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RECENT TRENDS IN CONSUMPTION AND
DISPOSABLE MONEY INCOME IN THE USSR

(ORR Project 14.4590)

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1. Introduction

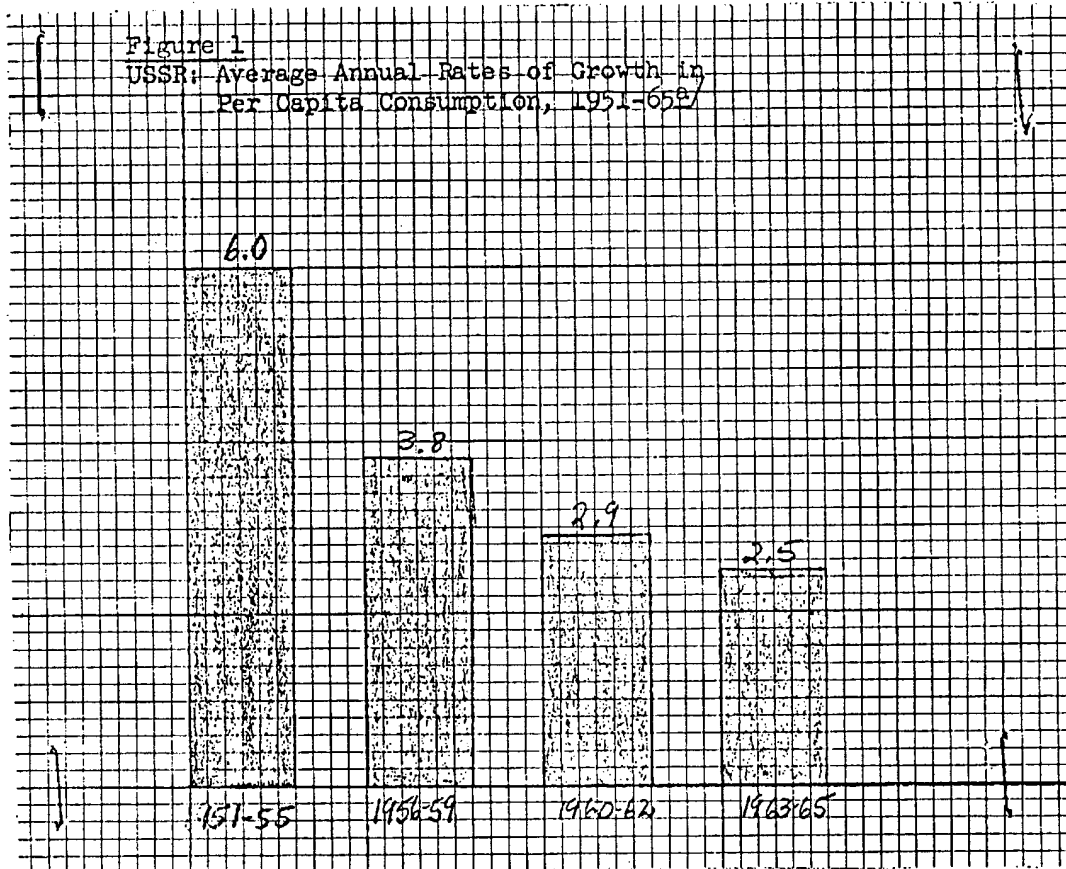
One of the basic measures of the performance of an economic system is its success in providing for the material welfare of its members. With such ringing phrases as "Everything for man, for his welfare!" 1/ Soviet ideologists constantly proclaim Communism's superiority in this respect. Certainly one of the principal aims of Soviet policy is to raise the level of living of its citizenry. However, this goal must compete for the allocation of resources, with the demands for military and space programs and for modernization of plant and equipment throughout the economy. Because of its control over economic resources, the regime can manipulate the annual share of gross national product (GNP) allocated to consumption. In addition, through its investment policies the regime can determine the level of inputs for those sectors of the economy that directly supply the consumer -- the light and food industries, agriculture, and services.

The formulation of a policy for allocation of resources among the major claimants -- consumption, defense, and investment -- is intertwined with the whole fabric of Soviet domestic and foreign policy. In the absence of Stalinist repression, the leadership must heed to some extent the popular expectations of a better life. Moreover, the prosperity of the industrial West continues to whet the appetites of Soviet consumers for more rapid progress. Growing contact with the West presumably accelerates this process.

II. Trends in Consumption

The Soviet population lives markedly better in the mid-1960's than it did at the end of the postwar reconstruction. Between 1950 and 1958 per capita consumption grew at an average rate of over 5 percent per year, but since 1958 the rate has fallen by one-half (See Figure 1)*. Nevertheless Soviet consumption per capita has increased from 27 percent of US consumption per capita in 1955 to 31 percent in 1964.

(Figure 1)



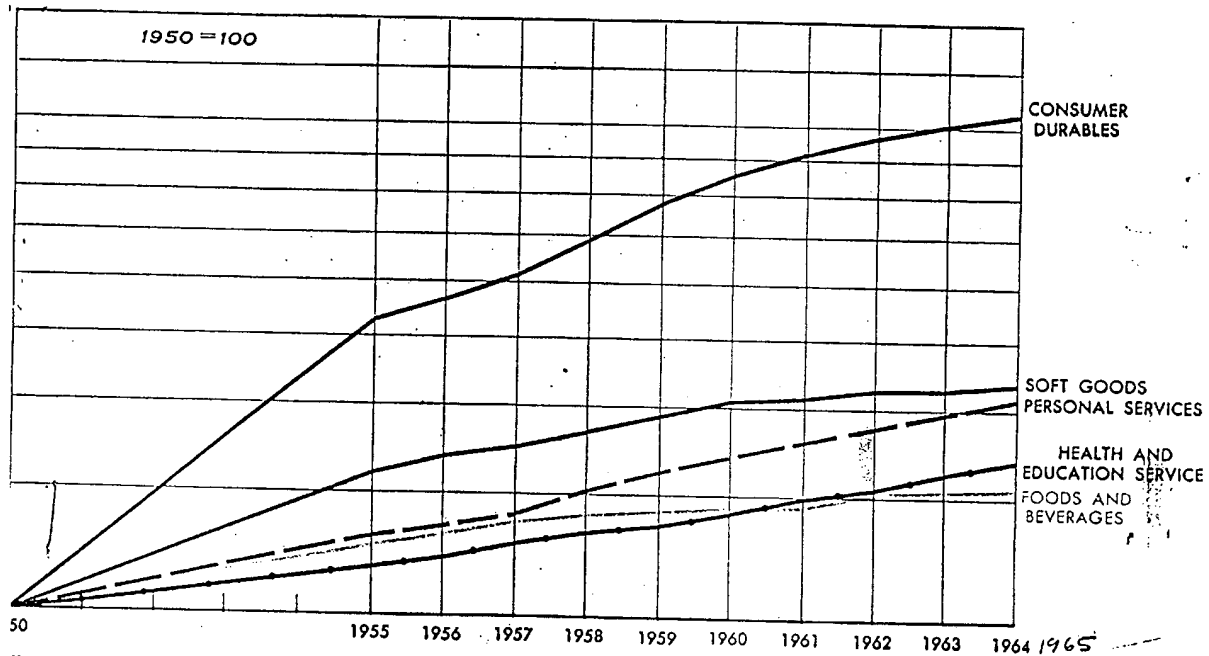
a/ Derived from the index of consumption, Appendix A.

* Some part of this decline may have been offset by better quality of goods and services. Despite the myriad complaints concerning the quality of goods, observers agree that both variety and workmanship of consumer products have improved noticeably in recent years.

With respect to the major categories of consumption, the annual rate of increase in the consumption of food has been low and declining over time; that of services has been steady and somewhat higher than that for food; that of soft goods has been greater still but has slowed down appreciably; and that of durable goods has grown most rapidly (See Figure 2).

(Figure 2)

**USSR: Index of Growth in Per Capita Consumption
by Major Component
1950-65^{a/}**



a/ See Appendix A for a discussion of the nature of the data used to derive the indexes and the method of construction.

A. Food and Beverages

Soviet citizens consume on the average about 3100 calories per day, or about the same as in the United States. This level, reached by 1953 and

maintained since, is adequate for the energy requirements of the Soviet populace. But along with the expansion in real incomes of the population since 1955, the demand for better quality food such as meat and eggs, more variety, and more conveniences has grown. In these respects, changes in the daily diet have not matched consumer expectations. Table 1 shows the trends since 1950 in per capita consumption of the major categories of food.

Table 1
USSR: Average Annual Rates of Growth in Per Capita
Consumption of Food, 1951-65 a/

	<u>1951-58</u>	<u>1959-65</u>
All food		
of which:	4.2	1.7
Animal products	4.8	2.2
Processed foods	8.4	4.3
Basic staples	0.4	-1.2

a/ Separate foods were aggregated by use of price weights. Animal products include meat, fish, milk and milk products, and eggs. Processed foods include canned goods, macaroni, margarine and vegetable oil, sugar and confectionery, beer, wine, champagne, and vodka. Basic staples include vegetables, potatoes, and bread and flour.

Per capita consumption of basic foods such as bread and potatoes fell absolutely after 1955 as the supply of animal products and processed foods such as sugar, canned goods, and beverages increased rapidly. After 1959, however, the demand for more meat and dairy products was thwarted by the failure of domestic supply to maintain previous rates of expansion and the unwillingness of the regime to authorize imports. As a result the rate of increase in per capita availability of animal products declined by more than one-half during 1959-63. Beginning in 1964, however, the decline in this growth rate apparently was halted.

As incomes rise, consumers tend to substitute animal products, vegetable oils, fats, sugar, and other "quality" foods for the starchy staples such as potatoes and grains. A change in the share of calories derived from starchy foods, the so-called starchy-staple ratio, therefore, is a good indicator of the changes in the quality of diet that have occurred in the USSR. In 1953, 70 percent of the caloric content of the average Soviet diet originated in starchy food, 15 percent in animal products. By 1960 the percentage of calories from starchy foods had dropped to about 62 percent (compared to 24 percent in the United States ^{2/}) while animal products supplied almost 20 percent, a decided improvement in diet. From 1960 to 1964 however, the starchy-staple ratio held nearly constant. But following a large boost in production of meat and milk in 1965, increased availabilities ^{of these foods} reduced the starchy-staple ratio to 57 percent.

B. Services

Housing is a particular vexing problem for the Soviet consumer. Rapid urbanization and low rates of investment in new housing combined to hold per capita living space* for the entire country static during the early 1950's at slightly more than 5 sq. m. The new Khrushchev government pledged *itself* to "overcome the housing shortage," and in 1957, increased state investment plus encouragement of private home building led to a sizable boom. But these

2 ^{2/} U.S Department of Agriculture, US Food Consumption, Statistical Bulletin No. 364, p. 65.

* Living space is defined in the USSR to include living rooms, dining rooms, and bedrooms; it does not include bathrooms, kitchens, hallways, and corridors.

policies were both short-lived, and by 1964 the level of investment in housing construction was 11 percent below the peak achieved in 1959. Housing space constructed during the Seven Year Plan (1959-65) fell 30 percent short of the target of nearly 1 billion square meters. Per capita living space in 1965 was about 6½ sq. m., far short of the officially designated minimum norm of 9 sq. m. and less than half the available space per capita in Austria or West Germany. ³/~~5A~~/

Although there has been no striking improvement in the per capita supply of living space, there has been an appreciable improvement in personal privacy.

