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# USSR: Estimates of Personal Incomes and Savings

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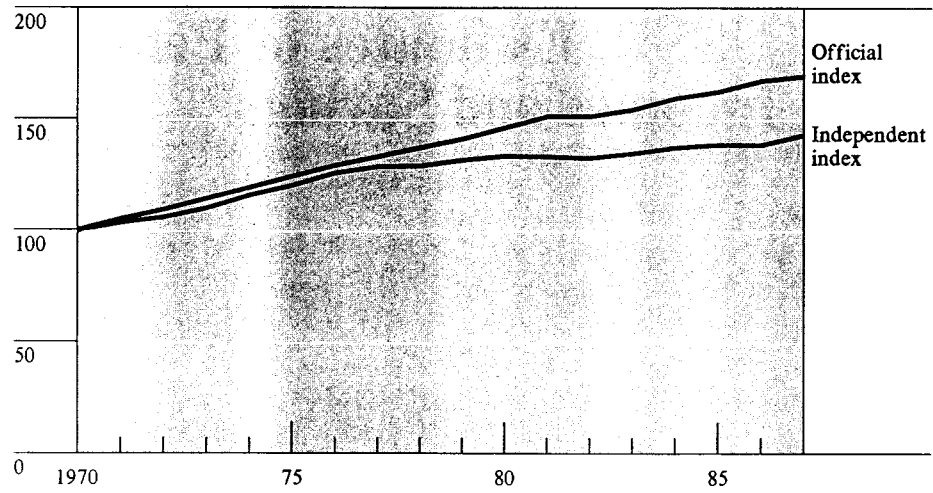
**Directorate of  
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# **USSR: Estimates of Personal Incomes and Savings**

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## USSR: Indexes of Real Per Capita Income

*Index: 1970=100*



Sources: Official data are from various issues of *Narodnoye khozyaystvo*.  
The independent index is derived from appendix A.

## USSR: Estimates of Personal Incomes and Savings

### Summary

We construct independent measures of Soviet personal disposable money income in nominal and real terms because of substantial shortcomings in the official Soviet series. The official measure includes imputed, noncash “incomes” in the form of state-provided services such as education and health care, does not adequately account for inflation, and is based on an ill-designed methodology. Indeed, we believe that in 1985 Soviet statistical authorities altered their procedures in some way to conceal the negative statistical impact of the antialcohol campaign on measures of real income.

Using Soviet data, we construct estimates of Soviet personal disposable money income in rubles from the ground up and then deflate nominal income with a price index that better captures Soviet inflation than does the official measure. Our estimate—although an improvement on the Soviet series—has some shortcomings. For example, information gaps prevent us from including a small amount of earnings in the state sector and more substantial incomes earned in the illegal or “second” economy.

By our estimates Soviet real per capita disposable income has grown much more slowly than indicated by the official index, particularly since 1976 (see graph). The widening gap in the 1980s reflects the differences in coverage of incomes and deductions and our higher estimates of Soviet inflation. Growth of Soviet real per capita income lagged US growth during the 1980s for the first time in the postwar period, largely because of the falloff in Soviet economic performance. The Soviets did succeed in reducing the expansion of money incomes in the first half of the 1980s to better match the slowdown in growth of consumer goods and supplies. Nonetheless, growth of money incomes still exceeded growth of supply, and excess demand has remained a chronic problem.

We also calculate annual personal savings. Our estimates show that savings as a share of disposable income averaged 4.4 percent in the 1970s. In line with the sharp falloff in growth of real incomes in the early 1980s, the average savings rate fell to 3.3 percent. With some recovery in real incomes since then, this rate reached 6.5 percent in 1987.

## Contents

	<i>Page</i>
Summary	iii
Background	1
Shortcomings of Soviet Official Measures	1
Trends in Incomes	2
Trends in Key Components	3
Comparisons With US Trends	3
Reliability of the Estimate	4
Trends in Savings	6
Improving the Estimates	7
<b>Appendixes</b>	
A. Key Tables	9
B. Sources and Methodology for Table A-1	21
C. Sources and Methodology for Table A-2	25

## USSR: Estimates of Personal Incomes and Savings

### Background

As an indicator of trends in living standards, Soviet officials calculate “real per capita incomes of the population”—a concept that has no counterpart in Western statistics. Soviet data show steady but slowing growth in this measure—an average annual rate of 3.4 percent in the period 1976-80 and 2.1 percent in 1981-85.

Because we believe this measure to be unreliable, we have constructed an independent measure that depicts trends in real disposable income—the statistical concept used in the West. This report assesses shortcomings in the official Soviet measure, presents our own estimates of the real growth of Soviet personal disposable incomes, and describes the methodology and sources we use to construct these estimates—including changes incorporated since the estimate was last published in 1979.<sup>1</sup> We also present estimates of annual personal savings and calculate ratios of savings to income.

### Shortcomings of Soviet Official Measures

The Soviet Government regularly publishes a statistical series labeled “real incomes of the population” expressed per capita with breakdowns for state employees and for collective farmers. Typically, only a one-paragraph description of this series is given in the annual statistical handbooks. Soviet sources have not described this measure in sufficient detail to permit a definitive assessment of what is being measured or

how well it is done. From a survey of all available sources, a Western expert has concluded that the series clearly does not equate to the Western concept of real disposable income—the deflated summation of money incomes minus taxes. She believes that the index more closely approximates a measure of consumption of material goods and services than a measure of money incomes.<sup>2</sup> This conclusion is supported by more recent Soviet sources. Thus, the Soviet measure of incomes includes personal money incomes (wages, transfer payments, interest, and the like); income in kind; material expenditures by the state on “free” or heavily subsidized services; and depreciation on housing and perhaps on other social overhead capital. Since the official series purports to measure consumption, it deducts taxes, dues, and savings from money incomes.

The uncertain composition of the Soviet measure also makes it difficult to assess changes in the reliability of the official series over time. Indeed, Soviet statistical authorities probably manipulated statistics on real per capita incomes, retail sales, and national income in 1985-87 in an attempt to obscure the negative impact of Gorbachev’s antialcohol campaign on Soviet consumption.<sup>3</sup>

<sup>1</sup> See Gertrude E. Schroeder, “An Appraisal of Soviet Wage and Income Statistics,” *Soviet Economic Statistics*, ed. Vladimir G. Trembl and John P. Hardt (Durham, NC: Duke University Press, 1972), pp. 287-314.

<sup>2</sup> Although the nature of the change in Soviet handling of alcohol-related data is unclear, it probably involved changes in accounting procedures. Two possibilities are that alcohol was excluded from the price index used to deflate retail sales or that its weight in the index was lowered by excluding the turnover tax. Both procedures would enable the statistical authorities to show greater improvements in living standards than would otherwise be the case. For a discussion that suggests the former explanation is most likely, see Jan Vanous, “The Dark Side of Glasnost: Unbelievable National Income Statistics in the Gorbachev Era,” *Planecon Report* 3, No. 6 (13 February 1987). Another Western expert believes that inconsistencies in the Soviet consumption statistics in 1985-86 are more the product of archaic and often conflicting methodologies and conventions than outright manipulation and deliberate falsification of data. See V. Trembl, “Dr. Vanous’ ‘Dark Side of Glasnost’ Revisited,” draft article, August 1988.

<sup>3</sup> This estimate was first published in David W. Bronson and Barbara S. Severin, “Soviet Consumer Welfare: The Brezhnev Era,” *Soviet Economic Prospects for the Seventies* (Washington, D.C.: Joint Economic Committee, US Congress, 1973), pp. 376-403. Subsequent versions were published in Gertrude E. Schroeder and Barbara S. Severin, “Soviet Consumption and Income Policies in Perspective,” *Soviet Economy in a New Perspective* (Washington, D.C.: Joint Economic Committee, US Congress, 1976), pp. 620-660, and in M. Elizabeth Denton, “Soviet Consumer Policy: Trends and Prospects,” *Soviet Economy in a Time of Change*, (Washington, D.C.: Joint Economic Committee, US Congress, 1979), vol. 1, pp. 759-789.

