

15597

No. 38

*[Handwritten signature]*  
*[Handwritten initials]*

ECONOMIC INTELLIGENCE REPORT

OUTLAYS ON CONSUMER SERVICES  
IN THE USSR  
1948-60

CIA HISTORICAL REVIEW PROGRAM  
RELEASE IN FULL



CIA/RR 150  
November 1958

CENTRAL INTELLIGENCE AGENCY  
OFFICE OF RESEARCH AND REPORTS

*[Small handwritten mark]*

ECONOMIC INTELLIGENCE REPORT

OUTLAYS ON CONSUMER SERVICES IN THE USSR  
1948-60

CIA/RR 150

CENTRAL INTELLIGENCE AGENCY  
Office of Research and Reports

- 11 -

## FOREWORD

This report describes outlays on consumer services in the USSR, 1948-60, examining in detail the relative importance of the various services and comparing the roles of public organizations and private individuals in furnishing these services. All estimates have been made in terms of 1955 prices. The information upon which the report is based has been derived from published Soviet data.

CONTENTS

	<u>Page</u>
Summary and Conclusions . . . . .	1
I. Introduction . . . . .	2
A. Concept of Consumer Services Adopted for This Report . . . . .	2
B. Comparisons with US Expenditures on Services . . . . .	3
C. Reliability of Estimates . . . . .	4
II. Education . . . . .	5
A. General . . . . .	5
B. Outlays on Education by Organization, 1955 . . . . .	5
C. Outlays on Education by Function, 1955 . . . . .	6
D. Outlays on Education by Type of Cost, 1955 . . . . .	7
III. Health . . . . .	7
A. General . . . . .	7
B. Outlays on Health by Organization, 1955 . . . . .	8
C. Outlays on Health by Function, 1955 . . . . .	8
D. Outlays on Health by Type of Cost, 1955 . . . . .	9
IV. Housing . . . . .	9
A. Outlays on Housing by Organization, 1948-60 . . . . .	9
B. Outlays on Housing by Organization, 1955 . . . . .	10
V. Other Consumer Services . . . . .	10

Appendixes

Appendix A. Statistical Tables . . . . .	13
Appendix B. Methodology . . . . .	23
Appendix C. Source References . . . . .	37

[p. iv blank]

Tables

	<u>Page</u>
1. Estimated Outlays on Consumer Services in the USSR, 1948-60 . . . . .	14
2. Estimated Indexes of Per Capita Outlays on Consumer Services in the USSR, 1948-60 . . . . .	15
3. Estimated Ratios of Outlays on Consumer Services to Gross National Product in the USSR, Selected Years, 1948-60 . . . . .	16
4. Estimated Percentage Composition of Outlays on Consumer Services in the USSR, 1948-60 . . . . .	17
5. Estimated Public Outlays on Consumer Services in the USSR, 1948-60 . . . . .	18
6. Estimated Private Outlays on Consumer Services in the USSR, 1948-60 . . . . .	19
7. Estimated Outlays on Education in the USSR, by Type of Cost, 1948-60 . . . . .	20
8. Estimated Outlays on Health in the USSR, by Type of Cost, 1948-60 . . . . .	21

OUTLAYS ON CONSUMER SERVICES IN THE USSR\*  
1948-60

Summary and Conclusions

It is estimated that, by 1960, outlays on consumer services in the USSR will have increased from 143.3 billion rubles\*\* in 1948 to 318.5 billion rubles -- 2.2 times the level of 1948 and a per capita increase of 1.8 times. (See Table 1.\*\*\*)

In 1957, education accounted for 35 percent of outlays on consumer services, health for 19 percent, housing maintenance and construction for 22 percent, and all the others -- household operations, personal transportation, recreation and culture, repair services, and personal care -- for 24 percent.

Those consumer services which were already established on a broad scale by 1948, such as education and health, or those considered of secondary importance by the Soviet planners increased relatively little between 1948 and 1960. On a per capita basis, outlays on education in 1948 were 82 percent of those in 1955, and between 1955 and 1960 -- when consumer services as a whole are expected to rise by 39 percent -- they are expected to rise by only 13 percent. Outlays on health in 1948 were 79 percent of those in 1955, on a per capita basis, and between 1955 and 1960 are expected to rise by 20 percent. (See Table 2.\*\*\*\*)

Outlays on housing maintenance and construction did not increase much between 1948 and 1955, those of 1948 being 82 percent of 1955 on a per capita basis. In 1957 the Soviet government issued a decree which, if implemented as expected, will place housing a close second to education among consumer services by 1960. Housing activity in 1960 is expected to be approximately double the level of 1956 on a per capita basis. Household expenditures on utilities and communications services follow the general trend in housing but should not rise so steeply during 1955-60. It is estimated that outlays for these household operations, on a per capita basis, will be 47 percent higher in 1960 than in 1955.

Personal transportation is one of the rapidly growing consumer services. On a per capita basis, outlays on personal transportation in 1955 were more than double the 1948 level, and a further rise of 63 percent is forecast for 1960. Outlays on recreational and cultural

---

\* The estimates and conclusions in this report represent the best judgment of this Office as of 1 June 1958.

\*\* All ruble values in this report for years other than 1955 were obtained by applying 1955 prices to the quantities of services estimated to have been supplied in the other years.

\*\*\* Appendix A, p. 14, below.

\*\*\*\* Appendix A, p. 15, below.

services, which almost doubled per capita between 1948 and 1955, will advance, it is estimated, only 18 percent between 1955 and 1960. One of the reasons for this slowing down of growth is that existing cultural and recreational facilities are already well developed, and further expansion of libraries, clubs, and religious facilities is accordingly not of pressing importance. On a per capita basis, outlays on repair services -- which include such activities as tailoring and the repair of household appliances -- in 1948 were 66 percent of 1955 and will be an estimated 35 percent above the 1955 level by 1960. Personal care shows the smallest increase of any of the household services. In 1948, outlays on personal care were 89 percent of the per capita level attained in 1955, and it is estimated that the 1960 level will be only 10 percent above that of 1955.

Although the estimated value of Soviet consumer services, calculated in 1955 prices, has increased each year during 1948-60, consumer services as a portion of gross national product (GNP) have held steady at a level of approximately one-sixth of GNP. Ordinarily one would expect that consumer services in an economy being rapidly industrialized and urbanized would constitute a growing proportion of GNP, but consumer services in the USSR have claim on resources only to the extent that they support the growth of a healthy, well-educated, and moderately contented labor force.

Public organizations provide approximately two-thirds of the cost of consumer services, and private individuals one-third. The percentage contribution of public organizations is declining slowly, however, from a high of 68 percent in 1950 to 62 percent in 1960. Public outlays are extremely important in education and health (estimated at 95 percent and 87 percent, respectively, in 1958) and of considerable importance in housing and recreation and culture (estimated at 58 percent and 30 percent, respectively, in 1958). Public organizations pay none of the cost of household operations, personal transportation, repair services, and personal care.

