problem and the deficiency in the level of social services.

The steady rise in the budget for subsidies is only one element in a trend of deteriorating (net) revenues from taxes on goods and services. The "turnover" tax has always been a major source of revenues, second only to profit taxes (Table 1, line 12) even when taxes on imports and exports are included in the latter (line 13).¹² Both taxes are imposed mostly (but not exclusively) on consumer goods, at highly differential rates (Senchagov 1989), with taxes on alcohol accounting for a very

11. Subsidization of defense could be manifested in lower profits and/or lower profit taxes of defense industries (a tax expenditure) and/or higher consumer prices through either cross-subsidization or the imposition of sales taxes.

12. Revenues from foreign trade have traditionally come from the profits of the foreign trade monopoly organization, and reflected the disparities between domestic and world prices at the official exchange rate. Under the reforms and the decentralization of foreign trade they grew more similar to regular tariff incomes.

high proportion. During the reform period the share of revenues from turnover taxes in GNP deteriorated, mainly owing to the campaign against alcohol (which has since been lifted). Foreign trade revenues, which rose significantly with the energy crises, have sunk since the mid-1980s as oil prices declined and a self-imposed restriction on imports came in force. Despite efforts to raise these incomes, both taxes are planned to bring in only 18% of GNP in 1990, compared with almost 24% in 1981–85. On a net basis (e.g., *minus* subsidies) the decline is sharper (from 14.6 to 6.7% of GNP; line 19). This is another reason why a radical change in the role of subsidies can significantly contribute to stabilizing the fiscal situation.

Finally, as can be seen from the lines 20, 21 of Table 1, taxes on individuals, like income and social security taxes, have always accounted for only a minor share of budget revenues. Part of the distributive function of such taxes was dealt with directly through the determination of wages. With the reforms, the expected widening of income differentials, and the partial decentralization of wage determination, a new income tax law was introduced. This law is more progressive, and is hoped to bring in more revenues in the future (Tedstrom 1989). The inexperience and lack of infrastructure for income-tax collection, especially from the expanded nonstate sector, means that indirect taxation will probably remain the main source of revenue in the near future (McKinnon 1989a,b).

Two conclusions can be drawn. First, although significant deficits clearly resulted from steps taken early on in the economic reform, the old regime cannot be cleared on all blame. On the expenditure side, it seriously neglected social services and welfare programs, investment in housing and infrastructure, and was responsible for the development of the time-bomb of extensive subsidies. On the revenue side, it relied excessively on temporary sources of revenues such as taxes on oil and on highly distortive turnover taxes. Inexperience, the lack of new fiscal instruments, and the pressing needs of the new system helped create a fast-growing deficit, with critical consequences for the future of the reforms.

The second conclusion is that the budget will have to be balanced, at least in the short run, if the reform is to proceed, although the interactions between this process and the main elements of economic reform remain to be seen. As matters now stand, it seems that balancing the budget is being attempted as an independent act, a precondition for the reform, and that the means used are mostly traditional ones.

4. Monetary Decentralization and Monetization in the Production Sector: Supply Response, Monetary Expansion, or Both¹³

Under the classical model of central planning, the production sector was virtually excluded from the monetized part of the economy. Plans and resource allocations, both inputs and outputs, were prepared and executed in terms of physical supply or purchase orders. Technically, "credits" or accounts needed to execute these orders were established for the enterprises in branches of the state bank, but these performed mainly accounting and control functions. In most cases, separate accounts were established for expenditures (inputs) and revenues (outputs), and very little (if any) shifts across accounts were allowed. Balances remaining in such accounts were usually eliminated at the end of every year, and negative balances (when more inputs were needed to fulfill plan targets) were routinely covered by accommodating credits (Wolf 1985, 1989; Bunich 1988).

Excess demand within the production sector, thus, was typically the outcome of taut physical planning or underfulfillment of plans—not of monetary expansion. The main (almost only) true monetary transaction of the production sector was wage payments to the household sector. Like other enterprise accounts, the wage account was also separate and controlled against overruns, but overruns did occur, creating disequilibrium in the household sector and consumer goods market.

Decentralization, introduced gradually since 1987 (the new enterprise law, the banking reform), has granted enterprises increased powers to determine production plans, modes of production, and suppliers and buyers—including some direction in wage determination (tied to rises in productivity), the work force (though major layoffs are not expected), and even some freedom in the determination of prices and goods sold under "contract" and as "new" products. Enterprises now have greater control over investment decisions; they can finance outlays from the increased proportion of profits that is not taxed away (the new tax schemes are essentially regressive) or from credits granted by the reformed banking system. All these, together with the "monetization" of the previously segmented bank balances of the enterprises—permitting shifts of balances across accounts—are steps toward the marketization or monetization of the production sector as a whole.

13. The term "monetization" in this paper refers to substituting planning and "state orders" with the use of money in the production sector of the Soviet economy. The process of monetization is a necessary but not a sufficient condition for the full *marketization* of the sector. Nevertheless, the term "marketization" is also used from time to time.

Under the new system enterprise managers are elected by the work force of the enterprises. They are required to maximize profits rather than output targets as in the past, with one major exception—the fulfillment of state orders. Such orders consist of products required by the state for its own use (as in the case of military requirements) or of important consumer and producer goods that enterprises would otherwise prefer not to produce due to low profitability.¹⁴ Inputs for the production of state orders are provided according to the old system. The transition to the new system envisages a gradual reduction in the proportion of state orders to under 50%. So far, losing enterprises have not been shut down; they were covered by state orders or direct subsidies. The reforms also permitted the creation of limited private and “cooperative” sectors in almost all branches of the economy. Such enterprises can operate according to free market rules.¹⁵

These liberalization steps, especially the incentives to managers and workers and the increased level of competition, were expected to produce a supply response based on the assumed large inefficiency reserves embedded in every enterprise. That these expectations did not materialize is an understatement. In fact, 1989 was the first year in a long time in which an absolute decline in GNP was recorded (of around 1% according to the CIA: see also *PlanEcon Report*, February 21, 1990, p. 1) and in which a decline occurred in the absolute volume of production in a significant number of key products (Voronin 1989, p. 47; *Pravda*, January 28, 1990 pp. 1–3). Several interrelated explanations can be offered for this failure, some concentrating on the enterprise level, others on the macroeconomic level; all may well borrow from the health care metaphor: the medicine was much too weak but the side effects were very serious.