Rooms are smaller, thus fewer people per room, and most new state-built apartments now include private baths and kitchens... In addition to new building, much of the reconstruction of old buildings emphasizes creation of smaller, more rationally planned apartments.* However, in Moscow alone, 40 percent of the housing in 1964 was obsolete by Soviet standards, with tenants forced to use communal kitchens and bathrooms. ⁴/~~5B~~/

The other services have advanced steadily. Household expenditures for utilities continue to grow, although a large backlog of demand for provision of gas and electricity remains. The population has also used an increasing

³ ~~5A~~/ UN Economic Commission for Europe Annual Bulletin for Housing and Building Statistics for Europe, Paris 1963, pp. 6, 7, 12, 38.

⁴ ~~5B~~/ Stroitel'naya Gazeta, 23 June 1965, P.3.

* Discussing the reconstruction of one old building in Moscow, a recent article noted that where 5 or 6 families formerly lived in one apartment and shared the kitchen, after reconstruction each family has an individual apartment with private kitchen. ^{5A}/~~5A~~/

^{5A}/~~5A~~/ Vechernaya Moskva, 15 January 1966, p.4.

share of its growing income for transportation, personal care, and repair services. During the past few years the planners have placed great emphasis on increasing the number of clothing and appliance repair shops, laundries, drycleaners, and other service outlets. In part, this policy stems from the increasing stocks of consumer durables and the desire of the regime to rely on commercial channels for the performance of chores formerly done in the home.

Communal services -- health, education, and other ^x "free" services (museums, libraries, and the like) -- amount to 10-14 percent of total consumption.

Achievements in health and education have been impressive, as ^{shown by} the comparative indicators in Table 2. The quality of many communal services, however, is below U.S. standards, the degree varying from field to field.

Table 2

USSR and US: Comparative Indicators of Health and Education Services
Selected Years, 1950-64

	USSR a/			US
	1950	1958	1964	1964
Doctors (per 10,000 persons)	13.2	16.8	20.5	14.7
Hospital beds (per 10,000 persons)	56	74	94	88 b/
School enrollments (thousands)	34,752	31,483	46,664	41,417 c/
Number of teachers (thousands)	1,475	1,900	2,435	1,651 c/
Number of students per teacher	23.6	16.6	19.2	25.1

a. Narodnoye Khozyaystvo SSSR v 1964, (hereafter N.kh.) p. ~~677-8~~ for education; p. 733 for health. ₆₆₇₋₈

b. Hospital's Guide, August 1, 1965, Part II, p. 450.

c. U.S. Statistical Abstract, 1965, p. 120.

C. Soft goods

Per capita consumption of soft goods -- mainly fabrics, clothing and shoes -- increased at an annual rate of about 8 percent between 1950 and 1959. Since 1959, however, the rate of growth has slowed to an average of 2 percent per year. This decline appears to be due in large part to increasing consumer resistance to poor quality and inappropriate assortment of clothing and shoes.

Although the over-all rate of increase in consumption of soft goods has fallen, consumption of some kinds of soft goods has been maintained at a high rate. For instance, in 1964 sales of ready-made clothing were more than four times the level of 1950. On the other hand, sales of fabrics increased by only one and one-half times, reaching a peak in 1960 and declining absolutely in volume in the early 1960's. This difference reflects a significant shift from home production to the purchase of factory-made clothing.

D. Consumer durables

During 1951-58 production of consumer durables increased at an average rate of $16\frac{1}{2}$ percent per year, declining to 8 percent per year during 1959-65. From slightly more than one-fourth of total sales of nonfood goods in 1950, durables moved up to almost 40 percent in 1963. ^{6/} Stocks of consumer durables on a per capita basis remain very low because of the negligible level of stocks in the base period and, possibly, because of the relatively short service life of Soviet-made durables. Comparisons of

^{6/} Sovetskaya Torgovlya, Moscow, 1964, pp. 68-69

the stocks of durables in the USSR and the United States are shown in Table

3. Even these comparisons result in substantial overstatement, considering the lower quality of Soviet durables and the absence of an estimate for retirements for the USSR.

Table 3

USSR and US: Estimated Stocks of Selected Consumer Durables, Selected Years, 1955-64

	USSR				US
	1955	1958	1960	1964	1963
Sewing machines	31	64	92	N.A.	135*
Radios**	66	105	130	161	974
Television sets**	4	12	22	56	318
Motorcycles and scooters	4	8	13	23	4
Refrigerators	5	8	13	27	288
Washing machines	1	6	13	47	216
Electric vacuum cleaners	2	5	8	18	211

* Electric only.

** Based on official figures.

E. Problems in the Consumption Sector and Leadership Response

The improvement made to date in consumption is far from sufficient, nor are the problems in maintaining and expanding supplies of consumer goods easy to solve. The leadership has been particularly concerned about the failure of agriculture to provide the minimum output required for self-sufficiency in food, necessitating the import of large quantities of grain.*

Clearly, more resources had to be committed to the output of foodstuffs. In

* Following the disastrous harvest of 1963, the Soviet Union imported about 11 million metric tons of wheat and flour. The good 1964 harvest did not permit an adequate margin for rebuilding depleted stocks, and the poor climatic conditions in 1965 which resulted in another harvest shortfall again forced substantial imports.

In contrast to the situation in 1963, however, the quality of bread apparently did not fall (see Section V, p.).

addition, there has been a persistent piling up of inventories of various kinds of consumer goods. The Soviet consumer, having achieved a standard of living above the minimum subsistence level, has shown great reluctance to purchase the available supply of clothing, shoes, and other soft goods despite the ever-increasing level of his money income and savings. At the same time there exists a large pent-up demand for ^{some} ~~some~~ consumer durables, as shown by the long waiting lists at retail outlets. Finally, the transition to an urban society has not been supported by adequate provision of housing, utilities, repair services, and other amenities taken for granted in Western Europe.

1. The Unsatisfied Demand for Food

Progress in improving consumption of food has become stuck on that part of the leadership's program calling for a better and more varied diet. Although real incomes of the Soviet population have increased appreciably over the past 15 years, the diet has not improved commensurately, nor has the share of income spent on food declined. Households in the USSR spend about one-half of their total income for food, compared with less than 20 percent of take-home pay spent by the average US citizen. ^{7/} The unsatisfied demand for high-quality foodstuffs, especially animal products and fruits, finds expression in the continued high prices for these items in the collective farm markets, ^{(CFM),} where prices reflect changes in demand and supply. Although the proportion of foodstuffs purchased in state stores has been increasing since

^{7/} U.S. Department of Agriculture, National Food Situation, November 1965, p. 5.

1950, the collective farm market continues to play an important role in supplying the population with items in short supply in state outlets -- usually perishable foods such as vegetables, fruits, and animal products.

The new leadership has recognized the importance of the CFM, both as a source of supply for the consumer and as a source of income for peasants and collective farms. In May 1965 a liberalization of the rules of trade⁸ was announced. ~~7A/~~ All price ceilings were lifted, funds were made available to modernize and expand existing markets and to construct new ones. In addition, measures were taken to improve the transportation of surplus agricultural products to the market. As a result, in 1965 quantities sold in the CFM increased and prices were down by 6 percent. ~~7B/~~⁹

2. The Slowdown in the Rate of Growth of Consumption of Soft Goods

The decline in the growth of consumption of soft goods as a whole can be traced in large part to the stagnation in physical volume of sales in spite of a moderate growth in overall production. Repeated price cuts for various commodities, particularly cloth, have failed to increase the volume of sales significantly. As a result, a severe problem of inventory accumulation has arisen. Inventories more than doubled from 1959 to 1964, whereas retail sales increased by less than 30 percent (see Table 4). At the end of 1964, retail inventories of soft goods were 12.7 billion rubles, more than half as large as total retail sales of soft goods in that year.*

⁸ ~~7A/~~ Sovetskaya torgovlya, 20 May 1965, p. 1.

⁹ ~~7B/~~ Izvestiya, 3 Feb 66, p. 2.

* For a fuller discussion of the Soviet inventory problem, see Marshall Goldman, "The Reluctant Consumer and Economic Fluctuations in the Soviet Union," in The Journal of Political Economy, August 1965, p. 366.

Table 4

USSR: Retail Sales and Inventories of Soft Goods,
Selected Years, 1950-64

	1950	1952	1958	1960	1963	1964
	Billion Rubles					
Sales <u>a/</u>	9.5	10.8	18.7	21.8	23.3	23.9
Inventories <u>b/</u>	2.3	4.2	5.8	8.3	11.7	12.7
	Index (1950=100)					
Sales	100	114	197	229	245	252
Inventories	100	183	252	361	509	522

a. N.kh., 1964, p. 629 except 1952 from N.kh. 1962, p. 521.

b. N.kh., 1964, p. 637 except 1952 from N.kh. 1962, p. 527.

The difficulty of bringing production and consumption of a given commodity into equilibrium in the USSR arises primarily because neither production nor price reacts adequately to changes in demand. The state retains control over the total volume of consumer supplies. Moreover, within the limits of resources devoted to consumption, planners and enterprises do not adjust to changes in consumer demand. Enterprise managers hesitate to innovate when changes may increase the risk of underfulfilling the plan; rather than do so, they will resort to production of goods that they know are unwanted. In recent years the regime has adopted increasingly radical measures in an attempt better to match supply and demand. Although some price cuts on hard-to-sell consumer goods, such as certain clothing, shoes, and household appliances, were announced at the end of 1964, the problems of excess inventories did not appear to be diminishing after the first quarter of 1965. Further retail price reductions, ranging from _____

6 percent for certain types of clothing to 30 percent for some fabrics in excess supply, were announced in the latter part of April. Simultaneously, the rural-urban price differential on some goods [redacted] was abolished,* [redacted] In the hope that it would encourage rural consumers to purchase more of the goods in excess supply.

Another approach to the problem of matching supply and demand, watched with interest by both Soviet and Western observers, is the experimental establishment of direct contractual relations between factories and retail outlets.** These were first tried in the Bol'shevik and Mayak clothing firms and were then extended to some 400 clothing, shoe, textile and leather plants, andⁱⁿ October 1965, [redacted] into the food industry. In order to be successful the experiments must assume that managers of retail outlets are familiar with customer desires and have the necessary incentives to balance sales with purchases. Finally, there must be an arrangement whereby the factory managers are penalized for not producing the assortment reflected in the retail orders.

* The rural-urban price differential was completely abolished in January 1966.

** Begun under Khrushchev, these experiments not only have been permitted by the new regime to continue but have been expanded. For a more detailed account of these experiments see the paper by Imogene Erro in this volume.

Not

The results of the new system are, as yet, inconclusive. However, the mere fact that the experiment has been extended ^{at least,} suggests that the leadership believes the consumer must be allowed to have a greater influence on the assortment of goods.