---

## I. Introduction.

### A. Concept of Consumer Services Adopted for This Report.

The categories of Soviet consumer services included in this report are education, health, housing, household operations, personal transportation, recreation and culture, repair services, and personal care. The outlay on each consumer service is taken as the economic value of the service at the final stage of production, regardless of (1) whether the service was purchased directly by a consumer or supplied "free" by a government organization, (2) whether the service involved a money transaction or was the result of self-consumption by the producer (and therefore fell outside of normal

market channels), or (3) whether the service arising from the outlay was consumed immediately or over a period of years.

The first consideration, of private versus public outlay, is exemplified by the situation in education, 95 percent of the expenditures for education being made through the budgets of public organizations and only 5 percent through household budgets. The second consideration, of actual versus imputed outlay, is exemplified by housing, it being necessary to estimate the value of the maintenance of private housing performed by individual owners operating outside of any direct tie to the market. The third consideration, of present versus future consumption, arises most strongly in the case of education, health, recreation and welfare, and, especially, housing. The erection of new schools, hospitals, libraries, and apartment buildings (over and above those retired from use) represents the use of economic resources to broaden the flow of services to the consumer. The using up of these services by the consumer, however, takes place only over a period of time, and the consumer's well-being in the current year is increased by only a fraction of the value of the economic resources currently being allocated in his behalf. An advantage of including such "investment" in consumer facilities within total outlays is that this procedure puts economic policy toward the consumer in clearer perspective. The new Soviet housing program, for example, will cause per capita outlays on housing to more than double in 1960 compared with 1955, but the rise would not be nearly so remarkable -- only 24 percent -- if measured in terms of the flow of housing services from the existing housing stock. If, in Table 2,\* the per capita index for housing were made 124 instead of 211, the index for total services would be 122 instead of 139.

It is only in the case of housing that there is a marked difference between the results obtained by the method used in this report and the results obtained by the alternative method of using flows of services. For instance, in the case of health and education, as shown in Tables 7 and 8,\*\* the relatively small category "construction" sets the upper limit to the portion of total outlays going to investment.\*\*\*

#### B. Comparisons with US Expenditures on Services.

Comparison of Soviet expenditures on consumer services with expenditures in the US is made difficult because of great variations in the relative values of the ruble and the dollar in the different sectors of the two economies as well as important differences in

\* Appendix A, p. 15, below.

\*\* Appendix A, pp. 20 and 21, respectively, below.

\*\*\* The economic outlays listed for household operations, transportation, repair services, and personal care are believed to cover the maintenance of capital plant, but the expansion of capital plant -- new waterlines, buses, tailor shops, and barber shops -- is not covered; data are lacking, and the amounts involved are small.

governmental policy on the financial support of services. The USSR, with a population almost 20 percent greater than the population of the US, maintains an educational system of roughly the same size, measured by numbers of children and young people in the various grades, numbers of teachers, and the level of physical facilities. As the GNP of the USSR is 40 percent that of the US, the educational effort of the USSR is proportionately greater. Objectives of education in the US, however, are more diffused in contrast to those of Soviet education, whose overriding objective is to train workers and professionals for their roles as producers in the Soviet state.

Medical care in the USSR is quantitatively comparable to care in the US, and the large gap in quality is being steadily reduced. Compared with the US, where private medical care predominates, a far greater proportion of Soviet energies are devoted to public health, including industrial medicine. In dental care the USSR lags far behind, having only 20 percent as many dentists as in the US to care for a population almost 20 percent larger.

In housing the Soviet consumer is far worse off than his US counterpart. Per capita the Soviet urban dweller has 5 square meters (sq m) of living space compared with 30 sq m in the US, and the greatly superior quality of US housing makes the difference still more dramatic. In transportation the ratio in favor of the US consumer is also tremendous, 8 to 1 in terms of passenger miles per capita and considerably more if the convenience and comfort of the US consumer's automobile is contrasted with the Soviet consumer's railroad coach. In most other consumer services the US consumer far outdistances the Soviet consumer, but in welfare and cultural activities -- which in the USSR are an important instrument for political indoctrination -- the Soviet consumer benefits from heavy governmental subsidization.

#### C. Reliability of Estimates.

Estimates in this report vary widely in reliability.\* Estimates for 1955 are in general more reliable than for other years, because money outlays for 1955 are often available directly from official Soviet sources, whereas estimates for other years were constructed by applying 1955 prices to the quantities of services estimated to have been supplied in the other years. Estimates for the public sector are often more reliable than for the private, because statistical data on public expenditures are far more plentiful than data on private expenditures. In general, the larger the ruble quantity, the higher the degree of reliability.

---

\* For a detailed discussion of the manner in which estimates were made, including specific estimates for each category of service, see the Methodology, Appendix B.

## II. Education.

### A. General.

Since 1951 the Soviet standard of education has been compulsory 10-year secondary education for all children. Although 10-year schooling has in fact become normal in urban areas, 7-year schooling has been typical in rural areas. In 1958 the Soviet government announced that 10-year compulsory schooling would be rapidly extended to rural areas. Each year 450,000 graduates of the secondary schools are admitted to institutions of higher learning, which have a total enrollment of 2.0 million students.

Outlays on education amounted to 77.9 billion rubles in 1955, over 20 billion rubles more than in 1948, as shown in Tables 1 and 7.\* By 1960, outlays on education are expected to reach almost 96 billion rubles, or 23 percent above 1955. One reason for the relatively small rate of increase in Soviet education, compared with other consumer services, has been the decline in enrollments. The number of regular pupils and students enrolled in the educational system dropped from 37.3 million in 1950-51 to 33.9 million in 1955-56, 1/\*\* a result of manpower losses during World War II and the resulting decline in births. Another reason for the relatively small rate of increase in education is the fact that educational facilities were already fairly well developed in 1948.

In 1955, there were 213,000 public schools, 32,000 kindergartens, 765 colleges and universities, and 2,800 scientific institutes in the USSR. 2/ These facilities are used very intensively, and further expansion in the scope and standards of Soviet education will require continuing increases in expenditures on education.

### B. Outlays on Education by Organization, 1955.

Soviet outlays on education in 1955, by organization, are shown in the following tabulation:

<u>Organization</u>	<u>Value</u> <u>(Billion Rubles)</u>
State	66.8
Enterprise	6.9
Individual	4.2
Total	<u>77.9</u>

\* Table 1, p. 14, below, gives aggregative expenditures on education. Table 7, p. 20, below, gives expenditures on education divided among wages, materials, and construction.

\*\* For serially numbered source references, see Appendix C.

State outlays of 66.8 billion rubles come from the state budget. Enterprise outlays of 6.9 billion rubles come from publicly controlled funds, with 4.7 billion rubles being accounted for by the various state industrial ministries. The balance of enterprise outlays of 2.2 billion rubles comes from other regulated and controlled organizations, trade unions accounting for 1.0 billion rubles, industrial cooperatives for 0.3 billion rubles, and collective farms for 0.4 billion rubles. There are no private schools in the Soviet education system. In 1955, private expenditures on education in the USSR amounted to 4.2 billion rubles, or 5 percent of all education outlays. Private expenditures are made for food, special fees, and the breakage of equipment. Tuition is a charge of the past, except in the newly instituted boarding schools. Almost all students in higher education receive stipends from the state.

