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ECONOMIC INTELLIGENCE REPORT

HOUSING IN THE USSR



CIA/RR 92

12 July 1957

CENTRAL INTELLIGENCE AGENCY

OFFICE OF RESEARCH AND REPORTS

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CIA/RR 92

(ORR Project 14.622)

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FOREWORD

The purpose of this report is to present a quantitative measure of Soviet housing conditions and of investment in housing. No attempt is made to describe in detail problems of morale induced by socialization of "the home," the shortage of space, or other factors. Nor is an attempt made to describe in detail variations in the quality or type of construction or to describe problems of management of state housing. Information on these subjects may be found in Timothy Sosnovy, The Housing Problem in the Soviet Union, 1954; in Joseph Berliner, Urban Residential Building in the USSR, 1955; in a series of articles in Soviet Studies by Alexander Block; and by a study of Soviet housing law. These unmeasurable factors have been considered, however, in ascertaining the housing conditions under which the Soviet people live and in estimating future Soviet policy regarding housing.

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HOUSING IN THE USSR*

Summary

Although the Soviet regime inherited a poverty of housing from pre-revolutionary Russia, the history of Soviet housing since that time has been dominated by an increasing shortage. This condition has developed from a series of factors, the most basic being the low priority of housing in the National Economic Plan. Rapid urbanization, heavy war destruction, and discouragement of private building have accentuated the shortage.

Housing in the USSR is divided sharply between urban housing and rural housing. Action by the state has been the vital factor in the field of urban housing. At the present time, urban housing is 65 percent state owned, whereas rural housing is almost entirely privately owned and privately built. Of all housing in the USSR, urban and rural, the state owns only about 30 percent. Measured in terms of living space available to each person, conditions in urban housing grew continually worse from 1917 to the outbreak of World War II. In the postwar period the rates of urbanization and of housebuilding have been approximately the same; conditions in 1956 were no better than at the end of World War II and are still well below those of 1917. Rural housing conditions today differ little from prerevolutionary conditions. It is planned that between 1956 and 1960 the total amount of urban housing space will be increased by 50 percent. To achieve this, radical changes have been made in housebuilding design, techniques, and materials.

The allocations planned for housing construction for the Sixth Five Year Plan are not adequate, however, to achieve the goal outlined. State expenditures on housing investment have claimed only a small portion of total state capital investment. State investment in housing during the 1930's averaged only 9 percent of total state capital investment, increased to about 12 percent in the Fourth Five Year Plan, and rose to about 14 percent in the Fifth Five Year Plan. This postwar investment has been concentrated primarily on houses for industrial workers built by the industrial ministries. In the US, investment in housing, except for the depression and war years, has averaged over 20 percent of total

* The estimates and conclusions contained in this report represent the best judgment of CIA as of 15 December 1956.

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capital investments. Investment in state housing, planned to constitute approximately 14 percent of total state capital investment in the next 5-year period, would not increase standards rapidly or appreciably. It would take many years of investment at twice this level to provide the Russians with standards approaching those in Western countries.

I. Background.

Rural and urban housing in the USSR are differentiated by one significant factor -- ownership. Since the Revolution in 1917, rural housing has remained almost entirely privately owned, whereas about 65 percent of urban housing in the USSR is owned by the state.*

State ownership of rural housing, estimated at less than 5 percent of total rural housing, is limited to housing built on machine tractor stations (MTS's) and sovkhozes. Nonprivate dwellings on kolkhozes include those of the managers, agronomists, and other technicians and belong to the farm. 1/** State urban housing is built and owned by ministries, state organizations, and municipalities (local soviets). Today ministries and state organizations control 60 percent of state urban housing, and municipalities control 40 percent. 2/

The Revolution brought an end to all private ownership of land in the USSR. In cities with populations of over 10,000, the larger houses and all apartment buildings were nationalized. Housing which had been attached to industry became state property when the industry itself was nationalized. State organizations and administrations took over part of the nationalized housing for dwellings and office space. Municipalities were made responsible for the remainder of state housing. 3/

After 1923, by which time about 47 percent of existing urban housing space had been taken over by the state,* 4/ there was little further nationalization, and the remainder of urban housing as well as all rural housing remained in private ownership on land leased from the state.

* In terms of living space.

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The dominant role in state housing construction was assumed and retained by industrial ministries. These ministries have always had priority over construction materials and labor and have received the lion's share of investment funds.

Although municipalities originally were given responsibility for most of the nationalized housing as well as for all utilities, cultural services, and city planning and development, they never assumed a dominant role in Soviet housing construction, because they were accorded low priority on materials and labor and lacked practical authority to implement a broad housing program. Only in large cities such as Moscow and Leningrad have municipalities been dominant in housing construction.

Cooperative housing associations came into existence in urban areas during the early 1920's. These cooperatives did some building with state aid, but usually they leased existing housing from municipalities and assumed the responsibility of management and maintenance. By the mid-1930's they were managing almost all municipally owned housing, or about 40 percent of all state housing. 5/ In 1937, however, these cooperatives were abolished and their housing was turned back to the municipalities or to other state organizations, 6/ ostensibly because of irresponsible maintenance but in fact because the state had no control over the appointment of management or allocation of space.

Private urban housing construction was not outlawed after the Revolution, and up to the beginning of the First Five Year Plan (1928-32) private living space built actually exceeded state building. During the 1930's, however, the private sector was discouraged by lack of construction materials and loan funds and by discriminating taxes. After World War II the official attitude toward private housing construction changed, and since that time a number of acts have been passed to encourage construction by this sector.

Almost no change in rural housing in the USSR occurred after the Revolution. Throughout the Soviet period the peasants have continued to build their dwellings on land leased from the state. The state has built a few houses for MTS and sovkhoz workers, but most of these workers have built their own houses. In recent years the state has taken a more active role in rural housing construction, but this interest is limited almost entirely to the "new lands."

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II. Construction.

A. Statistics.

1. Urban Construction.

From the beginning of the Soviet period to 1948, housing data were measured in terms of square meters of living space (zhilaya ploshchad'), which excludes baths, kitchens, corridors, closets, and hallways. ^{7/} Since 1947, official announcements have been made in terms of total or basic space (obshchaya ploshchad'),* which represents the total area within the walls of a residence ^{8/} and averages 54 percent greater than living space.

The National Economy of the USSR, ^{9/} a statistical compilation published in 1956 and hereafter referred to as the handbook, contains a new series of historical data on Soviet urban housing construction in terms of total space, with 5-year data for prewar construction and annual data for postwar construction.

It is necessary to have data in terms of both living space and total space. Living space is used in the determination of rent, in the allocation of space, and in the calculation of housing construction costs. At the local level, all planning and accounting are done in terms of living space. All planning and accounting data released are in terms of living space. On the state and republic levels, however, plan and fulfillment data on housing construction are now released in terms of total space.

The newly released data in the handbook agree substantially with previously released construction statistics. (Minor differences are presented in Appendix A.) Released Soviet data on war losses, however, previously stated to have been 70 million square meters of living space, now indicate them at 40 million to 45 million square meters of living space. Also, previous calculation of the increased urban living space from newly acquired territories in 1939-40 was two-thirds of the figure derived from statistics in the handbook. The basis for these changes is found in the total housing fund figures released for 1940 and 1950, both of which are higher than previously estimated. Although

* The term obshchaya ploshchad' refers to all space within the apartment. It excludes areas outside the apartment, such as elevator space, stairways, and basements. Another term with the same meaning is poleznaya ploshchad'.

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certain data in the handbook disagree with data previously published, an arbitrary decision has been made to use the handbook figures in all cases where they apply, with proper notation of inconsistencies and disagreements.

A summary of urban housing construction in the USSR for selected periods, 1924-60, is given in Table 1.* A summary of urban housing space in the USSR for selected years, 1917-55, is given in Table 2.**

2. Urban Housing Space.

Censuses or estimates of both state and private urban housing were made in 1923, 1926, and 1950. Estimates of state urban housing alone were made in 1937, 1940, and 1945, and since 1947 an estimate has been made each year. 10/ The handbook includes data on total urban housing space, state and private, existing in 1926, 1940, 1950, and 1955 which were assumed to have been based on this material. It is likely that considerable guesswork was involved in the 1940 figures because there had been no census of private housing since 1926 and private construction data were incomplete. Although no data have been seen for postwar years before publication of the handbook, many Soviet authors have presented data on urban living space for prewar years. 11/ Most of the prewar data are contradictory because only in the state sector were data made available to Soviet writers. Even the official statistical publication Socialist Construction, the predecessor of the handbook, ignored private building during the 1930's.*** 12/ It has therefore been necessary to discard most of the prewar housing figures presented by Soviet writers. The technique for determining the amount of space existing in any given year is described in the notes to Table 2.****

3. Rural Housing Space.

No census has ever been taken of rural housing, and annual estimates of construction have been made only in the postwar period. The figures are therefore very rough estimates as presented in Table 3.†

* Table 1 follows on p. 6.

** Table 2 follows on p. 7.

*** Figures on private building are rounded similarly both in Socialist Construction and in the handbook.

**** See Appendix B, p. 53, below.

† Table 3 follows on p. 8. Notes to Table 3 are in Appendix B, p. 56, below. (Text continued on p. 9.)

Table 1
 Urban Housing Construction in the USSR ^{a/}
 Selected Periods, 1924-60

| Urban Housing Construction | 1924-28 | | Second Five Year Plan (1933-37) | | Fourth Five Year Plan (1946-50) | | Fifth Five Year Plan (1951-55) | | Sixth Five Year Plan (1956-60) | |
|-------------------------------------|---------|--------------------|---------------------------------|-----------------------|---------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|
| | 1924-28 | 1929-32 | 1933-37 | 1938-42 ^{b/} | Living Space | Total Space ^{c/} | Living Space | Total Space ^{c/} | Living Space | Total Space ^{c/} |
| State | | | | | | | | | | |
| Plan | | 42.4 ^{d/} | 64.0 ^{e/} | 35.0 ^{f/} | 72.4 ^{g/} | 117.0 ^{h/} | 65.0 ^{h/} | 105.0 ^{i/} | 127.0 ^{h/} | 205.0 ^{j/} |
| Actual | 6.7 | 23.5 | 26.8 | | 44.9 ^{h/} | 72.4 ^{k/} | 65.3 ^{h/} | 105.4 ^{l/} | | |
| Actual (percent of Plan) | | 55 | 42 | | 62 | 62 | 100 | 100 | | |
| Private | | | | | | | | | | |
| Plan | | 20.1 ^{m/} | 8.2 ^{n/} | 10.0 ^{o/} | 12.0 ^{p/} | 17.0 ^{h/} | | | 55.0 ^{h/} | 78.0 ^{h/} |
| Actual | 8.8 | 4.6 | 3.8 | | 21.3 ^{h/} | 30.4 ^{q/} | 27.2 ^{h/} | 38.8 ^{r/} | | |
| Actual (percent of Plan) | | 23 | 46 | | 178 | 179 | | | | |
| Total state and private | | | | | | | | | | |
| Plan | | 62.5 | 72.2 | 45.0 | 84.4 | 134.0 ^{h/} | | | 182.0 ^{h/} | 300.0 ^{h/t/} |
| Actual | 15.5 | 28.1 | 30.6 | | 66.2 ^{h/} | 102.8 | 92.5 ^{h/} | 144.2 ^{s/} | | |
| Actual (percent of Plan) | | 45 | 42 | | 78.4 | 77 | | | | |
| Percent of total constructed | | | | | | | | | | |
| State | 43 | 84 | 88 | | 68 | 70 | 71 | 73 | | |
| Private | 57 | 16 | 12 | | 32 | 30 | 29 | 27 | | |

a. Million square meters of living space unless otherwise indicated. See Appendix A.
 b. For data on fulfillment and on construction in 1942-45, see Appendix A.
 c. Total space.
 d. ^{13/}
 e. ^{14/}
 f. ^{15/}
 g. ^{16/}
 h. Estimated.
 i. ^{17/}
 j. ^{18/}
 k. ^{19/}

l. ^{20/}
 m. ^{21/}
 n. ^{22/}
 o. ^{23/}
 p. ^{24/}
 q. ^{25/}
 r. ^{26/}
 s. Excludes about 10 million square meters of state housing constructed by decentralized means.
 t. Includes about 20 million square meters of state housing constructed by decentralized means.