Finally, Soviet use of an official—but unpublished—price index for goods and services to deflate nominal personal incomes overstates the growth of real incomes. Soviet sources have publicly admitted that the index's major component—the official retail price index—seriously underestimates the actual degree of inflation in consumer prices. For example, the deputy chairman of the State Price Committee, Anatoliy Komin, has stated that the official indexes are faulty because they are constructed using a fixed sample of commodities and state list prices, rather than prices of actual transactions.<sup>4</sup> In fact, Soviet economist Oleg Bogomolov suggested in a 1987 article that the annual increase in consumer prices during the last 25 years has averaged about 3 percent rather than 0.4 percent as claimed in official statistics.<sup>5</sup>

### Trends in Incomes

To provide an independent measure, we estimate Soviet disposable money income in rubles from the ground up. We then deflate these estimates of nominal income with a price index that we believe more accurately captures inflation (see inset).

We use official Soviet data to construct our estimate, with the exception of data on Soviet military pay and allowances, which we estimate independently. Our main information sources are the annual issues of the Soviet statistical handbook *Narodnoye khozyaystvo* for data on wages and transfer payments and the handbook on the Soviet budget *Gosudarstvenniy byudzhety*, published every five years, for data on taxes. We estimate other sources of income such as incomes of households from sales of farm products and insurance indemnities on the basis of fragmentary data published in the Soviet press. Since we last published our estimates in 1979 we have revised several elements of our methodology:

- We now accept total wage payments to collective farm workers as reported in the statistical handbook without adjusting for payments into the social security and social insurance funds, which we now believe come from the farms' incomes and not from wage funds.

<sup>4</sup> *Izvestiya*, 20 May 1987, p. 2.

<sup>5</sup> *Literaturnaya gazeta*, 16 September 1987, p. 12.

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### Simplified Description of Methodology

1. Sum of money income = *wages + transfer payments + military pay + net borrowing + profits distributed to members of consumer cooperatives*
  2. Sum of deductions = *taxes + union and party dues*
  3. Personal disposable money income = *sum of money income – sum of deductions*
  4. Real personal disposable money income per capita = *(personal disposable money income/population) × (1/price index)*
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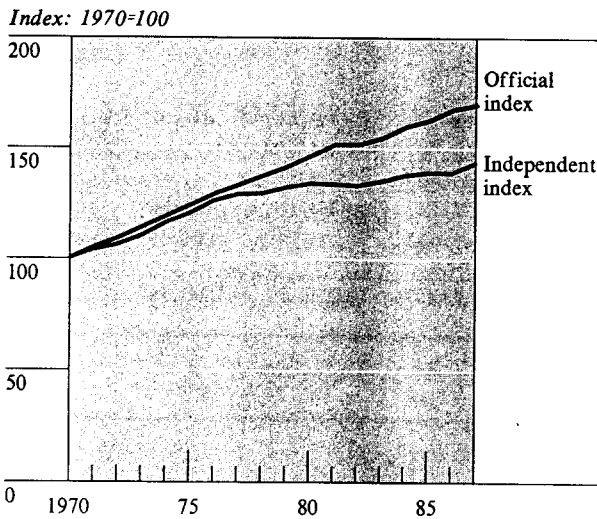
- New data have enabled us to revise our estimate of incomes from sales of farm products.
- We now include loans to housing cooperatives in the net borrowing component of money income.
- We no longer deduct purchases of state bonds or payments of insurance premiums, because neither has been compulsory for many years.

These changes taken together have raised our estimates of nominal income—by 4 percent, for example, in 1980.

By our estimate, real per capita disposable money income has grown more slowly than indicated by the official index of per capita real income of the population, particularly since 1980 (see figure 1 and table 1). By our measure, real per capita disposable money income increased from about 1,200 rubles (1982 prices) in 1980 to 1,240 rubles in 1985—or less than 1 percent per year—whereas the official index grew by about 2.1 percent annually. This difference reflects not only our estimate that inflation was higher than official measures show, but also probably substantial differences in coverage of incomes and deductions.



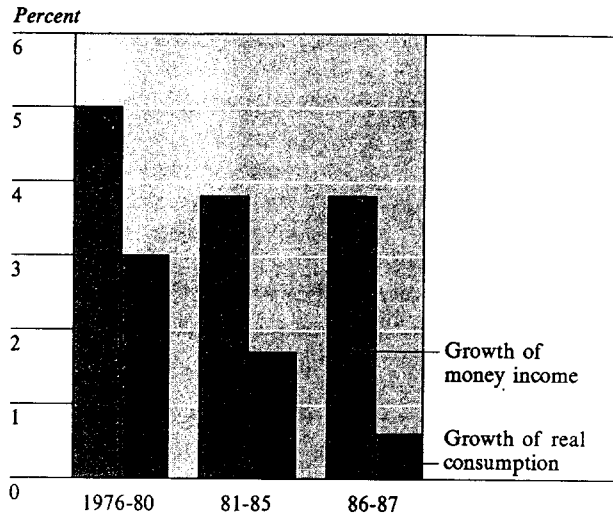
**Figure 1**  
**USSR: Indexes of Real Per Capita Income**



Sources: Official data are from various issues of *Narodnoye khozyaystvo*. The independent index is derived from appendix A.

321439 4-89

**Figure 2**  
**USSR: Growth of Money Income and Real Consumption**



Sources: Appendix A and CIA estimates of real consumption of goods and paid services in 1982 rubles.

321440 4-89

Our estimate of nominal incomes shows that Moscow has had some success in holding down the expansion of money incomes to better match the slowing growth in availability of goods and services (see figure 2). Nevertheless, growth of money incomes has outstripped growth of supplies of consumer goods and services, producing significant inflationary pressures. This problem has intensified in the Gorbachev era as growth of money incomes has accelerated while goods supply has been hampered by the antialcohol campaign and cuts in imports.

#### Trends in Key Components

The slower growth of Soviet money incomes in 1980-85 stems largely from the trend in gross earnings of wage and salary workers, which make up some 70 percent of total money incomes (see table 2). This component of incomes grew at an average annual rate of 3.3 percent in 1981-85 compared with 5.0 percent

in 1976-80. Meanwhile, transfer payments—constituting almost one-fifth of total money incomes—were the fastest growing category; pensions and welfare payments grew by 6 percent per year in 1981-85, reflecting the general aging of the population as well as increases in some pensions. For example, partial pensions were increased for women who give birth to more than five children and are unable to acquire sufficient time as a state employee to qualify for full pensions. The share of transfer payments in total money incomes has increased from 11.8 percent in 1965 to 18.1 percent in 1987.

#### Comparison With US Trends

Throughout the postwar period, Soviet citizens' real incomes generally have grown faster than incomes of US citizens, often by a wide margin (see figure 3). To

**Table 1**  
**USSR: Personal Disposable Money Income <sup>a</sup>**

*Billion current rubles*  
(except where noted)

	1965	1970	1975	1980	1984	1985	1986	1987
Total money income of the population	126.95	185.94	254.62	324.59	380.03	393.76	410.70	426.17
Total deductions	8.97	14.67	20.95	28.04	32.90	34.29	35.67	37.16
Total disposable money income	117.98	171.27	233.67	296.55	347.13	359.47	375.03	389.01
Per capita disposable money income ( <i>current rubles</i> )	510.86	705.35	917.48	1,112.92	1,256.32	1,288.84	1,332.22	1,369.74
Per capita real disposable money income (1982 <i>rubles</i> )	666.91	897.40	1,078.12	1,195.41	1,235.32	1,239.27	1,241.58	1,257.80

<sup>a</sup> See appendix A for sources and methodology.

**Table 2**  
**USSR: Personal Money Income <sup>a</sup>**

*Billion current rubles*

	1965	1970	1975	1980	1984	1985	1986	1987
Total money income of the population	126.95	185.94	254.62	324.59	380.03	393.76	410.70	426.17
Gross earnings of wage and salary workers	89.05	132.03	178.74	228.01	259.08	268.72	278.15	288.77
Collective farm wage payments	9.13	14.04	15.86	18.24	22.20	22.88	24.11	24.50
Transfer payments <sup>b</sup>	15.01	24.04	38.03	51.28	65.20	68.34	73.41	77.00
Other earnings <sup>c</sup>	13.76	15.83	21.99	27.06	33.55	33.82	35.03	35.90

<sup>a</sup> See appendix A for sources and methodology.