C. Outlays on Education by Function, 1955.

Soviet outlays on education in 1955, by function, are shown in the following tabulation:

<u>Function</u>	<u>Value</u> <u>(Billion Rubles)</u>
General	37.3
Higher	29.0
Science	11.6
Total	<u>77.9</u>

The largest outlays are those for general education, amounting to 37.3 billion rubles -- the sum of 7.5 billion rubles for preschool training, 24.7 billion rubles for elementary and secondary schools, and 5.1 billion rubles for extracurricular activities. Extracurricular activities consist of summer playgrounds, pioneer camps, and schoolchildren's tours. Enrollments were the largest in general education. In 1955-56, 30.1 million pupils and students were enrolled in the public schools, and in 1955 the kindergartens accommodated 1.7 million children. 3/

Outlays for higher education in 1955 amounted to 29.0 billion rubles. These outlays for higher education include expenditures for specialized secondary schools (technicums) as well as expenditures for colleges and universities. Specialized secondary schools, with an enrollment of 1.9 million in 1955-56, train semiprofessional personnel such as toolmakers, laboratory assistants, and nurses. Colleges and universities, with an enrollment of 2.0 million in 1955-56, train professional personnel such as engineers and scientists. 4/

Outlays on science education in 1955, amounting to 11.6 billion rubles, include expenditures for college and university research, the

research of scientific institutes, and long-range industrial research. That part of Soviet industrial research which is a direct cost of production is not included under this heading.

D. Outlays on Education by Type of Cost, 1955.

Soviet outlays on education in 1955, by type of cost, were made up mainly of wages and operating materials and supplies. Less than 5 percent of all education costs were accounted for by construction, as shown in the following tabulation:

<u>Type of Cost</u>	<u>Value (Billion Rubles)</u>
Wages	41.6
Operating materials and supplies	32.6
Construction	3.7
Total	<u>77.9</u>

Outlays on education for wages in 1955 amounted to 41.6 billion rubles, the sum of payments to the teachers, janitors, and the administrative workers, as well as stipends, hourly payments for teaching special courses, and payments to the state budget for social insurance. Wages vary widely. Mean wages of teachers in grade schools, including overtime and extra pay, were 8,000 rubles in 1955. The basic pay of a director of a university with the title of professor and with a Doctor of Science degree was 96,000 rubles per year. <sup>5/</sup> The comparable spread in the US is 6 to 1, not 12 to 1. The Soviet teacher without administrative responsibility receives a wage about equal to that of a semiskilled laborer.

III. Health.

A. General.

Soviet outlays on health amounted to 43.1 billion rubles in 1955, almost 13 billion rubles more than in 1948, as shown in Tables 1 and 8.\* Outlays on health are expected to reach 56.2 billion rubles by 1960, or 30 percent above 1955, and health, as a consumer service, will drop to third place behind housing.

In 1955, there were 24,000 hospitals with 1.3 million beds, 310,000 doctors, 21,000 dentists, 850,000 semiprofessionals, and 47,000 pharmacists in the USSR. <sup>6/</sup>

\* Table 1, p. 14, below, gives aggregative expenditures on health. Table 8, p. 21, below, gives expenditures on health divided among wages, materials, and construction.

B. Outlays on Health by Organization, 1955.

Outlays on health in 1955, by organization, are shown in the following tabulation:

<u>Organization</u>	<u>Value</u> <u>(Billion Rubles)</u>
State	33.0
Enterprise	4.6
Individual	5.5
Total	<u>43.1</u>

State outlays on health amounted to 33.0 billion rubles, or three-fourths of total health outlays in 1955. The outlays by enterprises on health of 4.6 billion rubles come from publicly controlled funds, with 3.0 billion rubles being accounted for by industrial ministries, 0.3 billion rubles by industrial cooperatives, and 1.3 billion rubles by collective farms. In 1955, private expenditures on health amounted to 5.5 billion rubles, 3.8 billion rubles being for medicines and drugs, 7 1.1 billion rubles for passes to sanatoria and rest homes, and 0.6 billion rubles for nursery fees. Despite persistent reports of private health practice and black marketing in medicines and drugs, there are no indications that these activities are significant in scope.

C. Outlays on Health by Function, 1955.

Outlays on health by function in 1955 were predominantly for hospitals and other health care institutions, as shown in the following tabulation 8:

<u>Function</u>	<u>Value</u> <u>(Billion Rubles)</u>
Hospitals and other health care institutions	26.8
Maternity and child care	5.2
Sanitation	1.7
Training	3.1
Care of disabled, medical administration, and other	2.5
Medicines and drugs	3.8
Total	<u>43.1</u>

The 1955 outlays of almost 27 billion rubles on hospitals and other health institutions include outpatient treatment and home visits.

D. Outlays on Health by Type of Cost, 1955.

Outlays on health by type of cost in 1955 are shown in the following tabulation:

<u>Type of Cost</u>	<u>Value (Billion Rubles)</u>
Wages	18.9
Operating materials and supplies	21.6
Construction	2.6
Total	<u>43.1</u>

The 1955 outlays of 18.9 billion rubles for wages are second to the 21.6 billion rubles for operating materials and supplies, with construction accounting for only 2.6 billion rubles. The second place of wages reflects the relatively low wage paid to the Soviet health worker, including professional personnel, the mean wage of 7,200 rubles for health workers being below the national mean wage of 8,600 rubles. 9/ Trained medical personnel with administrative duties, however, receive wages and salaries equivalent to administrators in the education system. The large outlays for materials are a reflection of the tremendous size of the physical plant.

IV. Housing.

A. Outlays on Housing by Organization, 1948-60.

Outlays on housing amounted to 39.4 billion rubles in 1955, or 10.3 billion rubles more than in 1948.\* By 1960, outlays on housing are expected to reach 90.3 billion rubles, almost as much as the 95.9 billion rubles to be spent on education in 1960. This tremendous increase in outlays on housing is expected to be brought about under the 1957 housing decree. 10/ The outlays on housing by 1960 are to be 2.3 times the level of 1955, or 2.1 times on a per capita basis. By the end of 1960, according to the Soviet plan, there will be more than 614 million sq m of living space\*\* in urban centers as compared with 414 million sq m of living space in 1955, and by the end of 1960 there will be 27.0 million houses in rural areas as compared with 24.4 million houses in 1955. Although this tremendous expansion will help to relieve substandard housing conditions, housing has been neglected for such a long time that at least 10 or 12 years will be required 11/ to bring housing up to Soviet standards of minimum health and decency -- namely, 9 sq m of living space per person.

\* See Table 1, Appendix A, p. 14, below.

\*\* Living space excludes hallways, kitchens, baths, and all other similar secondary space.