Table 2
 Urban Housing Space in the USSR a/
 Selected Years, 1926-55

| End of Year | Million Square Meters | | | | | |
|---------------------------------------|-----------------------|----------|----------|--------------|---------|----------|
| | Total Space | | | Living Space | | |
| | State | Private | Total | State | Private | Total |
| 1926 | 130.0 b/ | 113.0 b/ | 216.0 b/ | 72.3 c/ | 81.7 c/ | 154.0 c/ |
| 1928 | 109.0 d/ | 120.0 | 229.0 | 76.5 e/ | 86.7 e/ | 163.2 |
| 1932 | 141.6 | 126.1 | 267.7 | 100.0 | 91.3 | 191.3 |
| 1937 | 178.8 | 131.1 | 309.9 | 126.8 | 95.1 | 221.9 |
| 1937 (adjusted) | 184.6 | 131.1 | 315.7 | 131.0 f/ | 95.1 | 226.1 |
| 1938 | 192.9 | 132.7 | 325.6 | 136.0 | 96.1 | 232.1 |
| 1940 (including new territories) | 267.0 b/ | 154.0 b/ | 421.0 b/ | 170.9 | 106.7 | 277.6 |
| Acquired housing from new territories | 53.8 | 16.7 | 70.5 | 22.7 | 7.6 | 30.3 |
| Losses during World War II | 46.5 | 21.3 | 67.8 | 32.2 | 13 | 45.2 |
| 1945 | 275 | 147 | 422 | 171 | 103 | 274 |
| 1946 | 286 | 151 | 437 | 178 | 106 | 284 |
| 1947 | 296 | 156 | 452 | 184 | 110 | 294 |
| 1948 | 309 | 161 | 470 | 192 | 114 | 306 |
| 1949 | 322 | 167 | 489 | 201 | 117 | 318 |
| 1950 | 340 b/ | 173 b/ | 513 b/ | 211 | 121 | 332 |
| 1951 | 356 | 180 | 536 | 222 | 125 | 347 |
| 1952 | 371 | 187 | 558 | 231 | 130 | 361 |
| 1953 | 390 | 194 | 584 | 243 | 135 | 378 |
| 1954 | 411 | 200 | 611 | 256 | 140 | 396 |
| 1955 | 432 b/ | 208 b/ | 640 b/ | 268 | 146 | 414 |

a. A discussion of the methodology used to derive the data in this table is presented in Appendix B, p. 53, below.

b. 27/

c. 28/

d. All figures are estimated.

e. 29/

f. 30/

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Table 3

Rural Housing Space and Construction of Rural Housing
in the USSR a/
1943-55

| <u>End of Year</u> | <u>Number of Houses Built (Thousands)</u> | <u>Total Number of Houses <u>b/</u> (Millions)</u> | <u>Total Space (Million Square Meters) <u>c/</u></u> |
|--------------------|---|--|--|
| 1943 | 400 <u>d/</u> | | |
| 1944 | 500 <u>d/</u> | | |
| 1945 | 600 <u>d/</u> | 21.8 | 817 |
| 1946 | 400 <u>e/</u> | 22.0 | 823 |
| 1947 | 500 <u>d/</u> | 22.2 | 834 |
| 1948 | 700 <u>d/</u> | 22.7 | 851 |
| 1949 | 700 <u>f/</u> | 23.2 | 869 |
| 1950 | 400 <u>g/</u> | 23.3 | 875 |
| 1951 | 400 <u>h/</u> | 23.5 | 881 |
| 1952 | 370 <u>i/</u> | 23.6 | 886 |
| 1953 | 400 <u>j/</u> | 23.8 | 892 |
| 1954 | 470 <u>k/</u> | 24.0 | 900 |
| 1955 | 600 <u>l/</u> | 24.4 | 914 |

a. Data on number of houses built are computed from unrounded data. State agricultural housing in worker settlements is included in urban housing.

b. Depreciated at 1 percent. See Appendix D.

c. Total space in square meters has been estimated on the basis of 37.5 square meters of space per dwelling. It is assumed that all space is living space.

d. Estimated. Reconstruction as well as new construction is included.

e. 31/

f. 32/

g. 33/

h. 34/

i. 35/

j. 36/

k. 37/

l. 38/

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B. State Construction.

1. Responsibility for Construction and Management.

State housing construction is part of the national economic plan. Of state housing built since the war, about 70 percent has been built by industry, 10 percent by transport, 10 percent by municipalities (local soviets), and the remainder by other ministries and state organizations.* Ministries build and maintain houses for their employees in cities and workers' settlements in the vicinity of plants of the ministry. This construction may be for the purpose of providing additional housing for employees of an existing plant, or the housing construction may be an integral part of a construction program involving the erection of a new plant. The ministries provide utilities and cultural facilities if municipal facilities are not available. Housing is also constructed and administered by municipalities, which are responsible as well for the construction and operation of urban water, electricity, sewerage and gas services, public baths, transportation within the city, laundries, hotels, and other services. There is also a small amount of housing built under the direction of regional and republic governments.

The building and management of state urban housing has always been considerably confused by a multiplicity of authority and a lack of coordination. Although municipalities are responsible for city planning and development and for most utilities and services, they often do not determine the location and planning of ministerial housing and utilities within urban areas. As a result, city planning becomes difficult, utilities are not adequately provided, and space is allocated arbitrarily. 39/ The large number of construction organizations involved in urban building creates a problem. Municipalities and ministries building in an area have their own construction organizations, and there is a complete lack of coordination among these builders. 40/ As a typical example, in Krasnoyarsk approximately 40 small residential settlements are being built by separate industrial enterprises. Most of them are building their own schools and hospitals and clubs. The sewers in each of these settlements are built independently without reference to a central sewerage system so that sewage cannot be disposed of outside of the city. There are 51 independent designing organizations involved in the planning of houses and services within the city. 41/

* See Appendix C.

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Within the past few years, municipalities have been given more precise authority in city planning and a larger share of state housebuilding funds. In three cities -- Moscow, Leningrad, and Kiev -- all housing construction trusts have been combined under a single authority, and this procedure is to be extended to other large cities and certain regions. Republic ministries of urban and rural construction have been formed to centralize authority over municipal housing and service construction. Arguments have been put forth to concentrate all authority for urban building in the hands of municipalities, allowing industry to build and own housing only outside of cities in workers' settlements. It is estimated, however, that industry will not willingly relinquish any of its rights to build and manage employee housing. 42/

2. Location and Type of State Housing Construction
in Urban Areas.

In the haste of reconstruction following World War II, many single-unit and small dwellings of 1 or 2 stories were constructed in urban areas. One- and two-story buildings comprised 75 to 90 percent of new construction in medium- and small-sized towns in the Fourth Five Year Plan. 43/ During the Fifth Five Year Plan the direction of urban building was toward the construction of centrally located multi-story apartment buildings. 44/ Although the initial construction cost was generally higher than in the case of smaller units, it was argued that economies in management and maintenance as well as in provision of utilities and transport facilities would outweigh the higher construction cost. 45/ For the Sixth Five Year Plan, most of the state housing to be built will be 3- and 5-story apartment houses located in so-called satellite areas around cities and a certain distance from them. Small 1- and 2-story residences will continue to be built in small towns. 46/

US housing delegates made several general comments regarding city planning in the USSR. There was unanimous opinion that the Russians are not taking advantage of the unique opportunity for over-all long-term urban planning offered a totalitarian state. There is a lack of dynamics in planning, big cities having a master plan which is being followed to a certain extent, but there is no planning beyond 10 years ahead. Future needs for shop and service space are not being provided, and no allowances are being made for increased use of automobiles. On the other hand, members of the delegation were impressed by the number of parks and green areas as well as the general layouts of the new satellite developments. 47/

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The composition of Soviet urban housing in 1956, in terms of living space, has been stated informally as follows 48/:

| <u>Size</u> | <u>Percent</u> | <u>Material</u> | <u>Percent</u> |
|-------------------|----------------|----------------------------|----------------|
| 1-story dwellings | 39 | Wood construction | 41 |
| 2-story dwellings | 32 | Mixed wood and brick/stone | 10 |
| 3-story dwellings | 9 | Brick, stone, concrete | 48.5 |
| 4-story dwellings | 8 | | |
| 5-story and over | 11 | | |

Most of the one-story wood houses in the USSR are privately owned. The remainder -- two-story and over, nonwood structures -- belong to the state. During the next 5 years, it is planned that most state housing construction will be 3- to 5-story structures, implying a drop in the share of 2-story and over-5-story dwellings. As private construction is to increase at the same rate as state construction, the share of one-story houses constructed of wood will not decline. The type of material used in state construction during the Sixth Five Year Plan, however, will change the current material composition of state housing appreciably. Most of the existing housing in the material category "brick, stone, and concrete" is brick or stone, whereas during the next 5 years most of the housing built in the state category will utilize prefabricated reinforced concrete components. The plan for utilization of prefabricated reinforced concrete in building, particularly housebuilding, was first outlined in the fall of 1954. A series of conferences and decrees followed, resulting in a considerable increase in the size and scope of the original program. Fulfillment of the Sixth Five Year Plan for housing depends overwhelmingly on the success of this program. Members of the housing delegation were told that the Russians want city centers eventually to have 85 percent multistory prefabricated (mainly concrete) residences, whereas at present about 40 percent of state urban housing construction is so composed. 49/

3. Shortcomings of Construction Organizations in Housebuilding.

Housebuilding has always had low priority in the total construction program and in the quality of materials and workmanship. 50/ There is no known year in the Soviet period in which the program for state housing construction has been fulfilled.*

* Although the original Fifth Five Year Plan was fulfilled, revised goals were not fulfilled. No annual plans were fulfilled in the Fifth Five Year Plan.

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Among the criticisms directed toward builders, the following are frequently noted:

a. Poor quality of construction. 51/ The workmanship and quality of materials used in housebuilding are vastly inferior to those used in industrial construction. Members of the US housing delegation were shocked to note the use of poor materials such as green lumber, warped frames, rusty hardware, wrought iron pipe for water and sewerage lines (embedded in concrete in the new prefabs) which will deteriorate in 3 to 6 years, concrete containing excess sand, and peeling plaster in new buildings. As for workmanship, the finishing work is so poor that buildings are in need of repair before they are completed, with tilting floors, frames that do not fit, and leaking ceilings. Although the basic structures are generally sound, in some cases even technical standards are violated, causing foundations to give way and walls, ceilings, and balconies to collapse. 52/

b. Poor scheduling of construction. 53/ Year after year state housing construction is started so late in the year that over 60 percent of the work must be finished in the last 3 months of the year. This gives rise to inferior-quality construction work and necessitates a concentration of construction resources at the end of the year. For example, the amount of housing finished in the first 6 months of 1956 is less than one-fourth of the total planned for the year. 54/

c. Failure to complete housing before it is turned over for occupancy. 55/ This often occurs because the new tenants want to move in and the builders and local soviets want to meet acceptance schedules.

d. Excessive housing starts and lack of housing finishes. For example, on 1 January 1956 in cities of the RSFSR, excluding Moscow, 25 billion rubles worth of housing and service construction was under way. Yet during the whole of 1955 the cost of projects completed was only 7.5 billion rubles. Thus 70 percent of all capital investment in housing was incompleting construction. 56/ Yet in 1956 many projects have been started and many incompleting projects left unattended. The reason is that fulfillment of the plan is measured in terms of rubles spent. In housing construction the first stages produce a rapid expenditure of expensive materials, whereas the finishing work of a residence requires "unprofitable" labor inputs and proceeds slowly. 57/

e. Neglect of housing in favor of other construction. This criticism is infrequently noted because housing is of secondary importance

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in a ministry's building program. It is, however, the major cause of underfulfillment of the housing construction plan.

f. High cost of construction. In every known year in the Soviet period the cost of housebuilding has exceeded estimated costs.

g. Architectural and building excesses. 58/ Architectural excesses in the form of costly decorations, ostentatious facades, towers, wasted space, and lack of standardization add to the cost of housebuilding in the USSR. At the Builders Conference in the fall of 1954, examples were given of housing which cost over 3,000 rubles per square meter of living space, or double the national average; of apartment houses built with decorated towers costing several million rubles; and of residences with living space comprising only 30 to 40 percent of total space.

All of these shortcomings have been registered continually throughout the postwar period, but not until 1954 were they given serious attention. Drastic changes have occurred in the housing construction field for the Sixth Five Year Plan period. These are discussed in F, below.

C. Private Construction.

Except for the few houses which are built by industry for sale to employees, almost all private urban building is done by the owners.* The main problem faced by the individual housebuilder is the acquisition of construction materials. The Ministry of Trade has outlets in urban areas, and industrial ministries have outlets for materials, tools, and hardware. In the prewar period the state made no effort to make materials available. In the postwar period the state has lowered the retail price of building materials each year since 1947, and since 1954 a serious effort has been made to furnish the market with adequate supplies. At present the availability of supplies rather than their price continues to restrict private construction. Bank funds available for private loans are seldom used up, and land is not difficult to acquire. 59/ Land for building is granted by the executive committee of the rayon or the city soviet. Plots, ranging from 300 to 600 square meters, are leased in perpetuity with payment of an annual property tax

* Recent visitors to the USSR have reported that certain elite groups such as scientists and doctors and teachers have been allowed to build cooperative apartment houses. It has also been reported that a few hired laborers are available for private construction.

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of about 100 rubles. 60/ The only restrictions on this land are those limiting the size of the dwelling and the maximum time the land can be held before construction is begun. 61/ The city soviet sets aside areas for private housing on the outskirts of towns. Although the municipalities are responsible for providing utilities to these areas, in fact they do so only occasionally. Industrial ministries are supposed to assist their workers in acquiring blueprints and drawings and to provide technical assistance in building, in transportation of materials, and in provision of utilities and services.

In rural areas, kolkhozniki build on their private plots. State agricultural workers occupy lots granted by the rayon soviet. These lots vary, in size from 700 to 1,200 square meters. 62/ Special stores in the cooperative trade network sell construction materials in villages and other rural areas.

Until the inauguration of the new lands program the only evidence that the state has engaged in kolkhoz housing construction was the agrogorods (agricultural cities) built in 1950. These proved very costly in labor and materials and were resisted by the peasants. The state builds an unknown share of the housing of sovkhos and MTS workers.

A crude type of construction prevails in both urban and rural private housing. The labor is unskilled, all kinds of scraps are used for materials, and utilities are generally lacking. This is particularly true in rural areas, where the same materials and structure types prevail as in prerevolutionary times. It is noteworthy that although numerous requests were made, members of the US housing delegation to the USSR were not allowed to see any private housing.

D. Urban Housing Construction, 1917-45.

1. Before 1929.

From the Revolution to 1924 there was little housing construction. There was general confusion regarding what housing had been nationalized and who was responsible for its upkeep. Widespread destruction and ruin resulted from the Civil War, with mass wrecking of whole blocks of buildings to obtain fuel, and neglect as large segments of the urban population fled to the country to avoid starvation. 63/ Between 1917 and 1923 the urban population declined from 20 million to

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17 million 64/ and, although there was a certain amount of new building, there was a net loss in total living space because of destruction and dilapidation. 65/ Housing construction recommenced on a large scale in 1923, and between 1923 and 1929 a total of 16.6 million square meters of living space was built, including 7 million in the state sector and 9.6 million in the private sector.* This is the only period since the Revolution in which private building exceeded state building. In terms of total space the state sector built more, but less than 40 percent of this was living space.

2. 1929-32.

The First Five Year Plan for urban housing construction was based on the estimated increase in the urban population, but the plan stated that outlays would fall short of providing adequate housing. 66/ The plan was fulfilled by only 45 percent, and a total of 28.1 million square meters of living space was provided. At the same time the urban population increased by 13 million so that the new space per new urban dweller was only about 2.2 square meters -- less than 25 square feet. Whereas the state sector fulfilled the plan by 55 percent, the private sector built only 23 percent of housing planned for this period. This was because of a series of government regulations in 1929-30 which virtually halted private construction. Loans and lots were no longer available, and materials and blueprints could not be purchased. An example of this policy is a law which was in force during the First Five Year Plan under which the income tax on home owners with an income of 6,000 rubles was 16 percent whereas the income tax on tenants with the same income was only 4 percent. 67/ As a result of the discouragement of private building and the low priority of housing in the total state construction program, housing needs were deferred, and average space declined continually during the 1930's.