<sup>b</sup> Transfer payments include pensions and grants, stipends to students, loan service, insurance indemnities, net borrowing, and interest on savings.

<sup>c</sup> Other earnings include net household incomes from sale of farm products, profits distributed to cooperative members, and military pay and allowances.

a large extent this reflects the low base from which the Soviets started postwar reconstruction. In the 1980s, however, US income growth has taken the lead, primarily because of the sharp falloff in Soviet economic performance.

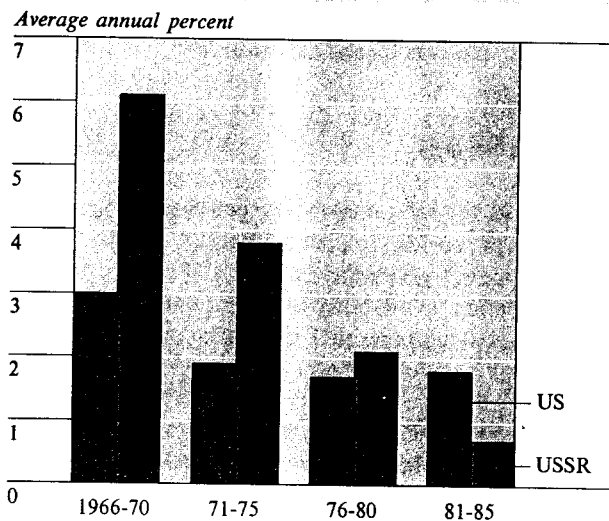
#### Reliability of the Estimate

Our estimate can be questioned on several counts. First, there is the general consideration of whether data based on Soviet statistics can be trusted. Second,

there is the more specific concern that our estimate excludes some key sources of income or some deductions. Finally, the price index we use to deflate money income may understate the true rate of inflation.

**Quality of Soviet Data.** Available evidence suggests that the Soviet official series on money wages—the primary component of our estimate of money incomes—is reliable. One Western expert, after careful

**Figure 3**  
**Growth of Per Capita Income**  
**in US and USSR<sup>a</sup>**



<sup>a</sup> Specifically this graph charts growth of real per capita personal disposable money income. US figures are from the *US Statistical Abstract, 1987*, table 722, p. 431. Soviet figures are derived from appendix A, table A-1.

321441 4-89

examination of Soviet wage and income statistics, has pointed out that, although wage data are potentially as subject to falsification as production reporting, the distortions may be less than for output because of close monitoring of the wage fund by banks and financial organs. Gertrude Schroeder concluded that, although the Soviet press cites instances of erroneous reporting of wages, "in the aggregate the distortion is probably not large and probably does not differ much over time."<sup>6</sup>

**Information Gaps.** We recognize that our estimate omits some sources of money income. For example, official Soviet statistics on wages may exclude some money payments to workers and employees of state enterprises that are not directly related to labor effort, such as severance pay and certain cash awards. One Western expert has estimated that such nonwage

money payments in 1979 were 7.2 billion rubles, or 2.2 percent of total money income.<sup>7</sup> We have not attempted to adjust official wage data for this potential shortfall. We also omit such money incomes as prison wages and receipts from sales of property because data are not available.

Our estimate does not take account of incomes earned in the second economy, because we lack information on such activity.<sup>8</sup> A survey of emigres from the USSR conducted by American economists Gregory Grossman and Vladimir Treml indicates that, on average, those households who did private work earned 657 rubles a year from all such activity.<sup>9</sup> Assuming the average household size was 3.5 persons,<sup>10</sup> the earnings would equal about 15 to 20 percent of our estimate of disposable income per year in the late 1970s. The Soviet Interview Project (SIP), involving 2,800 emigres, arrived at a figure of 46.6 rubles per month or 559 rubles a year.<sup>11</sup> Although these estimates pertain to samples of households likely to be more energetic and entrepreneurial than the Soviet average, they do suggest that private-sector incomes are substantial.

Complete information on deductions from income is also unavailable. Soviet citizens to some extent are pressured to contribute to various charitable organizations—for example, for the development of culture, for the care of orphans, and recently for the victims of Chernobyl—and pay annual dues to the Komsomol (the Communist Youth League) and to Dosaaf (the Voluntary Society for the Promotion of Assistance to

<sup>7</sup> Vladimir G. Treml, CIR Research Note *Total Labor Income of State Workers and Employees*, 8 May 1986.

<sup>8</sup> Gosplan economist T. Koryagina has estimated that total activity in the second economy amounts to 70-90 billion rubles annually, including 14-16 billion rubles' worth of sales of services (*Trud*, 12 August 1988, p. 4). The Soviets may in the future publish more complete data on the scope of the second economy. However, as in any country, such estimates would be imprecise because of the difficulties inherent in estimating illegal activities.

<sup>9</sup> Gregory Grossman, "Roots of Gorbachev's Problems: Private Income and Outlay in the Late 1970s," *Gorbachev's Economic Plans* (Washington, DC: Joint Economic Committee, US Congress, 1987), vol. 1, p. 219.

<sup>10</sup> *Naselenie SSSR, 1987*, p. 109.

<sup>11</sup> Aaron Vinokur and Gur Ofer, "Inequality of Earnings, Household Income, and Wealth in the Soviet Union in the 1970s," *Politics, Work, and Daily Life in the USSR*, ed. James R. Millar (Cambridge: Cambridge University Press, 1987), p. 186.

<sup>6</sup> Schroeder, p. 294.

**Table 3**  
**USSR: Growth of State Retail**  
**Prices, 1971-87**

*Average annual percent*

	1971-75	1976-80	1981-85	1986	1987
Soviet official index	NEGL	0.6	1.0	2.0	1.0
Alternative retail price index	1.6	1.8	2.2	3.1	1.5

the Land, Air, and Naval Forces of the USSR). These contributions and payments should be counted as deductions from income. We lack readily accessible data to estimate these deductions annually, but the amounts probably are small.

The magnitude of the incomes not accounted for probably far exceeds that of the deductions not included in our figures. Our estimate of personal disposable income is therefore probably biased downwards.

**Inflation Measurement.** Finally, there is the question of measuring the impact of price increases on nominal incomes. We know the official Soviet retail price index understates the rate of inflation. Indeed, Soviet officials have recently acknowledged this and have indicated that a new price index will be used starting 1 January 1989.<sup>12</sup> Since the existing Soviet index is clearly biased downwards, we calculate an alternative retail price index (ARPI) by comparing CIA's index of real consumption of goods with the Soviet index of sales in current rubles. The implied growth of prices resulting from a comparison of these two indexes indicates a substantially higher rate of inflation than the official Soviet index (see table 3).

The ARPI has some shortcomings. For example, it is derived from a sample index that does not include all goods sold. It also may not fully take into account price increases that result when low-priced versions of a given product are replaced with higher priced versions without a commensurate increase in quality.

<sup>12</sup> *Trud*, 24 November 1988, p. 1.

And it would be affected by any inaccuracy in our measure of real consumption. Nevertheless, the ARPI probably is a more accurate measure than the Soviet index of price changes and accords well with both recent Soviet admissions and anecdotal evidence that the official index is biased downwards.<sup>13</sup>

### Trends in Savings

Analysis of the relationship between Soviet incomes and savings provides important insights into the state of the economy, given the sensitivity of savings behavior to inflation, availability of goods, and other factors.<sup>14</sup> We calculate annual savings by summing additions to savings deposits and purchases of bonds, but leave out additions to cash hoards on which there are no time series of data (see appendix A, table A-4). Although Soviet sources have suggested that cash holdings "under the mattress" are substantial,<sup>15</sup> Moscow does not publish data on currency in circulation—essential (though not sufficient) information for estimating growth of cash hoards.