B. Outlays on Housing by Organization, 1955.

Outlays on housing in 1955, by organization, are shown in the following tabulation:

<u>Organization</u>	<u>Value</u> <u>(Billion Rubles)</u>
Public	21.2
Individual	18.2
Total	<u>39.4</u>

Public gross expenditures on housing in 1955 amounted to 25.4 billion rubles, net expenditures being 21.2 billion rubles after deducting rent receipts of 4.2 billion rubles. In 1955, more than 15 million sq m of new living space were completed by the state at a cost of 21.7 billion rubles. It is estimated that public organizations spent another 3.7 billion rubles to maintain public housing stock of 262 million sq m of living space. In 1955, expenditures by individuals on housing are estimated to have been 18.2 billion rubles -- the sum of 4.7 billion rubles for private urban housing, 9.3 billion rubles for private rural housing, and 4.2 billion rubles for rent of public housing. Estimated expenditures by urban individuals of 4.7 billion rubles on private housing are the sum of 3.8 billion rubles (for 5.9 million sq m of newly constructed living space) and 0.9 billion rubles (for the maintenance of the private urban individual housing stock of 143 million sq m of living space in 1955). Estimated individual expenditures on rural housing of 9.3 billion rubles are the sum of 6.6 billion rubles for 600,000 new houses and 2.7 billion rubles for the maintenance of 24.4 million houses.

V. Other Consumer Services.

Outlays on consumer services other than education, health, and housing amounted to 49.7 billion rubles in 1955, or 23.5 billion rubles more than in 1948, as shown in Table 1.\* Outlays on other consumer services are expected to reach 76.1 billion rubles by 1960, or 53 percent above 1955. As a percent of total outlays on consumer services, the outlays on other consumer services increased from 13 percent in 1948 to 24 percent in the period 1955-56, and for the period 1957-60, even with the tremendous increase in housing, it is expected that this relationship will be maintained at approximately 24 percent, as shown in Table 4.\*\* On a per capita basis, outlays on other consumer services in 1960 compared with 1955 are expected to increase by 47 percent on household operations, by 63 percent on personal transportation, by 18 percent on recreation and culture,

\* Appendix A, p. 14, below.

\*\* Appendix A, p. 17, below.

by 35 percent on repair services, and by 10 percent on personal care, as shown in Table 2.\* The outlays on other consumer services are of great importance to the individual as these other services are primarily paid for out of personal income.

---

\* Appendix A, p. 15, below.

APPENDIX A

STATISTICAL TABLES

[p. 12 blank]

Table 1  
 Estimated Outlays on Consumer Services in the USSR a/  
 1948-60

Billion 1955 Rubles

Consumer Service	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Education	57.6	61.1	64.2	67.0	71.8	74.7	75.7	77.9	80.9	84.7	87.1	91.0	95.9
Health	30.4	32.4	34.3	35.6	37.1	38.9	40.1	43.1	45.2	47.4	50.8	53.2	56.2
Housing	29.1	30.0	29.0	31.6	31.5	34.8	37.0	39.4	43.5	52.9	62.1	75.7	90.3
Household operations	5.7	6.2	6.8	7.5	8.2	8.8	9.7	10.8	11.9	13.3	14.6	15.9	17.3
Personal transportation	7.1	8.0	8.9	10.1	11.3	12.4	14.3	16.5	17.8	20.2	23.1	26.2	29.3
Recreation and culture	8.2	8.5	9.1	9.8	10.5	11.4	12.5	14.3	15.0	15.9	16.7	17.6	18.3
Repair services	3.2	3.5	3.8	4.1	4.4	4.8	5.2	5.6	6.0	6.5	7.0	7.6	8.2
Personal care	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.9	3.0
Total	143.3	151.7	158.2	167.9	177.1	188.2	197.0	210.1	222.9	243.6	264.2	290.1	318.5

a. For methodology, see Appendix B.

Table 2  
 Estimated Indexes of Per Capita Outlays on Consumer Services in the USSR  
 1948-60

Consumer Service	1955 = 100												
	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Education	82	87	90	92	97	99	99	100	102	105	106	109	113
Health	79	83	87	88	91	93	95	100	103	106	112	115	120
Housing	82	84	80	86	84	92	96	100	109	130	150	180	211
Household operations	59	63	69	74	80	84	91	100	108	119	128	137	147
Personal transportation	48	53	59	65	72	78	88	100	106	118	133	148	163
Recreation and culture	64	66	69	73	77	82	90	100	103	107	111	115	118
Repair services	64	69	74	78	83	89	95	100	106	112	119	127	135
Personal care	89	88	91	94	96	99	102	100	102	104	106	108	110
Total	<u>76</u>	<u>80</u>	<u>82</u>	<u>85</u>	<u>89</u>	<u>93</u>	<u>95</u>	<u>100</u>	<u>104</u>	<u>112</u>	<u>120</u>	<u>129</u>	<u>139</u>

Table 3  
 Estimated Ratios of Outlays on Consumer Services to Gross National Product  
 in the USSR <sup>a/</sup>  
 Selected Years, 1948-60

<u>Year</u>	<u>Gross National Product (Billion 1955 Rubles)</u>	<u>Consumer Services (Billion 1955 Rubles)</u>	<u>Ratio (Percent)</u>
1948	807	143.3	17.8
1950	924	158.2	17.1
1955	1,285	210.1	16.3
1956	1,399	222.9	15.9
1957	1,490	243.6	16.3
1960	1,800	318.5	17.7

a. For methodology, see Appendix B.

Table 4  
 Estimated Percentage Composition of Outlays on Consumer Services in the USSR a/  
 1948-60

Consumer Service	Percent												
	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Education	41	41	41	40	41	40	39	37	36	35	33	31	30
Health	21	21	22	21	21	20	20	20	20	19	19	18	18
Housing	20	20	18	19	18	18	19	19	20	22	24	26	28
Household operations	4	4	4	5	5	5	5	5	5	5	5	6	5
Personal transportation	5	5	6	6	6	7	7	8	8	8	9	9	9
Recreation and culture	6	6	6	6	6	6	6	7	7	7	6	6	6
Repair services	2	2	2	2	2	3	3	3	3	3	3	3	3
Personal care	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	100	100	100	100	100	100	100	100	100	100	100	100	100

a. For methodology, see Appendix B.

Table 5  
Estimated Public Outlays on Consumer Services in the USSR a/  
1948-60

	(Billion 1955 Rubles)												
	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Consumer Service	54.5	57.8	60.7	63.4	68.0	70.7	71.6	73.7	76.5	80.1	82.4	86.1	90.7
Education	26.5	28.3	29.9	31.1	32.4	33.9	35.0	37.6	39.4	41.4	44.3	46.4	49.0
Health	12.3	13.1	15.0	17.2	17.0	19.7	20.6	21.2	24.3	29.8	35.8	43.6	51.5
Housing	2.2	2.3	2.5	2.7	2.9	3.2	3.6	4.2	4.4	4.7	5.0	5.3	5.5
Recreation and culture													
Total	95.5	101.5	108.1	114.4	120.3	127.5	130.8	136.7	144.6	156.0	167.5	181.4	196.7
	(Percent)												
Percent public outlays are of total	66.6	66.9	68.3	68.1	67.9	67.7	66.4	65.1	64.9	64.0	63.4	62.5	61.8

a. For methodology, see Appendix B.