3. 1933-37.

The period from 1933 to 1937 was the worst in the peacetime history of Soviet housing. The urban population increased by about 16 million, and the amount of housing built was not sufficient to provide room for a bed for each new urban resident. The Second Five Year Plan called for the construction of 72.2 million square meters of urban space, including 64 million square meters of state construction and 8.2 million

* See Appendix A.

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square meters of private construction. The plan was fulfilled by 42 percent, and the amount of living space constructed exceeded that of the First Five Year Plan by only about 2.5 million square meters. Space built by the private sector declined in comparison with the previous period.

4. 1938 - July 1941.

By 1938, urban housing conditions were far worse than they had been before the plan periods. The urban population had increased by about 25 million from 1928 to 1938, and in this same period the total amount of construction amounted to about 60 million square meters of living space, less than half of the housing needed to maintain the 1928 average of space per capita.

The Third Five Year Plan was met more successfully than the first two Five Year Plans. In $3\frac{1}{2}$ years, over half of the total plan was fulfilled and almost as much space was built as in each of the two previous Five Year Plan periods. The plan had called for the construction of 45 million square meters of living space, 35 million by state construction and 10 million by private construction. By July of 1941 the state had constructed 21 million square meters and private builders had constructed 5 million square meters.

5. 1942-45.

There was very little urban housing construction during World War II, and conditions became even more crowded as large numbers of industrial workers migrated eastward and as western cities were razed by both the Germans and the retreating Russians. A certain amount of temporary construction necessarily took place in the new industrial centers of the east where the population rose by 5 million between 1939 and 1943. But most of the construction from the beginning of the war through 1945 occurred after the liberation, in areas previously occupied. 68/

During 1942-45 a total of 29 million square meters of urban living space was built or restored, an amount greater than that built in any of the three prewar Five Year Plans. A large share of the construction figures for this period as well as for the period of the Fourth Five Year Plan include reconstruction and restoration of existing housing.

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World War II left about 25 million people homeless in the country. In areas which had been occupied by the enemy, it was reported that almost half of the urban living space -- 70 million square meters -- had been destroyed and 30 percent of rural housing -- 3.5 million dwellings -- had been wrecked. 69/ These reports of war losses are exaggerated. It appears that net urban losses were actually about 45 million square meters, and the extent of actual rural losses is unknown.*

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E. Urban and Rural Housing Construction in the Postwar Period.

With the end of the war the official attitude toward housing changed. The postwar period brought a marked increase in both state and private housing construction. State housing has received a greater share of total construction resources, and private housing has benefited from a number of acts which have been passed to encourage private construction and ownership. The distaste for private ownership in the Soviet legal system apparently was overcome by the realization that the state could not supply the housing required for its urban population.

A series of decrees and decisions published between 1943 and 1945 to promote private reconstruction of war-damaged and destroyed housing includes an increase in the amount which could be borrowed from banks from 7,000 to 10,000 rubles, exemption from payment of land taxes, allocation of more building materials to the retail market, and permission for kolkhozniki to obtain timber from certain state forests. 70/ In 1946 a decree was issued under which workers in most areas of the USSR were allowed to buy houses built by ministries for sale to their employees, and this concession was extended to the rest of the country in 1949. This decree offered private citizens the first opportunity to own skillfully built houses. And because banks and purchasers financed these houses, there was no financial cost to the industry building the houses. 71/

A decree published in 1948 legalizing the purchase and ownership of private dwellings received a great deal of publicity. This decree guaranteed for the first time that the land on which private houses were built was leased in perpetuity rather than for a specific number of years, thus giving official assurance that the house would not be subject to seizure by the state. This decree was limiting as well as

* For discussion of exaggerated war losses in urban areas, see Appendix B.

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liberalizing, however. It set a limit on the size of lots and restricted the number of rooms in a private house to a maximum of five, thus eliminating the possibility of private construction of large houses with extra rooms for rent. Although private construction and ownership of dwellings had continued throughout the plan periods, without confiscation by the state, legalizing the existing situation gave the owner the benefit of recourse to the law in certain disputes. 72/

1. 1946-50.

The Fourth Five Year Plan for housing called for the construction and restoration of 84.4 million square meters of living space in urban areas, including 65 million square meters by ministries and state organizations, 7.4 million square meters by municipalities, and 12 million square meters by private builders. Of this total, 41.6 million square meters were planned for areas occupied by the Germans during the war. This plan appears to have been designed to stabilize the number of privately owned urban dwellings at the prewar level and increase the number of state-owned dwellings, which had regained its prewar level by 1946, to meet expected urban population increases. 73/ In rural areas, construction was planned at 3.4 million dwellings of which 1.7 million were designated to be in occupied areas. 74/ After 2 years the Five Year Plan for urban construction had been fulfilled by 27 percent, 21 percent in the state sector and 68 percent in the private sector. At the end of 1948, in order to conceal the fact that state housing construction plans were greatly underfulfilled (33 percent of the Five Year Plan was completed in 3 years) and that private construction was overfulfilled (the Five Year Plan was achieved in less than 3 years), the USSR changed its methods of announcing figures for housing construction. Figures for state and private construction were combined, and the unit of space was changed from living space to total space. Living space, which is estimated at 62 percent of total space in the state sector and 70 percent of total space in the private sector, had always been the unit of measure of Soviet housing construction and was the measure employed in the plan. In terms of living space, the state sector fulfilled the Fourth Five Year Plan by 62 percent, the private sector by 178 percent. In rural areas, only 2.7 million dwellings were completed against a plan of 3.4 million.

2. 1951-55.

The Fifth Five Year Plan called for the construction of 105 million square meters of total state housing space (68 million square

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meters of living space), an increase of approximately 50 percent over that built between 1946 and 1950, a task magnified by the large role of reconstruction in the Fourth Five Year Plan figures. This plan for state housing construction was not intended to improve housing conditions appreciably, because almost all of this housing was scheduled to be absorbed by increases in urban population. Therefore, a net increase in the amount of space per capita was possible only if the amount of private building was also considered. The plan for private construction was not announced.

In 1951 and 1952 the level of urban housing construction remained at approximately the 1950 level. There were constant official complaints about the lack of progress in housing construction during this time, and Malenkov stated at the 19th Party Congress in October 1952 that the plan was behind schedule. When the new consumer welfare program was announced in 1953, there was no mention of increased goals for housing construction. Plan fulfillment announced for 1953 was only slightly above that of the 2 previous years. A revised figure for 1953, which is about 5 percent higher, was presented in the handbook.

In 1954, housing goals for the Fifth Five Year Plan were revised for both urban and rural areas. Total urban space planned for 1954 was 30 percent more than that built in 1953, an increase from 29 million square meters to 37.8 million square meters. 75/ The plan for rural housing was announced to be 400,000 houses, the same number that had been built in each of the years from 1948 through 1953. 76/ It was evident, however, that the plan for rural construction had been revised. In the new lands alone, about 600,000 square meters of housing was built in 1954 by state workers, and this was less than planned. 77/ In 1954 a number of measures were taken both to fulfill the current plan and to establish a base for the Sixth Five Year Plan, including high priorities on construction materials for housebuilding, organization of the Ministry of Urban and Rural Building, initiation of the prefab concrete program, and liberalization of land policy for private builders in the new lands. 78/ The 1954 plan for urban construction was fulfilled by 82 percent. The scheduling of housing construction under this plan was poor. Construction got under way late in the year, and a great deal of housing remained incomplete at the end of 1954 to be counted in the total for 1955. 79/ It was announced that 470,000 houses were built in rural areas. 80/

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Although construction plans for 1955 were not announced, planned expenditures on state urban housing were given, indicating an increase in spending of about 7 percent. Completed total urban housing space rose by only 4 percent whereas 600,000 houses were built by kolkhozniki and rural intelligentsia. It appears that with the exception of construction in the new lands, the remainder of the housing program was designed to complete housing begun in previous years and lay the groundwork for the next period. The Fifth Five Year Plan for state housing, before revision, was the first Five Year Plan to be fulfilled in Soviet history. ^{81/} A change in coverage of figures, however, may have made this possible.*

F. Housing in the Sixth Five Year Plan (1956-60).

1. The Plan.

The Sixth Five Year Plan for housing construction is dominated by the tasks of increasing the rate of growth of housing constructions beyond that of the Fifth Five Year Plan program and beyond the rate of growth of the total construction program without raising the priority of housing in the total construction program and with a minimum utilization of scarce materials, especially metals.

The major physical features of this program are as follows: State urban housing construction is planned at 205 million square meters of total space, an increase of 95 percent over that built by the state during the Fifth Five Year Plan.** ^{82/} Private urban housing construction is planned to be approximately double that of the Fifth Five Year Plan period when it amounted to 38.8 million square meters of total space, or 27 percent of urban housing construction. ^{83/} Unplanned state housing construction, which amounted to about 10 million square meters of total space in 1951-55, will also be approximately doubled, [redacted] [redacted] Thus total urban housing construction planned for the Sixth Five Year Plan period is about 300 million square

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50X1

* It is estimated that a change in coverage of figures for urban and rural construction occurred in 1954. Before 1954, part of sovkhos and MTS housing was counted as rural. Current statements suggest that all MTS and sovkhos housing, including that built by the workers, is included in urban figures.

** Includes construction of state housing for sovkhos and MTS workers in rural areas.

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meters (200 million square meters of living space) which is equal to one-half the total urban housing in 1955. It is not known how much rural housebuilding is contemplated.

The major financial features of this program as announced are as follows: Total expenditures on state housing construction are planned to increase by about 55 percent over expenditures in the previous 5-year period, amounting to approximately 135 billion rubles (1 July 1955 prices).* In order to achieve an increase in total space of 95 percent while at the same time increasing expenditures by only 55 percent, a reduction in the cost of housing construction of at least 20 percent is required. 85/ It is planned that the cost per square meter of living space will fall from 1,500 to 1,800 rubles per square meter to 1,000 to 1,200 rubles per square meter. 86/ Loans to private builders in urban areas will be approximately doubled at the same time that the amount of private construction is planned to be doubled.

The following measures have been introduced to achieve the state housing goals of the Sixth Five Year Plan:

a. Standardization and simplification of designs. As from the second half of 1956 (for seismic regions, from 1957), all apartment houses are to be constructed according to standard designs with all architectural excesses and extravagances eliminated. 87/

b. Use of prefabricated concrete blocks and sections. Reinforced concrete components are being introduced on an increasing scale in housing construction in order to save metals and lumber, reduce building time, and reduce the cost of materials. US housing delegates were informed that 40 percent of state urban building currently employed reinforced concrete. Its utilization will increase as the state plans to increase the annual output of precast reinforced concrete structural parts from about 9 million cubic meters in 1956 to 28 million cubic meters in 1960. 88/

c. Combination of housing construction organizations. It is planned that in many cities and regions the dozens of independent construction trusts engaged in housebuilding will be put under single jurisdictions which will cut overhead costs, allow greater specialization,

* See notes to Table 5, Appendix B, p. 61, below.

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and reduce idle time by pooling materials and machinery. The housing construction trusts of Moscow, Leningrad, and Kiev have already been combined. 89/

d. Improvements affecting the construction industry as a whole. In order to increase labor productivity in construction and improve the quality of work, wages have been raised, work norms have been changed and simplified to provide incentives, allocations for provision of housing and recreational facilities of construction workers have been raised, and production of building machinery is being accelerated. 90/

Beyond these measures, planning and financial procedures in construction have been modified and simplified. 91/ Much pressure has been applied to planning organizations to stop spreading resources over so many projects. 92/ And the newly created Academy of Building and Architecture has been given the responsibility of solving technical problems, introducing foreign construction techniques, and training personnel. 93/

2. Prospects of Fulfillment.

The construction plan for state housing represents a substantial increase in the rate of housebuilding, an average of 40 million square meters of total space a year, against an average of 21 million square meters a year in the Fifth Five Year Plan and 14.5 million square meters a year in the Fourth Five Year Plan. The 1956 plan, calling for only 29 million square meters, is not being met, 94/ and although it has been stated that "the pace of building will grow with every year," 95/ success of the plan rests heavily on chronically underfulfilled and unproved factors. The prefab reinforced concrete program is far behind schedule already. 96/ The techniques of building with prefabricated concrete are still in the experimental stages, and building standards are violated. 97/ There are too many unskilled workers involved. 98/ There is still emphasis on utilization of local materials and local initiative, 99/ which has proved unsatisfactory in the past, and there is not sufficient time to complete standardization of designs within the deadline. 100/ The financial plan depends on the success of all aspects of the construction program. Although the goal for reduction in cost for the over-all construction program is only 7 percent,* the goal for

* For contract construction. Excludes construction by economic means. The 20-percent cost reduction for housebuilding includes anticipated reductions in the cost of production of concrete components.

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reduction in cost of housebuilding is well over 20 percent. Fulfillment of the financial plan depends on the success of the cost reduction plan which is not likely to be fulfilled.

It is already apparent that the state housing goals for the Sixth Five Year Plan cannot be met unless further measures are taken. The only fully effective measure would be to raise the priority of housing in the total construction program at the expense of other types of construction. How far Soviet planners are willing to go to meet housing construction goals is not yet evident.*

The plan for private urban building of approximately 75 million square meters of total space against 39 million square meters in 1951-55 and 30 million square meters in 1946-50 can be met only if the state increases the sale of materials markedly. It has been stated that construction materials, tools, prefabricated parts, and prefabricated houses will be marketed on an increased scale. 102/ Despite this intention, it is estimated that the housing goal is too high.

Although the amount of rural housing construction planned is not known, it will certainly exceed the amount built in 1951-55 because of the new lands program. Khrushchev, speaking at the 20th Party Congress, indicated that the state would not enter the kolkhoz housing field in the Sixth Five Year Plan. He outlined various solutions to the problem of financing kolkhoz housing construction, but these differ very little from existing methods.