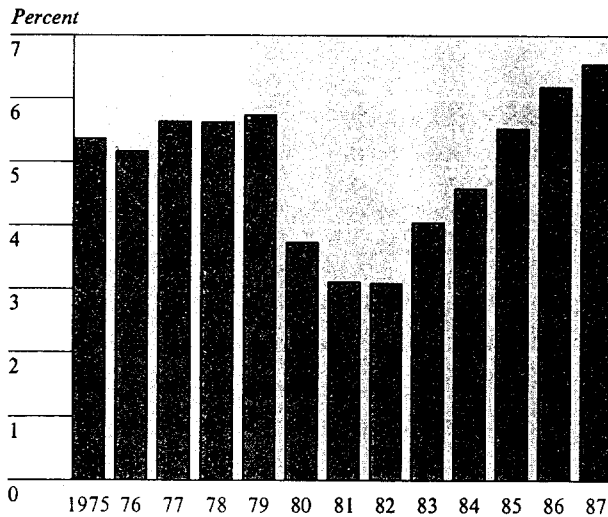
With our estimates of personal disposable income and savings on hand, we then compute two ratios: the average propensity to save (APS)—savings as a share of income—and the marginal propensity to save (MPS)—the annual change in savings as a share of the annual change in income (see appendix A, table A-5). The substantial unknowns in our estimates of incomes and savings—private-sector incomes and additions to cash hoards, respectively—probably

<sup>13</sup> For a complete explanation of the methodology used in calculating the alternative retail price index and a discussion of its shortcomings, see Gertrude E. Schroeder and Barbara S. Severin, "Soviet Consumption and Income Policies in Perspective," *Soviet Economy in a New Perspective*, pp. 621-660.

<sup>14</sup> Some recently published Soviet data suggest that the distribution of Soviet savings deposits is highly skewed. According to *Argumenty i fakty*, half of all savings deposits are held by 3 percent of the population. *Sotsialisticheskaya industriya* (1 June 1988, p. 3) reports that seven out of eight citizens have no savings. The skewness of this distribution clearly would need to be taken into account in analyzing Soviet savings behavior in depth.

<sup>15</sup> Oleg Bogomolov recently estimated that savings in the form of cash were about 80-90 billion rubles (*Argumenty i fakty*, No. 3, January 1989).

**Figure 4**  
**USSR: Average Propensity To Save,**  
**1975-87**



Source: Appendix A, table A-5.

321442 4-89

account for some of the volatility in these savings rates and mean that the APS and MPS estimates must be interpreted with caution.

We can make some general observations, however. Annual savings declined from 67 rubles per capita in 1979 to 35 rubles in 1982, a period when the inflation rate doubled and real per capita incomes declined slightly. As strapped consumers cut back on saving, the APS fell from 5.7 percent in 1979 to 3.0 percent in 1982 (see figure 4). With some recovery in growth of real incomes since then, the APS has climbed steadily and was 6.5 percent in 1987.

### Improving the Estimates

Soviet publication of statistics pertaining to the two largest gaps in our information—private-sector incomes and trends in cash hoards—would most improve our ability to estimate personal disposable income and trends in savings:

- Moscow may begin publishing more data on incomes earned by members and employees of cooperatives, and on other private sector earnings, because of the current policy to encourage that sector. Income earned in small-scale private activity is inherently difficult to measure, however, and this could delay publication.
- Soviet authorities have long been reluctant to release data on currency in circulation—which would give us a starting point for estimating trends in savings held in cash. Recent concern over the budget deficit has resulted in greater interest in trends in the money supply, which could prompt Moscow to be more generous in releasing such information.<sup>16</sup>

Finally, our estimate of real personal incomes would benefit from a better price deflator. The Soviets have announced that, starting 1 January 1989, they will calculate a new retail price index that will better reflect price changes in the consumer sector.

<sup>16</sup> See DI Research Paper SOV 88-10043U, September 1988, *USSR: Sharply Higher Budget Deficits Threaten Perestroika*.

**Appendix A**  
**Key Tables**

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
146.67	162.19	173.34	185.94	197.12	209.65	223.37	239.15	254.62	270.02	283.18
103.40	115.09	123.31	132.03	140.20	148.81	157.78	168.95	178.74	189.37	198.15
82.30	85.10	87.90	90.19	92.80	95.24	97.47	99.78	102.16	104.24	106.39
1,256.40	1,352.40	1,402.80	1,464.00	1,510.80	1,562.40	1,618.80	1,693.20	1,749.60	1,816.80	1,862.40
12.66	13.40	13.66	14.04	14.38	14.82	15.77	16.24	15.86	16.63	17.47
7.88	8.19	8.87	9.48	9.80	10.69	11.59	11.59	12.78	13.55	13.79
0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.04
4.00	4.50	4.50	5.00	5.00	5.00	5.50	6.00	6.00	6.00	7.00
17.71	19.93	21.80	24.04	26.28	28.70	30.90	33.37	38.03	40.93	42.79
16.22	18.27	19.92	21.96	23.89	25.94	27.49	29.17	33.39	35.42	36.84
12.60	14.00	15.00	16.20	18.00	19.80	20.80	22.10	24.40	25.70	27.10
3.62	4.27	4.92	5.76	5.89	6.14	6.69	7.07	8.99	9.72	9.74
1.10	1.18	1.30	1.30	1.40	1.50	1.90	2.10	2.20	2.20	2.30
0.39	0.48	0.58	0.78	0.99	1.26	1.51	2.00	2.44	3.31	3.65
0.20	0.20	0.20	0.10	0.10	0.15	0.16	1.18	1.20	1.32	1.43
0.25	0.21	0.20	0.29	0.23	0.19	0.21	0.17	0.11	0.05	0.10
0.55	0.65	0.78	0.93	1.10	1.25	1.42	1.62	1.87	2.13	2.42

**Table A-1**  
**USSR: Calculation of Personal Money Income, 1950-87**

	1950	1955	1960	1965	1966
1. Total personal money income	NA	61.47	84.76	126.95	135.58
2. Gross earnings of wage and salary workers	31.12	43.34	59.97	89.05	95.83
3. Average annual number of wage and salary workers ( <i>million persons</i> )	40.40	50.30	62.00	76.90	79.70
4. Average monthly earnings, adjusted to annual basis ( <i>current rubles</i> )	770.40	861.60	967.20	1,158.00	1,202.40
5. Wage payments to collective farm workers	1.18	3.06	4.94	9.13	10.96
6. Net incomes of households from sale of farm products	4.18	4.11	5.39	8.88	7.32
7. Profits distributed to cooperative members	NA	0.01	0.02	0.02	0.02
8. Military pay and monetary allowances	3.50	3.50	3.00	4.00	4.00
9. Transfer payments	3.87	6.00	10.39	15.01	16.55
10. Pensions and welfare payments	3.37	5.22	9.68	13.85	15.18
11. Pensions	2.40	3.20	7.20	10.60	11.80
12. Welfare payments	0.97	2.02	2.48	3.25	3.38
13. Stipends to students	0.46	0.74	0.60	0.90	1.00
14. Insurance indemnities	0.04	0.04	0.11	0.26	0.37
15. Loan service	0.51	1.43	0.70	0.10	0.10
16. Net borrowing	0.07	-0.09	0.12	0.38	0.34
17. Interest on savings	0.06	0.12	0.23	0.38	0.46

Notes: Line 1 = sum of line 2 and lines 5-9 and 15-17.  
Line 2 = line 3 times line 4/1000.  
Line 9 = sum of lines 10, 13, and 14.  
Line 12 = line 10 less line 11.



