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Soviet Retail Trade and Prices, 1940-1951
Edward Ames

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SOVIET RETAIL TRADE AND PRICES, 1940-1951

Edward Ames

The statistics presented in this paper, if they are to be believed, would indicate that total and per capita retail sales in the Soviet Union are now considerably above prewar levels. This conclusion differs drastically from the prevalent, but unsubstantiated opinion shared by most foreign students of the Soviet economy including the author. The methods used by the author in making the computations are complicated and indirect, since no economic fact, with the possible exception of armaments production, is kept more secret by the Soviet Government than the level of consumption. The author therefore has considerable reservations as to the precision of the series. As here computed, however, the statistics are reasonably consistent internally and do not obviously contradict other available information. The estimates used below may therefore be a first approximation to the true statistical series in the possession of the Soviet planning authorities, and as such may form a useful basis for the analysis of Soviet economic policy.

Trade Developments Since 1940

The basic data for the present discussion (Tables 1 and 2) show the value, volume and price of retail sales in the Soviet Union since 1940, both total and (in a special sense to be presently clarified) per capita.¹ The remainder of the paper is devoted to a discussion of the economic aspects of developments in Soviet retail trade, assuming that the basic data reflect approximately what has actually taken place.

Early war years.—During 1941-1943, the Soviet government set up a rationing system in which goods were available at prices prevailing at the outbreak of the war. On account of the loss of territory and population and also as part of a deliberate policy to restrict consumption the volume and the value of goods was drastically curtailed. During this period, the government diverted consumer goods output largely into the manufacture of supplies for the armed forces, reduced its stockpiles of consumer goods, and, particularly in 1943, began to make use of Lend-Lease aid in the retail trade system. All of these factors led to an increase in turnover tax revenue relative to retail trade. Whereas turnover tax revenue had been about 60 per cent of the value of retail trade in 1940, it amounted to 95 per cent of retail trade in 1942 and 1943. The average retail purchases per person employed outside of agriculture declined by more than one-third during this period, despite an increase in money wage rates. The government increased drastically its revenue from direct taxes and public borrowing from 19 billion rubles in 1940 to 55 billion in 1943. The rationing system stabilized purchases at about 3,400 rubles per employed person at constant prices. This did not produce financial

1/ The computation of the data is explained in the appendix.

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Table 1
Soviet Retail Trade, 1940-1951 a)

<u>Year</u>	<u>Total Trade</u>		<u>Volume</u> (1940=100)	<u>Retail Prices</u> (1940=100)
	<u>Value</u> (Billions of current rubles)	<u>Index</u> (1940=100)		
1940	175	100.0	100.0	100
1941	97	55.3	50.3	110
1942	69	39.4	35.8	110
1943	75	42.8	38.5	111
1944	110	62.8	54.9	114
1945	173	98.8	63.3	156
1946	247	141.1	82.5	171
1947	302	172.5	96.4	179
1948	325	185.6	119.7	155
1949	347	198.2	143.	139
1950	375	214.0	186.	119
1951 (fore- cast)	407	232.3	214.	113

a). The basic data refer to the sales of the retail stores operated by the Ministry of Trade and other state agencies as well as to retail sales of producer and consumer cooperatives. They do not include trade in the so-called "kolkhoz market" (discussed at the end of the paper) in which individual farmers, and to some extent collective farms sell surplus output to the urban population at uncontrolled prices. Almost all retail trade is made up of sales to individuals; only in very limited cases are business and other organizations allowed to make purchases on the retail trade market.

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Table 2
Wage and Salary Earners in the Soviet Economy, and the Value
and Volume of Retail Sales per Employed Person, 1940-1950

	Wage and Salary earners a)			Retail Trade per Employed Person		
	In millions of persons	Index (1940=100)	Increase over previous year (In millions)	In rubles	Index of Value (1940=100)	Index of Volume
1940	31.9 b)	100.0	-	5,489	100	100
1941	n.a.	n.a.	-			
1942	20.4	64.2 c)	-	3,382	62	56
1943	21.7	68.0 c)	1.3	3,456	63	57
1944	n.a.	n.a.	-			
1945	27.3 b)	85.6	-	6,337	115	74
1946	30.3	95.0	3.0 d)	8,152	149	87
1947	32.9	103.1	2.6	9,182	167	93
1948	34.9	109.4 e)	2.0 e)	9,312	169	109
1949	36.7	115.0 e)	1.8 e)	9,455	172	124 g)
1950	38.7	121.3	2.0 f)	9,638	176	148

a) Collective farmers, but not state farm employees, are excluded from this index.

b) The 1946-1950 Five-Year Plan called for 33.5 million workers and employees in 1950, an annual increase of 1.25 million for each year of the plan. In 1950, the wage bill was to be 252 billion rubles a year, compared to 162 billion in 1940, while annual average wages were to be 48 per cent over 1940. This calculation implies that the 33.5 million employment planned for 1950 was 105.1 per cent of 1940, and 6.25 million more than in 1945. (Stenographic report of March 1946 session of the Supreme Soviet, pp. 66-7.)

c) Voznesenski, Voennaya Ekonomika Sovetskogo Soyuza v period otechestvennoi voyny, Moscow, 1948, pp. 109, 142.

d) Volodarski, L., Poslevoennaya Pyatiletka v deistvii, Moscow, 1947, p. 55.

e) Kronrod, Ya.A. Ukreplenie denezhnogo obrashcheniya v SSSR, inflyatsiya v stranakh kapitalizma, Moscow, 1950, p. 60.

f) Trud, January 27, 1951.

g) Trud, February 14, 1951.