1. The monetization of the enterprises' transactions and accounts was not accompanied by a liberalization of the input markets, which remained largely under state control in order to secure inputs for state orders. Enterprises with “monetized” balances that sought inputs in order to produce free goods were referred back to the state supply depots—where they were asked for state orders. When combined with the demand for inputs of newly created private and cooperative enterprises, and with the sellers' market in the producers' goods sector, this situation can turn a sector with a manageable physical

14. Typical examples are clothing and footwear for children or the elderly, priced below cost.

15. By the end of 1989, about 3 million workers (out of total labor force of 139 million) were employed in newly created cooperatives or privately (Zoteyev 1989, p. 36).

disequilibrium into a narrow market with significant excess monetary demand. Initial shortages are made more acute by hoarding and by the state protecting its supplies. The shortage of producers' inputs, the very high prices that developed, and the public outcry against "speculation," discouraged production activity in the free market, sending enterprises back to the shelter of state orders. The partial monetization of enterprise balances, the reduced rate of taxation of profits, and the expansion of credit (see below), helped create excess money balances held by enterprises with limited productive uses. The apparent policy error here is in the lopsidedness of the monetization process—releasing or monetizing much more enterprise balances than the corresponding supply of real goods. An opposite approach—expanding the monetized domain of the goods (inputs) market in the production sector, with limited monetization of old-type enterprise balances—could (and still can) serve as part of a sound, anti-inflationary monetary reform. The explanation of this error lies partly in the hesitant approach to the introduction of price reforms (we shall come to this later) and partly in the concern over losing essential state need.

2. The partial liberalization of the banking system—which allowed it to extend credit to enterprises, mostly for investment purposes—added to monetary expansion without an adequate expansion of production (Bunich 1988; Bochkov 1989; Levchuk 1989; McKinnon 1989a,b). Low (even negative) real interest rates, still determined centrally except for a few new cooperative banks; the inexperience of new banks in allocating and rationing credit; strong bureaucratic influence on the new banks; and the readiness (even eagerness) of individual enterprises to take loans to replace previous budget allocations—all combined to exert pressure on the banks to grant credit to the wrong clients and beyond reasonable amounts. With such a long history of loans and budgetary allocations that did not have to be repaid, both banks and enterprises are playing this new game somewhat rashly. The atmosphere of soft budget constraints not only contributes to general disequilibrium, it may exert pinpoint pressure on the investment sector, initiating too much investment in nonessential projects and increasing the backlog of unfinished projects. It is quite surprising that the authorities did not raise interest rates in order to curb some of the demand for credit, although as is well known from Western experience, that in the environment described above this may have proved effective.
3. Contrary to declared government policy, there is a clear general tendency among Soviet public enterprises to allow far higher wage in-

creases than justified by the additional contribution to production. The total nominal wage fund increased from 7.1 to 8.4% between 1988 and 1989 (Zoteyev 1989, p. 23) with little effect on production (see Appendix Table A1). Several conditions combined to make this possible: the accumulation of money in the hands of enterprises from the monetization process, the availability of credit, a higher proportion of retained profits (see above), and enterprises' ability to charge higher prices.¹⁶ According to the new enterprise law, managers are now appointed by the workers and have every incentive to cater to the latter's demands. Under present conditions there is more than one way to measure "labor productivity," and there are alternative ways to raise wages. The official Soviet data for the last two or three years reveal wage hikes that are twice as high (or more) than the estimates of productivity gains. Even when wage discipline is perfect and in full accordance with increased production, however, if production is still locked in unfinished investment projects or in the further accumulation of unwanted goods purchased by the government under state orders, the impact on market disequilibrium is the same as under excess payments.

4. Under the conditions described above there is little scope for competitive conditions to develop. In addition to the excess demand and shortages, created largely by the self-same instruments designed to stimulate a supply response, one should note the highly monopolistic structure of the Soviet production sector. Such a monopolistic structure is a natural manifestation of the system of central planning. Even when there are many producers of the same item, their markets are allocated centrally and competition is avoided. It is hard to break these monopolies under the condition of a sellers' market and without a price reform.
5. In an overheated economy profits can be raised in a much simpler way than by increasing production or productivity—through increasing prices within the permitted limits, voluntary contracts on a given proportion of total production, or the development of "new" products. While price increases may somewhat narrow the degree of market disequilibrium, some of these higher prices are paid in the final stage by the state, and thus are accommodated by monetary expansion.

Another related way to increase profits is by shifting the structure

16. Prime Minister Ryzhkov has recently complained that in 1989 enterprises held about R100 billion, or slightly more than 10% of the gross volume of industrial production, in monetary assets (1989b, p. 3). The amount may not be high by market economy standards, and given the absence of opportunities for other financial holdings, but it is clearly substantial compared with the past record.

of production away from low-profit to high-profit products. This would improve efficiency if prices reflected relative scarcities. Since they do not, enterprise profits go up at the expense of social losses. A common recent phenomenon is the replacement in markets of basic low-grade products by higher-quality ones (at higher prices). This reflects the traditional pricing practice of determining prices in proportion to the amount (or value) of the basic material input. In this way higher-priced goods have a lower value-added content.

In summary, partial reform creates many opportunities to increase profits, or, perhaps more significant, to increase wages (and related payments) without increasing profits. All this comes at a time when a real increase in production is difficult, mostly due to lack of supplies, and to riskier conditions. With no significant hardening of the budget constraint by the authorities and no serious challenge from markets and competition, the present steps of the partial reform opened up easier opportunities for enterprise managers operating as agents to simulate success, avoid failure rather than to perform according to the real intentions of their principals, or both. Indeed, such performance has become very difficult. Put in a context of a principal-agent relationship, the goals, signals, and rules of the game of the principals became less clear, sometimes erratic. Agents became somewhat more independent—but were responding to socially wrong signals—and in control of more specific information. The gap between the two appears to have widened. In this respect, the partial solutions and initial steps, at least during the transition period, seem to have been counterproductive (Ericson 1989). A considerable amount of effort has been devoted in the Soviet Union (and other East European and socialist countries) to redefine a new structure of property rights that will lead to higher levels of efficiency and better principal-agent coordination, while at the same time conforming to some minimum “socialist” ideological requirements. Improvements in the present situation are clearly feasible before a final resolution on the extent of “destatization” or privatization is reached, but a clearer and credible vision of the final model will help.

5. *The Household Sector: Liquidity, Demand for Savings and Money*

A sizable proportion of the excessive monetary *flows* created by the budget deficit and expansionary monetary steps in the production sector find their way into the household sector, where they have been accumulating as a growing *stock* of monetary assets—the notorious “overhang.”