Table 6  
Estimated Private Outlays on Consumer Services in the USSR a/  
1948-60

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
	(Billion 1955 Rubles)												
Consumer Service	47.8	50.2	50.1	53.5	56.8	60.7	66.2	73.4	78.3	87.6	96.7	108.7	121.8
Education	3.1	3.3	3.5	3.6	3.8	4.0	4.1	4.2	4.4	4.6	4.7	4.9	5.2
Health	3.9	4.1	4.4	4.5	4.7	5.0	5.1	5.5	5.8	6.0	6.5	6.8	7.2
Housing	16.8	16.9	14.0	14.4	14.5	15.1	16.4	18.2	19.2	23.1	26.3	32.1	38.8
Household operations	5.7	6.2	6.8	7.5	8.2	8.8	9.7	10.8	11.9	13.3	14.6	15.9	17.3
Personal transportation	7.1	8.0	8.9	10.1	11.3	12.4	14.3	16.5	17.8	20.2	23.1	26.2	29.3
Recreation and culture	6.0	6.2	6.6	7.1	7.6	8.2	8.9	10.1	10.6	11.2	11.7	12.3	12.8
Repair services	3.2	3.5	3.8	4.1	4.4	4.8	5.2	5.6	6.0	6.5	7.0	7.6	8.2
Personal care	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.9	3.0
Total	47.8	50.2	50.1	53.5	56.8	60.7	66.2	73.4	78.3	87.6	96.7	108.7	121.8
(Percent)													
Percent private outlays are of total	33.4	33.1	31.7	31.9	32.1	32.3	33.6	34.9	35.1	36.0	36.6	37.5	38.2

a. For methodology, see Appendix B.

Table 7  
 Estimated Outlays on Education in the USSR, by Type of Cost a/  
 1948-60

Year	Type of Cost				Index of Total (1955 = 100)
	Wages (Billion 1955 Rubles)	Materials (Billion 1955 Rubles)	Construction (Billion 1955 Rubles)	Total (Billion 1955 Rubles)	
1948	30.6	24.9	2.1	57.6	74
1949	31.8	26.9	2.4	61.1	78
1950	33.2	28.3	2.7	64.2	82
1951	34.5	29.8	2.7	67.0	86
1952	36.7	32.1	3.0	71.8	92
1953	38.2	33.2	3.3	74.7	96
1954	39.8	32.6	3.3	75.7	97
1955	41.6	32.6	3.7	77.9	100
1956	42.9	33.6	4.4	80.9	104
1957	45.2	34.5	5.0	84.7	109
1958	46.9	34.7	5.5	87.1	112
1959	49.2	35.6	6.2	91.0	117
1960	51.9	37.2	6.8	95.9	123

a. For methodology, see Appendix B.

Table 8  
 Estimated Outlays on Health in the USSR, by Type of Cost a/  
 1948-60

Year	Type of Cost				Index of Total (1955 = 100)
	Wages (Billion 1955 Rubles)	Materials (Billion 1955 Rubles)	Construction (Billion 1955 Rubles)	Total (Billion 1955 Rubles)	
1948	12.9	15.8	1.7	30.4	71
1949	13.9	16.7	1.8	32.4	75
1950	14.8	17.6	1.9	34.3	80
1951	15.6	18.5	1.5	35.6	83
1952	16.4	19.2	1.5	37.1	86
1953	17.3	19.9	1.7	38.9	90
1954	18.1	20.7	1.3	40.1	93
1955	18.9	21.6	2.6	43.1	100
1956	19.7	22.8	2.7	45.2	105
1957	20.6	24.0	2.8	47.4	110
1958	21.4	25.3	4.1	50.8	118
1959	22.2	26.9	4.1	53.2	123
1960	23.1	29.0	4.1	56.2	130

a. For methodology, see Appendix B.

## APPENDIX B

### METHODOLOGY

#### A. General.

Estimates of outlays on consumer expenditure in the USSR, 1948-60, in this report were based largely on 9 Soviet statistical handbooks, 12/ the 2 most important being Cultural Construction in the USSR and Health in the USSR. Information was most complete for 1955, and all estimates for other years have been presented in terms of 1955 prices. Other important sources were Soviet plan announcements and Soviet accounting handbooks. 13/ The official data were subject to considerable interpolation and manipulation by the analyst. Many assumptions and judgments were necessary to place the information in the context of this report, especially in the case of private expenditures on services. All totals were derived from unrounded data and may not agree with the sum of the rounded estimates here presented.

The accuracy of the estimates varies widely among the different categories of services. Data on expenditures from the state budget on education, health, and recreation and culture are judged to be the most accurate information used, even though adjustments were necessary in these data, as explained below. Outlays on education, health, and recreation and culture by enterprises and individuals are based on less reliable information, such as examples appearing in Soviet accounting books of enterprise outlays for education. Estimates on the physical volume of housing are derived from Soviet sources and are thought accurate, but the ruble values per sq m of living space are subject to considerable error and information on the volume and cost of maintenance is scanty. In the case of household operations, it was necessary to estimate consumer expenditures on a series of utility and communications services, most of which are used jointly by industry and private households. The sum of the resulting estimates is consistent with other, general information on the place of household operations in total consumer expenditure. Outlays on private transportation are believed to be fairly accurate despite the necessity of estimating average fares and average length of trips. Outlays on tailoring and repair of clothing and household appliances are given in official retail trade statistics. Estimates of outlays on personal care are based on rule-of-thumb judgments and are subject to great error, but these outlays are small compared with other consumer services.

For each of the eight categories of services, the method for finding the 1955 ruble value is described below, together with the general principles by which values were estimated for the other years.

B. Education.

1. Outlays in 1955 by Type of Organization.

Soviet outlays on education in 1955 are the sum of state budget expenditures (66.8 billion rubles), expenditures of enterprises (6.9 billion rubles), and private expenditures (4.2 billion rubles).

a. State.

State budget expenditures on education are the sum of expenditures (1) directly from education appropriations and (2) from social insurance appropriations. The state budget education expenditure of 68.9 billion rubles in 1955 was reduced by 3.8 billion rubles to exclude political education, art and radiobroadcasting, and publishing. Social insurance expenditures made for educational purposes were estimated as 1.7 billion rubles by multiplying 1955 social insurance expenditures of 25.3 billion rubles 14/ by 6.9 percent, which was the percentage shown for education in the 1950 social insurance expenditure plan. 15/

b. Enterprise.

This category is the sum of expenditures made for education by enterprises of industrial ministries, by industrial cooperatives, by trade unions, and by collective farms.

(1) Enterprises of Industrial Ministries.