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stability, however, since the individual was unable to spend all of his income even after taxes in state stores. As a result, prices, prices on kolkhoz markets rose drastically, and at the beginning of 1943 reached a level 13 times prewar.

Later war years and early postwar period--During 1944-1947, the government attempted to regain financial stability by raising prices of goods in state-owned stores and thereby increasing the cash inflow of the State Bank relative to cash payments. The volume of trade rose steadily during this period and in 1947 reached 96 per cent of prewar. This development reflected to a considerable degree the increase in territory under Soviet control, but also the rise in imports of consumer goods (Lend-Lease in 1944-45, UNRRA in 1946, and imports from the satellites since 1945) and finally the diversion of output from military to civilian purposes. The value of trade per employed person almost tripled and in 1947 was higher by two-thirds than in 1940. The volume of trade, however, rose far less rapidly and remained below prewar levels.

Soviet trade policy in this period was obviously an attempt to repeat the efforts of the early 1930's, when the government had been able to abolish rationing after applying a similar type of policy.

The policy aimed at financial stabilization in three ways. The first was the introduction of the "commercial store" system in April 1944^{1/}, where unrationed goods were sold at prices approximating those of the kolkhoz market. These prices were extremely high in 1944 but later declined. The second way was the reintroduction at prices substantially above prewar levels of certain types of consumer goods which had not been produced at all for retail sale during the early period of the war. The third way was the raising of prices on bread and other basic foodstuffs at the end of 1946, when it became clear that the earlier measures would not prove sufficient to absorb all excess purchasing power. For reasons of internal policy, these prices had been kept constant throughout the war, and the government justified their increase by the poor harvest of 1946.

Discussions of Soviet trading policy during the period of rationing tend to emphasize the importance of the commercial store system. However, it would seem that increases in the prices of rationed goods were at least equally significant. Thus, although commercial store prices declined steadily from 1944 on, the index of retail prices continued to rise through 1947. This phenomenon was due in part to an increase in the volume of commercial trade relative to rationed trade, but also to the rise in the price of rationed goods. Since price indices are generally lacking for both rationed and

^{1/} Prior to April 1944, there had been a small amount of trade at "commercial prices" in a few "closed stores" selling only to favored groups, who were admitted by pass. The new "commercial stores" were open to the public.

commercial trade, any conclusions must be highly tentative. Nevertheless, the available data permit some tenuous calculations of the trend of commercial and rationed retail prices during the years 1944-1946, (Table 3).

Table 3
Commercial and Rationed Trade, 1944-1946

	<u>1944</u>	<u>1945</u>	<u>1946</u>
	(In billion rubles)		
Total retail trade a)	110	173	247
Rationed trade	104	156.5	182
Commercial trade b)	6	16.5	65
Tax revenue due to higher prices c)	5	10.7	35.5
Value of commercial trade at ration prices	1	5.8	29.5
Value of total retail trade at rationed prices	105	162.3	211.5
		(1940=100)	
Volume of total retail trade a)	54.9	63.3	82.5
Prices of rationed goods	109.2	146.4	146.4
	As a per cent of		
Commercial store prices			
Rational prices d)	600	284	220
1940 prices	655	416	322

- a) from Table 1.
 b) Lifits, M.M., ed., *Sovetskaya trgovlya za 30 let*, Moscow, 1947, pp 129, 154.
 c) Total revenue from this source in 1944-1945 was 15.7 billion. (*Finansy SSSR za XXX let*, Moscow, 1947, p. 70); the division of this revenue between the two years was estimated by the author. The 1946 figure is calculated on the assumption that prices of rationed goods were not raised in 1946. Actually, prices were raised at the end of the year. Thus some inaccuracy results from this method, but probably not enough to affect substantially the orders of magnitude involved.
 d) The ratio of total commercial sales to the value of commercial sales at rationed prices.

This particular interpretation of the data is not the only one possible; in fact, it is somewhat unsatisfactory, if only because the price index of rationed goods seems too low for 1944. However, all interpretations consistent with the data lead to the conclusion that rationed prices rose substantially in 1945 and that commercial store prices declined considerably throughout the period, both in absolute terms and relative to rationed prices.

Trade policy during this period had, however, only limited success. Although the government was able to reduce the note circulation, it did not eliminate excess purchasing power to a point where rationing could be abolished. This failure reflected in part a failure to maintain direct taxes and public borrowing from individuals at a sufficiently high rate: this type of revenue declined from 70.7 billion rubles in 1945 to 45.5 billion in 1946, and increased only to 50.6 billion in 1947. The drop was due to the abandonment of an emergency "war tax" on incomes at the end of 1945 and to the reduction in the intensity of bond drives.