III. Financing of Housing Construction and Repairs.

A. State Housing.

1. Construction.

Housing investments are an integral part of the capital investment plans of all state ministries, organizations, and administrations. Sources of funds for planned state housing construction are the same as

* Suggestions of increased attention in the second half of 1956 are found in the appointment of Kaganovich as head of the building materials industry, in the delegation of responsibility to local party organs for fulfillment of housing construction plans, 101/ and in the increased press space devoted to housing problems.

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for other state investments and include budget allocations* and own funds -- amortization deductions, retained profits, mobilization of internal resources, and receipts from sale of used property. 103/

In the annual plan for capital investments of each economic ministry an average of 15 to 20 percent of total investment funds is scheduled for housing and communal facility construction for employees.** It is noteworthy that the basic and strategic industries and ministries spend a greater proportion of their total investment funds on housing construction than do less important ministries. The additional housing gives these industries the advantage in attracting and retaining labor. Noneconomic ministries and organizations such as the Ministries of Health, Culture, Higher Education, Gosplan, and Gosbank finance planned housing construction for employees entirely from budgetary allocations. These investment allocations are included in the total budget allocations to these ministries and organizations. 104/ It is estimated that housing investments comprise 50 percent of the total planned capital investments of municipalities and regional centers, with public utilities and services *** comprising the remainder. The housing investments of municipalities are financed from both budget and their own funds. 106/ Besides planned capital investments in housing there are also unplanned investments. These are financed by decentralized or above-plan means.

During the Fifth Five Year Plan, 105.4 million square meters of housing were built by means of funds allocated by the state plan. In addition, approximately 10 million square meters were built from "enterprise and other decentralized funds." 107/ These additional funds form so-called decentralized or extralimit investments. Availability of funds depends in most cases on fulfillment or overfulfillment of the plan, but neither the housing constructed nor the funds used are included in the state plan and, unless specified, data on housing exclude these investments. The sources of such funds are many, including the following: 108/

* Budget allocations for housing investments are channeled through union, republic, and local budgets to ministries and organizations within the classification system of other budget allocations.

** See Appendix C for examples of the share of housing in total investments of various ministries.

*** Besides housing investments, other municipal investments include water, sewerage, gas, electricity, baths, laundries, barberships, hotels, crematoriums, parks, urban transport, and office and shop space for rent. 105/

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- a. Enterprise fund
- b. Profits from small retail sales outlets for employees
- c. Premiums for All-Union socialist competition
- d. Up to 5 percent of profits of industrial cooperatives
- e. Special above-plan receipts of hotels, rest homes, and so on
- f. Above-plan budget revenues of union-republic budgets
- g. Fifty percent of profits of subsidiary agricultural experimental stations, health resorts, and experimental schools

Ministries and state organizations have always received most of the state's housing investment funds, the proportion increasing with each Five Year Plan.* 109/ Municipalities, receiving about 10 percent of the total, have recently voiced objection to this division of funds because city planning, public services, and utilities have suffered greatly. 110/ Members of the US housing delegation to the USSR were informed that municipalities were to receive a larger share of total planned housing investment funds in the Sixth Five Year Plan; however, data confirming this have not been released.

2. Repairs.

In Western countries a portion of rental receipts is used for capital repairs. In the USSR, these receipts are inadequate for capital repairs because rental rates have not been increased since the 1930's whereas the cost of repairs has risen sharply. It has therefore been necessary to provide additional funds for repairs in the USSR. For all state housing, including that of economic and noneconomic ministries, municipalities, and state organizations, the sources of financing planned capital repairs are the same. These include amortization allowances (part of rental receipts), rental receipts of nonresidential buildings,

* For distribution of housing construction by sector (in square meters), see Appendix C. Investment data by sector follow the same pattern.

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long-term loans from the communal bank, budget allocations, 111/ and several other special sources. Industrial ministries spend less on repairs than municipalities because industrial housing is newer and the construction is of better quality than that of municipalities.

A large share of capital repairs to housing is financed outside the plan as decentralized or extralimit investments, the sources of funds being the same as for decentralized investments in new housing construction. It is noteworthy that funds provided by all sources are inadequate, and Soviet housing is in a deplorable state of disrepair. 112/

B. Private Housing.

1. Construction..

Private housing construction is financed by private savings and state loans. The state partially controls the financial resources for private construction by influencing the volume of total savings through wage and price control and by exercising its authority over long-term borrowing.

Terms for borrowers of funds for private construction may be divided into the following categories:

a. Urban areas: war invalids, widows, and families of service personnel can borrow up to 10,000 rubles for 7 to 10 years at 2-percent interest per year. 113/

b. Urban areas: workers, engineer-technical personnel, and white collar workers can borrow up to 7,000 rubles for a maximum of 7 years at 2-percent interest per year. The owners must provide at least 50 percent of the cost of construction, which may be provided either in cash or by their own labor. 114/

c. Doctors and teachers may borrow up to 10,000 rubles for a maximum of 7 years at 2-percent interest per year. The owner must provide 30 percent of the cost of construction, which may be provided either in cash or by his own labor. 115/

d. Sovkhoz workers may borrow up to 15,000 rubles for 10 years at 2-percent interest per year. 116/

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e. MTS workers may borrow up to 12,000 rubles for 10 years at 2-percent interest per year. 117/

f. Kolkhozniki may borrow up to 12,000 rubles for 10 years at 2-percent interest per year. 118/

g. Dwellers in the new lands can receive loans ranging from 10,000 to 20,000 rubles depending on the area, including unprecedented nonreturnable grants of up to 50 percent on 20,000-ruble loans. 119/

The conditions under which these funds are granted differ in the various categories. For example, whereas MTS workers, doctors, and teachers may receive advances of up to 15 percent of loans for the purchase of materials, other borrowers must fulfill 5 to 10 percent of construction before they may receive their first payment. 120/

For urban dwellers, funds for private construction are borrowed from the communal bank through the enterprise in which the worker is employed, under the supervision of the trade union. An urban dweller also may borrow directly through the local soviet. 121/ Rural dwellers and state agricultural workers borrow from the agricultural bank through their management. 122/

Besides building their own houses, urban dwellers can purchase houses from their employer ministries, according to a decree of 1946 under which industrial enterprises were authorized to build houses for sale to their employees. The cost of these houses ranges from 10,000 to 30,000 rubles, and bank loans are available up to 10,000 rubles for 10 years at 1-percent interest. 123/

It is interesting to note that in Moldavia in 1954 an advertisement appeared for the sale to individuals of 278 houses by the Kishinev municipal authorities. 124/ This is the only time evidence of sale of housing by municipalities has been noted. A recent development in private construction has been the production and sale to the public of prefabricated 2- to 3-room houses. This was begun in 1954 and is to be expanded in the Sixth Five Year Plan period, particularly in new agricultural areas. 125/

Except for the preplan period, no data are available on total expenditures for private housing construction. For a few scattered years, data on loans to rural dwellers are available. Data are available,

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however, on state loans for private urban construction. From these data and from other information a rough estimate can be made of total ruble expenditures on private urban housing construction.* The state's attitude toward private urban building can be traced by noting the amount of credit extended to private builders. Loans were very low in the 1930's. They increased markedly in 1939, when the state changed its loan policy toward private building. They ceased completely in the war year 1942 and showed a tremendous increase in the immediate postwar years. This high rate continued while private housing destroyed by the war was rebuilt and then slackened off until 1953, when credit was expanded again.

2. Repairs.

Loans for private housing repairs are also available in amounts up to 3,000 rubles. 126/ There are no known data on expenditures for repairs to private housing.

C. Expenditures for Housing, 1917-55.

Expenditures for housing construction in the USSR for 1924-56 are given in Table 4.**

1. 1917-28.

There are no annual data on ruble expenditures for housing construction for 1917-24. There was almost no construction during this period.

From 1924 to 1929 the state invested a total of 1.3 billion rubles in housing construction and repair, which amounted to 11.6 percent of total state capital investments. Individuals built 57 percent of the new living space with an investment of 32 percent of total funds spent on new construction. This is the only period for which data are available on private housing investments. In subsequent periods the only figures available are total state loans for private urban building.

2. First Five Year Plan (1928-32).

The First Five Year Plan called for an investment of 4 billion rubles in new state housing -- 9 percent of total state investments. 127/

* See Appendix E.

** Table 4 follows on p. 30. Notes to Table 4 are in Appendix B, p. 56, below.

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Although actual expenditures exceeded the plan, the cost of construction rose considerably, and the plan for increased living space was fulfilled by less than 50 percent in the state sector. The First Five Year Plan specified that total private housing investment should total 965 million rubles, of which 28 million were to be provided by the state in the form of long-term loans. 128/ There is no information on actual expenditures. It is doubtful that any loans were granted during this time because of the changed policy toward private building after 1930. On the basis of the amount of private housing built, it is estimated that during this time urban dwellers spent about 200 million rubles on private housing.

3. Second Five Year Plan (1933-37).

The state planned to spend 13.4 billion rubles on housing construction and repair of municipal housing during the Second Five Year Plan. 129/ Of this amount, 11.5 billion rubles -- 10 percent of total state investment -- was for new construction, and 1.8 billion rubles was for repair of municipal housing. 130/ Actual expenditures totaled almost this amount, but the plan for the amount of space to be built was greatly underfulfilled, an indication of further inflation in construction costs. During the previous plan period the state had built almost as much living space with less than half the expenditures of the Second Five Year Plan. Loans for private building were negligible during this time.

4. Third Five Year Plan (1938-42).

The Third Five Year Plan for housing investment was more realistic than the two preceding Plans. An investment of 15.5 billion rubles in state housing was planned -- 7.3 percent of total state investment. 131/ Funds allocated were 35 percent greater than those expended in the previous period. This was planned to provide housing space only 31 percent greater than that built in the previous period. Actual expenditures for state construction and municipal repair for 3½ years have been estimated at 15.5 billion rubles, an amount equivalent to the total planned for the 5-year period.

5. War Years (1942-45).

There is no information on expenditures for housing construction in the war period. Total state investments for the period from July 1941 to June 1945 amounted to 108.6 billion rubles, and it is estimated that housing investments were about 9 percent of the total, or 10 billion

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Table 4

Housing Investment in the USSR
 1924-56

| Year | Billion Rubles a/* | |
|--------------------|---|--|
| | Expenditures on State Construction | State Loans for Private Urban Construction b/ |
| 1924 | 0.031 c/ | |
| 1925 | 0.113 d/ | |
| 1926 | 0.171 e/ | |
| 1927 | 0.222 f/ | |
| 1928 | 0.318 g/ | |
| 1928 (4th quarter) | 0.079 h/ | |
| 1929 | 0.508 i/ | |
| 1930 | 0.775 j/ | |
| 1931 | 1.115 k/ | |
| 1932 | 1.594 l/ | |
| 1933 | 1.3 m/ | |
| 1934 | 1.7 n/ | 0.020-0.025 o/ |
| 1935 | 1.9 p/ | 0.020-0.025 q/ |
| 1936 | 2.4 r/ | 0.020-0.025 s/ |
| 1937 | 3.5 t/ | 0.037 u/ |
| 1938 | N.A. | 0.04 v/ |
| 1939 | N.A. | 0.119 w/ |
| 1940 | 3.2 x/ | 0.189 x/ |
| 1941 | 4.1 t/ | 0.050 t/ |
| 1942 | N.A. | 0 y/ |
| 1943 | N.A. | 0.060 z/ |
| 1944 | N.A. | 0.128 aa/ |
| 1945 (1950 prices) | 3.6 t/ | 0.270 bb/ |
| 1946 (1950 prices) | 5.6 t/ | 1.006 cc/ |
| 1947 (1950 prices) | 6.5 t/ | 1.014 dd/ |
| 1948 (1950 prices) | 8.9 t/ | 1.569 t/ |
| 1949 (1950 prices) | 11.2 t/ | 0.691 ee/ |
| 1950 (1950 prices) | 13.2 t/ | 0.720 ff/ |
| 1951 (1950 prices) | 15.9 t/ | 0.300 t/ |

* Footnotes for Table 4 follow on p. 31.

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Table 4

Housing Investment in the USSR
 1924-56
 (Continued)

| Year | Billion Rubles <u>a/</u> | |
|-------------------------|--|---|
| | Expenditures or, State Construction | State Loans for Private Urban Construction <u>b/</u> |
| 1952 (1950 prices) | 17.5 <u>t/</u> | 0.353 <u>t/</u> |
| 1953 (1950 prices) | 19.4 <u>gg/</u> | 0.714 <u>hh/</u> |
| 1954 (1950 prices) | 23.1 <u>t/</u> | 0.960 <u>ii/</u> |
| 1955 (1950 prices) | 23.0 <u>t/</u> | 0.850 <u>jj/</u> |
| 1956 Plan (1950 prices) | 26.0 <u>t/</u> | 1.0 <u>kk/ ll/</u> |
| 1956 Plan (1955 prices) | 23.0 <u>t/</u> | |

a. For 1924-44, figures are in current prices.

b. All loans are in current prices.

| | | | |
|----------------|----------------|-----------------|------------------|
| c. <u>132/</u> | l. <u>141/</u> | u. <u>149/</u> | dd. <u>158/</u> |
| d. <u>133/</u> | m. <u>142/</u> | v. <u>150/</u> | ee. <u>159/</u> |
| e. <u>134/</u> | n. <u>143/</u> | w. <u>151/</u> | ff. <u>160/</u> |
| f. <u>135/</u> | o. <u>144/</u> | x. <u>152/</u> | gg. <u>161/</u> |
| g. <u>136/</u> | p. <u>145/</u> | y. <u>153/</u> | hh. <u>162/</u> |
| h. <u>137/</u> | q. <u>146/</u> | z. <u>154/</u> | ii. <u>163/</u> |
| i. <u>138/</u> | r. <u>147/</u> | aa. <u>155/</u> | jj. <u>164/</u> |
| j. <u>139/</u> | s. <u>148/</u> | bb. <u>156/</u> | kk. <u>165/</u> |
| k. <u>140/</u> | t. Estimated. | cc. <u>157/</u> | ll. Approximate. |

rubles. 166/ Loans for private construction during this period were over 400 million rubles, most of which were granted after the war.