3. The Pent-up Demand for Consumer Durables

Unsatisfied demand for consumer durables confronts the planners with a different problem from that in the soft goods sector -- competition with producer and defense durables for machine-building capacity. Although current production of consumer durables is only 10 percent of total production of all machinery and equipment, the potential impact on the Soviet economy of a shift toward their production is enormous. So far the leadership's solution to the surplus demand has been to use artificial restraints (for example, to freeze waiting lists for automobiles) or to arbitrarily restrict the extent of the market. Thus, in the past there has been no intention to provide a car for each family; the 1964 stock of cars indicates a ratio of one car for every 305 people in the USSR (compared with one car for fewer than three people in the United States). 10/ Rather than supply each household with domestic appliances, the regime in the past has talked of and has supplied some rental centers and laundromats. In addition, crowded housing conditions and a restricted supply of electricity help to hold back demand for large household durables. Finally, discontent with the quality of various consumer durables and the difficulty in getting repairs done promptly and correctly, or even done at all, undoubtedly has curtailed demand.

10/ Survey, October 1965, p. 98.

Because enterprises lack incentive to respond to consumer demand and because of the relatively low priority given producers for allocation of high-quality materials, machinery, and man-power to the production of consumer durables, poor quality and lack of assortment have been especially pronounced.

Nevertheless, a strong demand for selected durables continues to exist. New waiting lists for car purchases were opened in mid-1963 (the previous lists had closed in 1956), and within a very short time hundreds of Moscovites had signed up in spite of relatively high prices.* Just how high car prices are was made clear when it was revealed that a Volga costs just under 1900 rubles to produce. !!! It costs a Soviet citizen about 5500 rubles to purchase that Volga.

Waiting lists also are evident ^{for other durables.} In mid-1964, for example, store clerks were estimating a waiting period of 3 to 4 years for the more desirable refrigerators. In view of the rapid increase in production, it is quite likely that queues shortened during 1965, but a wait is still necessary for the larger, more desirable models. Washing machines now are readily available in larger cities but rural areas are not so well supplied.

The supply situation for vacuum cleaners, popular brands of television sets (including the lower priced models), and transistor radios is relatively better with regard to both quality and quantity. Despite the increasing availability of various durables, however, sales of certain items -- sewing machines, watches, bicycles, and cameras -- have actually declined in

* The current ruble-dollar price ratio for cars averages about 2 to 1 compared with 1.3 to 1 for food and 0.9 to 1 for all consumer goods and services as a whole (the geometric average of ratios using Soviet and US weights).

!!! Pravda, December 26, 1965, p. 2.

recent years. Moreover, the planners have had only limited success in correcting the imbalance of supply and demand for the several types of durables in surplus inventory. Price reductions and the offering of installment credit have failed to raise sales significantly.

The new five-year plan has set a few goals for consumer durables production -- television output is to double, refrigerator output is to triple, and the gross value of furniture output, currently 1.8 billion rubles is to increase by more than 50 percent. Even if these goals are met, stocks per capita of these goods will remain considerably below stocks in the US. Most striking, however, is the plan to increase production of passenger cars at an average annual rate of 30 percent compared to 8 percent per year since 1960. Nevertheless this means producing only 700,000 to 800,000 cars in 1970 (less than one tenth of 1965 US production), a quantity that will not satisfy all of the would-be customers.

4. Inadequate Expansion of the Service Sector

Urbanization and the increase in disposable money income have placed a strain on retail facilities and on the provision of personal services, medical and educational services, transportation, and communications. In addition, plans for increasing the number of laundries, public baths, and hair-dressing and barber establishments are continually underfulfilled. Moreover, the growing stock of consumer durables, coupled with their low quality, requires a major expansion in the repair network. A casual survey of the daily press discloses a flow of articles and letters detailing the inadequate number ^{and} variety of repair facilities and the poor quality of the services rendered. Much of the inadequacy stems from the low priority given

to construction in the services sector. The new leadership has promised rapid growth of expenditures in this area, calling the fall in investment in the services sector that occurred in 1959-62 "regretable." ^{Nevertheless} the expansion of facilities remains grossly insufficient and the endemic problems of poor-quality repair work will not be solved easily. Public services in rural districts lag far behind ^{those in} the cities. ¹² ~~the~~

In addition, urbanization has placed a growing strain on the supply of housing. ^{It is true} ~~However,~~ ^{that} much of the excess demand for housing as expressed in long waiting lists would disappear if the state charged full-cost rentals. State-built housing (currently about 40 percent of the total stock*) is heavily subsidized; as a result of the nominal charges, the average family unit spends only from 3 to 5 percent of its income for housing. Paying full costs would increase rents by 80 percent. ¹³ ~~or~~ Intensifying the pressure on the supply of new state housing has been the decline in private home building.** The ~~Five-Year Plan~~ (1966-70) indicates that no major shift in investment toward state housing is planned, nor is the leadership apparently going to take the obvious solution of encouraging private home building.

* During the Seven Year Plan, however, an average of 60 percent of the housing constructed was in the public sector, thus the share of state-built housing is increasing.

** Throughout the 1950's private home construction by individuals accounted for more than one-third of the value of investment in housing and will be slightly under one-quarter for the decade of the 1960's.

¹²⁸ Izvestiya, 27 July 1965, p. 3.

^{132A} Voprosy ekonomiki, no. 10, 1964, p. 7.

III. Trends in Disposable Money Income*

Disposable income in the Soviet Union has increased almost 200 percent since 1950. In contrast to increases in consumption, however, the major increases came during 1955-65 when disposable income increased at an average annual rate of 8 percent. This rapid growth came about because: (1) wage reforms in 1956-60 and in 1964 sharply raised wage levels for workers employed in state enterprises; (2) a social insurance reform in 1956 liberalized payments and broadened coverage for state workers, and beginning in 1965, collective farmers and their families were included under a state social insurance program; (3) abolition of compulsory bond purchases in 1958 and a partial abolition of income taxes in 1960-61 increased take-home pay; and (4) the share of money income in the income of kolkhoz peasants rose rapidly.

Table
5

Disposable income would have grown even faster had not some of Khrushchev's more flamboyant promises been delayed or shelved. For example, the wage reform for service workers and a rise in the minimum wage scheduled for 1962 were not implemented until 1964-65. A further increase in the minimum wage promised by 1965 was not made.

A. Money Earnings of Wage and Salare Workers

Wages and salaries of workers in state owned enterprises constitute the largest segment of money income, rising from 65 percent of the total in 1950 to 72 percent in 1965. During this period the average wage of state workers grew

* Disposable income is defined as the total money receipts of the population during a given year minus direct taxes on the population. Money receipts include: (1) money wages and salaries; (2) net income from private activities; (3) dividends paid members of cooperative organizations; (4) pensions, grants, stipends and other transfer payments; (5) interest on bonds and savings; and (6) net borrowing. This concept of income excludes all imputed payments such as in-kind payments. Direct taxes include: (1) income tax on the earnings of the population and (2) local taxes, fees, fines, etc.

Table 5

USSR: Indexes of Disposable Money Income, Selected Years, 1950-65 a/

(1950 = 100)

	1950	1955	1960	1961	1962	1963	1964	1965
Total money income	100	135	187	206	222	231	245	269
1. Gross earnings of workers and employees	100	139	200	221	237	248	266	294
2. Collective farm wage payments and household income from sale of farm products	100	131	190	214	250	268	271	N.A.
3. Transfer payments	100	141	234	258	271	264	280	N.A.
Total State Deductions ^{b/}	100	129	96	99	102	106	114	122
Total Disposable money income	100	136	202	224	242	252	266	294
Per-Capita disposable money income	100	125	170	185	197	202	211	229

a/ See Appendix B for sources and methodology.

b/ Total state deductions include direct taxes on the population, local taxes, fees and fines, and state loans.

by 50 percent, largely as a result of major wage reforms during 1956-60 and 1964-65. The earlier reform affected 50 million workers, added 4.5 billion rubles annually to the wage bill, and raised the average wage of workers in industry, construction, and state agriculture 13 to 25 percent. ¹⁴/₉ Designed to restructure the chaotic wage system in the "productive" sectors of the economy, the reform established a set of coordinated job classifications and ^a simplified wage structure reestablished base pay as the predominant share of workers' income, and fixed a minimum wage of 27 rubles a month.

To complete the restructuring of wages, service workers were scheduled to receive wage increases in 1962 and the minimum wage was to be raised ^{from 27} to 40 rubles a month for all workers and employees. However, the second reform was postponed until 1964-65, when 20 million service workers were granted wage increases averaging 21 percent; these increases added 3.3 billion rubles annually to the wage bill. ¹⁵/₁₀ As can be seen in Figure 3 this change greatly narrowed the differential in wages between the "productive" and service sectors. Also implemented at this time was the postponed hike in the minimum wage.

Fig. 3

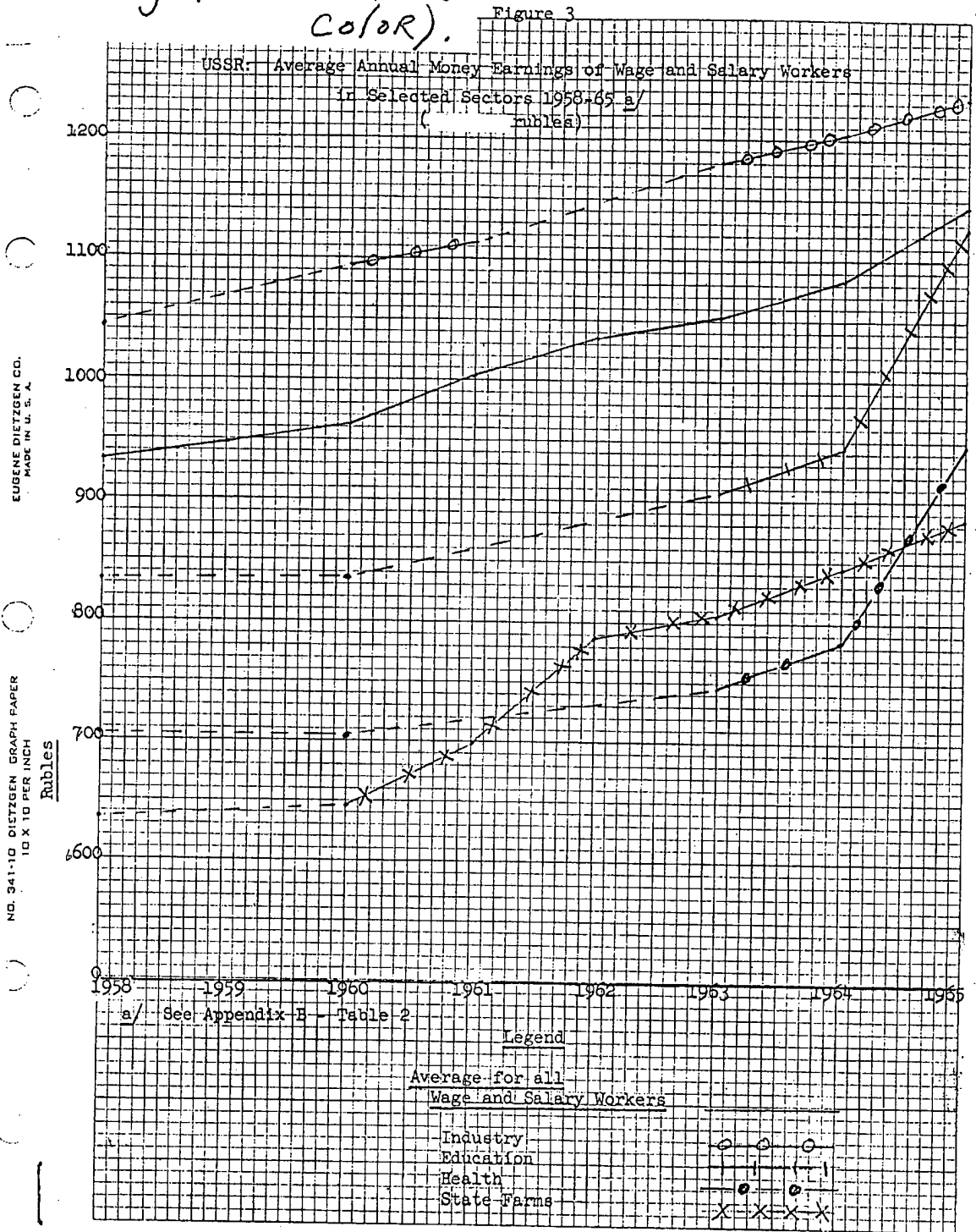
B. Money Incomes of Collective Farmers and Secondary Income of Rural Residents

The peasant population in households attached to collective farms has two primary sources of money income: (1) the remuneration for labor services expended on the collective farm and (2) money income from the sale of farm products produced on private plots. Other rural residents, including state

¹⁴/₂ I.N. Popov-Cherkasov, Organizatsiya zarabotnoy platy pabochikh sssr, Moscow, 1965, p. 12.