*Billion current rubles*  
(except where noted)

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
297.54	308.93	324.59	339.80	354.10	367.61	380.03	393.76	410.70	426.17
208.41	216.71	228.01	235.90	245.02	251.37	259.08	268.72	278.15	288.77
108.62	110.59	112.50	113.96	115.16	116.05	116.83	117.80	118.51	118.60
918.80	1,959.60	2,026.80	2,070.00	2,127.60	2,166.00	2,217.60	2,281.20	2,347.20	2,434.80
17.86	17.95	18.24	18.60	19.50	21.31	22.20	22.88	24.11	24.50
14.66	15.08	16.08	17.26	17.42	18.87	18.54	18.40	18.89	19.21
0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06
7.00	7.00	7.50	7.50	8.00	8.00	8.00	8.00	8.00	8.00
45.30	47.56	51.28	54.73	58.10	61.70	65.20	68.34	73.41	77.00
38.85	40.79	44.01	46.43	49.60	53.00	56.10	59.04	63.61	66.90
28.90	30.60	33.00	35.40	37.80	40.00	42.20	44.90	49.30	51.67
9.95	10.19	11.01	11.03	11.80	13.00	13.90	14.00	14.31	15.23
2.40	2.40	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.70
4.05	4.37	4.77	5.80	6.00	6.20	6.50	6.70	7.20	7.40
1.45	1.46	0.02	1.90	1.93	1.94	2.00	2.04	2.06	2.08
0.11	0.08	0.09	0.33	0.35	0.40	0.70	0.68	0.93	0.94
2.72	3.05	3.33	3.54	3.74	3.97	4.27	4.65	5.10	5.61

**Table A-2**  
**USSR: Compulsory Deductions From Personal Money**  
**Income, 1950-87**

	1950	1955	1960	1965	1966
1. Total deductions	4.18	5.59	6.44	8.97	9.86
2. Direct taxes	3.58	4.83	5.60	7.70	8.44
3. Personal income tax	2.04	3.55	4.64	6.77	7.50
4. Agricultural tax	0.80	0.44	0.40	0.36	0.35
5. Bachelor and small family tax	0.74	0.84	0.56	0.57	0.59
6. Local taxes	0.28	0.29	0.14	0.17	0.19
7. Trade union dues	0.24	0.36	0.55	0.86	0.96
8 Party membership dues	0.08	0.11	0.15	0.24	0.27

Notes: Line 1 = sum of line 2 and lines 6-8.  
Line 2 = sum of lines 3-5.

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1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
10.88	12.22	13.42	14.67	15.77	16.97	18.14	19.57	20.95	22.39	23.63
9.32	10.50	11.60	12.74	13.72	14.79	15.83	17.12	18.36	19.63	20.76
8.36	9.50	10.54	11.61	12.54	13.57	14.57	15.81	16.99	18.22	19.32
0.35	0.34	0.33	0.33	0.32	0.31	0.30	0.29	0.29	0.28	0.28
0.61	0.66	0.73	0.80	0.86	0.91	0.96	1.02	1.08	1.13	1.16
0.19	0.20	0.19	0.18	0.20	0.22	0.24	0.24	0.25	0.26	0.27
1.08	1.20	1.28	1.38	1.45	1.54	1.63	1.75	1.85	1.98	2.06
0.29	0.32	0.35	0.37	0.40	0.42	0.44	0.46	0.49	0.52	0.54

*Billion current rubles*

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
25.24	26.51	28.04	29.15	30.39	31.54	32.90	34.29	35.67	37.16
22.07	23.16	24.51	25.50	26.60	27.60	28.78	30.00	31.20	32.50
20.60	21.66	22.95	23.91	25.01	26.00	27.10	28.30	29.50	30.90
0.27	0.26	0.26	0.26	0.25	0.25	0.24	0.23	0.20	0.20
1.20	1.24	1.30	1.33	1.37	1.40	1.44	1.47	1.50	1.40
0.28	0.29	0.29	0.29	0.28	0.31	0.33	0.36	0.37	0.38
2.30	2.45	2.60	2.68	2.79	2.89	3.00	3.12	3.26	3.40
0.59	0.61	0.64	0.68	0.72	0.74	0.77	0.81	0.84	0.88

**Table A-3**  
**USSR: Estimates of Personal Disposable Money**  
**Income, 1950-87**

	1950	1955	1960	1965	1966
1. Total personal money income ( <i>billion current rubles</i> )	NA	61.47	84.76	126.95	135.58
2. Total deductions ( <i>billion current rubles</i> )	4.18	5.59	6.44	8.97	9.86
3. Personal disposable money income ( <i>billion current rubles</i> )	NA	55.88	78.32	117.98	125.72
4. Population ( <i>million persons</i> )	180.08	196.16	214.33	230.94	233.53
5. Per capita disposable money income ( <i>current rubles</i> )	NA	284.89	365.41	510.86	538.34
6. Alternative retail price index ( <i>1982 = 100</i> )	83.90	68.20	71.09	76.60	77.10
7. Real per capita disposable money income ( <i>1982 rubles</i> )	NA	417.73	514.01	666.91	698.23

Notes: Line 1: table A-1, line 1.

Line 2: table A-2, line 1.

Line 3: line 1-line 2.

Line 4: population data are from the US Department of Commerce, US Bureau of the Census, Center for International Research, Soviet Branch.

Line 5: (line 3/line 4) times 1,000.

Line 6: CIA estimate.

Line 7: (line 5/line 6) times 100.

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
146.67	162.19	173.34	185.94	197.12	209.65	223.37	239.15	254.62	270.02	283.18
10.88	12.22	13.42	14.67	15.77	16.97	18.14	19.57	20.95	22.39	23.63
135.79	149.97	159.92	171.27	181.35	192.68	205.23	219.58	233.67	247.63	259.55
235.99	238.32	240.55	242.81	245.19	247.56	249.94	252.31	254.69	257.06	259.43
575.39	629.29	664.79	705.35	739.63	778.29	821.13	870.29	917.48	963.31	1,000.44
77.60	77.90	78.10	78.60	79.60	82.00	83.10	83.70	85.10	85.40	86.40
741.48	807.82	851.21	897.40	929.19	949.14	988.13	1,039.78	1,078.12	1,128.00	1,157.92

**Table A-4**  
**USSR: Estimates of Personal Savings, 1955-87**

	1955	1960	1965	1966	1967	1968
1. Savings deposits ( <i>current million rubles</i> )	5,366.40	10,909.00	18,727.00	22,915.00	26,869.00	32,360.00
2. Additions to savings ( <i>current million rubles</i> )	531.10	853.00	3,020.00	4,188.00	3,954.00	5,491.00
3. Bond purchases ( <i>current million rubles</i> )	314.00	60.00	180.00	220.00	130.00	280.00
4. Net borrowing ( <i>current million rubles</i> )	-94.00	122.00	380.00	338.00	249.00	212.00
5. Total savings ( <i>current million rubles</i> )	939.10	791.00	2,820.00	4,070.00	3,835.00	5,559.00
6. Alternative retail price index (1982 = 100)	68.20	71.09	76.60	77.10	77.60	77.90
7. Real total savings (1982 million rubles)	1,376.98	1,112.67	3,681.46	5,278.86	4,942.01	7,136.07
8. Population ( <i>million persons</i> )	196.16	214.33	230.94	233.53	235.99	238.32
9. Real per capita savings (1982 rubles)	7.02	5.19	15.94	22.60	20.94	29.94

Notes: Line 1: *Narodnoye khozyaystvo*, various issues.

Line 2: annual increase in savings deposits.

Line 3: a. 1955, 1960 - *Gos. byud.* 1966, p. 11.

b. 1965-70 - *Gos. byud.* 1972, p. 12.

c. 1971-75 - *Gos. byud.* 1976, p. 9.

d. 1976-80 - *Gos. byud.* 1982, p. 111.

e. 1981-85 - *Gos. byud.* 1987, pp. 4-5.

f. 1986-87 - estimated.

Line 4: table A-1, line 16 times 1,000.

Line 5: line 2 + line 3-line 4.

Line 6: table A-3, line 6.

Line 7: (line 5/line 6) times 100.

Line 8: table A-3, line 4.

Line 9: line 7/line 8.