6. Fourth Five Year Plan (1946-50).

The Fourth Five Year Plan stated that a total of 42.3 billion rubles (1945 prices) would be invested in state housing construction. This amounts to 14.5 percent of total state investment of

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292 billion rubles. 167/ The Plan did not state how much of this was to go to municipalities or ministries and state organizations. Nor did it state the extent of loans planned for individual housing, either urban or rural.

Total investment in housing repairs of municipalities was planned to be 5 billion rubles. 168/ Actual investment in state housing is estimated at approximately 12 percent of total state investment, falling short of the planned share of 14.5 percent. Nevertheless, it was very much higher than in the prewar period. Private investment in urban housing also increased considerably, partly because of funds saved during the war and partly because of the liberal state policy toward private construction. State loans for private construction in this period amounted to 5 billion rubles. 169/

7. Fifth Five Year Plan (1951-55).

The only available information on planned housing investment for 1951-55 is that capital investments in state housing were to be almost 100 percent greater than in the period of the Fourth Five Year Plan. 170/ At the same time, the state planned to build only 50 percent more total housing space. Several factors account for the increased allocation per square meter, the outstanding factor being that whereas the housing construction planned for the Fifth Five Year Plan was almost entirely new construction, the housing of the Fourth Five Year Plan included the less costly restored and reconstructed housing. Much of the housing construction of the immediate postwar period was of poor, cheap quality, and a large share consisted of 1- and 2-story small structures which were cheaper to build than the taller multiunit apartment houses more evident in the 1951-55 period. These factors may account for the increased costs of the latter period. Any interpretation made, however, is subject to certain error because annual data on investments are available for only 4 out of 10 postwar years and the data on construction are confused. Because this is an area of weakness in the economy, the subject is one on which any published information admits shortcomings.

Discussion of ruble expenditure on housing investment for this period in Soviet publications has been limited to general criticisms of the excessive building costs of state housing, the failure of ministries and municipalities to use up allocations, and the poor management of loan allocations for private construction.

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Estimated investment for 1951-53 indicates that state housing consumed 13 percent of total state investment. This represents a slight increase over housing's share in the 1946-50 period. The 1954 plan for state housing construction expenditures of 25.5 billion rubles -- 15 percent of state investments -- represented a rise in allocations of 31 percent over the expenditure for 1953. 171/ Investment in housing in 1954, which rose by only 19 percent, represented 14 percent of state investment. 172/ An increase in state housing investment of 6.1 percent over actual expenditures of 1954 was planned for 1955, a drop of 1 billion rubles from the planned expenditures of 1954. 173/ This plan was not fulfilled, and it is estimated that expenditures fell slightly below those of 1954. 174/ Total state housing construction expenditures for the 5-year period are estimated at 99 billion rubles, an increase of 118 percent over expenditures in the previous period, compared with a planned increase of about 100 percent.

D. State Investment for Housing as a Percent of Total State Capital Investment.

State investment for housing has been inadequate in the entire Soviet period. State expenditures for housing construction during the first 3 Five Year Plans approximated 9 percent of total state investment. In the Fourth Five Year Plan, state investment in housing approximated 12 percent of total state investment, in 1951-53 the share rose to 13 percent, and in 1954-55 the proportion was almost 14 percent. In the US, housing investment has remained about 20 percent of total capital investment except during the depression and World War II years, when the proportion fell to 13 percent. 175/ The share of state housing investment in total state investment during the Sixth Five Year Plan is planned to be 13.6 percent. Table 5* shows state investment for housing related to total state investment since 1924. Table 6** summarizes available data on expenditures for Soviet housing construction and repair.***

* Table 5 follows on p. 34. Notes to Table 5 are in Appendix B, p. 61, below.

** Table 6 follows on p. 36.

*** Continued on p. 37.

Table 5

Investment in Housing as a Percent of Total State Capital Investment
in the USSR a/*
1924-55

| Year | Billion Rubles | | |
|------------------|---|-----------------------------------|---|
| | Total Investment in State Housing | Total State Capital Investment | Investment in State Housing as a Percent of Total State Capital Investment |
| 1924-28 | 1.289 | 11.1 <u>b</u> / | 11.6 |
| 1929-32 | 4.492 | 49.5 <u>c</u> / | 9.1 |
| 1933-37 | 12.575 | 137.5 <u>d</u> / | 9.1 |
| 1938-42 Plan | 15.5 | 211.5 <u>e</u> / | 7.3 |
| 1938 - June 1941 | 13.1 <u>f</u> / | 130.0 <u>g</u> / | 10.1 |
| 1940 | 3.2 | 40.1 <u>h</u> / | 8.0 |
| 1946-50 Plan | 42.3 | 292.0 <u>i</u> / | 14.5 |
| 1946-50 actual | 45.4 | 384.0 <u>f</u> / | 11.8 |
| 1951 | 15.9 <u>f</u> / | 121.6 <u>f</u> / | 13.1 |
| 1952 | 17.5 <u>f</u> / | 134.9 <u>f</u> / | 13.0 |
| 1953 | 19.4 | 140.3 <u>f</u> / | 13.8 |
| 1954 Plan | 25.5 | 169.0 <u>j</u> / | 15.1 |
| 1954 actual | 23.1 <u>f</u> / | 161.3 <u>f</u> / | 14.3 |
| 1955 Plan | 24.5 | 167.0 <u>k</u> / | 14.7 |
| 1955 actual | 23.0 <u>f</u> / | 170.9 <u>f</u> / | 13.5 |
| 1951-55 | 98.9 <u>f</u> / | 729.0 <u>f</u> / | 13.6 |

* Footnotes for Table 5 follow on p. 35.

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Table 5

Investment in Housing as a Percent of Total State Capital Investment
in the USSR a/
1924-55
(Continued)

-
- a. Total housing investment including private expenditures bears the same approximate relation to total capital investment including kolkhoz and other nonstate investment as does state housing investment to total state capital investment. The latter relationship has been indicated because of more complete data. See notes to Table 5, Appendix B, p. 61, below.
- b. 176/
c. 177/
d. 178/
e. 179/
f. Estimated.
g. 180/
h. 181/
i. 182/
j. 183/
k. 184/

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Table 6

Expenditures for Urban Housing Construction and Repair
 in the USSR ^{a/}
 1924-55

Billion Rubles

| Period | Total Expenditures on State Housing Construction ^{b/} | Expenditures on Repair of Municipal Dwellings ^{c/} | Expenditures on Private Urban Construction ^{d/} |
|------------------|--|--|---|
| 1924-28 | 0.855 | 0.434 ^{e/} | 0.406 |
| 1929-32 | 3.992 | 0.500 ^{f/} | 0.390 ^{f/} |
| 1933-37 | 10.825 | 1.750 | 0.760 ^{f/} |
| 1938 - June 1941 | 13.1 ^{f/} | 2.5 | 1.7 ^{f/} |
| 1942-45 | 10.0 ^{f/} | N.A. | N.A. |
| 1946-50 | 45.4 ^{f/} | 5.0 ^{g/} | 10.7 ^{f/} |
| 1951-55 | 98.9 ^{f/} | 10.0 ^{f/} | 16.3 ^{f/} |

a. The data in Table 6 do not comprise total investments in housing. Estimates of expenditures on repair of total state housing, repair of private housing, and private rural housing construction have not been made, because of lack of data.

b. Prices for state investments are indicated in notes to Table 5, Appendix B, p. 61, below.

c. The estimate of expenditures for repair of municipal dwellings in 1929-32 is contained in Appendix A. The estimate for 1951-55 is based on the assumption that known expenditures for RSFSR of 6 billion rubles 185/ are 60 percent of the total for the USSR.

d. See Appendix E for technique of estimating expenditures for private urban construction. An average cost of 500 rubles per square meter was used for 1946-50, and an average cost of 600 rubles per square meter was used for 1951-55.

e. For 1924-28, figures represent total state housing capital repairs.

f. Estimated.

g. Plan.

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IV. Housing Conditions.

A. Urban.

1. General.

Housing conditions in the USSR have never been comparable to those of the West in terms of space, utilities, sanitation, comfort, or privacy. Before the Revolution, private utilities and separate living and sleeping quarters were available only to a small group, and since the Revolution these comforts have been available only to high Party, government, and scientific personnel. The Soviet people are not honestly informed of Western housing conditions, and conditions that would not be tolerated by the average US worker are above average for the Soviet worker. Although the Soviet people are aware that their housing compares favorably with that of Asiatic countries and that a vast housebuilding program is currently under way, housing conditions are not improving at a rate which satisfies the increasing desires of the workers.

State urban housing generally has central heating, electricity, and running water. Separate kitchens and toilet facilities are being provided in most units of current construction; in existing state housing, however, these facilities are generally shared among families. Many apartments are occupied by several families, and many families occupy single large rooms. The latter is true even in recently built housing because a single large room is cheaper and faster to build than several smaller rooms. The average number of occupants per room in urban areas of the USSR has been estimated at 2.3 in 1923, 3.9 in 1940, and 4.0 in 1950; the US average has been less than 1. 186/

The state has given very little material or technical assistance to the private urban sector, which comprises 35 percent of urban living space. There are great differences in quality between dwellings built by the state and those built privately. Private dwellings are built by the owner, and although they are occasionally provided with electricity and running water, they are usually without sanitary facilities and central heating. The state provides community baths, clubs, libraries, theaters, laundries, and the like. Because the dwellings lack space and facilities, these services are utilized, and a deemphasis of the "home" has come about.

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There is no technique for measuring the effect of the housing shortage on worker morale and productivity. Several articles have been written which state explicitly that productive activities have been disrupted because of housing shortages and that poor housing has been responsible for lack of productivity gains. 187/ A member of the US housing delegation to the USSR was told by a plant manager that the quantity and quality of housing had a definite effect on labor turnover and that new housing was an excellent attraction for labor recruitment. 188/

Soviet leaders are well aware of the seriousness of the housing shortage. Housing problems have been discussed in all of the major speeches of the last few years, numerous building conferences have been held, delegations have been sent abroad and received at home, revolutionary housebuilding techniques have been introduced, and the style of architecture changed.

The basic problem -- that of increasing construction faster than the urban population growth -- remains, however. The USSR is trying to stop the influx of population into large cities by placing strict limitations on the registration of new citizens in Moscow, Leningrad, and Kiev; 189/ by planning new housing construction outside of cities; and by limiting industrial building in large cities. 190/ The rate of urban building planned for the Sixth Five Year Plan is equal to half the total living space existing in 1955, and that planned for the Seventh Five Year Plan is to be double that of the Sixth. 191/ Much of the housing planned will continue to be absorbed by urban population increases, however, and the Soviet leaders are not willing to decrease the rate of growth of the total economy in order to rapidly improve housing conditions. Members of the US housing delegation to the USSR reported that housing built under the current program was of such poor quality that the USSR was facing a "maintenance nightmare" and that this would be so costly that another deferment of the basic problem of housing existed.

The USSR will probably continue a policy of gradual increase in urban housing standards for many years. The encouragement given to private construction will continue through the Sixth Five Year Plan; however, after 1960 its role is more difficult to determine. Private construction has been a vital factor in the improvement of urban space conditions in the postwar period. Although the cost to the state has been limited to provision of building materials, private housing causes

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many headaches to city planners and managers. Often private settlements are in locations desired for other purposes and the housing cannot be removed until other housing is provided. These settlements are located on the outskirts of towns, where the provision of utility and transport facilities is costly. Ideologically, private ownership is excusable as long as there is no profit involved. This problem was minimized by several decrees prohibiting the subletting or sale of dwellings and limiting the size of dwellings. As long as a critical shortage of space remains, private urban construction will certainly be allowed.

2. Living Space in Urban Housing.

In urban areas of the USSR, state housing space is allocated by square meters of living space. Living space excludes kitchens, baths, corridors, hallways, and lobbies. Space is allocated by living space rather than by rooms or apartments because the extreme housing shortage requires that large rooms be shared by more than 1 person or family. Kitchens and baths are shared by 2 to 5 families. Living space gives no indication of privacy, type or quantity of available services. It takes no account of unequal distribution of housing space. Housing space is not provided in accordance with needs. Industrial ministries and state organizations allocate housing as a reward to their most productive workers and as an incentive to attract or retain skilled workers and technicians. High Party officials and administrators, teachers, and professional people have much better housing than the average worker, and people with influence or with means to purchase rights to housing space fare better than the average worker. Nevertheless, available space provides the most accurate measure available of changing standards. Regional as well as occupational variations in average space seem to occur. The handbook contains population and housing stock data for large cities of the USSR for January 1956. Calculating average total space per person in these cities* and grouping the data by economic region produces the averages shown in the following tabulation:

* Kiev, Moscow, and Leningrad are omitted because data are not comparable.

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| <u>Economic Region a/</u> | <u>Total Space Per Capita (Square Meters)</u> | <u>Number of Cities in Sample</u> |
|---------------------------|---|---------------------------------------|
| IIa Baltic | 10.4 | 3 |
| V Transcaucasus | 7.3 | 3 |
| VII Central | 7.1 | 12 |
| VIII Urals | 6.5 | 3 |
| Xb Central Asia | 5.9 | 5 |
| XII Far East | 6.0 | 2 |

Table 7* shows the average amount of living space per capita in urban areas for selected years, 1917-55. It shows that, because of rapid urbanization and a very low level of construction, average space per capita declined continually from 1917 up to 1939. Acquisition of new territories in 1939-40 raised the average because housing standards in acquired territories were much higher than in the USSR. The average was higher in 1945 than before the war because of large population losses and because of reconstruction in the 1943-45 period. Rapid urban population increases during the Fourth Five Year Plan caused a decline in standards of space so that the average was not regained until the end of 1955. The current average is a living-sleeping space of 13 by 13 feet for a family of four, or a total space including kitchen, bath, and closets of a little over 16 by 16 feet.

Although most countries measure per capita housing in terms of numbers of rooms per family, a recent study 192/ presents data on urban housing space of several Western European countries which has been converted to square meters of total space. These data may be compared with Soviet statistics.

| <u>Country</u> | <u>Year</u> | <u>Housing Space (Square Meters Per Capita)</u> |
|----------------|-------------|---|
| Italy | 1951 | 15 |
| UK | 1951 | 20 |
| West Germany | 1954 | 15 |
| USSR | 1951 | 7 |
| USSR | 1954 | 7 |

* Table 7 follows on p. 41. Notes to Table 7 are in Appendix B, p. 62, below.