Therefore, at the end of 1947, the government introduced a "currency reform", exchanging the old currency for a new one at a rate of 10 to 1.^{1/} This reform appears to have solved, at least temporarily, the problem of excess purchasing power. In addition to the currency reform, rationing was abolished in the decree of December 14, 1947.

Later postwar period--The period since 1948 has been characterized by reductions in retail prices. With the abolition of rationing, the commercial store system was discontinued and prices were set at a level above the former rationed, but substantially below the former commercial store level. By 1947, the volume of trade in the commercial system had been of some importance since it provided about 20 per cent of goods other than food and 40 per cent of clothing and shoes.^{2/} As a result, the price index as a whole declined by 13.4 per cent in 1948 as compared to 1947, despite the increase in prices as compared to the former rationed level. Since then, there have been successive annual reductions in prices: as calculated in the Appendix, the reductions amounted to 13.1 per cent in 1949, 19.6 per cent in 1950 and 6.7 per cent in 1951.

In 1948 and 1949, the volume of trade was below planned levels.^{3/} While statements dealing with the subject laid blame upon the Ministry of Trade for inadequate attention to variety and failure

^{1/} The fact that deposits of economic enterprises were not affected by the reform, and that savings deposits were affected only to a lesser extent serves to emphasize the fact that the reform was designed to affect only that portion of the economy, and that type of monetary circulation, which was related to individual consumption.

^{2/} Moskvina, V.I., *Rol sovetskoi trgovli v povyshenii materialnogo blagosostoyaniya trudyahshchikhsya*, Moscow, 1950, p. 14, Lifits M.M. *Sovetskaya trgovlya*, Moscow, 1948, p. 114.

^{3/} For 1948, this statement is confirmed by the Stenographic Report of the 1949 session of the Supreme Soviet, p. 121. The statement with regard to 1949 is based on the calculations given in the appendix.

to control quality,^{1/} the failure to buy might also have reflected a contraction of cash in circulation after the currency reform. This contraction in the currency might well have been below the levels that would have satisfied the liquidity preference of the population. Similarly, the overfulfillment of the 1950 plan might have reflected either an improvement in the operation of the stores^{2/} or the dishoarding of cash by the population, or both. Since the retail trade plans are in part based on a prediction of the amount of cash which the population may wish to hold, the hypothesis might be advanced that the underfulfillments in 1948-1949 and 1951 show an over-restrictive fiscal and monetary policy, while the overfulfillment of 1950 shows an insufficiently restrictive fiscal and monetary policy.

If the data on retail trade are deflated by the number of "workers and employees" (employment other than collective-farm members), the retail sales per capita appear to have been very stable since 1947. In 1950, average outlay per capita was 9,638 rubles as compared to 9,179 rubles in 1947, reflecting an increase of only 5 per cent. The rise in direct taxes and public borrowing from 50.6 billion in 1947 to 63 billion in 1950 and 77 billion (planned) in 1951 has apparently led to a considerable stabilization of purchasing power.

The Retail Price Index

Direct comparisons of prices at present with those prevailing before the war would seem an easy method of checking the orders of magnitude which one might expect from a price index constructed upon conventional principles. Unfortunately, it is difficult to obtain current retail prices and even more difficult to be sure that comparability of products is maintained. However, two sets of published data, one for 1940 and one for 1951, are presented in Table 4.

About all that can be concluded from this table is that some prices are higher than before the war and others are lower. From this meager assortment of data, it is impossible to conclude very much about price changes as a whole. At the same time, it is clear that prices are not 10, 5 or even 3 times as high now as before the war, and although the computed index of 119 probably would not be obtained from a detailed analysis, it is not obviously absurd.

^{1/} The former means that consumers were unwilling or unable to buy in state stores because the types of goods which they wanted were not on sale; the second means that the Ministry of Trade accepted goods of low quality, which it had to sell at a lower price than called for in the plan, with the result that sales value and turnover tax revenue plans were not fulfilled.

^{2/} This is claimed by the Minister of Finances in his budget address of 1951 (Pravda, March 8, 1951).

Table 4
Selected Soviet Retail Prices, 1940 and 1951, in rubles

	Unit	July 1 1940 a)	1951 b)
White bread	kg.	1.70	2.70
Rye bread	kg.	.85	1.70
Butter	kg.	26-28	34.
Sugar	kg.	5-5.5	11
Meat	kg.	14-21	13-28
Potatoes	kg.	.8-1.20 c)	.80
Cabbage	kg.	10 d)	.60
Milk	liter	2.10	2.40-3.40
Eggs	dozen	8.50	7
Tea	kg.	40	57-120
Man's suit	unit	695	600-1200
Leather shoes	pair	180-510	220-475
Cotton shirt	unit	123	75
Cotton shirt	unit	35	75-82

a) Monthly Labor Review, February 1941, p. 476.

b) The Economist, Nov. 17, 1951 as corrected in the issue of Nov. 24, 1951.

c) Source lists price as 8.00 rubles in the table, but from a footnote it may be inferred that this is a typographical error for .80 rubles.

d) Probably a misprint for 1.00 ruble.