Table 2 DEMAND FOR ASSETS, MONEY AND SAVING: 1965-1989
(Annual data; current billions of rubles)

	65-70	71-75	76-79	80-82	83-85	86	87	88	89 ^a
<i>Billions of Rubles</i>									
1 Personal disposable income	143.4	206.5	265.4	310.3	347.6	375.0	389.0	420.9	473.1
2 Change in personal disposable income		63.1	59.0	44.8	37.2	27.5	14.0	31.9	52.2
<i>Financial Assets of The Household Sector</i>									
3 Total (4+5+6-7)	39.0	105.7	176.0	227.4	277.2	325.8	360.1	401.7	461.2
4 Saving deposits	31.0	74.1	124.2	165.5	203.3	242.8	266.9	296.7	337.7
5 Cash	8.7	25.5	47.7	58.3	69.8	78.1	87.1	100.0	118.5
6 Bonds	2.0	8.5	5.9	6.3	8.5	11.0	12.2	11.4	11.4
7 Net borrowing	2.7	2.3	1.8	2.7	4.4	6.0	6.1	6.4	6.4
<i>Savings (florins)</i>									
8 Total (9+10+11-12)	7.1	13.5	20.2	13.6	22.1	31.3	34.1	44.2	60.5
9 Change in saving deposits	5.1	8.9	13.8	9.4	15.5	22.0	23.9	29.8	41.0
10 Cash	1.9	3.3	5.6	3.5	5.8	8.3	9.0	11.9	18.5
11 New bonds	0.3	1.4	0.9	1.0	1.4	1.9	2.2	2.0	2.0
12 Net borrowing	0.3	0.2	0.1	0.3	0.6	0.9	0.9	1.0	1.0

Table 2 DEMAND FOR ASSETS, MONEY AND SAVING: 1965-1989
(Annual data; current billions of rubles) (Continued)

	65-70	71-75	76-79	80-82	83-85	86	87	88	89 ^a
<i>Ratios:</i>									
Assets to Income									
21 All financial assets (3/1)	0.272	0.512	0.663	0.733	0.798	0.869	0.926	0.954	0.975
22 Savings ac- counts (4/1)	0.216	0.359	0.468	0.533	0.585	0.647	0.686	0.705	0.714
23 Cash (5/1)	0.061	0.123	0.180	0.188	0.201	0.208	0.224	0.238	0.250
Savings to income									
24 All financial assets (8/1)	0.049	0.065	0.076	0.044	0.064	0.083	0.088	0.101	0.128
25 Saving ac- counts (9/1)	0.036	0.043	0.052	0.030	0.045	0.059	0.061	0.071	0.087
26 Cash (10/1)	0.014	0.016	0.021	0.011	0.017	0.022	0.023	0.028	0.039
Change in Saving to Change in Income									
27 All financial assets (13/2)	0.101	0.101	0.114	-0.147	0.228	0.335	0.203	0.269	0.341
28 Saving ac- counts (14/2)	0.059	0.059	0.084	-0.099	0.165	0.237	0.136	0.185	0.215
29 Cash (15/2)	0.022	0.022	0.037	-0.045	0.060	0.092	0.050	0.091	0.126

Sources: CIA (1989a); *PlanEcon Report*, September 1, 1989; November 24, 1989; Capital Stock—*Narodnoe Khoziazistvo* (The National Economy), various years; Price index, CIA (1989a), Table a-3, p. 15, and CIA (1989b), Table 15, p. 39, 1989; *PlanEcon Report*, February 21, 1990, pp. 15, 16.
^aProvisional.

The “household” sector here includes the entire part of the Soviet economy in which transactions were always conducted in cash (henceforth referred to as the monetized or marketized sector). It includes, in addition to households, private agricultural production and distribution (on private plots and in some collective and state farms), and activities in the “second,” unofficial economy.¹⁷

Before the reforms, the household sector had been in a permanent state of excess demand, expressed mostly in the form of repressed inflation, since most prices were kept at given levels for extended periods. This state of excess demand was the outcome of two all-pervading phenomena: (1) Actual wage bills usually exceeded planned wage payments, and plans for production of consumer goods were never fully realized and (2) the plans themselves contained a calculated element of excess demand (the wage bill was systematically set somewhat higher than the consumption bill *plus* assumed voluntary savings) to assure that markets would clear and no surpluses would accumulate.

A sizable body of literature has appeared on the extent of the disequilibrium in Soviet (and other centrally planned economies’) consumer markets and on the ways in which it was expressed or resolved. Some researchers (notably Igor Birman 1981) produced very high estimates of this market’s size, and claimed that most of it was channeled into constantly growing unwanted savings and cash balances. These balances form the monetary overhang that threatens an imminent market crisis. Others, like Portes (1984), Pickersgill (1980), Nuti (1985), and Ofer and Pickersgill (1980), either arrived at lower estimates of the overhang, emphasized alternative avenues or safety valves aimed at taking the pressure off the consumer market, or both. The main such alternative was the expansion of the second economy, in both real volume and relative prices, and a decline in labor working in the public sector, transferring some workers to the second economy.¹⁸

It seems clear by now that whatever the extent of the inherited and accumulated disequilibrium, say, in 1985—and I believe it was not very large—it has grown significantly since then. The rise in the size of government deficits and the excessive increase in wages and other monetary flows affected the situation in the consumer goods markets. They brought with them a significant expansion in liquid assets held by the population and price increases in free (and even in public) markets (see Table 2 and discussion below). There is little doubt, from reports on the

17. These were estimated at 15–20% of the transactions of urban households, even in the 1970s (Grossman 1987, Ofer and Vinokur 1980).

18. Two recent surveys of the literature in the prereform era are Nuti (1985) and van Brabant (1988); see also Davies (1988).

situation in the consumer goods markets, that disequilibrium has worsened considerably in the past two or three years.

Past debates over the extent of disequilibrium under the old regime paid relatively little attention to the specific factors of the Soviet economic system that could have affected households' demand for money, demand for assets and savings, and the unique interaction between them. The demand side is clearly no less important than the supply side in determining conditions for equilibrium. When such differences were taken into account, however, the standard assumption was that under Soviet conditions there was no need or room for personal savings, as indeed was the case up to the mid-1950s. Therefore, when personal saving rates started to grow, they were interpreted as a clear indication of the development of disequilibrium.¹⁹

5.1 THE DEMAND FOR MONEY AND ASSETS (SAVINGS)

The first thing to note is the strong interrelation between the demand for money and the demand for savings and assets. Money, defined here as cash, and the very liquid saving accounts, bearing 2–3% interest rates, are virtually the sole assets that can legally be held in unlimited quantities. People select cash or savings according to the interest rate, and depending on security and concealment considerations. In addition, people can own a cooperative apartment and/or a Dacha, a car and other durable goods, jewelry and art, and—in the countryside—some livestock and small gardens. Lacking consumer credit, however, savings are needed for short- and medium-term transactions.