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Table 7

Living Space Per Capita in Urban Areas of the USSR
Selected Years, 1917-55

| <u>Year</u> <u>(End of Year)</u> | <u>Urban</u> <u>Population</u> <u>(Million)</u> | <u>Urban</u> <u>Living Space a/</u> <u>(Million</u> <u>Square Meters)</u> | <u>Living Space</u> <u>Per</u> <u>Capita</u> <u>(Square Meters)</u> | <u>Urban Total</u> <u>Space a/</u> <u>(Million Square</u> <u>Meters)</u> | <u>Total Space</u> <u>Per</u> <u>Capita</u> <u>(Square Meters)</u> |
|-------------------------------------|---|--|--|---|---|
| 1917 | 20 <u>b/</u> | 139 | 7.0 | 199 | 10.0 |
| 1926 | 26 <u>c/</u> | 154 | 5.9 | 216 | 8.2 |
| 1932 | 39 <u>d/</u> | 191 | 4.9 | 268 | 6.9 |
| 1938 | 56 <u>e/</u> | 232 | 4.1 | 326 | 5.8 |
| 1940 <u>f/</u> | 61 <u>g/</u> | 278 | 4.6 | 421 | 6.9 |
| 1945 | 57 <u>h/</u> | 274 | 4.8 | 422 | 7.4 |
| 1946 | 60 <u>h/</u> | 284 | 4.7 | | |
| 1947 | 63 <u>h/</u> | 294 | 4.7 | | |
| 1948 | 66 <u>h/</u> | 306 | 4.6 | | |
| 1949 | 69 <u>h/</u> | 318 | 4.6 | | |
| 1950 | 72 <u>h/</u> | 332 | 4.6 | 513 | 7.1 |
| 1951 | 75 <u>h/</u> | 347 | 4.6 | | |
| 1952 | 78 <u>h/</u> | 361 | 4.6 | | |
| 1953 | 81 <u>h/</u> | 378 | 4.7 | | |
| 1954 | 84 <u>h/</u> | 396 | 4.7 | | |
| 1955 | 87 <u>i/ j/</u> | 414 | 4.8 | 640 | 7.4 |

a. See Table 2, p. 7, above.

b. 193/c. 194/d. 195/e. 196/

f. Including annexed territories.

g. 197/

h. Estimated.

i. April 1956.

j. 198/

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3. Cost of Rent and Utilities.

Rent comprises a smaller percentage of a worker's budget in the USSR than in the US. In 1955, municipal rental charges averaged $3\frac{1}{2}$ to 4 percent of the family budget, 199/ utilities costing an additional 4 percent. 200/ This compares with a US average of 13 to 18 percent for rent and utilities. 201/

Monthly rental charges, which are fixed by law and range from a minimum of 44 kopeks to a maximum of 1.32 rubles per square meter of living space, are based on a number of factors. These include location, condition of the dwelling, profession of the tenant, and number of dependents. Earnings of the tenant exert the greatest influence on the rate. Starting with the minimum of 44 kopeks per square meter for every 100 rubles of monthly earnings over 145 rubles, there is an additional charge of 33 kopeks per square meter, so that almost all Soviet workers pay the maximum rate. 202/ When unusual additional features are provided, such as refrigeration or built-in closets, the rate may exceed 1.32 rubles per square meter. 203/

The Soviet press contains many examples of illegal rental practices which indicate that there is a considerable black market in housing space rights. Examples of such practices include acquisition of housing for the purpose of subletting at higher rates, private construction of housing for rent or sale instead of occupancy, and failure to notify the authorities when moving and subletting at exorbitant rates. 204/

Rental charges are not determined by maintenance or replacement costs. Charges are not adequate to meet these costs. Although costs have risen considerably, the antiquated laws dating from the 1930's governing rental and service charges have remained unaltered. 205/ Because housing facilities remain poor, an increase in rentals would arouse strong resentment. Also Soviet leaders use rentals for propaganda, comparing the low rentals in the USSR with rentals in the US, which "take up to 25 to 40 percent of the worker's earnings." 206/ This US percentage, so often quoted in Soviet literature, includes not only rentals and utilities but all household costs such as appliances, furnishings, and alterations. 207/

In order to estimate total rental and utility charges for a single year, the following technique may be used:

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a. Total state urban living space x 1.32 rubles (maximum legal rate per square meter of living space) x 2 (utilities cost about the same as rent) x 12 (months in year).

b. Total private urban living space x 2/3 (1.32 rubles) x 2 x 12. It is estimated that explicit rent of owner-occupied housing is approximately 2/3 that of state urban housing. The quality of private housing is lower, and few utilities are available; however, private dwellers have more privacy and gardens, and must pay an annual land tax of about 100 rubles. 208/

c. Total rural housing space x 1/2 (1.32) x 12. It is estimated that combined explicit rent and utility charges of rural dwellers are approximately 1/2 urban state rental charges.

B. Rural.

Rural housing conditions are much worse than urban housing conditions. The average rural dwelling is constructed very much like that constructed before the Revolution, except that electricity is occasionally available. The typical rural dwelling occupied by a single family consists of 1 or 2 rooms. It is lighted by kerosine lamps or by electricity. It is heated by a Franklin-type stove and does not have inside water. The rural dweller often has no access to communal facilities such as baths, laundries, theaters, and libraries. Rural dwellers fare better than urban dwellers only to the extent that each family has a separate dwelling and available land for a garden. An estimate of average space per capita in rural areas for postwar years is shown in Table 8.*

The figures in Table 8 indicate that after 1949 when reconstruction was completed, rural construction dropped to a level which provided almost no improvement in conditions.

In the last few years the state has increased investments in sovkhoz and MTS housing, particularly in the new lands. Most of the housing of these workers, however, continues to be privately built and owned. It is doubtful that the state will enter the field of kolkhoz

* Table 8 follows on p. 44.

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Table 8

Living Space Per Capita in Rural Areas of the USSR
1946-55

| <u>Year</u> | <u>Total Space ^{a/} (Million Square Meters)</u> | <u>Population ^{b/}</u> | <u>Space Per Capita (Square Meters)</u> |
|-------------|--|---------------------------------|---|
| 1946 | 823 | 113 | 7.3 |
| 1947 | 834 | 113 | 7.4 |
| 1948 | 851 | 112 | 7.6 |
| 1949 | 869 | 112 | 7.8 |
| 1950 | 875 | 112 | 7.8 |
| 1951 | 881 | 112 | 7.9 |
| 1952 | 886 | 112 | 7.9 |
| 1953 | 892 | 112 | 8.0 |
| 1954 | 901 | 112 | 8.0 |
| 1955 | 914 | 113 | 8.1 |

a. See Table 3, p. 8, above. All space is estimated to be living space.

b. Population statistics are estimated on the basis of urban estimates and total population figures presented in the handbook.

housing construction as long as urban conditions remain so poor. It is estimated, however, that the development of the new lands will cause an improvement in rural housing conditions, because without much better housing the state will not be able to attract and retain the 1.5 million to 2 million agricultural workers needed.

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C-O-N-F-I-D-E-N-T-I-A-L

APPENDIX A

URBAN HOUSING CONSTRUCTION AND RECONSTRUCTION IN THE USSR
1917-56

For the prewar period the handbook, The National Economy of the USSR, contains data on total urban space constructed in the 3 prewar 5-year periods for both the state and the private sectors. From previous publications, data are also available for living space on both a 5-year and an annual basis for most years.

For the postwar period the handbook contains annual data for total state and total private urban housing construction. Annual postwar data in terms of living space are available for 1946 and 1947 only, after which time all announcements were made in terms of total space. It has therefore been necessary to estimate the relationship between living and total space for most of the postwar period in order to determine the amount of living space constructed. The data tabulated below are in terms of both living and total space for the Soviet period.

| Year | Million Square Meters | | | | | |
|------------------|-------------------------|-------------|-----------------|------------------------|-----------------------|-----------------------|
| | Total Space <u>a</u> /* | | | Living Space | | |
| | Total | State-Built | Privately Built | Total | State-Built | Privately Built |
| 1917-22 | | | | 1.4 <u>b</u> / | 1.4 <u>b</u> / | 0 |
| 1923 | | | | 1.1 <u>b</u> / | 0.3 <u>b</u> / | 0.8 <u>b</u> / |
| 1924 | | | | 1.2 <u>b</u> / | 0.4 <u>b</u> / | 0.8 <u>b</u> / |
| 1925 | | | | 1.8 <u>b</u> / | 0.7 <u>b</u> / | 1.1 <u>b</u> / |
| 1926 | | | | 3.2 <u>b</u> / | 1.4 <u>b</u> / | 1.8 <u>b</u> / |
| 1927 | | | | 4.4 <u>b</u> / | 1.9 <u>b</u> / | 2.5 <u>b</u> / |
| 1928 | | | | 4.9 <u>b</u> / | 2.3 <u>b</u> / | 2.6 <u>c</u> / |
| Total <u>d</u> / | <u>42.9</u> | <u>23.7</u> | <u>19.2</u> | <u>18.0</u> <u>e</u> / | <u>8.4</u> <u>e</u> / | <u>9.6</u> <u>e</u> / |

* Footnotes for the tabulation follow on p. 47.

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Million Square Meters

| Year | Total Space | | | Living Space | | |
|------------------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| | Total | State-Built | Privately Built | Total | State-Built | Privately Built |
| 1929 | | | | 6.8 <u>f/</u> | 3.8 <u>g/</u> | 3.0 <u>g/</u> |
| 1930 | | | | 6.7 <u>h/</u> | 6.0 <u>g/</u> | 0.7 <u>h/</u> |
| 1931 | | | | 6.9 <u>h/</u> | 6.4 <u>g/</u> | 0.5 <u>h/</u> |
| 1932 | | | | 7.7 <u>h/</u> | 7.3 <u>g/</u> | 0.4 <u>h/</u> |
| Total | <u>38.7</u> | <u>32.6</u> | <u>6.1</u> | <u>28.1</u> | <u>23.5 i/</u> | <u>4.6 j/</u> |
| 1933 | | | | | 7.2 <u>k/</u> | |
| 1934 | | | | | 6.0 <u>l/</u> | |
| 1935 | | | | | | |
| 1936 | | | | | | |
| 1937 | | | | | | |
| Total | <u>42.2</u> | <u>37.2</u> | <u>5.0</u> | <u>30.6 h/</u> | <u>26.8 m/</u> | <u>3.8 h/</u> |
| 1938 | 9.9 <u>h/</u> | 8.3 <u>h/</u> | 1.6 <u>h/</u> | 6.0 <u>h/</u> | 5.0 <u>h/</u> | 1.0 <u>h/</u> |
| 1939 | 9.1 <u>h/</u> | 7.5 <u>h/</u> | 1.6 <u>h/</u> | 5.5 <u>h/</u> | 4.5 <u>h/</u> | 1.0 <u>h/</u> |
| 1940 | 15.8 <u>h/</u> | 12.8 <u>h/</u> | 3.0 <u>h/</u> | 9.7 <u>h/</u> | 7.7 <u>h/</u> | 2.0 <u>h/</u> |
| 1941 (January to July) | 7.2 <u>h/</u> | 5.8 <u>h/</u> | 1.4 <u>h/</u> | 4.4 <u>h/</u> | 3.5 <u>h/</u> | 0.9 <u>h/</u> |
| Total | <u>42.0</u> | <u>34.4</u> | <u>7.6</u> | <u>25.6 h/</u> | <u>20.7 h/</u> | <u>4.9 h/</u> |
| July 1941-45 | <u>49.8</u> | <u>41.3</u> | <u>8.5</u> | <u>29.0 h/</u> | <u>23.9 h/</u> | <u>5.1 h/</u> |
| 1946 | 17.4 | 12.6 | 4.8 | 11.5 <u>h/</u> | 7.8 <u>h/</u> | 3.7 <u>h/</u> |
| 1947 | 18.2 | 11.8 | 6.4 | 11.7 <u>h/</u> | 7.3 <u>h/</u> | 4.4 <u>h/</u> |
| 1948 | 21.1 | 14.7 | 6.4 | 13.5 <u>h/</u> | 9.1 <u>h/</u> | 4.4 <u>h/</u> |
| 1949 | 21.9 | 15.5 | 6.4 | 14.0 <u>h/</u> | 9.6 <u>h/</u> | 4.4 <u>h/</u> |
| 1950 | 24.2 | 17.8 | 6.4 | 15.5 <u>h/</u> | 11.1 <u>h/</u> | 4.4 <u>h/</u> |
| Total | <u>102.8</u> | <u>72.4</u> | <u>30.4</u> | <u>66.2 h/</u> | <u>44.9 h/</u> | <u>21.3 h/</u> |
| 1951 | 26.0 | 18.7 | 7.3 | 16.8 <u>h/</u> | 11.6 <u>h/</u> | 5.2 <u>h/</u> |
| 1952 | 25.8 | 18.4 | 7.4 | 16.6 <u>h/</u> | 11.4 <u>h/</u> | 5.2 <u>h/</u> |
| 1953 | 29.0 | 21.4 | 7.6 | 18.5 <u>h/</u> | 13.2 <u>h/</u> | 5.3 <u>h/</u> |

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| Year | Million Square Meters | | | | | |
|-----------|-----------------------|----------------|-----------------|-----------------------|-----------------------|-----------------------|
| | Total Space | | | Living Space | | |
| | Total | State-Built | Privately Built | Total | State-Built | Privately Built |
| 1954 | 31.1 | 23.0 | 8.1 | 20.0 <u>h/</u> | 14.3 <u>h/</u> | 5.7 <u>h/</u> |
| 1955 | 32.3 | 23.9 | 8.4 | 20.6 <u>h/</u> | 14.8 <u>h/</u> | 5.8 <u>h/</u> |
| Total | <u>144.2</u> | <u>105.4</u> | <u>38.8</u> | <u>92.5 <u>h/</u></u> | <u>65.3 <u>h/</u></u> | <u>27.2 <u>h/</u></u> |
| 1956 Plan | 38.0 <u>h/</u> | 29.0 <u>n/</u> | 9.0 <u>h/</u> | | | |

a. All figures on total space are from the handbook.

b. 209/

c. 210/

d. Total does not include data for 1917.

e. 211/

f. 212/

g. 213/

h. Estimated.

i. 214/

j. 215/

k. 216/

l. 217/

m. 218/

n. 219/

1917-28

Published annual data on living space constructed were used for each year in this period. There is some question, however, as to whether the same original data were used in the compilations of the handbook. The handbook reports that the state sector built more total space than the private sector, whereas previously published figures indicate that the private sector built more living space. If the same original data were used, of housing built in 1917-28, 50 percent of privately built total space was living space; only 35 percent of state-built total space was living space.