Trade Volume and Standard of Living

The main claim that can be made for the series presented in Tables 1 and 2 is that the value, volume, and price indices approach those computed by the Soviet authorities. These series do not correspond to indices that would be obtained by customary American procedures using the same data. If for no other reason, great caution must be used in interpreting the figures.

This caution must extend in particular to the application of the last two columns in Table 2, which indicate that the per-capita volume of retail sales in 1950 was 48 per cent greater than in 1940. The difficulty lies not so much in the computation of the index since the annual increases (with the exception of those for 1945 and 1948) are taken directly from Soviet sources, but rather in the fact that the properties and behavior of the Soviet index differ from those of indices computed by American methods.

Total consumption in 1950 of a number of basic commodities was reported in the Soviet press as follows:

Table 5
Total Volume of Retail Sales of Selected Commodity Groups,
1950, in per cent of 1940

Meat and meat products	135
Fish	153
Butter and fats	160
Sugar and confectionery	130
Fabrics (cotton, linen, silk and wool)	138
Footwear	135

Source: Pravda, March 2, 1951

These figures compare with an average increase in the volume of retail sales of 86 per cent, reported in Table 1. It may be assumed that the commodities reported in the Soviet press have been carefully selected so as to present a picture of satisfactory economic progress. The list excludes, for instance, bread, flour, and potatoes, which form the backbone of the diet of the Soviet working population and the per-capita consumption of which has probably not substantially increased since prewar. It would seem extremely unlikely that overall consumption has, in the average, expanded more rapidly than the consumption of the commodities reported in the Soviet press. The difference between the data presented in Table 1 and the far more modest figures of Table 5 is in all probability, therefore, due to the peculiarities of the material as well as of the methods of Soviet statistics.

Five such peculiarities may be responsible for the extent of the statistical rise in the volume of retail trade sales as presented in Tables 1 and 2: (1) The method of deflating value figures by price changes used in Soviet statistics; (2) the rapid change in the composition of Soviet consumption due to the increased role of industrial in relation to agricultural products; (3) the increased role of imports in the supply of consumers' goods; (4) the shift in Soviet housing policy from public to private home construction; (5) the role of the so-called kolkhoz market, which is not covered by our basic data.

(1) The Soviet volume index is obtained by deflating sales (as calculated in the stores' account) of the retail trade network by a price index. The latter is computed on a year-to-year basis by weighing the prices of particular commodities in successive years by the quantities of the second year. Thus the index is constructed on a shifting weight basis, whereas American indices typically use the same set of weights for a series of years. Therefore, the joining of the various year-to-year changes to form a continuous series may lead to certain technical deficiencies resulting from lack of comparability of data.

These deficiencies impart a particularly strong bias to the index because changes in Soviet prices are not ordinarily "general" changes in the price level as a whole, but rather changes in prices of individual commodities. A decline in an individual price will inevitably be followed by an increase in consumption of the commodity in question relative to other commodities since the price reduction aims at directing demand to that commodity. By using as weight the quantity consumed after the price cut rather than the quantity consumed before the price cut, the Soviet statisticians obtain larger percentage price reductions and consequently larger percentage volume increases than if they used the system customary in the Western world.^{1/}

(2) In recent years, a number of commodities which were extremely high-priced and scarce in 1945 have become available to consumers in increasing quantities. This trend may be illustrated by the following data.

Table 6
Output of Selected Consumer Goods, 1950, as per cent of 1945

Passenger cars	a)	1071
Metal beds	b)	730
Rubber footwear	c)	700
Knives and forks	b)	600
Hosiery	c)	520
Chinaware	b)	480
Furniture	b)	300

- a) Central Statistical Administration, per cent of 1946.
- b) Pravda, July 15, 1951, Refers to Russia proper (R.S.F.S.R.), rather than the entire USSR.
- c) Pravda, April 17, 1951.

The post-war Five-Year Plan contemplated an increase in the total volume of trade of 28 per cent; food was to rise 23 per cent and "the main industrial goods" by 36 per cent as compared to prewar. The latter would seem to include textiles, shoes, etc., i.e. goods of the type given in Table 5. ^{2/} At the same time, the planned increases in production of certain durable consumer goods was very much larger: phonographs 218.7 per cent, radios 346.7 per cent, bicycles 358.5 per cent, and so on.^{3/} In general, the increase in the index of sales of "industrial goods" (non-food) in postwar years has been much more rapid than of foods.

^{1/} Chapter IX of N. Ryauzov and N. Titelbaum, Kurs torgovoi statistiki, Moscow, 1947, gives a reasonably clear description of the computation of the Soviet retail price index. By inference, it makes clear that the volume index is based upon frequently inadequate data.

^{2/} Lifits, M. M., ed. Sovetskaya Torgovlya za 30 let, Moscow, 1947, p. 139.

^{3/} Ibid., p. 144.

Table 7
Year-to-year Increases in the Volume of all Retail Trade
and Retail Sales of Food and Industrial Goods, in per cent

	<u>All Trade</u>	<u>Food</u>	<u>Industrial Goods</u>
1946	30	15	85
1947	17	n.a.	n.a.
1948	n.a.	n.a.	n.a.
1949	20	17	25
1950	30	27	35

Source: Central Statistical Administration

These data cannot be used to derive the relative importance of food and industrial goods in the overall index because certain elements of retail trade have not been included in the two categories given in the table. They suggest, however, that a part of the statistical increase in the index results from a changing relation between the industrial components of the index.