1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
3,8397.00	46,600.00	53,215.00	60,732.00	86,660.00	78,905.00	90,985.00	103,000.00	116,660.00	131,060.00
6,037.00	8,203.00	6,615.00	7,517.00	7,928.00	10,245.00	12,080.00	12,015.00	13,660.00	14,400.00
360.00	470.00	330.00	340.00	380.00	440.00	560.00	841.00	894.20	921.90
200.00	292.00	230.00	189.00	210.00	173.00	113.00	54.00	97.00	113.00
6,197.00	8,381.00	6,715.00	7,668.00	8,098.00	10,512.00	12,527.00	12,802.00	14,457.20	15,208.90
78.10	78.60	79.60	82.00	83.10	83.70	85.10	85.40	86.40	89.60
7,934.70	10,662.85	8,435.93	9,351.22	9,744.89	12,559.14	14,720.33	14,990.63	16,732.87	16,974.22
240.55	242.81	245.19	247.56	249.94	252.31	254.69	257.06	259.43	261.81
32.99	43.91	34.41	37.77	38.99	49.78	57.80	58.32	64.50	64.83



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	1979	1980	1981	1982	1983	1984	1985	1986	1987
146,240.00	156,500.00	165,700.00	174,300.00	186,920.00	202,100.00	220,800.00	242,800.00	266,900.00	
15,180.00	10,260.00	9,200.00	8,600.00	12,620.00	15,180.00	18,700.00	22,000.00	23,900.00	
992.30	890.30	732.90	1,342.60	1,280.50	1,310.20	1,690.10	1,921.00	2,170.00	
82.00	90.00	330.00	350.00	400.00	700.00	680.00	929.00	940.00	
16,090.30	11,060.30	9,602.90	9,592.60	13,500.50	15,790.20	19,710.10	22,992.00	25,130.00	
90.30	93.10	96.50	100.00	101.40	101.70	104.00	107.30	108.90	
17,818.72	11,880.02	9,951.19	9,592.60	13,314.10	15,526.25	18,952.02	21,427.77	23,076.22	
264.18	266.46	268.77	271.14	273.68	276.31	278.91	281.51	284.00	
67.45	44.58	37.03	35.38	48.65	56.19	67.95	76.12	81.25	

**Table A-5**  
**USSR: Estimates of Savings Ratios, 1955-87**

	1955	1960	1965	1966	1967
<i>Total savings (million current rubles)</i>					
1. Total <i>change</i>	939.10	791.00	2,820.00	4,070.00	3,835.00
2. Annual change <i>in change</i>				1,250.00	-235.00
<i>Disposable money income (billion current rubles)</i>					
3. Total	55.88	78.32	117.98	125.72	135.79
4. Annual change				7.74	10.07
5. Average propensity to save ( <i>percent</i> )	1.68	1.01	2.39	3.24	2.82
6. Marginal propensity to save ( <i>percent</i> )				16.14	-2.33

Notes: Line 1: table A-4, line 5.  
Line 2: annual change in line 1.  
Line 3: table A-3, line 3.  
Line 4: annual change in line 3.  
Line 5: line 1/line 3, divided by 10.  
Line 6: line 2/line 4, divided by 10.

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
5,559.00	6,197.00	8,381.00	6,715.00	7,668.00	8,098.00	10,512.00	12,527.00	12,802.00	14,457.20	15,208.90	16,090.30
1,724.00	638.00	2,184.00	-1,666.00	953.00	430.00	2,414.00	2,015.00	275.00	1,655.20	751.70	881.40
149.97	159.92	171.27	181.35	192.68	205.23	219.58	233.67	247.63	259.55	272.30	282.42
14.18	9.95	11.35	10.08	11.33	12.56	14.35	14.09	13.96	11.92	12.75	10.11
3.71	3.88	4.89	3.70	3.98	3.95	4.79	5.36	5.17	5.57	5.59	5.70
12.16	6.41	19.24	-16.53	8.41	3.42	16.82	14.31	1.97	13.88	5.89	8.71

	1979	1980	1981	1982	1983	1984	1985	1986	1987
1	16,090.30	11,060.30	9,602.90	9,592.60	13,500.50	15,790.20	19,710.10	22,992.00	25,130.00
	881.40	-5,030.00	-1,457.40	-10.30	3,907.90	2,289.70	3,919.90	3,281.90	2,138.00
2	282.42	296.55	310.65	323.71	336.07	347.13	359.47	375.03	389.01
	10.11	14.14	14.09	13.06	12.36	11.07	12.34	15.56	13.98
5	5.70	3.73	3.09	2.96	4.02	4.55	5.48	6.13	6.46
6	8.71	-35.58	-10.34	-0.08	31.62	20.69	31.78	21.09	15.30
7									

## Appendix B

### Sources and Methodology for Table A-1

1. Total personal money income: all years—sum of lines 2, 5-9, and 15-17.
2. Gross earnings of wage and salary workers: product of lines 3 and 4.
3. Average annual number of wage and salary workers: 1950, 1955—*Narodnoye khozyaystvo SSSR v 1974 godu* (Moscow: *Finansy i statistika*), pp. 549, 562 (hereafter, *N. kh.* and the appropriate year). 1960, 1965-74—*N. kh.* 1975, p. 532. 1975-82—*N. kh.* 1980, p. 357 and *N. kh.* 1982, p. 364. 1983-84—*N. kh.* 1984, p. 409. 1985-86—*N. kh.* 1986, p. 414. 1987—*N. kh.* 1987, p. 364.
4. Average monthly earnings, adjusted to annual basis: 1950, 1955—*N. kh.* 1975, pp. 532, 562. Includes gross earnings of cooperative artisans: 0.88 billion rubles in 1950 and 1.17 billion rubles in 1955. Cooperative artisans earned a wage equal to two-thirds that of industrial and salary workers, according to Frederick A. Leedy, *Producer Cooperatives in the Soviet Union*, International Population Reports Series, No. 51 (Washington, DC: US Bureau of the Census), pp. 14, 95. The average annual number of artisans is reported in *N. kh.* 1964, p. 545. Producers' cooperatives were converted into state enterprises in 1960, and members were then classified as state workers. 1960, 1965-74—*N. kh.* 1975, p. 546. 1975-82—*N. kh.* 1980, p. 364, and *N. kh.* 1982, p. 370. 1983-84—*N. kh.* 1984, p. 417. 1985-86—*N. kh.* 1986, p. 431. 1987—*N. kh.* 1987, p. 390.
5. Wage payments to collective farm members: 1950, 1955, 1960—David W. Bronson and Constance B. Krueger, "The Revolution in Soviet Farm Household Income, 1953-67," in James R. Millar, ed., *The Soviet Rural Community* (Urbana: University of Illinois Press, 1971), p. 250. 1965-80—derived for each year as the product of (1) official statistical handbook data on total wage payments (money plus in-kind payments) made by collective farms to collective farm members for their work in socialized activity of the farms and (2) the share constituting money payments only. Data for total wage payments are available for 1965-70 in *Sel'skoye khozyaystvo SSSR* (Moscow: *Gosstatizdat*, 1971) p. 479; for 1971-74 in *N. kh.* 1975, p. 414; for 1975-82 in *N. kh.* 1980, p. 254, and *N. kh.* 1982, p. 255; for 1983-84 in *N. kh.* 1984, p. 294; for 1985-86 in *N. kh.* 1986, p. 287; for 1987 in *SSSR v tsifrakh v 1987 godu*, p. 137. Money payments accounted for 79.4 percent of total payments (money plus in-kind payments) in 1965 according to V. N. Zhurikov and V. I. Solomakhin, comp., *Spravochnik po oplata truda v kolkhozakh* (Moscow: Kolos, 1973), p. 10; 85.6 percent in 1966, 92.4 percent in 1967, 93.7 percent in 1968, and 96.9 percent in 1969, according to S. V. Rogachev, *Ekonomicheskiye zakoni i razvitiye sel'skogo khozyaystva* (Moscow: Kolos, 1973), p. 217; and 93.6 percent in 1970 (Zhurikov and Solomakhin, op. cit.). Money payments are estimated to amount to 94 percent of total payments in 1971, in line with the 1970 share; 95 percent from 1972 through 1976; and 96 percent during 1977-80. *Vestnik statistiki* No. 7, 1987 (p. 54), indicated that money payments were 97.9 percent of total payments in 1981, 97.5 percent in 1982, 97.3 percent in 1983, 97.8 percent in 1984, and 97.8 percent in 1985. The share in 1986 was estimated to be 98 percent, and the share in 1987 was estimated on the basis of growth in payments to collective farm workers reported in *Pravda*, 24 January 1987.
6. Net income of households from sales of farm products is derived as the difference between total money income of households from sales of farm products and money outlays. Total money incomes include (1) sales to state procurement and state and cooperative trade organizations (1950, 1955, estimated; 1965, 1970, 1975, and 1980-85, from *N. kh.* 1985; 1966-70, 1971-75, and 1976-80, interpolated; 1986-88, estimated); (2) sales in collective farm *ex-village*

markets and commission trade (various *N. kh.*); and (3) sales of livestock to collective farms. Data on livestock sales in 1950, 1955, and 1965-70 are from "USSR: Gross National Product Accounts, 1970," A(ER) 1975-76, November 1975; 1980 from Shmelev, *Lichnoye podsobnoye khozyaystvo: vozmozhnosti perspektivy* (Moscow: Politizdat, 1983), p. 60; and sales growth in 1971-79 is interpolated. Sales of livestock in 1981-87 are estimated to have increased by 50 million rubles per annum. These data represent sales by *kolkhozniki* of their own livestock and may be understated by the amount of livestock that is owned by farms but contracted out to *kolkhozniki* to be raised and sold. Money outlays include purchases from outside the sector of materials and services used in production of these agricultural products and indirect taxes. Included in indirect taxes are fees charged collective farm market traders and taxes levied on livestock holdings of households. Money outlays are assumed to equal 10 percent of the gross incomes of households from sales of farm products.