Several points regarding conflicting data on living space are as follows: Zaslavskiy 220/ presents a figure stated to cover 1924-28 which actually covers the period 1917-28 according to annual data. Sosnovy includes reconstruction as well as new construction in his data for private housing construction 1923-28. Reconstruction is not included in prewar data presented in this report. Filatov 221/ presents a figure of 7 million square meters for state construction in 1917-28 and a figure of 9.7 million square meters for private construction in the same period. These figures do not fit annual data. Maslakov 222/ presents the same data as Filatov.

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1929-32

Annual data are available for construction of living space in the state sector. A total figure for the 4-year period and for 1929 are available for private construction. The other years are estimated.

During this period, living space constructed in the state sector was 72 percent of total space; in the private sector, 75 percent; and for the combined total, 72.6 percent. Zaslavskiy presents a figure for state construction in 1929-32 which has been rejected in favor of the official fulfillment figure.

1933-37

A 5-year figure for construction of living space in the state sector is available. Annual figures were not released, however, probably because of the decrease in housing construction after 1934.

The relationship between living and total space constructed in this period by the state sector is 72 percent. The estimate for private living space constructed is obtained by taking 75 percent of total private space constructed, the relationship during the First Five Year Plan.

1938 - June 1941

This period contains conflicting data on construction. The handbook presents figures of 34.4 million square meters of total space for state construction, 7.6 million square meters for private construction, a total of 42 million square meters. If the relationship between total and living space in the first two Five Year Plans is used, living space constructed was as follows: state sector, 24.8 million square meters; private sector, 5.7 million square meters; and total, 30.5 million square meters.

Broner 223/ presents a figure of 30 million square meters of living space referring to "the total increase in housing space" (state only) during the period 1938-42. Bol'shaya sovetskaya entsiklopediya 224/ indicates a figure of 30 million square meters as being state construction for 1938-May 1941. Another figure for state construction exists -- 20.7 million square meters for the period 1938-May 1941, with 17.2 million square meters for 1938-40 (Yunik 225/) and 3.5 million square meters for the first half of 1941 (Sosnovy 226/).

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It is estimated that living space constructed during this period, including construction in newly occupied areas, totaled 25.6 million square meters -- 20.7 in the state sector and 4.9 in the private sector. A check on the reliability of the 1938-41 estimate for living space built is found in a recent statement 227/ that urban living space increased more than 85 million square meters during 1928-41 (beginning of war) as a result of new construction. Estimates of the increase in the urban living space for this period, based on construction during the period, total 84 million square meters.

State living space constructed is estimated at 60 percent of total space, private living space at 64 percent, and the combined total at 61 percent.

Annual estimates of living space for state construction are based on the figures for 1938-40 and the first half of 1941 presented above, and a total figure for state construction in 1927-39 of 64 million square meters. 228/ Annual estimates for private construction are based on the figure for total space for the 3½-year period presented in the handbook, with consideration of the increased territory in 1940 and 1941.

If it were assumed that the relationship between living and total space existing during the first two Five Year Plan periods continued into the period under consideration, the resulting figure for 1941 would be unrealistically high in comparison with annual construction in 1938-40.

July 1941 - 1945

During this and subsequent periods, reconstruction as well as new construction is included in Soviet housing construction data.

According to the handbook, total construction and reconstruction during this period amounted to 49.8 million square meters of total space -- 41.3 million in the state sector and 8.5 million in the private sector. The only data available in terms of living space for this period are as follows:

| | |
|---------------------------------------|--|
| State sector, July 1941 - May 1945 | 17.9 million square meters <u>229/</u> |
| State sector, 1943-44 liberated areas | 12.7 million square meters <u>230/</u> |

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A high estimate for state construction of living space for June to December 1945 totals 5 million square meters with a total for July 1941 - 1945 of 23.9 million. For the private sector, a control figure of 19 million square meters for living space constructed during the entire plan period up to 1945 (Goldenberg, 231/) provides an estimate of 5.1 million square meters for the private sector for the period under consideration, with a total of 29 million square meters of living space for the combined total. This is only 58 percent of total space claimed for the period -- 57.9 percent in the state sector and 60 percent in the private sector. This relationship is considered reasonable for the period under consideration.

1946-55 and 1956

As previously stated, after 1947, over-all housing construction data were released in terms of total space and no longer in terms of living space. For 1946-47, figures are available in terms of both living and total space. State space built was 62 percent of total state-built space. A member of the US housing delegation was informed by an official of the Central Statistical Administration that, on the average, living space built is 62 percent of total space. This relationship has been used in postwar statistics on state construction to convert total space to living space. For the private sector, living space constructed has been estimated at 70 percent of total space. There is less auxiliary space in private housing because private housing usually has no hallways or stairways and often no inside toilet facilities.

It is of interest to note that data released annually disagree slightly with figures presented in the handbook, as shown in the tabulation below. This probably occurs because of incomplete data at the time of release of annual plan fulfillment results.

| <u>Year</u> | <u>Total Space Constructed As Previously Announced (Million Square Meters)</u> | <u>Total Space Constructed According to the Handbook <u>232/</u> (Million Square Meters)</u> |
|-------------|--|--|
| 1946-48 | 51 <u>233/</u> | 57 |
| 1949 | 22 <u>234/</u> | 22 |
| 1950 | 28 <u>235/</u> | 24 |
| 1951 | 27 <u>236/</u> | 26 |
| 1952 | 27 <u>237/</u> | 26 |
| 1953 | 28 <u>238/</u> | 29 |
| 1954 | 32 <u>239/</u> | 31 |
| 1955 | 35 <u>240/</u> | 32 |

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A fairly reliable technique exists for determining the amount of private housing construction each year. This has been useful in the past because until the publication of the handbook, separate data for private construction did not exist; only data on total urban construction were released.

The only statistic on private construction gathered and announced annually is that of construction of private housing with the aid of state loans. It appears that approximately one-half of private building utilizes state loans, as shown in the following tabulation:

| Private Construction Space Built with Aid of State Loans Announced Annually (Million Square Meters) | | | Amount of State-Aided Space Multiplied by Factor of 2 | Private Construction Space Built According to the Handbook (Million Square Meters) |
|--|---------------|------------------|---|---|
| Year | Type of Space | Amount | | |
| 1946-50 | Total | 15.0 <u>241/</u> | 30.0 | 30.4 |
| 1946-49 | Living | 8.4 <u>242/</u> | 16.8 | 16.9 |
| 1951 | Living | 2.8 <u>243/</u> | 5.6 | 5.2 |
| 1952 | Living | 2.5 <u>244/</u> | 5.0 | 5.2 |
| 1953 | Living | 2.4 <u>245/</u> | 4.8 | 5.3 |
| 1953 | Total | 3.9 <u>246/</u> | 7.8 | 7.6 |
| 1954 | Total | 4.2 <u>247/</u> | 8.4 | 8.1 |
| 1955 | Total | 4.0 <u>248/</u> | 8.0 | 8.4 |
| 1956 (plan) | Total | 4.7 <u>249/</u> | 9.4 | 9.0 |

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APPENDIX B

METHODOLOGY FOR TABLES 2, 3, 4, 5, and 7

A. Notes to Table 2.

1926

Both living and total space are available from the 1926 census. State living space was 70.2 percent of total space; private living space, 72.3 percent of total space; and the combined space, 71.3 percent.

1928

Figures for living space, state and private, are available. Using the 1926 relationship between total and living space, total space was derived for 1928.

1932

Total space and living space constructed in 1929-32 were added to 1928 figures to obtain 1932 estimates. No allowance was made for retirements.

1937

Total space and living space constructed in 1933-37 were added to 1932 figures. No allowance was made for retirements.

1937 (Adjusted)

An estimate of state urban housing was made in 1937, the first since 1926. D.L. Broner 250/ presents a figure for state urban living space in 1937, probably from the 1937 estimate, which necessitates an upward adjustment of derived figures. This increase in the balance of state urban housing space may have resulted from a failure to collect complete state housing construction data during the intervening years since 1926. It may have resulted from a change in status of housing in populated areas from rural housing to urban housing. The increase may

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have been the result of nationalization of private housing after 1926, particularly cooperative housing. This third possibility has been rejected because no evidence has been seen of nationalization of private housing after 1926 and because it is doubtful if the private housing construction figures reflected cooperative housing.

1938

Housing constructed during 1938 was added to 1937 stock figures to obtain the balance of space at the end of 1938. No allowance was made for retirements.

1940

Total urban housing space, state and private, is presented in the handbook. Total space constructed in 1939-40 was added to space existing at the end of 1938. This was subtracted from figures presented in the handbook for 1940 to obtain figures on acquired total urban housing space from new territories,* amounting to 70.5 million square meters. To obtain urban living space, urban living space constructed in 1939-40 was added to space existing at the end of 1938. D.L. Broner 251/ presents a figure for state urban living space in 1940, exclusive of newly acquired housing which agrees with the estimates presented. To obtain living space acquired from new territories, 42 percent of total space estimated to have been acquired was added.

Approximately 30 million square meters of urban living space was estimated to have been added in 1939-40. The total urban population in these areas was about 3 million. The space per person, estimated at about 10 square meters, in these areas was and still is appreciably higher than in other areas of the USSR.** T. Sosnovy estimates acquired space at 26 million square meters.

* Including Western Belorussia and the Ukraine, Bessarabia, Latvia, Lithuania, Estonia, and Northern Bukovina.

** Note the higher average space per person in the Baltic republic cities as found in statistics presented in the handbook.

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War Losses

The USSR claimed that losses during the war amounted to 70 million square meters of living space* (over 100 million square meters of total space). 252/ Net actual losses derived from data in handbook are now presented as having been about two-thirds of this claim as follows:

| | |
|---|---------------------------|
| Total space in urban areas, 1950 (from handbook) | 513 million square meters |
| Total space in urban areas, 1940 (from handbook) | 421 million square meters |
| Net gain from 1940 to 1950 | 92 million square meters |
| Gross construction and recon- struction 1941-50 (from handbook) | 160 million square meters |
| Net loss | 68 million square meters |

The maximum net war loss possible, assuming no retirements during this period except for war losses, was 68 million square meters of total space or 40 million to 45 million square meters of living space. In order to determine war losses in terms of living space, the same technique was used as in the case of total space. In applying this technique, living space in 1950 was assumed to be 65 percent of total space, 62 percent in the state sector and 70 percent in the private sector.

1945

The 1945 estimates for total and living space were derived by subtracting construction and reconstruction in 1946-50 from the 1950 stock figures. An allowance was made for retirements in 1946-55 at about 0.6 percent per annum for total space, and about 0.55 percent per annum for living space.** Annual figures were obtained by adding construction for each year and deducting retirement allowances.

* There is some question as to whether the figure of 70 million square meters included housing retired in unoccupied areas during the war. Although most authors have stated that the 70 million square meters referred to war-destroyed and partially ruined housing only, Voznesenskiy claimed that the state would have to rebuild 60 million square meters of housing in order to restore war losses.

** See Appendix D for discussion of retirement rates.

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1955

The handbook presents figures on the stock of total urban housing space in 1955. In order to estimate the stock of living space, 65 percent of total space was assumed to be living space, 62 percent in the state sector and 70 percent in the private sector.

In March of 1956 it was announced in a foreign broadcast that the total amount of living space in urban areas of the USSR was 400 million square meters. 253/ The same announcement, however, said that the increase in space planned of 205 million square meters would raise urban space by 50 percent, which implies a reference to total state housing space only. If the 400 million square meters actually refers to living space, the estimate presented herein of 414 million square meters of living space in 1955 is given additional weight.

B. Notes to Table 3.

The estimate for total rural housing existing in 1945 is based on a statement by Voznesenskiy 254/ that of the 12 million prewar rural dwellings existing in territory occupied by the enemy, 3.5 million were destroyed. On the basis of a statement of M. Arkadiyev 255/ that 839,000 rural dwellings were rebuilt in occupied areas during 1943-44, it is estimated that about 1.5 million houses were built during 1943-45. The estimates for 1947 and 1948 are based on a total for the 2 years of 1.2 million houses. 256/ It was announced that 2.3 million houses were built by kolkhozniki and rural intelligentsia in 1951-55. 257/ Annually announced figures total 2.2 million, probably because of rounding.

C. Notes to Table 4.

1924-28

There are many contradictory figures on housing investments for this period. The data most frequently quoted in Soviet literature are from Veselovskiy 258/ (1951), who presents a figure for state investments 1928/24-1928 (3d quarter) of 1.9 billion rubles. This disagrees with his own statement on another page of the same text 259/ that the state invested 806 billion rubles in new housing in the period 1924-28. In the first instance he was referring to total capital investments by the state and private sectors in new housing and housing repair. Other

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authors, however, have not corrected his error. The annual figures presented below combine data from Bol'shaya sovetskaya entsiklopediya (1932), from Maslakov, Veselovskiy, Zaslavskiy, and Broner. Housing investments and total investments included capital repairs during this period. Loans for private construction during this time were negligible.