Certainly the data on production of consumer goods, other than food, do not support the contention that the volume of retail trade in 1950 was 86 per cent above prewar. The two main producers of industrial goods, the Ministries of Light Industry^{1/} and of Local Industry produced in 1950 17 per cent and 50 per cent, respectively, more than in 1940. The output of goods available for individual consumption may have increased somewhat faster than production, particularly in the case of the Ministry of Local Industry, which is apparently viewed as the main source of consumer goods, and which has been encouraged to stop producing goods on subcontract from other plants.

(3) Imported goods may account for a part of the statistical increase in the volume index. Before the war, the Soviet public preferred imported consumer goods to domestic goods. This situation distressed the Soviet Government^{2/} and induced it, as far as can be determined, to set very high prices on such goods. Since the end of the war, the Soviet Union has imported considerable amounts of consumer goods from the satellites, such goods being the main exportable commodity with which these countries could pay for their imports from the Soviet Union. Since the demand for such goods is thought to be large, the Soviet Government could presumably sell the increased quantity of these exports without reducing prices below the prewar level. If this shift is not adequately reflected in changed index weights, it would make the index register a rise in volume which actually represents, in part at least, a rise in the price level.

^{1/} In 1940 the enterprises now in the Ministry of Light Industry were divided between two People's Commissariats: Light Industry and Textiles. The two were combined at the beginning of 1949.

^{2/} See, for example, Mikoyan's speech at the XVIII Congress of the Communist Party in March 1939.

(4) The shift from public to private housing construction probably accounts for another portion of the statistical increase in retail trade. At the end of 1937, the first provision was made for support of private housing construction but the volume of such construction was small before the war. Since the end of the war, however, private housing construction appears to have become quite extensive. The materials used for this purpose are treated as a part of retail sales, whereas the materials used in state-financed housing construction are treated as a part of investment. Thus retail trade now includes a sizeable (but at present unmeasurable) element which before the war was treated as capital investment. This change makes the index probably register a rise in volume, but actually simply represents a change in Soviet housing policy.

(5) Finally, the existence of the kolkhoz markets outside of the trade system covered by our data makes it necessary to add another qualification if the index of retail trade volume is to be used as an index of per-capita consumption. Most of the money spent on retail purchases represents ultimately the payrolls and other out-payments of non-agricultural enterprises. However, a part, of varying size, of such out-payments is spent by collective farmers, who in turn earn a part of their income by sales of foodstuffs to the urban population in the kolkhoz markets. The purchasing power of the urban population depends therefore not only on the transactions reflected in our calculations, but also on the volume and price level of the kolkhoz markets. To the extent that this volume and this price level in 1950 differed from that in 1940, per capita consumption as given in Table 2 does not represent changes in the real purchasing power of the urban population. On the other hand, it would not be appropriate to deflate the retail trade figures by the total population, since the peasants are to a large extent self-supporting and do not rely on money for their food supply or housing.

Only extremely rough estimates are possible in evaluating the volume and price level of kolkhoz trade in 1940, 1947 and 1948.

Table 8
Kolkhoz market trade, 1940 and 1947-48

	<u>1940</u>	<u>1947</u>	<u>1948</u>
Value of kolkhoz market trade (in billions of rubles)	41.2	45	45
Index of volume (1940=100)	100	40	120
Index of price (1940=100)	100	270	91

Sources: 1940 value figure in LITs, M.M., Sovetskaya trgovlya, Moscow, 1948, p. 33. Kronrod, Ya.A. Ukreplenie denezhnogo obrashcheniya v SSSR, inflyatsiya i strqnakh kapitalizma, Moscow, 1950, p. 72, states that trade on the kolkhoz market and in cooperative trade amounted in 1948 to about one third of all trade, and that price reductions in 1948 led to a savings of 29 billion rubles. As shown in the appendix, this saving must be ascribed to the kolkhoz market rather than the cooperative markets. A number of sources have indicated that food prices dropped 70 per cent after the currency reform, and the Central Statistical Administration indicated that in the third quarter of 1948 the volume sold on kolkhoz markets was 22 per cent above prewar. The other figures can be deduced from these statements.

These estimates seem to indicate that both prices and quantities on this market were very volatile. Extreme caution must therefore be used in interpreting any statements in which the kolkhoz markets figure.