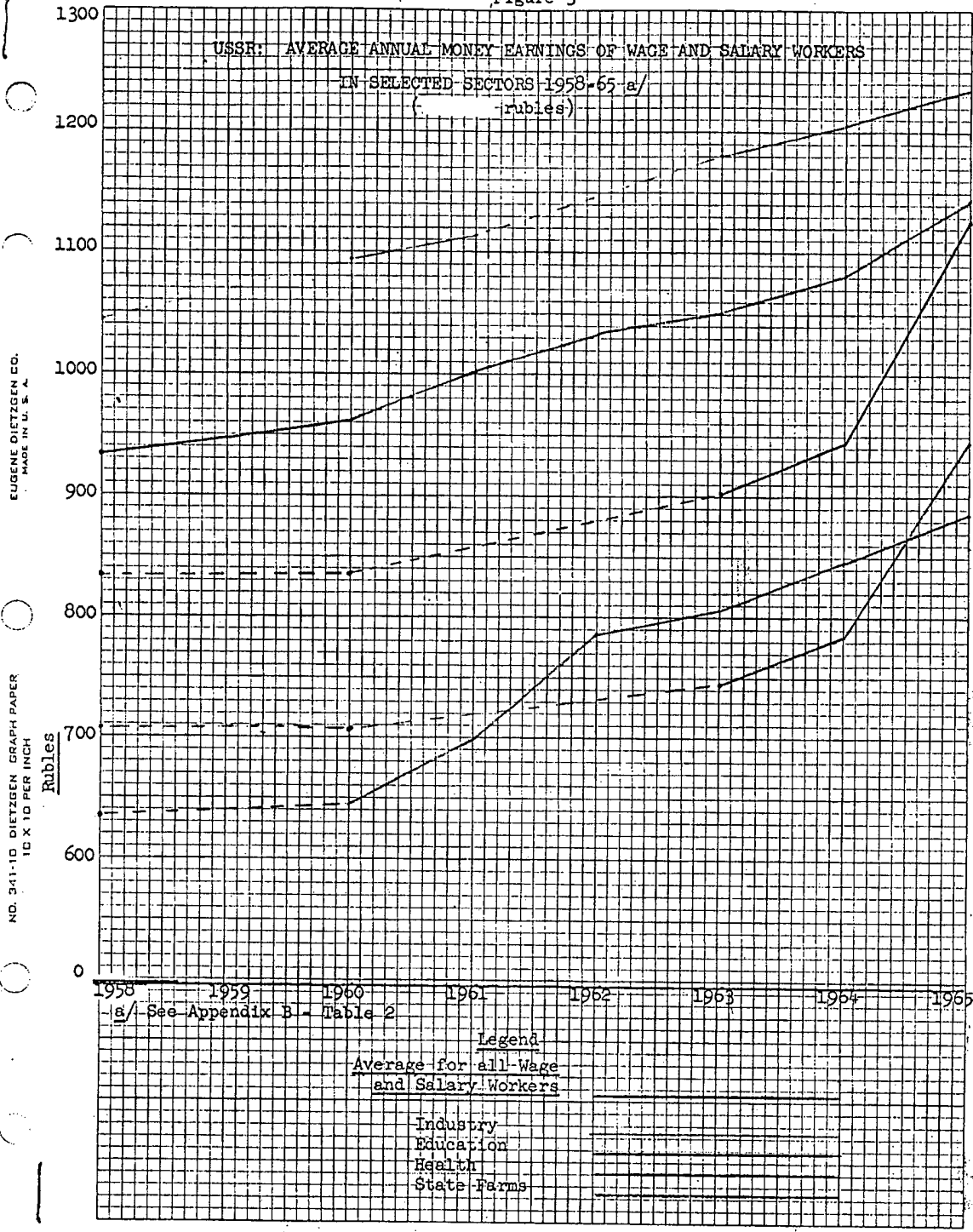
¹⁵/₁₀ Ibid.

ALTERNATIVE
PRESENTATION of
Figure 3 (without
color).



Broken line indicates data not available for intervening years.

Figure 3



Broken line indicates data not available for intervening years.

workers, supplement their wages with income from the sale of farm products.

During the past decade the average money earnings of collective farmers derived from work on the farm has almost tripled and cash payments now make up about three-fourths of the farmers' total income, compared with 42 percent in 1955. Yet collective farmers remain at the bottom of the economic ladder, with cash incomes averaging less than 400 rubles a year in 1964, or about one-third the level of earnings of state workers. In part, the rapid rise in money payments merely represents the implementation of a state policy to pay money wages rather than to make payments in-kind. In-kind payments as a share of total income paid out by the collective farm to its members declined from 58 percent in 1955 ¹⁶/~~58~~/ to 26 percent in 1962. ¹⁷/~~22~~/ Thus, the tripling of money wages paid to collective farmers by no means represents a three-fold increase in total income.

About one-half of the total money income of collective farm families is derived from the sale of farm products either obtained from their "own enterprise" -- land allotment and livestock held by the household -- or from the sale of products received from the collective farm as in-kind payments. ¹⁸/~~13~~/ These sales are made in collective farm markets (CFM), where prices fluctuate with changes in supply and demand (See Table 6). In general, prices in the CFM declined gradually during the 1950's and increased moderately during the 1960's.

¹⁶ ~~58~~/ Kh. E. Pomanov, N.S. Panin (ed.), Obshchestvenniye fondy kolkhozov i raspredeleniye kolkhoznykh dokhodov, Moscow, 1961, p. 269.

¹⁷ ~~22~~/ N. Polyakova, Ekonomika sel'skhozayastvennykh predpriyattii, Moscow, 1964, p. 289.

¹⁸ ~~13~~/ Ye. V. Kasimovskiy, Problemy ekonomiki truda, Moscow, 1965, p. 169.

Table 6

USSR: Indexes of Sales and Prices in the
Collective Farm Market, 1958, 1960-64 a/

	(1950=100)					
	<u>1958</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
Sales	104	94	93	95	85	85
Prices	94	93	100	107	111	116

a/ N.kh. 1964, p. 657.
N.kh. 1962, p. 540.

However, incomes from CFM sales depend not only on prices but also on the supply of goods both in the CFM and in state outlets.* Thus, between 1955 and 1959 the increase in volume of sales more than offset the decrease in prices, and incomes from CFM sales increased by approximately 40 percent. Incomes stagnated during 1960-61 despite higher prices. Khrushchev's restrictions on private agriculture during the early 1960's succeeded in reducing CFM volume sharply. Increased prices did, however, result in a moderate improvement in incomes after 1962. The removal of Khrushchev's restrictions ¹⁹~~is~~ by the present

insurance program, workers are entitled to benefits for sickness, maternity, and large families, and pensions for old age and disability. Two major social insurance reforms have increased the cost of social insurance from 8 percent of the total state budget in 1955 to over 14 percent in 1965. A revision in the pension law in 1956 sharply raised the size of ^{coverage} payments and considerably increased the number of pensioners by (1) granting partial pensions to workers who have not worked the required number of years necessary for a full pension, (2) abolishing the time limitation following retirement in which one could apply for a pension, and (3) adding new categories of persons entitled to pensions. As a result, the number of state pensioners increased by 2,500,000 between 1956 and 1958 and by an average of 850,000 annually between 1958 and 1965, when today 30 million persons draw state pensions.

The second major reform, approved by the Supreme Soviet on 15 July 1964, brought 15 million collective farm households -- more than 50 million persons -- under a state social insurance system beginning in 1965.* ^{the adoption of} Until this program, the establishment of pension programs at collective farms had been optional and entirely at the expense of the individual farm. As a result, many farms had no program at all, and ^{even those} programs usually failed to match the benefits ^{available to} workers at state enterprises.

Under the new program for collective farmers, benefits are smaller and eligibility requirements more stringent than those ^{for state} workers. The minimum old age pension for collective ^{farmers} is 12 rubles a month -- for state workers, 30 rubles a month. Both the collective farmer and the state

* Excluded from coverage under this program are collective farm members who work only on private plots as well as chairmen and certain technical workers who qualify for benefits under the program for state workers.

employee must work 25 years to be eligible for a full pension, but the state employee of retirement age can qualify for a partial pension after only 5 years, whereas there is no provision for partial pensions for collective farmers. The retirement age for male collective farmers is 65 but for state employees only 60 years. Nevertheless, collective farmers are benefiting significantly from the new program, ^{which} increased the number of collective farm pensioners from 3 million to 6.8 million, and the average pension increased from approximately 6 rubles a month to about 17 rubles a month. ^{More} than 1 billion rubles was ^{thus} added to the money incomes of collective farmers during 1965.

Funding provisions for the program, which is officially estimated to have cost 1.3 billion to 1.4 billion rubles in 1965, limited the cost to the state by requiring mandatory deductions from the gross revenues of the farms.

Collective farms were required to contribute 2.5 percent of their gross revenues to a centralized social insurance fund, ^{in 1964} and ^{in 1965} 4 percent. In addition, a state subsidy, averaging 400 million rubles a year during 1965-67, is to be granted to meet the estimated cost of the program.

State deductions from workers' incomes declined from 14 percent of total money income in 1955 to 7 percent in 1960, ^{substantially} increasing disposable income during this period. The reduction was caused primarily by the suspension of compulsory bond purchases in 1958. Further, Khrushchev announced in 1960 a program for abolishing personal income taxes, which averaged 6.6 percent of total money income in that year. The program began in October 1960 with the lowest income groups, and was to be applied to a progressively higher income

group each October thereafter until all income tax payments were eliminated in 1965. After completing about one-tenth of the program, however, the regime announced in September 1962 that additional military spending brought about by the "increasingly aggressive actions of imperialism" necessitated a suspension of the program. ²⁰~~21~~ In a speech to the 23rd Party Congress Brezhnev made a vague promise to reduce the income tax "in the future". In 1965 state deductions still amounted to 6.4 percent of total money income.