Expenditures of enterprises for education were estimated to be 4.7 billion rubles based on the difference of 6.8 billion rubles between total state social-cultural expenditures of 154.0 billion rubles 16/ and total state social-cultural budget expenditures of 147.2 billion rubles. Although the 154.0 billion rubles and the 147.2 billion rubles are not strictly comparable, the difference indicates the magnitude of expenditures by industrial ministries for social-cultural purposes. It is assumed that enterprise social-cultural expenditures are for education and health only and that education is the same portion of health and education expenditures in enterprises as in the state budget. The 4.7 is to 6.8 as 68.9 is to 100.1, 18/ 100.1 billion rubles being the sum of state budget expenditures for education and health and 68.9 billion rubles being the education appropriation.

(2) Industrial Cooperatives.

Expenditures of industrial cooperatives for education were estimated as 0.8 billion rubles based on a partial breakdown of total industrial cooperatives' social-welfare expenditures of 1.1 billion rubles. 19/

(3) Trade Unions.

Trade union expenditures for education were estimated at the planned figure of 1.0 billion rubles. 20/

(4) Collective Farms.

Expenditures of collective farms for education were estimated to be 0.4 billion rubles, the sum of 0.3 billion rubles for new school construction and 0.1 billion rubles for preschool activities. New school construction was estimated as 0.3 billion rubles by multiplying the number of new spaces provided for 160,000 pupils 21/ by 2,000 rubles, this price being half that shown for state construction on page 27, below.

c. Individuals.

Expenditures of individuals for education are the sum of parents', guardians', and students' payments for (1) part of the costs of kindergartens and the training of preschool-retarded children, (2) part of the costs of training of school-age retarded children, (3) part of the costs of childrens' vacation playgrounds, and (4) fees.

(1) Kindergartens and Preschool Retarded Children.

(a) Kindergartens.

Parents' fees for kindergartens were estimated to be 1.2 billion rubles by taking 20 percent of the sum of all kindergarten expenditures of 5.9 billion rubles. The 20-percent fee which parents pay was taken from an example of kindergarten costs. 22/

(b) Preschool Retarded Children.

Individuals were estimated to have paid fees of 0.4 billion rubles for the training of preschool retarded children by multiplying the number of children by the median fee charged. Fees for training retarded children were estimated as 225 rubles per month per child, the midpoint in the range of charges of 50 to 400 rubles set for institutions in the RSFSR in 1955. 23/ The number of preschool retarded children was estimated to be 136,587 by taking half the average annual number (400,215 24/) of all retarded and orphan children less half the average annual number (127,041 25/) of school-age retarded and orphan children.

(2) School-Age Retarded Children.

The fees for the training of retarded school-age children were estimated to be 0.2 billion rubles by multiplying the 225 rubles per month per child and half of the average annual number of school-age retarded and orphan children of 127,041 as explained in the preceding paragraph.

### (3) Childrens' Vacation Playgrounds.

Parents' payments for childrens' vacation playgrounds were arbitrarily estimated to be 0.1 billion rubles by taking 10 percent of estimated food costs of the playgrounds of over 0.9 billion.

### (4) Fees.

Fees in 1941 accounted for 3 percent of all educational expenditures. 26/ In lieu of later data, this figure has been adopted, giving 2.3 billion rubles for 1955.

## 2. Outlays in 1955 by Type of Function.

Soviet educational expenditures by function in 1955 are the sum of expenditures on general education (37.3 billion rubles), higher education (29.0 billion rubles), and science (11.6 billion rubles). The detailed expenditures by the state, enterprises, and private individuals were taken and regrouped by type of function. Two important items of information were that state budget expenditure on public schools for grades 1 through 10 was 24.2 billion rubles 27/ and that state budget expenditure on higher education was 23.3 billion rubles. 28/ A third important bit of information was that the planned 1956 expenditure on science education of 13.6 billion rubles was 2.0 billion rubles greater than the actual expenditure in 1955. 29/

## 3. Outlays in 1955 by Type of Cost.

Soviet educational expenditures by type of cost in 1955 are the sum of wages (41.6 billion rubles), materials (32.6 billion rubles), and construction (3.7 billion rubles). Information on the numbers in various categories of administrators, teachers, and janitors 30/ was combined with information on the wage structure 31/ to get expenditures on wages. Many detailed assumptions were necessary in piecing together the information -- for instance, assumptions as to the proportion of teachers who got extra pay for overtime, advanced degrees, and time-in-grade. The resulting summary tabulation is as follows:

Type of Education	Personnel (Thousands)	Wages (Billion Rubles)	Social Insurance* (Billion Rubles)	Average Annual Wage** (Rubles)
General	3,470	22.1	1.0	6,400
Higher	320	6.5	0.3	20,300
Science	119	2.7	0.1	22,700
Stipends	N.A.	6.8		
Lecture courses	N.A.	2.1		
Total	<u>3,909***</u>	<u>40.2</u>	<u>1.4</u>	

\* Paid by government.

\*\* Excluding social insurance.

\*\*\* Not including those receiving stipends or lecture fees.

The most important item in construction is the estimate of state construction for general education as 1.8 billion rubles, obtained by multiplying 442,500 new spaces provided for pupils 32/ by 4,000 rubles, the cost per new pupil space in the RSFSR during the Fifth Five Year Plan. 33/ Other items include state construction for science, higher education, and collective farms. Expenditures on materials was taken as the difference between total expenditures and expenditures on wages and construction.

#### 4. Estimates for Years Other Than 1955.

Soviet outlays on education for years other than 1955 were estimated by taking the number of teachers and other personnel employed in education in each year valued at 1955 wages, the number of students valued at 1955 cost of materials per student, and the number of new classrooms valued at 1955 construction costs from data given in Cultural Construction. 34/ The breakdown between public and private expenditures was derived by using the same relationship between the two as was estimated for 1955.

### C. Health.

#### 1. Outlays in 1955 by Type of Organization.

Soviet outlays on health in 1955 are the sum of state budget expenditures (33.0 billion rubles), expenditures of enterprises (4.6 billion rubles), and private expenditures (5.5 billion rubles).

##### a. State.

State budget expenditures on health are the sum of expenditures (1) directly from health accounts and (2) from social insurance accounts. The state budget health expenditures of 31.2 billion rubles 35/ in 1955 were reduced by 0.3 billion rubles to exclude sports and physical culture. Social insurance expenditures made for health purposes, planned at 2.2 billion rubles, 36/ were reduced by 0.1 billion rubles to exclude sports and physical culture.

##### b. Enterprise.

This category is the sum of expenditures made for health by industrial ministries, by industrial cooperatives, and by collective farms.

#### (1) Enterprises of Industrial Ministries.

Expenditures of enterprises for health were estimated to be 3.0 billion rubles, the difference between total public health expenditures of 36.4 billion rubles (less 0.4 billion rubles for sports and physical culture) and state organizational expenditures for health of 33.0 billion rubles. Total public expenditures of 36.4 billion rubles were obtained by increasing the 1955 state

budget health expenditures of 31.2 billion rubles by the relationship shown in 1954 of total public health expenditures of 33.7 billion rubles 37/ to the state budget health expenditures of 28.9 billion rubles. 38/

(2) Industrial Cooperatives.

Expenditures of industrial cooperatives for health were estimated to be 0.3 billion rubles, based on a partial breakdown of total industrial cooperatives' social-welfare expenditures of 1.1 billion. 39/

(3) Collective Farms.