In the classical Soviet system, typical life-cycle motivations for saving are much weaker than in market economies: the life-cycle profile of wages—almost the sole source of income—was much flatter; the state was responsible for pensions, education, housing (in rented apartments with highly subsidized rents), disability insurance, and employment. The rate of interest had always been very low, even in the absence of inflation, and the choice of assets was nil. This means that savings are concentrated in cash and saving deposits. The absence of most forms of consumer credit (limited to mortgages on cooperative apartments) operates in favor of savings, since anyone planning a costly purchase would have to precede it by a period of saving. Furthermore, the doubtful availability of many goods, and the erratic timing, forces consumers to be prepared—a kind of precautionary demand for savings. Finally, there is no inheritance tax, which also encourages saving.

19. I have argued elsewhere that private saving rates in the 1970s were not obviously abnormal (Ofer and Pickersgill 1980).

Three developments in the post-Stalinist era could have increased the general propensity of the population to save. First is the general rise in the standard of living. Second is the growing expectation of increased opportunities for higher levels of consumption. Third is both the rise in the standard of living until the mid-1970s and the deterioration in the relative level and quality of the supply of public services and social security payments—pensions had to be supplemented, proper medical care (and in some cases higher education) involved large private payments, and housing remained a constant problem. Based on data for the 1970s, we concluded that saving rates in the Soviet Union should be about as high as those in market economies (*ibid.*).

The secular aging of the Soviet population, other things being equal, should have reduced the overall level of saving, as it has done in many other countries (Bosworth, 1989), thereby possibly offsetting some of the above-mentioned trends. But since private saving is a relatively recent phenomenon, and the present elderly population does not possess many assets to dissave from, the effect of aging may be weaker here than in other countries.

Since then, and until the beginning of the reforms, expectations for improved consumption opportunities in the future may have subsided, but the need to supplement state social security programs with personal savings and to cope with rising short-term uncertainties has clearly increased.

Table 2 summarizes estimates by the CIA (1989a,b) and *PlanEcon Report* (1989) of trends in savings and asset holding by the household sector since 1955. According to these estimates the average rate of saving out of disposable money income grew from 1.7% in 1955 (not shown) to around 5.2% in 1975–79, and declined to 3.0% in 1980–82. Since 1982 there has been an increasing trend into the period of the reforms; by 1988 new savings reached 7.1% of income (8.7% in 1989, Table 2, line 25). When savings are defined to include the accumulation of all financial assets, including cash, the corresponding rates are higher in the last decade by slightly more than a third (about 7.5% for the late 1970s, around 5% for the early 1980s), but rose significantly since then to around 10% and up to 12% in 1989 (line 24).²⁰ Such rates cannot be considered excessive, but their rise is indicative of the growing pressure of repressed inflation.

Over the period, the ratio of the *stock* of monetary assets to personal disposable income grew from 0.22 (0.27 with cash holdings) in 1960–65

20. In general marginal saving rates also increased toward the end of the period, with the exception of 1989 (lines 27–29). It is not clear to what extent this is a change in trend or simply a result of incomplete data.

to 0.53 (0.73) in 1980–82 and 0.71 (0.96) in 1988 and 1989 (lines 21–23). While this rise is impressive, and the rise in total assets is probably even steeper,²¹ the final level is clearly not high by international standards and the high proportion of liquid assets in total wealth reflects the limitations on asset holdings. This can be seen in line 20 of Table 2: the ratio between the holdings of financial assets by households and an estimate of the value of the entire capital stock in the country is computed. While this ratio has growing over time, it is still very low, pointing to the large potential of asset transfers to the household sector. Finally, the ratios of cash holdings and cash accumulating to income (average and marginal) has been rising throughout the period (lines 23, 26, 29), but they should not necessarily be deemed too high, even recently. Household cash holdings amount in 1989 to one quarter of annual income, and the rate of savings in cash in 3–4%.

Systemic differences call for a higher demand for money in Socialist economies relative to market economies. This is due to increased transactions demand, since there is no credit; to increased precautionary demand, because of greater uncertainty about the availability of goods; and to asset demand, since money is the sole asset that can be held by households.

With the introduction of the reforms, a number of sets of changes with potentially significant effects on the demand for both money and assets (and savings) have been developing. The first set of changes has to do with the increased level of uncertainty as to the fate of the reforms and the regime, especially expectations of a much higher rate of inflation, and of shortages and supply uncertainties. The second set of changes are those connected with the *transition* to the new economic system: there are expectations of fears of a monetary reform that may tax away the real value of liquid assets;²² and inflation may be used deliberately by the government as part of the monetary reform or develop as a side effect of other policy measures, like a price reform, a devaluation, and the like. The effect of most of these expectations is to reduce the demand for nominal assets of all kinds and increase the pressure on the goods market and that for real assets, including illegal assets like foreign currency.

The third set of changes has to do with expectations for the new economic system in the longer run. If such expectations are that the Soviet system will move in the direction of a Western-style mixed-market

21. One estimate for the early 1970s puts real assets (apartments, cars, etc.) held by urban households at about one-third of their total wealth (Ofer and Pickersgill 1980).

22. A monetary reform in 1947 confiscated a large proportion of then-existing money balances held by the population through the unfavorable exchange of the newly introduced monetary unit. Since then there is a constant fear of a repetition of such action.

system with higher levels of risks and rewards, including destatization and privatization of productive enterprises and other real assets, then the demand functions for money (and especially for assets) should also start to move upward. In addition to a higher size of the portfolio of assets—a higher target level of assets relative to incomes—there would also be a significant structural change in the portfolio, away from financial and toward real assets (either stocks or actual production assets), and from low- to high-yielding assets. The level and structure of the shifts will depend on the relative weight that households ascribe to transitional and long-term factors, and these, in turn, depend on the situation as it develops in practice and on the policies of the government. With sound policies, which may tilt the balance toward longer-term considerations, a temporary increase may develop in the demand for *nominal* assets, in preparation for the time when real assets are put on sale. Similar behavior can be expected from enterprises, once they are able to purchase productive assets. Policies that may bring such an outcome are discussed in the next section.