IV. Implications of the Diverging Trends in Income and Consumption

In recent years increasing money incomes combined with a slowing growth rate in consumption ^{have} led to an imbalance between total money supplies and the amounts needed for purchases of consumer goods and ^{have} thus generated inflationary pressures of varying intensity.

For the purpose of this paper inflationary pressure is defined as the excess monetary demand for consumer goods caused by a gap between the amount of money supplied to the economy and the amount actually needed to purchase current levels of output at planned prices. Given the presence of excess demand for goods, "open" inflation results if prices rise _____

in response. If, instead, prices are fixed by decree, so-called "repressed" inflation exists in that consumers are forced to hold cash or savings deposits ~~in excess~~ of the amount desired, that is, they would spend the money if only the proper goods and services were available. It is important to note that under "open" inflation the higher prices become someone's higher income, whereas under so-called "repressed" inflation, this element of the inflation process is largely absent.

A. Indications of Inflation

At best, the measurement of inflationary pressures in the USSR is difficult because of the lack of comprehensive official data on income, price levels, real output, and the money supply. No attempt is made in this paper to measure an "inflationary gap." Instead, the trends in prices are presented, using the differential between state retail prices and collective farm market prices as the best indicator of inflationary trends over time. Further evidence is provided by examining trends in savings.

1. In the USSR, almost all nonfood goods and most food goods are sold in state stores at fixed prices. Inasmuch as these prices are changed infrequently, excess monetary demand has resulted typically in "repressed" inflation. Some of this excess purchasing power flows into the CFM, the only organized free markets in the USSR, and, therefore, prices in the CFM ^{are} ~~represent~~ a barometer of the extent of "repressed" inflation. The ratio between prices in the CFM and state retail prices for food is probably the best single measure of the failure of the state to drain off excess purchasing

power. Although during 1959-64 the ratio of the prices in the two markets rose from 1.31 to 1.63, the ratio still is well below the ratio in 1955.

USSR: Ratio of CFM Prices to State Retail Prices for Food, 1955-64

<u>1955</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
1.75	1.38	1.31	1.35	1.43	1.50	1.54	1.63

Furthermore, the ratios prevailing in recent years are still far below the ratio of about 2.2 in 1940. Even these ratios overstate the case for the importance of "repressed" inflation because they do not take account of the diminishing importance of the collective farm markets in total retail trade.

Franklyn Holzman has suggested the use of a measure of repressed inflation that expresses the ratio of the difference between actual expenditures in collective farm markets and these same expenditures valued at official state retail prices to the sum of total state retail sales plus collective farm market sales valued at state prices. ²¹~~22~~ An index of these adjusted ratios (1955=100) presented in the tabulation below shows a 150 percent increase in the index between 1950 and 1955, indicating increasing inflationary pressure. This sharp increase was due primarily to large reductions in state retail prices, which resulted in shortages and queues. During 1955-60 the ratio declined to below its 1950 level, not because of changing prices, but because of a decline in the higher priced CFM sales as a share of total sales. Since 1961 the ratio has again increased, reflecting rising CFM prices.

<u>1950</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
39	100	59	40	41	32	31	36	37	36	41

21 ~~22~~ F. D. Holzman, "Soviet Inflationary Pressure, 1928-57: Causes and Cures," Quarterly Journal of Economics, May 1960, p. 170.

2. Savings deposits* more than doubled from 1958 to 1965 compared with an increase in retail sales (for all goods) ^{of} about 50 percent. Trends in retail sales and personal savings accounts during 1950-65 are indicated in the following table.

Table 7

USSR: Retail Sales and Personal Savings Accounts,
Selected Years, 1950-65

	<u>1950</u>	<u>1958</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>
	<u>Billion Rubles</u>						
Retail sales <u>a/</u>	40.9	71.8	85.0	91.2	95.5	100.4	108.3
Personal savings accounts <u>b/</u>	1.9	8.7	11.7	12.7	14.0	15.7	18.7
	<u>Percent Increase over Previous Year</u>						
Retail sales			3.4	7.3	4.7	5.1	7.9
Personal savings accounts			7.0	8.5	10.2	12.1	19.1

a/ Sovetskaya torgoviya, Moscow 1964, p. 39, N.kh. 1964, p. 621, Tsifrakh, 1965, p. 144.

b/ N.kh., 1960, p. 854, N.kh. 1964, p. 595, Tsifrakh 1965, p. 152.

The rapid increase in personal savings held in banks suggests that it is not a lack of aggregate consumer purchasing power that is causing growing inventories of selected goods. Rather, the improved income and living standards of the Soviet consumer now permit him to be more selective in his purchases. In other words, the sellers' market characteristic of the Stalin era, when extreme conditions of scarcity assured a ready market for whatever goods were available, has given way to a buyers' market for many products.

* Data on total savings held by Soviet households (personal savings accounts deposited in state banks plus personal holdings) are not published. However, there is no evidence that deposits are increasing as a share of total savings.

A second consideration is the evident confidence the average citizen now places in the value of the ruble.* Almost every Communist state has a history of ruthless devaluation of money holdings, and the current confidence of the Soviet population, if well founded, represents an important economic development.

B. Leadership Response

Although the indicators described above do not provide precise measures of the degree of repressed inflation both suggest that such pressures have grown in the past several years. These indicators, coupled with the growing divergence between incomes and outlays on goods and services have posed a potentially serious problem for the Soviet leadership. In contemplating an anti-inflationary program in 1962, the regime was able to consider a range of actions: (1) raise retail prices; (2) freeze wage and salary levels; (3) reduce the rate of increase in transfer payments; (4) increase income taxes; and (5) reinstitute compulsory bond purchases. As noted above, Khrushchev chose to postpone the promised increases -- in the wages of service workers, the minimum wage of all workers, and the minimum pension level. Also, shelved in 1962 was the program to abolish the income tax. Finally prices were raised, up to 30 percent, for selected consumer items -- which led to civil unrest. ²² ~~21~~

* The Soviets are in the embryonic stage of studying consumer demand and apparently have not developed sample surveys to determine, for example, the motivations for savings (in and out of banks). But a recent issue of the official journal of Gosbank did provide the following:

"Savings (in banks) by the population in the USSR promote a proper and planned budget for the worker. In some cases, the savings are deposited for a determined purpose; for example, for the purchase of a television set, refrigerator, motor scooter, furniture, or for future purchase of an apartment in a housing cooperative, or for trips to resorts..." ~~22~~/23/

~~22~~/ Dengi i kredit, No. 6, 1965, p. 10-11.

~~22~~/ New York Times, 8 October 1962, p. 1.

→23/

Although inflationary pressures apparently were not easing, Khrushchev in 1964 announced the intent to grant substantial wages increases to service workers and to provide pensions for collective farmers -- programs that would add some 5 billion rubles annually to money incomes. These measures were carried out in late 1964 and 1965.

V. The New Leadership -- Consumer-Oriented or Not

The new regime has not come out with a clear-cut indication of its overall policy toward the Soviet consumer. Nevertheless, during the year and a half since Khrushchev's removal there have been new initiatives on the part of the leadership, some in response to immediate problems in the consumption area and others undertaken with a long-range view. A brief description of some of the measures adopted to increase the level of living is presented below. In addition, an analysis is undertaken of the current leadership's response to the harvest failure of 1965 compared with Khrushchev's handling of a comparable problem in 1963. A comparison of the emergency measures enacted in the two cases provides insight into the ^{comparative} attitudes of the two regimes and is perhaps suggestive of a more positive approach on the part of the new government in at least maintaining levels of living under abnormal conditions.

A. Consumer Policy Before the 1965 Harvest Failure

Up to the time of the disappointing 1965 harvest, there were a number of indications that the new regime had adopted measures that would raise the proportion of national income allocated directly to consumption. In addition, there was evidence that a larger share of investment resources was planned for consumer-oriented programs. The leadership in outlining its 1965 plan and in subsequent statements promised the following:

- (1) A promised increase of more than 7 percent in real income ^{in 1965,}
twice the officially claimed average rate of growth for the period 1959-64. Great stress, moreover, was laid on an expected sharp rise in the quality of

goods and services. Although the 1965 plan did not show how the overall rise in real incomes was to be obtained, it appeared to be based on the presuppositions of a much improved supply of processed foods (reflecting a 10-percent jump in 1964 farm output), a marked improvement in the quality of goods and services, an increase of 13 percent in urban-type housing construction, an acceleration in the output of selected consumer durables, and a major expansion in personal services.

(2) A new farm program, promulgated in March 1965, which called for large increases in the allocation of resources to socialized agriculture over the next 5 years, thus apparently committing the state not only to achieve self-sufficiency in basic foods, but also to effect a major improvement in the quality of the diet.

(3) An agreement signed with the Italian industrial firm, Fiat, "to cooperate with the USSR in the field of automobile production." If this accord is carried out, it will bring about a significant improvement in the quality of Soviet cars as well as expand the number produced. Moreover, Fiat may be asked to assist in establishing a network of service and parts centers. The ancillary facilities to support the operation of personally owned motor vehicles -- gasoline stations, repair shops, and the like -- are practically nonexistent at present.

(4) Selective reductions on retail prices of soft goods in surplus supply.

(5) The relaxation of some restrictions on private activity in two important areas of consumption -- home construction and the cultivation of gardens and maintenance of livestock.

(6) An increase in the share of new orders for chemical equipment used in the production of consumer-oriented products.

Some of the above measures were short run, reminiscent of those taken after Stalin's death and again shortly after Khrushchev's ascendancy to power in 1957, and may have been designed to win popular support. But some, such as the 5-year program for agriculture, suggest that the regime felt impelled toward material improvement of certain areas of consumption.

During the latter part of 1965, however, after the regime was made painfully aware of the low 1965 wheat harvest, there was a moratorium on statements or actions either in affirming previously taken actions or in taking new steps designed to raise consumption levels. This situation is in keeping with the lack of evidence of clear-cut decisions on relative priorities for the several major resource claimants in the new Five-Year Plan (1966-70). Undoubtedly, the recurrence of a harvest failure (the second in 3 years), requiring outlays of another \$500 million for wheat purchases, reopened the question of over-all resource allocations. In addition to possible conflict within the leadership over the relative priorities of, for example, consumption versus defense, there may be serious disagreement as to emphasis on alternative measures to further consumer welfare. For example, the views of those political leaders in favor of allocating more resources to agriculture than outlined in the March 1965 Plenum and at the expense of, for example, expanded programs for consumer

durables may be in conflict with other views as to relative priorities.

This it would appear logical for the leadership to hold in abeyance any announcements concerning decisions affecting consumer welfare if major allocational problems remain unresolved.

B. The Regime's Response to the 1963 and 1965 Harvest Failures

There was a marked contrast in the regime's response to the serious shortfalls in production of wheat in 1963 and 1965. After the earlier crisis the Soviet leaders attempted to enforce a number of conservation measures to reduce the overall use of grain. Among these steps were (1) an increase in the yield of every ton of grain by raising the extraction rate in milling grain into flour, thus degrading the quality of bread*; (2) restrictions on the sale of bread and flour in retail stores; (3) a step-up in the drive against feeding bread to livestock; (4) a revival of campaigns against waste and theft of bread and grain products; and (5) a reduction in the need for feed grains by slaughtering more livestock than usual. These and other measures were taken in September 1963 very soon after the Kremlin became aware of the harvest failure.