7. Profits distributed to cooperative members: Consumer cooperatives constitute a separate trade network, paralleling that of the state stores but designed primarily to service rural areas with stores and restaurants. A cooperative is usually composed of residents of a single village. Nominally, the cooperative system is controlled by its members, but the government actually exercises strict control over profits, prices, and earnings. A small share of profits is distributed to members. During 1962-65, 68.4 million rubles were distributed to cooperative members according to A. P. Ilyushin, ed., *50 let sovetskoy potrebitel'skoy kooperatsii* (Moscow: Ekonomika, 1965), p. 142. Total cooperative profits for those years were 3,389 million rubles (*N. kh.* 1963, p. 637, and *N. kh.* 1964, p. 747). Dividing distributions by profits results in a distribution rate of 2.2 percent. This rate is applied to reported profits for each year: 1950, 1960, and 1965-67—*N. kh.* 1967, p. 857. 1955—*N. kh.* 1960, p. 843. 1970-74—*N. kh.* 1975, p. 725. 1975-82—*N. kh.* 1980, p. 503; *N. kh.* 1982, p. 514. 1983-84—*N. kh.* 1984, p. 567. 1985-86—*N. kh.* 1986, p. 625. 1987—estimated.

8. Military pay and monetary allowances: CIA series in current rubles.

9. Transfer payments: all years—sum of lines 10, 13, and 14.

10. Pensions and welfare payments: the Soviet Union has established an extensive program of social services covering a wide range of contingencies. The state social security program includes benefits for sickness, maternity, and large families, and pensions for old age and disability that cover workers in state enterprises. Since 1965 a similar but more limited program has existed for collective farmers. Pensions and welfare payments are derived as the difference between total outlays for social security and social insurance, including pensions, and the sum of outlays for health resorts and sanatoriums, kindergartens and pioneer camps, and miscellaneous payments. 1950, 1968-69—*N. kh.* 1969, pp. 771, 774. 1955—*N. kh.* 1958, pp. 905-906, adjusted assuming relationship between expenditures in 1950 as reported in *N. kh.* 1958, pp. 905-906, and in *N. kh.* 1969, pp. 771, 774, applied in 1955. 1960, 1966-67—*N. kh.* 1968, pp. 776-779. 1965, 1970-74—*N. kh.* 1975, pp. 744, 746. 1975-87—*N. kh.* 1980, pp. 381, 527; *N. kh.* 1981, pp. 419, 561-564; *N. kh.* 1984, pp. 575, 578; *N. kh.* 1982, p. 381; *N. kh.* 1983, pp. 549-552; *N. kh.* 1986, pp. 632, 634; *N. kh.* 1987, p. 594.

11. Pensions: state workers and collective farmers are given pensions for permanent disability, survivor, old age, and long service. 1950, 1968-69—*N. kh.* 1960, p. 758. 1955—estimated to be 72 percent of pensions and welfare payments, based on the relationships existing in 1950 and 1960. 1960, 1966-67—*N. kh.* 1968, p. 776. 1965, 1970-74—*N. kh.* 1975, p. 744. 1975-86—*N. kh.* 1980, p. 524; *N. kh.* 1981, p. 564; *N. kh.* 1982, p. 381; *N. kh.* 1985, p. 561; *N. kh.* 1987, pp. 591, 594.

12. Welfare payments: total pension and welfare payments (line 10) less pensions (line 11).

13. Stipends to students: 1950, 1955—*Raskhody na sotsial'no-kul'turnye meropriyatiya po gosudarstvennomu byudzhetu SSSR* (Moscow: Gosfinizdat, 1958), p. 46. 1960, 1969-70—*N. kh.* 1970, p. 537. 1965, 1970-75—*N. kh.* 1975, p. 568. 1966-68—estimates

based on numbers of students in higher education (*N. kh.* 1968, p. 682, and *N. kh.* 1969, p. 675) and average stipend paid in 1965 and 1969. 1976-86—*N. kh.* 1980, p. 381; *N. kh.* 1981, p. 419; *N. kh.* 1982, p. 381; *N. kh.* 1985, p. 412; *N. kh.* 1986, p. 435; *N. kh.* 1987, p. 393. ~~1988~~

14. Insurance indemnities: sum of compensation received for personal property and life and accident insurance claims. 1950, 1955, 1960, 1965-66—G. P. Kosyachenko, et. al., *50 let sovetskikh finansov* (Moscow: Gosfinizdat, 1967), pp. 347, 348. 1967-68—A. G. Zverev, *Natsional'nyy dokhod i finansy SSSR* (Moscow: *Finansy*, 1970), p. 282. 1969—*Ekonomicheskaya gazeta*, No. 41, 1971, p. 6. 1970—*Finansy SSSR*, No. 1, 1971, p. 10. 1971-72—Based on *Ekonomicheskaya gazeta*, No. 41, 1971, p. 6, and *Finansy SSSR*, No. 4, 1972, p. 8. 1973—*Finansy SSSR*, No. 4, 1974, p. 14. 1974—*Finansy SSSR*, No. 6, 1975, p. 59. 1975—*Finansy SSSR*, No. 5, 1976, p. 17. Indemnities for 1976-80 are estimated by applying indemnities-to-premiums ratio (.618) for the 1976-80 period as a whole to the premiums figures for individual years 1976-80. A total of 20.167 billion rubles in indemnities was paid in the 1976-80 period according to *Finansy SSSR*, No. 10, 1981, p. 5. Indemnities for 1981-87 are estimated by applying voluntary indemnities-to-voluntary premiums ratio of .7069 for 1981-84 (*Finansy SSSR* 1985, p. 11) to the voluntary premiums figures for individual years 1981-87.

15. Loan service: 1950, 1955—*N. kh.* 1958, p. 900. 1960, 1965-68—*N. kh.* 1968, p. 774. 1969-70—*N. kh.* 1970, p. 730. 1971—*N. kh.* 1972-72, p. 482. Since 1971, budget reporting has carried no item on loan service. Estimates for 1972-85 are found in A. Motivans, "Personal Income and Fiscal Policy in the USSR: The State Bond and the Lottery," CIR Research Note, May 1988. 1986, 1987—estimated.

16. Net borrowing is calculated as the sum of:

(A) the difference between long-term loans to the population outstanding at the end of the given year and loans outstanding at the end of the previous year. 1950, 1955—*Vestnik statistiki* No. 2, 1960, pp. 89-92. 1960—*N. kh.* 1962, p. 639. 1966-68—*N. kh.* 1968, p. 779. 1969—*N. kh.* 1969, p. 774. 1970—*N. kh.* 1970, p. 735. 1971-75—*N. kh.* 1975, p. 747.

1976-81—*N. kh.* 1980, p. 528; *N. kh.* 1982, p. 526. 1982-85—*N. kh.* 1985, p. 566. 1986—*N. kh.* 1986, p. 639. 1987—*N. kh.* 1987, p. 595.

(B) The difference between long-term loans issued by Stroybank to housing cooperatives outstanding at the end of the year and loans outstanding at the end of the previous year.