The state can offer its citizens a very large volume of real assets for sale, as it owns almost all productive assets, most of the housing stock, and the entire stock of land. It also “owns” the right to grant households legal permission of existing economic distortions and inefficiencies. The main obstacles to such an exchange of money for real assets are first and foremost ideological and political, but also stem from the lack of legal, institutional, and know-how infrastructures, and from the need for a much higher degree of mutual trust and credibility between the two sides. The mixed experience of the first steps of allowing limited private and cooperative ownership of production capital underscores all these problems. At this point it seems that the first set of factors has the upper hand, and that the rise in savings and money holdings (Table 2) reflects repressed inflation and an increased level of disequilibrium.

6. Conclusion: Short-Term Stabilization and Long-Term Reforms: Policy Options

What are the policy implications for stabilization and economic reform strategies? Three major stereotyped options present themselves. The first option is, a radical reform entailing marketization, free prices, rapid movement toward private ownership of means of production, and an opening up of the economy. The almost inevitable open inflation that will accompany such a reform will be an essential healing element, stimulating enterprises to adopt a free market pattern of behavior. Stabilization under this option may be needed later.

The second, and polar option is to opt for stabilization in isolation from the reform, indeed, as a necessary retreat from reform until the conditions needed for them can be prepared. Stabilization under this option must be achieved through central direction and control. In a way this is a "second-try" strategy—an admission that the first attempt at reforms failed.

The third strategy also involves stabilization first, but this time stabilization is considered within the framework of future reforms, where both the general direction of the reforms and its individual aspects are used for a more successful stabilization.

The last two strategies involve a gradual step-by-step approach, while the first is more of a "big bang" approach. Under Soviet conditions, where a high rate of open inflation has not yet developed and where the size of the economy and other factors preclude the world market from playing an important initial role, a big bang approach should, in my view, be avoided. The announced program of the Soviet Union for the coming years is clearly a step-by-step strategy, addressing the stabilization problem first. It tends to tilt too heavily in the direction of more conservative or revisionist variants of the gradual approach, though like most real-life programs, it includes a small number of forward-looking elements as well. I am convinced, however, that it is too late to resort to the old instruments and that without adequate new steps the present reform instruments may not be able to produce more results than they did in the past five years. The major step missing, in my view, though not the only one, is a major program of *one off price revision* that will correct the distorted relative price structure, absorb some of the overhang, and (hopefully) form a set of stable expectations.

As a candidate for a stabilization program, the Soviet economy in some ways resembles other market economies in need of such programs but in other ways differs from them. Like other countries, the Soviet Union suffers from a large fiscal deficit, and from "fundamentals" that need to be taken care of. There are expectations for inflation accompanied by strong pressures on the goods markets and those for real assets (including foreign currency), and there is a need to (re)monetize large parts of the economy, though not only in the usual sense of reestablishing the value of the ruble but also in the sense of spreading the use of the ruble across the production sector. While most prices are held relatively constant, as is the rate of exchange, they cannot and do not serve as credible nominal anchors under the present circumstances.

The main differences are in three areas. First, open inflation rate is still low; the country does not yet suffer from the secondary effects of an inflationary spiral and inflationary inertia such as indexation and the

building up of permanent inflationary expectations.²³ Second, some of the main reform goals—the monetization of the production sector and the marketization of the economy—can be developed into powerful tools. If they can gain credibility, they can assist in the stabilization.

Finally, the Soviet Union lacks the macro- and microeconomic tools, institutions and infrastructure, and the experience needed to respond quickly and efficiently to changes in economic signals and variables. On the macroeconomic level, the missing elements are a credible legal system for mediation between agents and protection against the state, and a solid and experienced central bank and credit system. The existing “markets” are highly monopolized due to the old division of production between ministries responsible for given lines of goods. Also lacking are correct prices and any experience in free, market-determined prices. On the microeconomic level there is no familiarity with market conditions—no new ownership relations, no new decision-making structures, hierarchies of command, and accounting procedures. When the price system is wrong, even correct behavior according to the new rules will lead to resource misallocations. Coordination reforms on both the macro and micro levels are, of course, drawn-out processes that cannot be introduced overnight. As mentioned above, the potential contribution of the world economy, or market economies are also limited.

Under these conditions a “big bang” move into a free market environment would probably be counterproductive. Not only could open high inflation (with the attendant need to counteract it using a variety of “heterodox” means), be avoided, but it is highly doubtful that enterprises that are neither equipped nor ready to operate under ordinary market conditions will be able to do so under conditions of high inflation and inadequate macroeconomic guidance.

Stabilization should be firmly in place far before the production sector completes its adjustment to a hard budget environment. It is also needed in order to create a favorable environment for marketization and destatization reforms. The main difference between the big bang and gradual approach is that under the latter most prices, including the rate of interest and rate of exchange, are not left to be freely determined by the market straight away; they are first adjusted and then regulated until stabilization is been secured. The stabilization program does include a major price revision that will set relative prices approximately right and absorb part of the overhang.

23. True, there are various alternative protective arrangements against shortages, such as direct supplies of “deficit” goods (like meat) to privileged enterprises and institutions, which may not be so easy to get rid of.

Without a price revision eliminating most subsidies, it is difficult to see how the budget can be truly balanced over a short period of time. The present plan seeks to reduce the deficit to 2.5% of GDP by the end of 1992, but is neither radical nor realistic enough. A major elimination of subsidies can free enough resources to make up the income of the weaker part of the population and improve other aspects of the welfare state, still leaving perhaps half the same amount to narrow the deficit.²⁴ The price revision could also unify the turnover tax on most goods and services, leaving it as a major source of budgetary income (McKinnon 1989a,b).

A price revision that will set relative scarcities in the economy about right can be used as a base for the imposition of a harder budget constraint on enterprises, allowing them to invest if they make profits, take credit at higher interest rates if they are able to repay, and to buy and sell in the input markets—all much more freely than hitherto, when their achievements did not reflect social benefits. The establishment of correct prices will also help in the process of marketization of the production sector and thus promote stabilization in the monetary markets. While controls over the determination of credit, wages and, of course prices will have to be rather strict, there will be a more sound environment for their gradual relaxation. In an environment of stable prices it is much easier to use a higher real interest rate as a regulator of credits than in an environment of high open inflation. With more-or-less correct prices, losing enterprises can declare bankruptcy, labor can be mobilized, and there can be a meaningful beginning of offering public enterprises for sale or lease to cooperatives or private agents. These will help break the monopolistic structure of production. All the above will be much more difficult to achieve without a price revision and the government will have to resort more and more to direct controls and physical allocation, as indeed it is planning to do (Ryzhkov 1989b).²⁵

The price revision, including a devaluation of the ruble, will serve as part of the long-awaited monetary reform. It will confiscate some existing real balances (highly concentrated in the hands of the rich), and reduce real incomes. The new prices will become a more credible anchor, at least for some time. Once monetary and fiscal reforms are well established,

24. Such saving is possible because the subsidy bill is only very weakly progressive. Actually, subsidies are distributed approximately equally, in absolute amounts, among the various population deciles (Ofer and Vinokur 1988). More targeted income support programs can achieve better welfare results at a far smaller cost.