The 1965 crisis, on the other hand, appears to have been deliberately underplayed by the new leadership, which referred only obliquely to the need for large imports of wheat, reassuring the population that the government had taken measures to provide for "normal supplies of bread and bread products." Apparently no restrictive measures comparable to those employed by Khrushchev were adopted. The reluctance of the new regime to take such steps may be due in large part to the experience gained under comparable conditions during the 1963-64 consumption year. Certain measures, such as the campaigns against feeding of bread to livestock, were ineffective; others, such as degrading the quality of bread, caused severe

* The extraction rate in milling grain into flour is expressed as a proportion or percent and determines the volume of flour that can be obtained from a given volume of grain. For example, if 72 kilograms of flour are obtained from 100 kilograms of grain, the extraction rate is said to be 72 percent. The quality or desirability of the bread baked from flour is inversely related to the extraction rate -- the higher the extraction rate in milling the grain, the lower the "quality" or consumer satisfaction.

widespread consumer dissatisfaction, manifested in reduced labor productivity and civil disturbances.

~~In considering~~ ^{Among the} ways to hold down grain imports and thus conserve foreign exchange, the raising of the extraction rate when converting grain into flour is probably the most tempting alternative open to the regime. For every percentage point rise in the average extraction rate in state milling enterprises, about 370,000 tons* of grain, or roughly \$30 million in hard currency, are saved in terms of wheat imports foregone. This saving assumes the maintenance of total flour production in the present consumption year at approximately the same level as in previous years. Furthermore, it does not allow for the loss of the residual in milling grain into flour, part of which can be processed into livestock feed.

The average extraction rate for flour (at state mills) dropped from 87 percent in 1940 to 85 percent in 1950 and to 81 percent in 1955, where it remained fairly constant through 1962. Based on incomplete data, the extraction rate during the 1963-64 consumption year appears to have risen to about 96 percent.^{24/} If the rate did rise by 15 percentage points (from 81 to 96 percent) ~~X~~ the savings in foreign currency can be estimated at about \$450 million. In other words, if extraction rates had been maintained at the relatively low level of 81 percent, 5½ million tons of additional grain imports would have been required to provide the same absolute number of calories as that obtained with the 96-percent rate.

* Tonnages are given in metric tons.

^{24/} Sovetskaya Torgovlya, Moscow, 1964, p. 98.

No 19 — Although it is doubtful if the average extraction rate during the 1964-65 consumption year was actually reduced to the pre-1963 level, there was a decided improvement in the quality of bread and the availability of other products requiring high-quality flour.* The extraction rate may have fallen to, say, an average between 85 and 90 percent.

Since June 1965 the USSR has contracted for the purchase of about 7.5 million tons ²⁵/₂₁ of wheat and flour from Free World suppliers at a cost of about \$500 million.** If the average extraction rate of 87 percent had returned to the 96-percent level, import requirements would have been reduced by nearly one-half, a saving of about \$250 million. However, the quality of bread has not been downgraded and, as far as is known, the milling rate has not been raised again. ²⁶/₂₁ In fact, in September Brezhnev announced that the "CPSU Central Committee and the Council of Ministers envisage further improvement in supplying the population with bread both qualitatively and quantitatively." ²⁷/₂₇ That the supply of flour has improved is attested by US tourists who have recently noticed it for sale in state stores in several smaller cities, but not in in either Moscow or Leningrad.

* By the summer of 1964, top-quality white bread had become sporadically available, and by autumn most areas had white bread some of the time. In addition, macaroni, noodles, and other grain products requiring a high-quality wheat flour in their manufacture have been continually available since mid-1964. Nevertheless, the best-quality bread has remained unavailable on a continuing basis since 1963, even in major cities, and, with the exception of small rations preceding holidays, state flour sales to the public have not yet been resumed in major cities. ²⁸/₂₈

** Actual deliveries for 1965-66 (1 July - 30 June) are estimated at about 10 million tons of grain at a cost of about \$700 million. All of these deliveries were contracted for by the present regime. ²⁹/₂₉

²⁵/₂₁ U.S. Department of Agriculture, Soviet Grain Imports, ERS-Foreign 135, September, 1965, p.2.

²⁶/₂₉ Letter to the author from Dr. B. Meeker, U.S. Agricultural Attache, Moscow.

²⁷/₂₁ Izvestiya, 30 September 1965, p.2.

²⁸/₂₂ U.S. Department of Agriculture, ERS Foreign 115, p.4 and ERS Foreign 135, p.51.

²⁹/₂₇ Journal of Commerce, 30 December 1965.

C. Prospects

In the planned goals for 1966-70, ^{outlined} ~~analyzed~~ by Kosygin at the 23rd Party Congress, Khrushchev's successors have pledged themselves to providing a rapidly improving level of living for the Soviet populace. The promises are wide-ranging: higher wages, better quality goods, increased pensions, lessened ~~lower~~ taxes, and more housing. Also, the gap between urban and rural levels of living is to be narrowed.)

Per capita consumption is to increase slightly more than ⁴four percent annually during 1966-70 in contrast to ³three percent during 1961-65. Continual references to quality improvement in the plan indicate the regime recognize that low quality of consumer goods is a sore point with the populace. No major reallocation of resources is planned, rather, planners are counting on providing the additional goods and services for consumption through a restoration of previous rates of growth in productivity and national income. The confidence of the leadership is indicated by new programs to boost money incomes substantially by 1970.)

According to Brezhnev, during 1966-70 the minimum wage will be increased from 40 to 60 rubles a month, collective farmers will receive a guaranteed wage, minimum pension levels will be raised and the collective farm pension program will be liberalized. Brezhnev also renewed the old promise to abolish the income tax.

The key to the assessment of prospects under the new five-year plan is the plan's dependence on restoration of former growth rates in productivity and national income. The same forces that reduced these rates of growth in the

Seven-Year Plan (1959-65) are still operative: (1) the pre-emption by the military of increasing quantities of high-quality manpower, machinery, and materials; (2) the difficulty of raising production, technology, and incentives in agriculture; and (3) the failure to modernize industrial plant and equipment, together with the ^{inability} ~~failure~~ to translate new developments in technology into actual industrial practice. Therefore, prospects for simultaneously reaching all the new consumption goals by 1970 are dim.

1. General

The overall index of consumption comprises four major categories: (1) foods and beverages; (2) soft goods; (3) consumer durables; and (4) services. These components are combined with 1955 expenditure weights, which are essentially estimates of household outlays for goods and services in 1955 for consumption purposes (including military and prisoner subsistence) plus consumption-in-kind of household-produced items (chiefly food products and housing) plus all health and education services, whether purchased or provided by government. The weight assigned some services is based on 1955 expenditures on "inputs" -- wages paid persons employed in providing the service plus the value of materials used. Health and education services are the most notable example of this procedure. Expenditures on the purchase of goods and services were directly obtainable from official data (retail sales and the like) for one-half of the total in the base year (1955); official production data and prices provided 21 percent more; and quantity estimates valued with official prices were required for the remaining 29 percent.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Each component of the index is moved back to 1950 and forward to 1965 by the use of volume indexes. However, the volume indicators probably do not adequately reflect the improvement in the quality of goods and services over time. The resulting downward bias is relatively unimportant for food, the major component of the aggregated index, but is most important in the ^{case} base of soft goods and health services. Because of these deficiencies in the construction of the index, it should not be viewed as a reliable indicator of change in any two consecutive years. Nevertheless, despite the data limitations inherent in the over-all consumption index and its subcomponents, it is believed that the statistical measures over time are reasonably reliable. Data recently published by the USSR tends to confirm this assumption (see Section 3, Appendix A). Table 1 presents the indexes of per capita increases in the availability of components of consumption.

2. Specific Details with Respect to the Derivation of the Four Separate Indexes

a. The food goods index

(1) Estimates are made of Soviet output of 20 representative food products in three categories:

(a) Basic foods -- food grains, potatoes, and vegetables;

(b) Animal products -- fish, meat and slaughter fats, milk,

butter, cheese and eggs;

(c) Processed foods -- sugar, vegetable oil, confectionery, beer, grape wine, champagne, vodka, canned goods, macaroni, and margarine.

(2) The production data are adjusted to exclude waste, losses, and seed and animal feed, and are further adjusted to reflect net imports and inventory changes.

(3) In order to eliminate double counting of products at different stages of production, the portion of these products which undergoes further processing is netted out of the gross supply available for human consumption. For example, an adjustment is made for the vegetables which are canned.

Table 8
USSR: Indexes of Consumption and Per Capita Consumption, by Component
1955-65

	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Aggregate										
Consumption	145.6	154.9	164.2	172.5	181.2	190.1	197.8	208.0	212.2	219.6	233.3
Soft goods	173.6	188.0	196.5	211.7	226.3	240.5	249.9	261.2	264.6	271.8	278.8
Consumer durables	283.5	311.6	341.1	392.7	450.3	504.7	551.1	592.3	628.4	655.3	743.3
Foods and beverages	138.0	145.6	154.7	159.8	165.7	170.8	176.1	184.8	186.2	191.4	204.8
Services	133.5	142.3	151.9	161.0	171.2	184.1	196.2	208.6	221.6	235.8	251.1
Personal Health and education	140.6 128.1	150.3 136.2	162.6 144.2	174.7 150.7	189.0 157.9	204.2 169.0	217.5 180.1	235.2 188.6	249.3 200.6	266.1 212.9	284.6 225.9
	Per Capita										
Consumption	133.7	139.7	145.6	150.1	155.1	159.9	163.5	169.2	170.0	173.6	182.0
Soft goods	159.4	169.7	174.2	184.4	193.6	202.3	206.5	212.5	212.0	214.9	217.5
Consumer durables	260.3	281.2	302.4	342.1	385.2	424.5	455.5	481.9	503.5	518.0	579.8
Foods and beverages	126.7	131.4	137.1	139.2	141.7	143.6	145.5	150.4	149.2	151.3	159.8
Services	122.6	128.4	134.7	140.2	146.4	154.8	162.1	169.7	177.6	186.4	195.9
Personal Health and education	129.1 117.6	135.6 122.9	143.8 127.8	152.2 131.3	161.7 135.1	171.7 142.1	179.8 148.8	191.4 153.5	199.8 160.7	210.4 168.3	222.0 176.2

(4) The volume index is then obtained by weighting the individual series in the aggregate index with the value of consumer outlays for each food in 1955.

(5) The product coverage in the volume indicator is nearly the same as in the base year, ~~thus it is representative of the universe.~~

b. The soft goods index

(1) Retail sales in 1955 are obtained for selected items -- cotton, wool, silk, and rayon cloth and linen, seven products, hosiery, leather footwear, tobacco and makhorda (a low-grade of tobacco), and knitted outerwear and under-wear.

(2) The 1955 values are moved over time by production indexes based on official data obtained from Soviet handbooks. The production data have not been adjusted for net imports, changes in composition, or inventory changes and therefore, the value series are not precise indications of consumption.

(3) Summation of the individual value series provides the basis for the index.

(4) The sample accounts for ~~almost all the~~ retail sales of soft goods, ~~therefore~~ product coverage is representative of the universe.