The evidence on kolkhoz market trade since 1948 is negligible. However, the non-agricultural labor force in 1950 was considerably greater than that planned in the postwar Five-Year Plan. The maximum sales by any individual peasant on the kolkhoz market is strictly limited by the size of the garden plot he is permitted to operate for his personal use and by the size of his tax payments. Since 1948, the Government has shown a strong tendency to restrict the peasants' individual operations. It would not be surprising therefore to find that the volume of goods sold on the kolkhoz markets in 1950 was little larger than in 1940 and perhaps less than in 1948. This conclusion is supported by the Central Statistical Administration report on the completion of the Five-Year Plan, which said only that the volume of kolkhoz market sales were "larger" than prewar. With supply on the kolkhoz market little changed but with money income of the urban population rising, we must assume that prices in the kolkhoz markets have risen substantially from their 1948 levels. Support for this assumption is found in the estimates of "savings to the population resulting from lower kolkhoz market prices", which were forecast at 23 billion in 1949, 30 billion in 1950 and 7 billion in 1951. ^{1/} Since the total value of kolkhoz trade was only about 45 billion rubles in 1948 and since the volume of kolkhoz market trade in 1950 was only at about the 1948 level, it would appear that prices have risen by perhaps 50 per cent since 1948.

Conclusion

Soviet propaganda has been quite cautious about making claims comparing the prewar and postwar standards of living, which suggests that a part of the change recorded in the Soviet volume index reflects the distortions attendant upon the great changes in internal conditions during and since the war. While it is likely that any index would indicate some increase in the standard of living as compared to prewar, it is also likely that an American type index would show a smaller increase than the Soviet index. Conversely, an index of the American standard of living in 1950 compared to 1940, if constructed by Soviet rules, would probably show a much larger increase than do those now in use.

^{1/} Kronrod, op. cit., pp. 72, 74, 76, 80; Gordin, op. cit.

APPENDIX

This appendix deals with the procedures used on reconstructing the series presented in Tables 1 and 2 of this paper. This computation and discussion both make use of certain auxiliary material, such as planned and realized budgetary revenue from the turnover tax, which is presented in Table I.

Table I
Soviet turnover tax revenue, 1940-1951
(in billions of rubles)

	<u>Planned</u>	<u>Actual</u>	<u>Turnover Tax Revenue as a percentage of retail trade</u>
1940	---	105.9	61
1941	125.9	93.2	96
1942	n.a.	66.4	96
1943	n.a.	71.1	95
1944	80.2	96.4	88
1945	118.1	123.1	71
1946	200.8	191.0	77
1947	254.7	239.9	79
1948	280.1	247.5	76
1949	262.2	254.6 a)	76
1950	238.4	236.1	63
1951	244.6	---	60

Source: Stenographic Reports of Supreme Soviet, and Plotnikov, K. N., Byudzhet Sotsialisticheskogo gosudarstva, Moscow, 1948

a) As calculated in this appendix.

Trade Statistics for 1940-1941

The figure of 175.1 billion rubles for 1940 trade is widely quoted.^{1/} The data for 1941 are obviously inadequate, because of the rapidly changing military scene and the resulting confusion in the reporting apparatus. It has been assumed, however, that the ratio of retail trade in 1941 to that in 1942 was proportional to turnover tax revenues in the two years. This figure is misleading because of the change in the relation between turnover tax revenue and retail sales during the war years, but is used here as an illustrative approximation; the analysis does not depend upon this particular figure.

^{1/} For example, Voznesenski, op. cit., 1948, p. 13.

Trade Statistics for 1942-1944

Sales by restaurants in 1940 amounted to 23.0 billion rubles^{1/}; in 1944 sales were 24.4 per cent greater than in 1940, or 28.6 billion. In 1940, restaurant trade was 13 per cent of all retail trade, and in 1944, its proportion was twice as great as in 1940, or 26 per cent of the total.^{2/} It follows that total retail trade in 1944 was 110 billion rubles. In 1944, retail trade was 35 billion rubles greater than in 1942, and in 1943 it was 6 billion rubles greater than in 1942.^{3/} Thus the value figures for 1943 and 1942 were 75 billion and 69 billion, respectively.

In 1943, the retail price index was 100.5 per cent of 1941 ^{4/}. In 1944, the volume of retail trade was 53.4 per cent greater than in 1942. ^{5/} The 1944 retail price index (with 1942 equal 100) may then be computed as $110/105.8=104$, where 105.8 is 69×1.534 . It is assumed that the 1942 price index (base 1940) was 110 at the 1941 level.

Trade Statistics for 1945-1951

Trade statistics for the period 1945-1951 are computed starting with 1947, for which relatively good data are available. They are then extended backward to 1945 and forward to 1951. In this fashion, year-to-year price and quantity indices may be linked together. The last step is to link the partial series thus prepared to the 1940 base. In detail, these four steps are accomplished as follows:

A. Trade in 1947 -- Trade in 1947 is calculated on the basis of the following table:

^{1/} Lifits, M.M., Sovetskaya Torgovlya, Moscow, 1948, p. 66.

^{2/} Ibid, p. 103.

^{3/} Ibid, p. 104, Voznesenski, op. cit., p. 126.

^{4/} Voznesenski, op. cit., p. 128, Pavlov, P.M. O planovykh rychagakh sotsialisticheskogo gosudarstva, Moscow, 1950, p. 88.

^{5/} Lifits, M.M., ed., Sovetskaya Torgovlya za 30 let, Moscow, 1947, p. 125.