25. Among other things, Ryzhkov recommends a return of the production sector to "credit" money and the elimination of cash transactions in that sector.

including interest and exchange rates, expectations for an inflationary spiral may be partly mitigated, increasing the prospects for increased demand for nominal assets as explained above, a further contribution for stabilization.

The ability to sell or lease property, state apartments,²⁶ enterprises (or shares in enterprises), and land will raise demand for savings and money, and help in achieving stabilization. It is hard to see how property can change hands before a reasonably rational price structure is set up. The actual execution of this policy will create credibility in the sincerity of the government, thus further contributing to stability. The prospects of the near creation of a real market environment with higher risks, but with chances for higher economic rewards, will also boost the demand for assets. The same applies to excess money in the hands of enterprises. It is difficult to see all this happening in a revisionist environment.

One institution of the market economy (besides a free price system) that should wait until after stabilization is the introduction of liberal credit arrangements in the consumer sector, the reason being their potential negative effect on saving.

In addition to the obvious difficulties in establishing the right level and speed of change in the various tools used, there are at least two principal difficulties. First, the idea of a price revision is widely resisted on political and social grounds. There is little faith in the ability of the government to compensate adequately, and even less trust in the power of the new price structure to help bring about equilibrium in consumer markets. There may also be vested-interest groups in administration circles, who have so far been assured of supplies *at official prices* outside the regular distribution networks. Adequate compensation to the weakest third of the population may help weaken such resistance, perhaps by raising retirement and other social security payments and through an increase in the minimum wage. As to the lack of faith in markets—this is a difficult issue and there are many in the Soviet Union, including many economists, who would prefer to solve the shortages problem by rationing (Ryzhkov 1989b, Hewett 1989). Here the government must take the necessary political risks in the hope that people will soon discover that balanced markets with available goods, albeit at higher prices, are preferable to empty markets or a gray market with exorbitant prices. If the assumption that a reform with price revision will generate a better supply response is plausible, then the risk of a one-time price move is even smaller. It may be advisable and helpful to cushion the initial stages of stabilization with a one-time supply

26. The successful sale of apartments depends on raising the present level of rents, which are extremely low and heavily subsidized.

of food and other consumer goods through imports. In addition to their supply effect such imports are also great absorbers of income due to the high turnover taxes imposed on them.²⁷

The second problem is that prices cannot stay constant for long even with a sound price revision. Indeed, the need to postpone full price liberalization at the outset reduces the effectiveness of the *reform* part of the program. The true price reform must come with minimum delay. It is argued that a more daring stabilization program, with potentially much faster results, may allow price liberalization sooner—and with less risk of inflation—than when the stabilization efforts drag on interminably with modest results.

A stabilization program with a major price revision will impose an immediate and sizable burden on most of the population. The political risks are, therefore, higher and there may be a point in speeding up the process of democratization before taking such a step. With a government run single-handedly by the Communist party, the populist voices unleashed by *glasnost* policies and partial democratization, demanding a voice in government but refusing to share the necessary burden of the transition, are gaining momentum. A more representative government and a diminished role of the Party (in accordance with the political reforms of last March) may prove better able to demand and in turn receive a *quid pro quo* from the people.

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27. Such a policy has been suggested by Shmelev (1989).

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Appendix Table A1 USSR ECONOMIC DATA 1970–1989

a. Basic Data 1988

Population (millions)	286.4
GNP: 1988 US \$ (billion) ^a	2,535.3
GNP per capita: 1988 US \$ ^a	8,850.0
Life expectancy (years)	69.0

Source: CIA (1989b), Tables 2, 3, pp. 24–25.

^aData converted at U.S. purchasing power equivalent. U.S. GNP per capita is \$19,770.

b. Average Annual Rates of Growth

	1970–75	1975–80	1980–85	1986	1987	1988	1989 ^a
GNP	3.1	2.1	1.9	4.0	1.3	1.5	-1.0
Industry	5.6	2.4	2.0	2.7	2.9	2.4	
Agriculture	-2.3	0.2	1.2	10.3	-4.0	-3.2	
Services	3.4	2.7	2.2	2.3	3.2	3.5	
Consumption	3.5	2.5	2.0	1.8	2.8	2.4	
Investment	5.0	3.9	3.3	5.4	1.3	2.2	
Defense	2.0	2–3	2–3	0.0	0.0		
GNP per capita	2.2	1.3	1.0	3.0	0.2	0.5	-1.9
Consumption per capita	3.0	2.0	1.1	-1.5	1.0	1.5	
Inputs: ^b Total							
Man-hours	2.2	1.4	0.7	0.7	0.5	-1.2	
Capital	7.5	6.4	5.4	4.4	3.6		
Total factor productivity	0.4	-1.4	-1.2	0.0	0.4		
Population	0.9	0.8	0.9	0.9	0.9	0.9	0.9

Sources: CIA (1989b), Tables 32–36, pp. 58–60; *PlanEcon Report*, February 21, 1990.

^aProvisional.

^bNonagriculture nonservices GNP.

 Appendix Table A1 USSR ECONOMIC DATA 1970–1989 (CONTINUED)

c. Structural Indicators

	1960	1987
GNP Shares ^a		
Agriculture	34.0	19.0
M+	39.0	53.0
S+	27.0	28.0
Consumption	54.0	54.0
Investment	22.0	33.0
Defense	12.0	15–17

Source: CIA (1989b), Table 33, p. 59.

^a1982 factor cost.

d. Foreign Trade & Debt (current U.S. billion \$)

	1970	1980	1988
Total:			
Export	12.80	76.40	110.70
Import	11.70	68.50	107.30
Hard currency:			
Export	1.40	27.90	31.20
Import	2.70	26.10	28.50
Current account balance	0.10	1.50	1.30
Debt:			
Gross	1.80	20.00	42.30
Net	0.60	10.50	27.90
Debt service ratio	0.10	0.19	0.22

Source: CIA (1989b), Tables 136, 139, pp. 159, 162.