Expenditures of collective farms for health were estimated to be 1.3 billion rubles, the sum of 1.0 billion rubles for health services and 0.3 billion rubles for new construction. Money income of collective farms was 75.6 billion rubles in 1955 and 94.5 billion rubles in 1956 40/; expenditures of collective farms on health services are estimated to be 1.2 billion rubles in 1956, out of total cultural expenditures of 1.4 billion rubles 41/; proportional expenditures on health services in 1955 would have been 1.0 billion rubles. Collective farms' new hospital construction was estimated to be 0.3 billion by multiplying an estimated 15,000 new rural hospital beds by 19,000 rubles, this price being the same as that shown for state construction of hospital beds on page 29, below.

c. Individuals.

Expenditures of individuals for health are the sum of medicine and drug sales (3.8 billion rubles) and fees (1.7 billion rubles) paid for passes to health resorts, sanatoriums, rest homes, and nurseries.

(1) Medicine and Drug Sales.

Sales of medicines and drugs were given as 3.8 billion rubles. 42/

(2) Fees.

Fees paid for passes to health resorts, sanatoriums, and rest homes were estimated to be 1.1 billion rubles from the information that the nonprivate share of total estimated expenses of 3.6 billion rubles was 70 percent, leaving 30 percent as the private share. 43/ Nursery fees were estimated as 0.6 billion rubles by multiplying the average number of children in nurseries (884,000 44/) by the 1955 planned fee of 640 rubles per year. 45/

2. Outlays in 1955 by Type of Function.

Soviet health expenditures by function in 1955 are the sum of expenditures on hospital and other health institutions (26.8 billion rubles); maternity and child care (5.2 billion rubles); sanitation (1.7 billion rubles); training (3.1 billion rubles); care of the disabled, medical administration, and other (2.5 billion rubles); and medicines and drugs (3.8 billion rubles). This breakdown was obtained by multiplying the 36.0 billion rubles of total public health expenditures (excluding sports and physical culture) by

67.0 percent for hospitals and other health institutions; by 12.3 percent for maternity and child care; by 4.7 percent for sanitation; by 8.7 percent for training; and by 6.8 percent for disabled, medical administration, and other, according to the 1957 Plan for the RSFSR. <sup>46/</sup> Other enterprise expenditures for health of 1.6 billion rubles (1.3 billion rubles by collective farms and 0.3 billion rubles by industrial cooperatives) were added to "hospitals and other health institutions," as was 1.1 billion rubles paid by individuals. The 0.6 billion rubles for nursery fees paid by individuals were added to "maternity and child care." The figure for medicines and drugs was derived as shown on p. 28, above.

### 3. Outlays in 1955 by Type of Cost.

Soviet health expenditures by type of cost in 1955 are the sum of wages (18.9 billion rubles), materials (21.6 billion rubles), and construction (2.6 billion rubles).

#### a. Wages.

Expenditures for health wages and salaries were estimated to be 18.9 billion rubles, the sum of wage payments (17.8 billion rubles) and social insurance (1.1 billion rubles). Wages of 17.8 billion rubles were obtained by multiplying the 1955 state health budget of 31.2 billion rubles <sup>47/</sup> by 57.1 percent, the percent shown for wages in the 1957 RSFSR health budget. <sup>48/</sup> These wages were increased by 5.9 percent, <sup>49/</sup> the amount paid to the state budget for social insurance by the health system.

#### b. Materials.

This category was estimated to be 21.6 billion rubles, the difference between the sum of wages (18.9 billion rubles) and construction (2.6 billion rubles) and total health expenditures (43.1 billion rubles).

#### c. Construction.

Health expenditures for construction were estimated to be 2.6 billion rubles, the sum of 2.3 billion rubles for state and 0.3 billion rubles for collective farms. State health capital investment for 1955 was obtained by multiplying 121,700 hospital beds and places in nurseries by 19,000 rubles. The 19,000 rubles was the result of dividing total Fifth Five Year Plan health capital investment of 7.3 billion rubles <sup>50/</sup> by 403,300 hospital beds and places in nurseries, <sup>51/</sup> the total number of beds and places added during the Plan. The 0.3 billion rubles for collective farms was explained on page 25, above.

### 4. Estimates for Years Other Than 1955.

Soviet outlays on health for years other than 1955 were estimated by taking the number of persons employed in health in each year

valued at 1955 wages, the materials valued at 1955 costs per hospital bed, and the increments of the number of hospital beds and nursery accommodations valued at 1955 construction costs from data given in the Health Handbook and the Sixth Five Year Plan for Health. 52/ The breakdown between public and private expenditures was derived by using the same relationship between the two as was estimated for 1955.

D. Housing.

Soviet outlays on housing in 1955 by organization (39.4 billion rubles) are the sum of outlays for construction and maintenance made by the state and by individuals. Net state expenditures on housing (21.2 billion rubles) are the difference between total outlays and consumer outlays on housing.

1. Total Outlays.

Total outlays on housing are the sum of expenditures for construction and for maintenance by the state, by urban individuals, and by rural individuals.

a. State.

State gross expenditures on housing were estimated to be 25.4 billion rubles, the sum of 21.7 billion rubles for completed construction and 3.7 billion rubles for maintenance. State construction expenditures on housing were obtained by multiplying 1,400 rubles (cost per sq m) 53/ by 15.5 million sq m of newly constructed living space, the 15.5 million sq m being 62 percent (the percent of living space to total state housing space) 54/ of 25.0 million sq m of total new housing space. 55/ State maintenance expenditures on housing were obtained by taking 1 percent of replacement costs of state housing stock of 262 million sq m of state living space 56/ at 1,400 rubles per sq m.

b. Urban Individual.

Urban individual expenditures on housing were estimated to be 4.7 billion rubles, the sum of 3.8 billion rubles for completed construction and 0.9 billion rubles for maintenance. Urban individual construction expenditures on housing were obtained by multiplying 650 rubles (cost per sq m) 57/ by 5.9 million sq m of newly constructed living space, the 5.9 million being 70 percent (the percent of living space to total space in private urban housing) 58/ of 8.4 million sq m of total new urban private housing space. 59/ Urban individual maintenance expenditures on housing were obtained by taking 1 percent of replacement cost average of urban individual housing stock of 143 million sq m of living space 60/ at 650 rubles per sq m.

c. Rural Individual.

Rural individual expenditures on housing were estimated to be 9.3 billion rubles, the sum of 6.6 billion rubles for completed construction and 2.7 billion rubles for maintenance. Rural individual construction expenditures on housing were obtained by multiplying 600,000 new houses 61/ by 11,000 rubles (cost per house). 62/ Rural individual maintenance expenditures on housing were obtained by taking 1 percent of replacement costs of average rural individual housing stock of 24.4 million houses 63/ at 11,000 rubles per house.

2. Consumer Outlays.

Consumer expenditures on housing are the sum of rent and expenditures for individual construction and maintenance.

a. Rent.