Table II
Retail Trade, 1947
(In billions of rubles)

	Planned a)	Actual
Cooperatives	73.0	70.4 b)
Urban areas	17.5	22.4 c)
Rural areas	55.5	48.0
State Stores	251.6	231.7 d)
TOTAL	324.6	302.1

a/ O gosudarstvennom plane vosstanovleniya i razvitiya narodnogo khozyaistva SSSR na 1947 god, Moscow, 1947, p. 25

b/ Voprosy Ekonomiki, No. 6, 1948, pp. 99-100

c/ Lifits, M. M. Sovetskaya Torgovlya, Moscow, 1948, p. 125

d/ In 1947, state trade was 76.7 per cent of state plus cooperative trade. Gogol, B.I., Sovetskaya torgovlya i ee rol v narodnom khozyaistve, Moscow, 1948, p. 65.

A check upon this calculation is to be found in the fact that whereas state turnover tax revenue was planned at 254.7 billion rubles, actual revenue was 239.9 billion. The shortfall of 14.8 is roughly two-thirds of the 22.5 billion shortfall in trade, which corresponds with the relation which one might expect between trade and turnover tax revenue.

B. Trade from 1945 to 1947--In linking the value, quantity and price indices for the period 1945-1947, the following procedure was used. First, we have an index of the volume of trade for 1946 and 1947, based on 1945 equals 130 and 1947 equals 152.1/ Thus in 1946, volume was 14.5 per cent smaller than in 1947.

In 1946 turnover tax revenue was 191.0 billion and in 1947 it was 239.9 billion. Thus in 1946 turnover tax revenue was only 79.6 per cent of 1947, although the volume of trade was 85.5 per cent of 1947. In other words, turnover tax revenue increased more than the volume of trade, indicating an increase in tax rates. If wholesale prices were also constant, it would also mean an increase in retail prices. If turnover tax rates in 1946 had been the same as in 1947, turnover tax revenue would have been 14 billion less in 1947 than it actually was. The shortfall of 14 billion rubles thus represents difference of 4.4 per cent between 1946 prices and 1947 prices. At 1947 prices, 1946 retail trade value would have been 258.1 billion rubles; taking into account the price reduction, retail trade was therefore 246.7 billion.

1/ Kronrod, Ya. A. op. cit., p. 37.

In 1945, retail trade volume was 23 per cent less than 1946. At 1946 prices, total retail trade in 1945 would therefore have been 189.7 million. Assuming again turnover tax revenue proportional to trade volume, at given prices, the 1945 sales volume at 1946 prices would have yielded a turnover tax of 146.9 billion. Actual 1945 turnover tax revenue was 123.1. The shortfall of 23.8 billion prices represented a price difference from 1946 of 8.85 per cent. Thus the figure of 189.7 billion must be deflated to yield retail trade in 1945 prices of 172.9 billion rubles.

C. Trade in 1948-1951--The basic information used in the computation of trade for this period is to be found in the data on planned and actual turnover tax revenues, and also in the "savings to the population" which were expected to result from the various price reductions.^{1/} The method whereby these "savings" were estimated has never been made clear. It would seem, however, that they were computed as a part of the procedure for forecasting turnover tax revenue, and it has been assumed that they represented the decrease in revenue from this source forecast on the basis of the planned volume of retail trade. In other words, it has been assumed that "savings" affect only budgetary revenue from turnover taxes,^{2/} and not the revenue of enterprises producing consumer goods. The computations are slightly complicated by the fact that beginning in 1949, price reductions were announced effective March 1, rather than January 1, whereas "savings" are predicted on an annual basis. The computational procedure is shown in Table III.

D. Conversion to a 1940 base--The foregoing calculations give the value of trade in current rubles, and also year-to-year changes in prices and volumes.

The volume series is converted to a 1940 base by the following calculation. According to Trud, February 14, 1951, "the incomes of workers and employees in 1949, per individual employed, in comparable prices, increased 24 per cent over the prewar level . . . and in 1950 they increased by 19 per cent over 1949." (Soviet comparisons with "prewar" ordinarily use 1940 as base.) Similar statements indicate that these increases are due to increases in wages, increases in state social welfare programs, reductions in prices, higher pay to farmers, and so forth.^{3/} Characteristically, the statements

^{1/} December 17, 1947, March 1, 1949, March 1, 1950, March 1, 1951.

^{2/} An identical calculation, assuming that "savings" affect budgetary revenue from turnover tax and deductions from profits of enterprises yields results which differ by less than one per cent from those of Table III. This alternative assumption would imply that any wholesale price changes considered in the Soviet computations of "savings" would affect only budgetary income, and not the level or allocation of retained profits of enterprises.

^{3/} See, for example. Trud, January 27, 1951, February 8, 1951, Pravda, May 11, 1951.