Comment

ABRAM BERGSON

As Gur Ofer makes clear in his fine paper, a central feature of the contemporary Soviet macroeconomic scene is the notably large budget deficit that the government has been running lately, and the associated macroimbalance in the consumers' goods market. Ofer presents data on the budget deficit in several variants, but they relate to only two of the critical Gorbachev years and represent only planned targets. Further data that have only lately become available, however, indicate the same striking upsurge as Ofer depicts.

I cite figures (Table 1) on what might be called the official budget deficit, that is, the excess of budget expenditures over budget revenues



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Table 1 DEFICIT, SOVIET GOVERNMENT BUDGET, 1985–90^a

Year	Deficit	
	Bil. rubles (1)	Per cent of GDP (2)
1985	13.9	1.8
1986	45.5	5.7
1987	52.5	6.4
1988	80.6	9.3
1989	92	9.9
1990 (Plan)	60	6.0

^aSources: (1) 1985–88, see text and TSSU (1989, pp. 624–625; 1989, *Pravda* (January 28, 1990); 1990, FBIS (November 13, 1989, p. 45); (2) GDP figures from Gur Ofer (1989) and Ofer's present paper, but see also FBIS (December 14, 1989, p. 46).

as officially recorded.¹ Among Ofer's various budgets, the primary one statistically is his "total deficit." This is the same as the official deficit, except the total deficit includes and the official deficit excludes net government bond purchases by households. The inclusion of such purchases in the deficit is for the good from the standpoint of Western budgetary norms; but an interesting question, which has yet to be fully explored, is how closely the total deficit as thus delineated conforms to such norms.²

The government budget deficit is of interest, but the more ultimate concern is the macrobalance in the consumers' goods market. From the consumers' goods market standpoint it would be useful, so far as available data permit, to extend the scope of the government budget to embrace extramarket activities in the economy more generally—that is, to include among the expenditures the self-financed investment and capital repairs of state enterprise, and among the revenues current earnings available for financing such expenditures, principally depreciation charges and retained profits not disbursed to households.

1. I refer to revenues other than "loan funds," which in TSSU (1989, p. 624) are included in total revenues.
2. One not insignificant case of nonconformity, according to some analysts, is that defense expenditures are only partially covered in the published budget. In fact, as is widely agreed and lately acknowledged even in the USSR, the traditional expenditure line "defense" in published Soviet budgets covers only a minor fraction of what would be classified as defense outlays in the West. But as the CIA seems to consider, the remaining defense outlays are probably classified under other budget headings rather than being omitted from the published budget altogether.

While Ofer in principle includes in the total deficit net purchases of government bonds, he inadvertently seems to refer instead to the official deficit for the Gorbachev years, at least in respect to plan targets for 1990. Such purchases appear to have been minute for some time, but according to the budget plan for 1990, gross sales are to be 15 billion and redemptions, while increasing, are not to be nearly that large. See TSSU (1989, p. 624), CIA (1989, p. 11), and FBIS (September 28, 1989, p. 37ff).

In view of the substantially self-contained nature of the Soviet economy and the inconvertibility of the ruble, it would also be appropriate to treat external transactions differently from the way they are now treated. At present one of the government budget revenue lines is "incomes from foreign economic activity." This item consists principally of the excess of customs duties on imports over subsidies on exports. In Soviet circumstances, the customs duties and subsidies must be understood elliptically as representing respectively the excess of the domestic wholesale prices of imports over world prices, and the excess of the domestic prices of exports over world prices. World prices are foreign currency prices converted to rubles at the official exchange rate.³

There is also a line relating to foreign transactions on the expenditure side of the government budget. This line, entitled "financing external economic activities," comprises the servicing of foreign debt, funding of credits and nonrepayable aid to foreign debt, funding of credits and nonrepayable aid to foreign governments, and financing of foreign trade more generally (FBIS, September 28, 1989, p. 42).

In the extended government budget that I envisage—and shall call the public sector budget—both the foreign revenue and expenditure lines are substantially, if not completely, deleted. In their place there would be one item on the outlay side, net exports. In calculating net exports, both exports and imports are to be valued at domestic wholesale prices.⁴

It is the public sector budget as so construed that is immediately related to the macrobalance in the consumers' goods market. A deficit in that budget should translate itself into an excess of money income accruing to households from the public sector over the corresponding volume of consumers' goods supplied. The excess is offset by households, voluntarily or involuntarily, through their purchases of government bonds, deposits in savings banks, and accumulation of cash—in effect, by household money savings, whether voluntary or involuntary.⁵

The public sector budget, as is appropriate, relates to the domestic economy, and is affected by shifts in external accounts only insofar as exports and imports vary. In that respect, it differs from the government budget, which is affected as well by changes in world prices and such

3. See Vladimir G. Treml and Barry L. Kostinsky (1982, pp. 19ff), Igor Birman (1981, pp. 60ff), and CIA (1988).

4. The expenditure item, "financing external economic activities" most likely includes much of the cost of administering foreign trade and finance. Such costs properly would be included among the outlays of the public sector budget. The wholesale prices at which exports and imports are to be valued in the public sector budget supposedly are the net of any turnover taxes separately recorded among government budget revenues.

For a prototype of this budget, though without explicit treatment of foreign economic activities, see Bergson (1953, p. 20).

5. Compounding rather than offsetting the gap between income and consumers' goods supplies is a small amount of household borrowing from banks. Compare Ofer, Table 2.

financial changes as may occur without the physical volume of exports or imports varying.

Attention to this distinction should forestall occasional misunderstandings. A significant factor in the mushrooming government budget deficit under Gorbachev, for example, was the fall, in 1986, in the world price of oil, a major export. At the inordinately low domestic price, oil exports, rather than being subsidized, have consistently yielded a premium. The collapse of world prices meant that the premium and with it government budget revenues declined, while per contra the government budget deficit increased. The inference is sometimes drawn that the imbalance in the consumers' goods market was correspondingly exacerbated. In fact it was exacerbated, but not because of the increase in the government budget deficit. Rather that resulted from the government's response to the loss of hard currency earnings; to a degree it curtailed imports of consumers' goods.

In contrast to the government budget, the public sector budget is unaffected by the fall in world oil prices. So far as imports are curtailed, however, net exports at domestic prices do increase, and with that the public sector budget does indeed show an increased deficit, with a corresponding adverse effect in the macrobalance.

As may be inferred from the illuminating data on household savings that Ofer has compiled (Table 2), the public sector budget deficit, like the total government budget deficit, increased under Gorbachev, but not nearly as much. The divergence between the two deficits could have originated variously, but a principal cause probably has been state enterprise accumulation of money that the State Bank in the first instance advanced to the government to finance its deficit. Such enterprise holdings of money—for the most part of the noncash or bank deposit sort—doubled during 1986–89, and now exceed 100 billion rubles (FBIS, September 28, 1989, p. 47).