(5) Data for benchmark years pertaining to actual retail sales indicate that the use of production series did not lead to important error in the earlier years.

(6) There undoubtedly is a large degree of downward bias due to quality improvement in the soft goods sector. See Appendix A, 3, c for its possible magnitude.

c. The consumer durables index

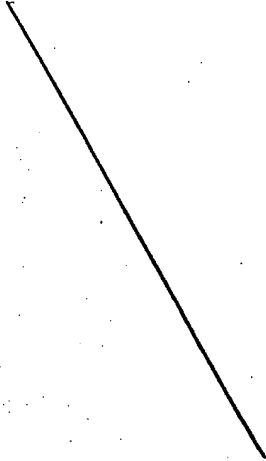
(1) Retail sales in 1955 are obtained for selected items -- furniture (including metal beds), bicycles and motorcycles, radios and television sets, watches and clocks, electrical appliances, sewing machines, cameras, kerosene burners, and musical instruments.

(2) The 1955 values are moved over time by production indexes based on official data obtained from Soviet handbooks. The data have not been adjusted for net imports, changes in composition, or inventory changes, and therefore, as in the base of soft goods, the value series are not precise indications of consumption.

(3) Summation of the individual value series provides the basis for the index.

(4) The sample accounts for about 45 percent of total retail sales of "non-soft goods" but it includes all major durable goods *except automobiles.*

(5) Although there undoubtedly is a degree of downward bias present because of quality input, it is believed small.



ds. The services index.

(1) Components of the services index include outlays on household operation, communications, personal transportation, recreation and sports, expenditures on religion, personal care and repair services, housing, health and physical culture, and education.

(2) Total expenditures on these items are derived for 1955.

(3) Each item is moved over time by the appropriate volume indicator.

For example, expenditures on health and physical education are moved by an index derived from budget expenditures on health and physical education (a combination of material expenditures and wages); expenditures on education are moved by an index based on budget expenditures on education in the same way.

(4) The services sector is relatively less important in the consumption picture and error here has little effect on the aggregated index

3. Comparison of the official and the computed indexes

a. General comparison

The USSR recently published an index of consumption for the period 1959-63³⁰.

The index, hereafter referred to as the official index of consumption is assumed to be a valid measure of changes in actual consumption. Various cross checks indicate the data is consistent with other data issued in official publications.

The official index of consumption differs from the independently constructed index used in this paper in the following ways: (1) A major difference arises from the fact that the official index is based on sales (actual consumption)

³⁰ Narodnoye khozyaystvo v 1964 gody, pp. 580-589. The table is entitled "Consumption of food and nonfood goods by the population and material expenditures of institutions serving the population, of scientific organizations and of government from 1959-63." It includes both expenditures in current rubles and indexes of rates of growth expressed in constant prices.

of all goods, with the addition of a value for the consumption-in-kind of food products, but the computed index is based primarily on production data adjusted for various uses. The computed index implicitly assumes that production of any year is consumed in the given year whereas, _____ sales of goods produced in a given year frequently occurs in the succeeding year. Thus there is a definite lag effect in the official index, or, expressed another way, the computed index measures, in part, consumption before it occurs.

(2) In the official index income-in-kind is valued by a combination of average market prices and average procurement prices.^{31/} The computed index values income-in-kind at retail prices.

(3) The Marxian concept of social product excludes all work done outside the branches of material production thereby excluding such benefits from measured consumption. Nearly all services are excluded -- those of teachers, doctors, nurses, etc., and those providing passenger transportation, a large part of communication services, ^{all} sanitary services, recreation and entertainment and so on. Only material expenditures by the institutions providing these services are included. Thus, the purchases of medicines or food by the hospital, for instance, are included but the cleaning service for the same hospital is not. The computed index attempts to value all expenditures on services. The Western concept considers all such services to be ^{a part of consumption} ~~consumed and thus a part of welfare~~ and thus of the level of living. Therefore changes in the

31/ V. Treml, The 1959 Soviet Intersectoral Flow Table, Vol. 1, November 1964, p. 19.

quantity and quality of services provided affect the rate of growth of total consumption.

(4) The official index excludes the value of housing. The computed index sets a rental value on the stock of housing.

The following tables compare the adjusted computed index with the official index and selected components of each. Table 2 compares the actual indexes, Table 3 compares the rates of change. All categories of the computed index have been adjusted to conform with the classification used in the official index. Because of the adjustments the computed indexes do not agree with the indexes presented in Part 1 of Appendix A.

Table 9

Comparison of Official and Computed Indexes of Consumption, 1959-63

	1959=100				
	1959	1960	1961	1962	1963
Total consumption					
Official index (excluding amortization)	100	108	111	118	122
Computed index (adjusted)*	100	105	109	115	117
Total food goods					
Official index	100	107	110	115	120
Computed index	100	103	106	111	112
Processed food					
Official index	100	110	115	123	130
Computed index	100	105	113	124	130
Total nonfood goods					
Official index	100	110	113	120	125
Computed index	100	108	114	120	125
Soft goods					
Official index**	100	111	112	119	120
Computed index	100	107	113	119	121
Radio and television sets					
Official index***	100	119	132	132	155
Computed index	100	120	130	139	158

* Adjusted to approximate the coverage of the official index through the exclusion of rent, expenditures on services and on salaries in health and education.

** Products of light industry.

*** Products of radio industry.

Table 10

Comparison of Rates of Change of Official
and Computed Indexes of Consumption-a/

	1960	1961	1962	1963	Average Annual
Total consumption					
Official index	8	3	6	3	5.1
Computed index	5	4	6	2	4.0
Total food goods					
Official index	7	3	5	4	4.7
Computed index	3	3	5	1	2.9
Processed food					
Official index	10	5	7	6	6.8
Computed index	5	8	10	5	6.8
Total nonfood goods					
Official index	10	3	6	4	5.7
Computed index	8	6	5	4	5.7
Soft goods					
Official index	11	1	6	1	4.7
Computed index	7	6	5	2	4.9
Radio and television sets					
Official index	19	11	0	17	11.6
Computed index	20	8	7	14	12.1

a/ Derived from Table 9.

The trend of both

indexes is upward with similar accelerations and decelerations. However, there

is, in general, better agreement over time than between any two consecutive years.

But two major questions arise: (1) the slower rate of growth in the computed

index of food consumption which is reflected in the lower rate of growth for

total consumption, and (2) the anomaly in the trend of the soft goods

component.

B. b. The Problem in the Food Sector

Further investigation of the food sector indicates that the basis of the differential between the two indexes is in the animal products components (see the following tabulation). Where other components can be matched, the movement is similar.

	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	Average Annual Rate 1960-63
Animal products						
Official index*	100	105	108	109	113	3.1
Computed index**	100	100	102	107	111	2.6

* Includes meat, milk, fish, and zhiivotnovotstvo.

** Estimates of the total production of the same categories available for consumption.

The computed index for animal products remains unchanged from 1959 to 1960 while the official index increased 5 percent. The discrepancy apparently arises from the difference between production of animal products and their sales in a given year. 1958 was an extraordinarily good year for agriculture. Above-normal production of food and feed grains permitted an expansion of herds in 1959 and a large gain in the output of animal products. The computed index (based on production of the current year) thus is at a higher base in 1959 than is the official index (based on actual sales of the current year). Thus, the lag in marketing caused by processing moves a part of the increased production into sales occurring in 1960. Sales of meat in 1960 registered a particularly great increase, 15 percent. At the same time the relatively poor harvest in 1959 caused herds to decline slightly in 1960 and consequently the supply of animal products (again based on production of the current year) declined.

To test the validity of this explanation the base year for both indexes was shifted to 1958 (the official index was extended to 1958 using a combination of retail sales of animal products and estimated consumption of animal products as income-in-kind valued at a combination of procurement and retail prices) in order to move both indexes forward from a period when sales and production were more nearly balanced. The following tabulation shows that as the result of the recalculation the movement of the two indexes is similar.

	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	Average Annual Rate 1959-63
Animal products							
Official index	100	104	109	112	113	117	3.3 3.2
Computed index	100	107	107	109	114	119	3.6 3.5

C. c. The Anomaly of the Soft Goods Indexes

A special problem in soft goods also arises from the use of production data for the computed index and sales data for the official. As previously noted the soft goods computed index is biased downwards because of the impossibility of measuring quality change. Nor has the computed index been adjusted for inventory changes. As indicated in the text, growth in inventories of soft goods in recent years has accelerated at a much faster pace than actual sales (see discussion p. ¹¹⁻¹³ ~~11-5~~). Thus, ^{had} ~~if~~ the computed index adequately reflected qualitative improvements over time it would ^{have been} ~~be~~ expected to increase at a faster rate than the official index.

The following tabulation is indicative of the extent of the downward bias of the computed index.

	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
Soft goods					
Official index	100	111	112	119	120
Official index (adjusted to include inventories)	100	113	119	126	134
Computed index	100	107	113	119	121

The exercise of comparison was useful, pointing up the areas of greatest problems but, at the same time, demonstrating that the methodology used to derive the computed index of consumption is adequate for measuring changes in consumption over time. The agreement between the two indexes for the 5 year period adds validity to the computed index for the longer period of time as used in this paper.

Appendix B

Derivation of the Index of Disposable Income

The USSR does not publish estimates of total disposable money income, but estimates for components covering approximately 80 percent of the total can be derived directly from official Soviet statistics. In constructing estimates for the remaining components it is necessary to use Soviet data appearing in a number of different sources and, in some cases, independent estimates.

Table 1|

1. Total money income
 - a. 1950-64 -- Sum of lines 2 through 8.
 - b. 1965 -- 10 percent increase over 1964 reported in Pravda, 7 Nov, 1964.
2. Gross earnings of workers and employees
 - a. 1950, 55, 58-64 -- Average annual number of workers and employees, Nardonoye Khozyaystvo SSSR v 1964 (hereafter N. Kh.), p. 545, times the average ^{monthly} earnings of workers and employees adjusted to an annual basis, N. Kh. 1964, p. 555.
 - b. 1956-57 -- Money earning from S. P. Figurnov, Real'naya Zarbofnaya plata i pod'yem material'nogo blagosostoyaniye trudyashchikhsya v SSSR, Moscow, 1960, p. 192; employment from N. Kh. 1958, p. 659.