Table III
Computation of Values, Prices and Quantities, 1948-1951
(Unless otherwise stated, figures are in billions of rubles)

	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>
(1) Planned turnover tax revenue a) Planned savings to population from price reductions	254.7	280.1	262.2	238.4	244.6
(2) Over 12-month period following reductions b)		57	48	80	27.5
(3) During calendar year c)		57	43.8	71.6	24.9
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(4) Turnover tax on planned volume, assuming no price reductions $\frac{(1) + (3)}{(1)}$		337.1	306.0	310.0	269.5
(5) Realized turnover tax revenue a)	239.9	247.5	254.6	236.1	n.a.
(6) Turnover tax revenue on realized volume and prices introduced March 1	239.9	247.5	250.4	227.7	n.a.
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(7) Planned volume of trade, per cent of previous year $\frac{(4)}{(6)}$ of previous year		140.5	123.6	123.8	118.2
(8) Value of trade, at prices of previous year, and planned volume of given year $\frac{(12)}{(7)}$ times (7) of previous year		424.4	401.2	437.2	443
(9) Value of trade, at prices and planned volume of given year $\frac{(8)}{(3)}$ minus (3)	324.6	367.4	357.4	365.6	418
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(10) Realized volume of trade, in per cent of previous year d)		124.2	120.0	130.0	115.0
(11) Indicated percentage fulfillment of retail trade plan $\frac{(7)}{(10)}$		88.36e)	97.1	105.1	97.3
(12) Indicated value of retail trade, as fulfilled $\frac{(9)}{(11)}$	302.1	324.6	347.1	374.7	406.7
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(13) Indicated price level, given year as percent of previous year $\frac{100}{(8)}$ minus (3)		86.6	89.1	83.6	94.4
(14) Indicated percentage decrease in prices in price cut. For 1949-1951 equal to (100 - (13) times 1.2 to "move forward" date of price cut from March 1 to January 1		13.4	13.1	19.6	6.7

a) From Supreme Soviet Stenographic Reports

b) For 1948-1950, Kronrod, op. cit., pp. 72, 74, 76, 80; for 1951 Gordin, Bolshevik No. 7, 1951. It has been assumed that the "planned savings to the population" affecting turnover tax revenue are all made in state trade in 1948, for at that time cooperative trade was operating under special legislation freeing it in part
(Continued on next page)

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include changes both on the income side (wage rates, budgetary welfare, outlays, etc.) and on the expenditure side (lower prices). The use of the expression "in comparable prices", which is ordinarily used only in the context of retail trade, suggests that what is meant is volume of trade per worker-and-employee. Since employment in 1949 was 15 per cent greater than in 1940, (see Table 2, p. 3), and since per capita trade is (assumed to be) 24 per cent in volume above 1940, it follows that total volume of retail trade in 1949 was 43 per cent higher than in 1940. This figure has been used.

The per capita figure for 1950 is obtained by deflating the value and volume indices (Table III) by the number of workers and employees (Table II). The figure of 19 per cent agrees with the data given in Trud, and cited on p. 17. This fact seems to indicate that the procedure used in this paper was also used by Trud; it is no proof for the correctness of the procedure, but it conforms to a pattern which may be found to exist in such computations.

The price series is put on a 1940 base by assuming that 1941 prices were 10 per cent higher than 1940 prices. This assumption has been justified in by quotations of individual retail prices,^{1/} and although this justification is of a very different order from the type of analysis presented in the remainder of these calculations, it is accepted as an approximation by students of Soviet prices.

Conclusion

From a statistical point of view, the following consideration may be proposed as particular method here used to place the postwar trade volume on a 1940 base: if the present trade volume were to be placed substantially lower than it has been here, at least one of the following conclusions would follow: (a) that the trade volume increased much less than 21 per cent (as here calculated) in 1945; (b) that the trade volume increased much less than 24 per cent (as here calculated) in 1948; (c) that the reported increases in trade volume given in Soviet publications are deliberately falsified. As to (a), the author who was in Moscow in 1945, was able to observe a considerable improvement in conditions during the year, and feels that, taking into account increases in the volume of trade in the devastated areas, the calculated increase is plausible. As to (b), it seems improbable that in view of the abolition of rationing in 1948 and the reduction of prices from the commercial store levels of the previous year, the reported increase would

(Continued notes)

- from price controls, and giving it some tax relief to encourage its expansion.
- c) Supreme Soviet, 1949 Sesown, pp. 15-16, gives the 1949 figure. TL figures for 1950 and 1951 assume roughly the same seasonal patterns as implied here.
- d) 1949-1950 figures are given by the Central Statistical Administration; the 1951 forecast is from Beriya's address of November 6, 1951.
- e) Percentage fulfillment of tax revenue plan.

^{1/} See Monthly Labor Review, February 1941, p. 476.

have been much less than calculated. The relatively low increase reported in 1947 (17 per cent) probably reflected the bad 1946 crop and a deliberate inventory policy pursued by the Soviet Government prior to the abolition of rationing. It is true that no increase was reported for 1948; but the planned increase in volume in 1949 was less than the reported increase in 1948, and the Soviet Government might have been hesitant about showing such a decline. As to (c), the experience of students using Soviet statistics shows that such statistics seem in general consistent, if carefully used and interpreted, and that however much the Soviet Government may wish to mislead, its published figures are based upon "real" accounting and statistical analysis. This does not mean that the statistics are compiled by the best possible methods. However, this paper does not try to give an index, as it might be prepared using American methods; it merely aims at reconstructing an index which the Soviet Government has not published in detail. The author feels that the indices of Table 1 of the text may be a fairly accurate reproduction of the Soviet indices, and leaves undecided the question of what indices the Soviet Government would have obtained if it had used some other, and perhaps better methods in its computations.

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