Rent was estimated to be 4.2 billion rubles by multiplying the state housing stock of 262 million sq m of living space by the legal rent of 15.84 rubles per year per sq m of living space. 64/

b. Individual Construction and Maintenance.

This category was estimated to be 14.0 billion rubles, the sum of 4.7 billion rubles for urban individual outlays and 9.3 billion rubles for rural individual outlays explained in 1, b, and 1, c, above.

3. Estimates for Years Other Than 1955.

Soviet outlays on housing for years other than 1955 were estimated by taking the physical volume of housing construction and maintenance valued at 1955 costs. Data on physical volume of both public and private housing space were derived from data given in the National Economy Handbook and the July 1957 housing decree. 65/

E. Household Operations.

Soviet consumer expenditures on household operations in 1955 (10.8 billion rubles) are the sum of expenditures for utilities (5.1 billion rubles) and communications services (5.6 billion rubles). (The seeming discrepancy in the total is due to the rounding of the components.)

1. Electricity.

Consumer expenditures for electricity were estimated to be 2.9 billion rubles by multiplying 7.3 billion kilowatt-hours by 40 kopecks. 66/

## 2. Water.

Consumer expenditures for water were estimated to be 1.5 billion rubles by multiplying 3.8 billion cubic meters by 40 kopecks 67/ based on prewar water consumption data 68/ and water consumption in the RSFSR. 69/

## 3. Gas.

Consumer expenditures for gas were estimated to be 0.7 billion rubles by multiplying one-third of the natural gas production of 9.0 billion cubic meters and one-half of the shale gas production of 1.4 billion cubic meters by 20 kopecks, 70/ the quantities being based on Sixth Five Year Plan data. 71/

## 4. Communications.

Consumer expenditures on communications were estimated to be 5.6 billion rubles by multiplying the total revenues of the Ministry of Communications of 9.7 billion rubles 72/ by 57.5 percent. Consumer expenditures as a percent of the revenues of the Ministry of Communications were believed to account for more than 55 percent but under 60 percent.

## 5. Estimates for Years Other Than 1955.

Consumer expenditures for household operations for years other than 1955 were estimated from output data valued at 1955 prices. Data on the production of electricity and gas were given in the Industrial Handbook 73/ and the Sixth Five Year Plan 74/; data on water consumption were given in the RSFSR Handbook 75/; and data on communications services were given in the National Economy Handbook and the Transportation and Communications Handbook. 76/

## F. Personal Transportation.

Soviet consumer expenditures on personal transportation in 1955 were estimated to be 16.5 billion rubles: 9.0 billion rubles for local and long-distance railroads; 6.9 billion rubles for street-cars, buses, taxis, and private automobiles; 0.4 billion rubles for river transportation; 0.1 billion rubles for ocean transportation; and 0.1 billion rubles for air transportation from data given in the National Economy Handbook and the Transportation and Communications Handbook. 77/ Physical data for years other than 1955 came from the same sources.

## G. Recreation and Culture.

Soviet outlays on recreation and culture in 1955 are the sum of expenditures for admissions paid to the places of entertainment (8.5 billion rubles), state budget expenditures for welfare services and sports (4.2 billion rubles), and private expenditures for religion (1.6 billion rubles).

1. Admissions.

Consumer expenditures for admissions to places of entertainment were estimated in a UN report to be 8.5 billion rubles -- the sum of 5.7 billion rubles for urban cinemas, 1.7 billion rubles for rural cinemas, 0.8 billion rubles for theaters, 0.2 billion rubles for circuses, and 0.1 billion rubles for museums and other. 78/

2. State Budget.

State budget expenditures for culture were estimated to be 4.2 billion rubles, the sum of 3.8 billion rubles from the education budget for libraries, clubs, and other cultural activities as explained in the methodology in B, 1, a, above, and 0.4 billion rubles from the state health budget for sports and physical culture as explained in C, 1, a, above.

3. Religion.

Consumer expenditures on religion were estimated to be 1.6 billion rubles by multiplying 6.7 million (the number of active church members) by their annual contribution of 240 rubles. The estimate of 6.7 million active church members was derived by taking one-fourth of the reported 80 million affiliated with religion in the USSR (50 million members of the Russian Orthodox Church 79/ and 30 million Moslems 80/) on the basis of 4 persons per family and estimating that one-third contained an active church supporter.

4. Estimates for Years Other Than 1955.

Consumer expenditures on recreation and culture for years other than 1955 were estimated from attendance data at recreation facilities and budget data in terms of 1955 prices. Data on attendance at cinemas, theaters, circuses, museums, and other recreation facilities were given in Cultural Construction 81/ and the Sixth Five Year Plan for cinemas. Culture and welfare estimates were based on state budget data given in Cultural Construction. 82/ Consumer expenditures on religion were held at the level of 1955 outlays for all years, on the basis that support of existing facilities is being maintained but not increased.

H. Repair Services.

Soviet consumer expenditures on repair services were estimated to be 5.6 billion rubles, being interpolated from data showing 3.8 billion rubles in 1950 and 6.0 billion rubles in 1956, 83/ giving an average annual rate of growth of 8 percent. This constant rate was then used to extend consumer expenditures on repair services to years other than 1955.

## I. Personal Care.

Soviet consumer expenditures on personal care are taken as the sum of expenditures for hairdressing (1.5 billion rubles), public baths (0.8 billion rubles), and laundries (0.2 billion rubles).

### 1. Hairdressing.

Consumer expenditures for hairdressing were estimated to be 1.5 billion rubles by multiplying 500 million visits by 3.0 rubles, the average amount charged for a haircut in Moscow. 84/ The 500 million visits was estimated on the basis of employment in all services of industrial cooperatives of less than 300,000. 85/ It was assumed that there were no more than 100,000 hairdressers in the USSR in 1955 who worked 250 days a year providing service for 20 people per day.

### 2. Public Baths.

Consumer expenditures for public baths were estimated to be 0.8 billion rubles by multiplying 544.3 million public admissions by 1.50 rubles. 86/ The number of public bath admissions was estimated by interpolating the admissions given as of 1 January 1938 and as of 1 January 1941 to obtain 1939 public bath admissions and by increasing the number of 1939 admissions to baths by 149 percent (1939 = 100), the increase given for the number of public baths in the RSFSR as of 1 January 1956. 87/

### 3. Laundrying.

Consumer expenditures for laundrying were estimated to be 0.2 billion rubles by multiplying 113.9 million kilograms of laundry by 2.0 rubles (cost per kilogram). 88/ The 113.9 million kilograms of laundry were estimated by interpolating the kilograms of laundry as of 1 January 1938 and as of 1 January 1941 to obtain 1939 kilograms of laundry and by increasing by 217 percent (1939 = 100), the increase given for laundry output in the RSFSR as of 1 January 1956. 89/

### 4. Estimates for Years Other Than 1955.

Consumer expenditures for personal care for years other than 1955 were estimated from data on population, bath admissions, and kilograms of laundry valued at 1955 prices. Hairdressing was estimated by the trend of the urban population. Admissions to public baths and kilograms of laundry were estimated from data given in the RSFSR Handbook. 90/