1950—estimated as 4 percent of long-term loans by Gosbank to the population, the same ratio as in 1955. *N. kh.* 1960, p. 854. 1955—estimated as difference between loans outstanding in 1955 and 1953, divided by 2, *N. kh.* 1960, p. 853. 1960—*N. kh.* 1960, p. 853. 1965-69—*N. kh.* 1968, p. 782-3. 1970—*N. kh.* 1970, p. 741. 1971-73—*N. kh.* 1973, p. 783. 1974—*N. kh.* 1974, p. 764. 1975—*N. kh.* 1980, p. 533; and *N. kh.* 1974, p. 764. 1976-80—*N. kh.* 1980, p. 528. 1981-83—*N. kh.* 1983, p. 558-9. 1984—*N. kh.* 1984, p. 585. 1985—*N. kh.* 1985, p. 571. 1986—*N. kh.* 1986, p. 639. 1987—*N. kh.* 1987, p. 595.

The state bank also issues short-term loans to buyers in retail trade. This series was carried in the annual statistical handbook until 1980. The statistical handbook for that year shows that the total value of such loans outstanding had been declining since 1977. Therefore, we have not attempted to take them into account in this line item.

17. Interest on savings: state savings banks offer the following major types of accounts for individuals:

- Demand deposits (*vkłady do vostrebovaniya*) paying 2 percent yearly interest.
- Time deposits (*srochnyye vkłady*) paying 3 percent yearly when held for more than six months.
- Lottery deposit (*vyigryshnyye vkłady*) paying an average 3 percent yearly in winnings.

See A. P. Sakharov and V. K. Chirkov, *Operatsii sberegatel'nykh kass* (Moscow: *Finansy*), 1973, pp. 21-23. For all years except 1950, interest payments are assumed to be 2.2 percent of average annual reported deposits. This assumption is based on *Vestnik statistiki*, No. 1, 1967, p. 22, which stated that interest on savings amounted to 383 million rubles in 1965—2.2 percent of average annual deposits in that year. Demand deposits make up the bulk of savings

bank accounts, amounting to 73.1 percent in 1971 according to *Den'gi i kredit*, No. 8, 1971, p. 68. The same article stated that no significant changes occurred in the distribution of deposits by category during 1965-70. In 1975 the proportions remained about the same; approximately 70 percent of savings deposits were in demand deposits according to *Finansy SSSR*, No. 4, 1976, p. 22. For 1950, however, interest payments are assumed to equal 3 percent of total deposits because, according to *Vestnik statistiki*, No. 1, 1967, p. 22, interest payments were lowered from 3-5 percent to 2-3 percent in 1955. 1950, 1955, 1968-69—*N. kh.* 1969, p. 585. 1966-67—*N. kh.* 1967, p. 699. 1965, 1970-75—*N. kh.* 1975, p. 597. 1976-77—*N. kh.* 1977, p. 434. 1978-80—*N. kh.* 1980, p. 408. 1981-82—*N. kh.* 1982, p. 414. 1983—*N. kh.* 1983, p. 444. 1984-85—*N. kh.* 1985, p. 448. 1986—*N. kh.* 1986, p. 448. 1987—*N. kh.* 1987, p. 406.



## Appendix C

### Sources and Methodology for Table A-2

1. Total deductions: all years—sum of lines 2 and 6-8.
2. Direct taxes:
  - a. 1950, 1955, 1960—*Gosudarstvennyy byudzhety SSSR i byudzhety soyuznykh respublik*, Moscow, 1966 (hereafter *Gos. byud.* and the appropriate year), p. 11.
  - b. 1965-70—*Gos. byud.* 1972, p. 12.
  - c. 1971-75—*Gos. byud.* 1976, p. 9. 1976-80—*Gos. byud* 1982, p. 11.
  - d. 1981-85—*Gos. byud.* 1987, p. 11.
  - e. 1986—*N. kh.* 1986, p. 628.
  - f. 1987—*N. kh.* 1987, p. 587
3. Personal income tax:
  - a. 1950, 1955, 1960, 1965-70—sources 2a and 2b.
  - b. 1971-75—source 2c.
  - c. 1976-80—source 2d.
  - d. 1981-85—*Gos. byud.* 1987, p. 11.
  - e. 1986-87—*N. kh.* 1987, p. 587.
4. Agricultural tax:
  - a. 1950, 1955, 1960, 1965-70—sources 2a and 2b.
  - b. 1971-75—source 2c.
  - c. 1976-80—source 2d.
  - d. 1981-85—*Gos. byud.* 1987, p. 11.
  - e. 1986-87—*N. kh.* 1987, p. 587.
5. Bachelor and small-family tax:
  - a. 1950, 1955, 1960, 1965-70—sources 2a and 2b.
  - b. 1971-75—source 2c.
  - c. 1976-80—source 2d.
  - d. 1981-85—*Gos. byud.* 1987, p. 11.
  - e. 1986-87—*N. kh.* 1987, p. 587.
6. Local taxes: it is assumed that building taxes and land rents, one-time collections at collective farm markets, and half of local taxes paid for state fees are paid by individuals. In addition, local taxes include an "admission tax" paid solely by institutions, according to the US Bureau of the Census, *The Soviet Financial System: Structure, Operation, and Statistics* (Washington: US Bureau of Census 1968), p. 127-28.
  - a. 1950, 1955, 1960—*Gos. byud.* 1966, p. 70, reduced by value of "admission tax" from *Gos. byud.* 1966, p. 70, and half the value of taxes paid on the three categories listed below.
  - b. 1965-70—*Gos. byud.* 1972, p. 77, reduced by value of "admission tax" from *Mestnyye byudzhety SSSR*, (Moscow: *Gosfinizdat*, 1970), p. 11. "Admission taxes" are assumed to have grown by 3 percent in 1969. Since 1969, "admission taxes" are assumed to be the residual—total local taxes less the sum of state fees and building tax and land rent.
  - c. 1971-75—*Gos. byud.* 1976, p. 74.
  - d. 1976-80—*Gos. byud.* 1982, p. 47.
  - e. 1981-85—*Gos. byud.* 1987, p. 40.
  - f. 1986-87—estimated.
7. Trade union dues: trade union dues are the product of trade union membership and 1 percent of the average annual wage. The rate is found in *Spravochnik profsoyuznogo rabotnika*, Moscow, 1979, p. 387. The average annual wage is derived by adjusting the average monthly wage, found in *N. kh.*, to an annual basis. Data on trade union membership are scattered but available for several years. Membership is established for 1949, 1954, 1959, and 1963 in Emily C. Brown, *Soviet Trade Unions and Labor Relations*, (Cambridge: Harvard, 1966), p. 48. Membership for 1967 and 1971 is given in *Sovetskiye profsoyuzy*, estimated on the basis of percentage of state labor force belonging to the trade unions or by percentage increases in the state labor force. State labor force data are found in *N. kh.* 1974, p. 549. Membership for 1976 is given in *Sovetskiye profsoyuzy*, No.22, 1976, p. 2. Membership for 1977 is given in *Ekonomicheskaya gazeta*, No. 12, 1977, p. 24. Membership for mid-1979 is given as 125 million in Moscow Domestic Service, 28 June 1979; membership for 1978 is assumed to be 120 million. Membership as of 1 January for 1980-86 is found in annual editions of *Ezhegodnik bol'shaya sovetskaya entsiklopediya*; the 1987 figure is estimated.

8. Party membership dues: party membership dues are the product of average annual party membership (estimated as of 1 July) and 1.5 percent of the estimated average annual wage of party members. Party membership is from *Spravochnik partiynogo rabotnika*, Moscow, 1978, p. 367. For 1978, from *Ezhegodnik bol'shaya sovetskaya entsiklopediya*, 1978, p. 12; for 1979, *Pravda Ukrainy*, 24 February, 1979; for 1980, Moscow Domestic Service, 1 September 1980; for 1981, *Ekonomicheskaya gazeta*, No. 16, 1981, p. 13; for 1982, *Partinaya zhizn'* No. 15, 1983. The average annual wage of party members is estimated to be 25 percent above the average for all state employees. The dues rate of 1.5 percent of wages is found in *Ustav kommunisticheskoy partiy Sovetskovo Soyuzu*, h 1964, p. 385. For 1983-86, see annual editions of *Ezhegodnik bol'shaya sovetskaya entsiklopediya*. For 1987, see *Partiynaya zhizn'* No. 21, 1987, p. 6.