Under Soviet planning arrangements bank deposits are supposed to be not nearly as fungible as cash; but as Ofer indicates, the distinction between the two kinds of money has been eroding since Gorbachev came to power. To be at all complete, any account of the macrobalance in the Soviet consumers' goods market must consider enterprise bank deposits as well as household cash holdings.

As might be expected, along with expansion of the public sector deficit, there has been a marked increase in the volume of household savings, relative to their disposable income. Ofer considers that the rate of household saving is not "grossly excessive" by Western standards, but he nevertheless concludes that repressed inflation—a more or less chronic feature in the Soviet consumers' goods market—has only become more pronounced under Gorbachev. In view of the egregiously

disorganized state of the Soviet consumers' goods market, it would be difficult to disagree. True, there are reportedly surpluses of some products. True also, shortages are feeding on themselves, with consumers stocking up on scarce goods when they can. But the shortages are by all accounts pervasive. At prevailing prices the aggregate of deficits in supplies doubtless exceeds the aggregate of surpluses. In that rather conventional sense the existence of repressed inflation seems indisputable.

The Soviet price structure, however, is strange; just how strange is sufficiently evident when we consider a few facts cited by Ofer: sales taxes, mainly on manufactured consumers goods, and subsidies, mainly on food products and housing, separately amount to some 12% of the GNP. With household income and consumers goods supplies unchanged, and prices at clearing levels, there is, I think, a presumption that households would be spending more and saving less than they now do. That, perhaps, might be expected for any plausible real interest rate. It seems particularly likely if the real interest rate remains negative, as it is now.⁶ This question lends itself to systematic inquiry. (compare Leon Podkaminer 1982, Irwin Collier, Jr. 1986). It will be illuminating to pursue further.

Ofer's concluding discussion of the options open for achieving macroeconomic balance as part of a program of economic reform more generally strikes me as quite thoughtful and balanced. His critique of the program for stabilization and reform that was adopted at the December meeting of the Congress of Deputies is also on target, and I have nothing to add to it here.

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6. As Ofer explains, besides cash, the bulk of Soviet household savings consists of deposits in savings banks. Estimates of the current rate of inflation cited by Ofer (7-11%) could be high, but it is doubtless a number of percentage points above the 2-3% interest that the government pays on savings deposits.

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Comment

MARTIN L. WEITZMAN

I believe this paper by Gur Ofer does an excellent job of going over the basic issues of the current Soviet economic dilemma. All the correct ingredients are present. And, in my opinion, there is the right emphasis or balance—more important aspects are treated centrally while less significant issues are on the periphery. Where I might differ marginally is in nuances, packaging, and summing up; that is, the ingredients and proportions would be more or less the same, but I might bake the cake slightly differently.

It may be worthwhile to begin by reviewing briefly how all this came about. While there are a few complicating factors, essentially the history of Soviet economic growth can be viewed as one of the nicest and most relevant applications of the Solow growth model. Most applications are to steady state behavior, since that is all most countries know. But in Soviet experience we have the kind of “natural experiment” talked about in all the texts on growth theory. Very roughly, investment rates were pushed up relatively rapidly from around zero to around 30% and held there for some time. This produced a huge spurt of growth, which at the time looked extremely high by comparison with any other time or place. However, if one looked closer at the sources of growth, capital accumulation was doing most of the pushing. The residual of total factor productivity was not very impressive at all. So when the capital got accumulated and the excess supplies of labor got absorbed, the Soviet economy found itself in a position of diminishing returns growing at the labor force rate plus λ , the rate of growth of labor augmenting technological progress, where λ was very low. This is not the entire story. If the aggregate production function is to be Cobb-Douglas then λ must decline over time, while a story with constant λ requires an elasticity of substitution of around .4. There are some other nuances. Still, in essence, this is to my mind as neat and relevant an application of the Solow growth model to economic history as has ever been made.

As growth rates systematically decelerated over the past several decades, there was some recognition of the nature of the basic problem. Soviet leaders have not proved themselves to be great economists, but it is remarkable to me how well they understood the basic message of the

Solow growth model even if they did not at all know the model itself. The Soviet leadership understood well that they had to make a transition from "extensive" to "intensive" growth and undertook over the years a series of half-hearted measures aimed ultimately at increasing λ .

In March of 1985 a historical accident occurred. Gorbachev was elected first secretary. This man turned out to be a big-stakes gambler of the first order. Instead of opting for slow decline and gradual deterioration in all areas, he undertook bold steps. In the economic sphere the situation has deteriorated since Gorbachev took office.

The Soviet economy today faces three monumental problems, any one of which is potentially devastating. Taken together, these three problem areas seem to present an almost insurmountable barrier.

The first major problem concerns what is sometimes euphemistically called macroeconomic "fundamentals." This is a relatively recent, Gorbachev-induced situation. Essentially there exists a substantial pent-up demand at quasi-fixed prices. The situation is like an economy coming out of wartime price controls with far too much purchasing power in the hands of the population. Even if everything else were fine about the Soviet economy, this would represent a potentially explosive situation calling for extreme stabilization measures. I will return to this theme later because it is the most pressing current economic problem.

The second grave problem is a structural reform of immense magnitude. Beneath all the fog, the Soviet Union is attempting to make a transition from one entire economic system to another: from "some form of" a planned system to "some form of" a market system. There are enormous headaches in this area alone, even if everything else were fine. All the big issues of economics are involved on a massive scale: property, ownership, privatization, banking, credit, capital markets, price reforms, international trade, convertibility, industrial organization, taxation, unemployment, inflation, bankruptcies, and on and on. Somehow the Soviets must build, almost from scratch, what Gur Ofer appropriately calls a "marketization infrastructure" in a society that has long been hostile to market ways. The enormity of this task is staggering.

The third major problem is that there is no model for what the Soviets seem to be striving for—some kind of "third way"—a utopia that would somehow combine the best features of capitalism and socialism. There is, to my reading, no consistent framework here, no clear articulation of feasible goals. Instead, the Soviet leadership seems to be wandering around, improvising as they go along, lurching from crisis to crisis. They seem unable to face up to hard choices, to the apparent fact that market and plan may both work, but in between them appears to be a wasteland of ambiguity. Behind all this is a fundamental, deeply rooted ambivalence about making a transition from socialism to capitalism. Soviet lead-