Table 11

USSR: National Disposable Money Income 1950, 1955-65

	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
1. Total Money Income	45.58	61.46	66.77	72.69	76.62	80.36	85.14	93.99	101.36	105.50	111.57	122.72
2. Gross earnings of workers and employees	29.83	41.53	44.13	48.21	50.97	53.56	59.59	65.95	70.65	74.11	79.25	87.85
3. Gross earnings of cooperative artisans	0.88	1.17	0.80	0.90	0.91	1.00	4.94	6.00	6.63	6.79	7.68	8.62
4. Collective farm wage payments	1.18	3.06	4.34	4.49	5.15	4.91	5.95	6.26	7.69	8.53	7.82	N.A.
5. Net household incomes from sale of farm products	4.54	4.46	4.73	5.19	5.77	6.32	0.11	0.11	0.11	0.11	0.11	0.11
6. Profits distributed to cooperative members	0.07	0.15	0.11	0.15	0.15	0.15	3.60	3.60	3.60	3.60	3.60	3.60
7. Military pay and allowances	4.40	4.50	4.90	4.18	4.14	3.92	10.95	12.07	12.68	12.36	13.11	N.A.
8. Transfer payments	4.68	6.59	7.76	9.57	9.53	10.50	9.50	10.60	11.20	11.60	12.20	14.70
a. Pensions and grants	3.60	4.47	5.25	8.03	8.40	9.00	0.63	0.63	0.69	0.75	0.83	0.83
b. Stipends to students	0.46	0.74	0.77	0.69	0.63	0.61	0.70	0.80	0.80	0.10	0.10	0.10
c. Loan service	0.51	1.43	1.63	0.70	0.37	0.69	0.06	0.06	0.06	0.06	0.06	0.06
d. Insurance payments less premiums	0.04	0.04	0.06	0.06	0.06	0.06	0.06	-0.02	-0.07	-0.15	-0.08	N.A.
e. Net borrowing	0.07	-0.09	0.05	0.09	0.07	0.14	6.20	6.40	6.60	6.90	7.40	7.90
9. Total State Deductions	6.48	8.33	8.75	7.26	6.17	6.20	78.94	87.99	94.76	98.60	104.17	114.82
10. Direct taxes on the population	3.58	4.83	5.05	5.20	5.19	5.50	5.60	5.80	6.00	6.30	6.80	7.30
11. Local taxes, fees, fines, passports, etc.	0.20	0.30	0.27	0.13	0.58	0.50	0.50	0.50	0.50	0.50	0.50	0.50
12. State loans	2.70	3.20	3.43	1.93	0.40	0.20	0.10	0.10	0.10	0.10	0.10	0.10
13. Total Disposable Income	39.10	53.13	58.02	65.43	70.45	74.16	78.94	87.99	94.76	98.60	104.17	114.82
14. Population (million persons at mid-year)	180.1	196.1	199.6	203.1	206.8	210.5	214.2	217.9	221.4	224.7	227.8	230.8
15. Per capita disposable income (rubles)	217.1	270.9	290.7	322.2	340.7	352.3	368.5	402.0	428.0	438.8	457.3	497.5
16. Price index (1950=100)	100.0	76.6	75.7	75.4	77.4	76.7	76.3	76.4	77.9	78.8	79.5	N.A.
17. Per capita real disposable income	217.1	353.7	384.0	427.3	440.2	459.3	483.0	526.2	549.4	556.9	575.2	N.A.
Index of real per capita disposable income (1950=100)	100.0	162.9	176.9	196.8	202.8	211.6	222.5	242.4	253.1	256.5	264.9	N.A.
annual increase in per capita real disposable income	-10.3*	8.6	11.2	3.0	4.3	5.2	8.0	4.4	4.4	3.1	3.3	N.A.

c. 1965 -- Pravda, 8 Dec 1965.

3. Gross earnings of cooperative artisans

a. 1950-1959 -- Cooperative artisans reportedly earned a wage

equal to two-thirds that of industrial workers and employees.

insert { U.S. Bureau of the Census, Producers' Cooperatives in the Soviet Union, by Frederick A. Leedy, International Population Reports Series p-95, No. 51, Washington, D.C. p. 14.

The average annual number of artisans reported in N. Kh. 1964,

p. 545. The average annual industrial earnings are estimated

as follows:

1950-55 -- D.N. Karpukhin, Sootnosheniye rosta proizvoditel'-nosti truda i zarabotnoy platy, Moscow, 1963, p. 53.

1956-57 -- Ibid, p. 108.

1958 -- N. Kh., 1964, p. 555.

1959 -- interpolated based reported earnings for 1958 and 1960, N. Kh., 1964, p. 555

b. 1960-65 -- Producers cooperatives were converted into state enterprises in 1960, and members were classified as workers and employees.

4. Collective farm wage payments

a. 1950-61 -- Estimates by Constance Krueger (unpublished) and are derived for each year as a residual, the difference between total money outlay and the sum of expenditures for obligatory payments to the state, repayment of long-term loans, deductions from income, production expenses, and administrative-economic expenditures.

- b. 1962-63 -- V.G. Venzher, Ispolzvaniye zakon stoimosti v kolkhoznomu proizvodstva, Moscow, 1965, p. 283.
- c. 1964 -- Estimated based on the relationship of wage payments to total revenues ^{of} ~~to~~ preceding years.
- d. 1965 -- Pravda, 3 Feb 1966

5. Net household income from sale of farm products

- a. 1950-64 -- Estimated by Constance Krueger (unpublished) and are based on total private sales as reported in N. Kh. 1964, p. 657; N. Kh. 1963, p. 546; N. Kh. 1962, p. 540; N. Kh. 1959, p. 708.

6. Profits distributed to coop members

Sum of profits distributed by consumer cooperatives and cooperatives:

- a. 1950-58 -- Estimated based on reported gross profits of consumer and producer cooperatives minus reported income taxes and the reported share of net profits distributed to members.
- b. 1959-65 -- Projected at same level after 1958 (with allowance for abolition of producer cooperatives in 1960).

7. Military pay and allowances

- a. 1950-55 -- 1956 estimate adjusted for changes ^{in the} size of the armed forces.
- b. 1956-58 -- Abraham S. Becker, Soviet National Income and Product, 1956-58, (hereafter SNIP), Santa Monica, 1962, p. 2.

c. 1959-62 -- SNIP, 1958-62, p. 7.

d. 1963-65 -- Projected at same level after 1962.

8. Transfer payments

a. Pension and grants

Includes state social insurance payments, state social assistance payments, benefits to mothers minus expenditures on education, health, and physical culture.

(1) 1950, 58, 60, 63, 64 -- N. Kh. 1964, p. 773.

(2) 1955-56 -- N. Kh. 1958, p. 900

(3) 1957 -- Gosudarstvennyy byudzhet SSSR, ^(Hereafter, Budget) Moscow, 1962, p. 2

(4) 1959, 61 -- N. Kh. 1961, p. 761.

(5) 1962 -- N. Kh. 1963, p. 654.

(6) 1965 -- Projected increase plus 1.4 billion rubles distributed to collective farm members.

b. Stipends *to student*

(1) 1950-57 -- Raskhody na sotsial'nokul'turnyye meropriyatiya po gosudarstvennomu byudzhety SSSR, Moscow, 1958, p. 46.

(2) 1958-65 -- 1957 base projected on the basis of the number of full-time students in higher and secondary-specialized educational institutions; as reported in N. Kh. 1964, p. 678,

c. Loan service

Includes interest from state loans and savings deposits plus principal retirement of state loans.

(1) 1950-56 -- N. Kh. 1958, p. 900. *sf*

- (2) 1957 --- Budget p. 9.
- (3) 1958-59 -- N. Kh. 1959, p. 801 .
- (4) 1960, 63, 64 -- N. Kh. 1964, p. 770
- (5) 1961 -- N. Kh. 1961, p. 761.
- (6) 1962 -- N. Kh. 1963, p. 654.
- (7) 1965 -- Projected at 1964 level.

d. Insurance payments less premiums

- (1) 1950-58 -- N. Laptev (ed.) Finansy i sotsialisticheskoye stroitel'stvo, Moscow, 1957, p. 355-56.
- (2) 1959-65 -- Projected at same level after 1958.

e. Net borrowing

Long term loans to the population. Difference between loans outstanding at the end of the ^{given} year and loans outstanding at the end of the previous year.

- (1) 1950-58 -- Vestnik statistiki, no. 2, 1960, pp. 89-92.
- (2) 1959-62 -- N. Kh. 1962, p. 639.
- (3) 1963 -- N. Kh. 1963, p. 658.
- (4) 1964 -- N. Kh. 1964, p. 774.

10. Direct taxes on the population

- a. 1950, 55-56, 58 -- N. Kh. 1958, p. 899.
- b. 1957 -- Estimated,
- c. 1959-62 -- N. Kh. 1962, p. 635.
- d. 1963-64 -- N. Kh. 1964, p. 770.
- e. 1965 -- Finansy, No. 1, 1966, p. 6.

11. Local taxes, fees, fines, passports, etc.

Estimates derived using methodology described in SNIP 1956-58, pp. 110-11, and based on data in:

- a. 1950 -- N. Kh. 1964, p. 770.
- b. 1955-58 -- SNIP 1956-58, p. 110.
- c. 1959-64 -- N. Kh. 1964, p. 770, N. Kh. 1963, p. 654.
- d. 1965 -- Projected at 1964 level.

12. State loans

- a. 1950, 58, 60, 63, 64 -- N. Kh. 1954, p. 770.
- b. 1955 -- N. Kh. 1960, p. 844.
- c. 1956 -- N. Kh. 1959, p. 800.
- d. 1959, 61, 62 -- N. Kh. 1962, p. 635.

14. Population

Mid-year population estimates from U.S. Department of Commerce, Projections of the Population of the USSR, By Age and Sex: 1964-1985, 1964, p. 35.

16. Retail price index

Derived by combining the reported state retail price index with reported collective farm market price index using 1955 share weights of 91.3 for state retail prices and 8.7 for collective farm prices. Sovetskaya Torgovlya, Moscow, 1964, p. 39, 266.

Table 12

USSR: Average Annual Money Earnings per Wage and Salary Worker, by Sector, 1958-65

	New rubles							
	1958	1959	1960	1961	1962	1963	1964	1965
Average for all sectors ^{a/}								
Industry ^{b/}	934	948	961	1000	1034	1051	1081	1144
Construction ^{c/}	1045	N.A.	1096	1112	N.A.	1181	1206	1308
Agriculture ^{c/}	1040	N.A.	1100	N.A.	N.A.	1219	1272	1383
Transportation ^{c/}	637	N.A.	647	699	790	805	847	883
Communications ^{c/}	988	N.A.	1040	N.A.	N.A.	1192	1226	1266
Trade, Restaurants, Material- Technical Supply ^{c/}	696	N.A.	748	N.A.	N.A.	870	880	886
Housing - Communal Economy ^{c/}	697	N.A.	703	N.A.	N.A.	774	788	907
Health ^{c/}	665	N.A.	691	N.A.	N.A.	751	774	871
Education ^{c/}	707	N.A.	707	N.A.	N.A.	744	784	944
Science ^{c/}	833	N.A.	839	N.A.	N.A.	904	942	1122
Credit and insurance ^{c/}	1271	N.A.	1250	N.A.	N.A.	1316	1344	1387
Administration ^{c/}	865	N.A.	844	N.A.	N.A.	937	948	1030
	1010	N.A.	1027	N.A.	N.A.	1123	1150	1256

^{a/} 1958-64 - N.Kh. 1964 p. 555, 1965 - SSSR v tsifrakh v 1965 godu, p. 126-7.

^{b/} 1958, 60, 63, 64 - N.Kh. 1964 p. 555; 1961 - D. N. Karpukin, Sootnosheniye rosta proizvoditel'nosti truda i zarabotnoy platy, Moscow, 1963, p. 12.

^{c/} 1965 - tsifrakh, 1965, p. 126.

^{d/} 1958, 60, 63, 64 - N.Kh. 1964 p. 555; 1961-62 - Planovoye Khozyaystvo No. 11, 1963, p. 48; 1965 - tsifrakh, 1965, p. 126.