Investment in Urban Housing
 1924-28

| Billion Current Rubles | | | | | | | | | |
|------------------------|---------------------------|----------------------|--------------|---------------------------|-----------------------|--------------|---------------------------|-----------------------|--------------|
| Year | Total Investment | | | State Investment | | | Private Investment | | |
| | Investment in New Housing | Investment in Repair | Total | Investment in New Housing | Investment in Repair* | Total* | Investment in New Housing | Investment in Repair* | Total* |
| 1924 | 0.057 | 0.079 | 0.136 | 0.031 | 0.050 | 0.081 | 0.026 | 0.029 | 0.055 |
| 1925 | 0.160 | 0.119 | 0.279 | 0.113 | 0.080 | 0.193 | 0.047 | 0.039 | 0.086 |
| 1926 | 0.254 | 0.187 | 0.441 | 0.171 | 0.104 | 0.275 | 0.083 | 0.083 | 0.166 |
| 1927 | 0.359 | 0.134 | 0.493 | 0.222 | 0.099 | 0.321 | 0.137 | 0.035 | 0.172 |
| 1928 | 0.431 | 0.152 | 0.583 | 0.318 | 0.101 | 0.419 | 0.113 | 0.051 | 0.164 |
| Total | <u>1.261</u> | <u>0.671</u> | <u>1.932</u> | <u>0.855</u> | <u>0.434</u> | <u>1.289</u> | <u>0.406</u> | <u>0.237</u> | <u>0.643</u> |

1929-32

There are many inconsistencies in the available data. The figures in the following tabulation are most commonly used:

Investment in State Urban Housing
 Selected Periods, 1928-32

| Billion Current Rubles | | | |
|------------------------|-------|------------------|-------------------------|
| Period | Total | New Construction | Repair of Local Soviets |
| 1928-32 | 4.9 | 4.3 | 0.569 |
| 1928 4th quarter-1932 | 4.9 | 4.3 | 0.569 |
| 1928 4th quarter-1932 | 4.6 | 4.071 | 0.569 |
| 1929-32 | | 3.992 | |

The second line of data on new construction has been discarded. It has been assumed that the figure 0.569 billion rubles refers to the period from the 4th quarter of 1928 through 1932. For this period total investments included capital repairs. Housing investments included only

* Estimated.

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repairs of local soviets but not repairs of housing by other state organizations. Loans for private construction during this period were negligible -- probably less than 10 million rubles.

1933-37

The following tabulation presents data available for this period:

| Investment in State Urban Housing 1933-37 | | | |
|--|--|------------------------------------|--------------|
| Billion Current Rubles | | | |
| <u>Year</u> | <u>Construction of State Housing</u> | <u>Repair of Local Soviets</u> | <u>Total</u> |
| 1933 | 1.3 | 0.185 | |
| 1934 | 1.7 | 0.268 | |
| 1935 | 1.9 | 0.335 | |
| 1936 | 2.4 | 0.418 | |
| 1937 (residual) | 3.5* | 0.561 | |
| Total by addition | 10.8 | 1.767 | 12.567 |
| Total stated | 10.825 | 1.750 | 12.575 |

Annual data are available for all years except 1937. There is disagreement, however, on the total for the 5-year period. A number of sources give a total of 10.825 billion rubles for new construction for the 5 years. Other sources give a total of 9.580 billion rubles. The larger figure is in current rubles, the smaller in constant rubles. 260/ The annual figure for repairs of local soviet housing for the 5-year period were derived by Norman Kaplan 261/ from percentage increases given by Kobalevskiy. During this period, total state investments included capital repairs; housing investments included only capital repairs by local soviets.

1938-42

The figure most frequently noted for investments in housing during this period is 15.5 billion rubles. This is the Plan figure for investments in new state housing construction and repairs of local soviets for the 5 years. 262/ This figure has also been seen representing the planned investment in new state housing only, 263/ actual investments for the period in new state housing only, 264/ and actual investments in new housing and repairs of local soviets. 265/ A figure of 2.5 billion

* Estimated.

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rubles is generally given to represent both planned and actual expenditures for repairs of local soviets. 266/ A figure of 15.5 billion rubles for expenditures on new construction and repairs of local soviets for the period 1938 to June 1941 is estimated to be correct. The basis for this assumption is indicated below:

a. Kobalevskiy specifically states that the figure 15.5 billion rubles includes repairs. Also several sources indicate the relationship of investment in housing to total investment for this period, and, with total investment known, housing investment totals about 13.5 billion rubles.

b. With total space built in 1938-41 and total allocations for 2 out of 4 years in this period known, this estimate appears reasonable.

The figure for planned investment in new state housing for 1941 is taken from Norman Kaplan. Loans for private construction are estimated for 1938, when they are assumed to have been about the same as 1937, and for 1941, when they are estimated at half the plan figure of 100 million rubles. 267/ For this period total state capital investments and housing investments exclude capital repairs.

1946-50

The only annual figures available for this period on investments in state housing construction are for 1946 and 1947, 6 billion rubles in 1946 and 7 billion rubles in 1947. 268/ Annual increases in the volume of state capital investments in housing were announced each year,* however, and a ruble series for 1946-50 was constructed, using 1946 as a base. Total expenditures in 1946-50 obtained by this procedure amount to 49 billion rubles. Converted from 1946 to 1945 prices, this totals 48 billion rubles. As will be indicated below, these figures cannot be used.

It was announced in 1954 that investments in state housing in 1951-54 were 80 billion rubles, or 1.8 times investments in 1946-50. 269/ This indicates that housing investments in 1946-50 in 1950 rubles were 45 billion rubles. This may be checked by using the 1953 actual housing investment figure (in 1950 rubles) as a base and applying the volume of housing investment series, as announced, back to 1946 to obtain annual investments in 1946-50 in 1950 rubles. This totals 45.1 billion rubles, with

* Annual volume series for postwar years are presented in D, p. 61, below.

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1946 totaling 5.6 billion rubles and 1947, 6.5 billion rubles. Construction prices in 1950 were at least 20 percent above 1945 construction prices. Yet the total for 1946-50 in 1945 prices is higher than the total in 1950 prices.

An examination of a broad sample of costs per square meter for housing construction indicates that there was little movement in housing construction costs during the Fourth Five Year Plan. A partial explanation for this may be that the cost of housing was not kept artificially low by subsidies in the immediate postwar years as was the cost of other types of construction. It is possible that the volume series for housing investment was not calculated in constant prices. It is also possible that the cost of housing construction in the immediate postwar period was higher than over-all construction costs. Regarding the loans for private construction, the 1948 figure is a residual from a known total for 1946-50 270/ and known figures for the other 4 years.

1951-55 and 1956

All investment figures for the period 1951-55 were announced in 1 July 1950 rubles. The estimates for 1951, 1952, and 1954 were based on announced increases in the volume of state housing investments, using the announced 1953 figure as a base. As stated above, it was indicated in November of 1954-that expenditures on state housing investments in 1951-54 totaled 80 billion rubles. Annual figures obtained using volume increases for 1951 and 1952, actual investments for 1953, and planned investments for 1954 total 77.3 billion rubles. Differences in rounding probably account for the discrepancy. Because of a change in statistical reporting procedure, there is no comparable volume figure for 1955. It has been assumed that expenditures in 1955 were approximately the same as in 1954 and that the plan of 24.5 billion rubles was fulfilled by approximately 94 percent.

The 1956 plan for investments in state housing calls for a 14-percent increase over 1955. Since this is approximately the same percentage as the price differential between 1950 and 1955 prices, the expenditures will remain at about the same level. 271/

The figures for loans to the private sector for 1951 and 1952 are based on a known figure for 1939-53 272/ and on known totals for 1939-50 and 1953.

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D. Notes to Table 5.

Prices and Inclusiveness

Both housing and total capital investments for figures for 1924-28, 1929-32, 1933-37 are in current prices and include extralimit investments and capital repairs.

Both housing and total capital investments for figures for 1928-42 plan, 1938 - June 1941, and 1940 are in 1936-37 prices and include extralimit investments but exclude capital repairs.

1946-50 plan figures for housing and total investments are in 1945 prices, and include extralimit investments but exclude capital repairs.

Figures for 1946-50 actual and for 1951-55 are in July 1950 prices and exclude both extralimit investments and capital repairs.

No attempt can be made within the scope of this report to describe the procedure used to estimate the state investment figures for 1946-55. It might be of value to observe the more rapid rate of increase in the volume of investment in state housing than in the volume of total capital investment by the state, as seen in the following tabulation:

| <u>Year</u> | <u>Volume of State Housing Investment as Percent of Previous Year</u> | <u>Volume of Total State Investment as Percent of Previous Year</u> |
|------------------|---|---|
| 1946 <u>273/</u> | 155 | 117 |
| 1947 <u>274/</u> | 117 | 110 |
| 1948 <u>275/</u> | 136 | 123 |
| 1949 <u>276/</u> | 126 | 120 |
| 1950 <u>277/</u> | 118 | 123 |
| 1951 <u>278/</u> | 120 | 112 |
| 1952 <u>279/</u> | 110 | 111 |
| 1953 <u>280/</u> | 111 | 104 |
| 1954 <u>281/</u> | 119 | 115 |
| 1955 <u>282/</u> | N.A. | 106 |

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E. Notes to Table 7.

Urban Population Statistics

For population purposes, in Table 7 the following areas are classified as urban: (1) cities with an adult population of at least 1,000, of whom not more than 25 percent are engaged in agriculture; (2) worker settlements with a minimum adult population of 400, 65 percent of whom are engaged in industry; and (3) urban-type settlements, such as health resorts. 283/

According to the above definition, urban population figures exclude the population of agricultural communities. The urban housing figures used in this report include state-built housing for sovkhoz and MTS workers. Therefore, to the extent of the state's participation in housing construction for agricultural workers, there is a lack of comparability between the urban population and urban housing. The degree of error introduced is considered insignificant because in the past the state has invested very little in housing for agricultural workers. Participation by the state will increase in the future, however, and this will necessitate an adjustment to make the figures comparable.

Annual urban population estimates for 1945-54 are based on a statement in Politicheskaya ekonomika 1954 that the urban population had grown by 3 million a year since the war and a statement frequently made in 1954 that the urban population had grown by 20 million in postwar years. Several checks may be applied to these estimates, including a statement made by Malenkov on 8 August 1953 that the urban population was over 80 million people and a statement in Izvestiya on 4 February 1955 that the urban population had grown by 17 million in the last 5 years.

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APPENDIX C

HOUSING CONSTRUCTION AND INVESTMENT IN THE USSR
BY SELECTED MINISTRIES AND SECTORS

Table 9

Housing Constructed by Major Sectors
 of the Economy in the USSR a/
 Selected Periods, 1924-55

| | Percent of Total | | | | | |
|----------------|------------------|----------------|----------------|------------------|---------------------|----------------|
| | <u>1924-28</u> | <u>1929-32</u> | <u>1933-37</u> | <u>1941 Plan</u> | <u>1946-50 Plan</u> | <u>1951-55</u> |
| Municipalities | 26.7 <u>b/</u> | 14.8 <u>c/</u> | 11.3 <u>c/</u> | 7.5 <u>d/</u> | 10 <u>e/</u> | 10 <u>d/</u> |
| Cooperatives | 13.7 <u>f/</u> | 6.3 <u>c/</u> | 4.0 <u>c/</u> | 0 | 0 | 0 |
| Industry | 42.6 <u>c/</u> | 63.0 <u>c/</u> | 59.0 <u>c/</u> | 80.0 <u>d/</u> | 70 <u>d/</u> | 90 |
| Transport | 9.7 <u>c/</u> | 7.9 | 17.2 <u>c/</u> | 6.0 <u>d/</u> | 10 <u>d/</u> | |
| Other | 7.3 <u>c/</u> | 8.0 | 8.5 <u>c/</u> | 6.5 <u>d/</u> | 10 <u>d/</u> | |
| Total | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100</u> | <u>100</u> |

a. Million square meters of living space.

b. 284/

c. 285/

d. Estimated.

e. 286/

f. 287/

Table 10

Capital Investment for Housing in the USSR
 by Selected Ministries and Sectors a/*
 1933-37 and 1946-50

| <u>Ministry or Sector</u> | <u>Percent of Total</u> |
|---------------------------|-------------------------|
| 1933-37 <u>b/</u> | |
| Industry | 12.2 |
| Heavy Industry | 12.8 |
| Agriculture (state) | 6.2 |
| Transport | 5.5 |
| Communications | 5.9 |

* Footnotes for Table 10 follow on p. 64.

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Table 11

State and Private Housing Construction in the USSR
 by Selected Ministries
 1946-60
 (Continued)

| | <u>State</u> | <u>Private</u> | <u>Total</u> |
|--------------------------------|----------------|----------------|--------------------|
| <u>Construction Materials</u> | | | |
| 1951 Plan | 0.28 <u>e/</u> | | |
| 1952 Plan | 0.45 <u>e/</u> | | |
| <u>Electric Power Stations</u> | | | |
| 1946-50 actual | 1.8 <u>f/</u> | | |
| <u>Ferrous Metallurgy</u> | | | |
| 1946-50 Plan | 5.8 <u>g/</u> | 0.8 <u>g/</u> | 6.6 |
| 1951-55 Plan | 5.0 <u>h/</u> | | |
| <u>Nonferrous Metallurgy</u> | | | |
| 1951-55 Plan | 3.0 <u>h/</u> | | |
| <u>Light Industry</u> | | | |
| 1946-50 Plan <u>i/</u> | 2.3 <u>j/</u> | | |
| 1946-50 actual | 1.3 <u>k/</u> | | |
| 1951-53 actual | 1.0 <u>k/</u> | | |
| <u>Petroleum</u> | | | |
| 1946-50 actual | 1.8 <u>l/</u> | | |
| 1951-55 Plan | 4.5 <u>m/</u> | | |
| <u>Railroads</u> | | | |
| 1946-50 Plan | | | 5.5 <u>n/</u> |
| 1946-50 actual | 3.0 <u>o/</u> | 0.8 <u>o/</u> | 3.8 <u>o/</u> |
| 1951-55 Plan | 4.0 <u>p/</u> | | |
| 1951-55 actual | 3.2 <u>q/</u> | | |
| 1956-60 Plan | 6.5 <u>r/</u> | 2.5-3.5 | 9.0-10.0 <u>s/</u> |

a. Million square meters of living space.

- | | | |
|----------------|---------------------------|----------------|
| b. <u>294/</u> | h. <u>300/</u> | n. <u>305/</u> |
| c. <u>295/</u> | i. Textile industry only. | o. <u>306/</u> |
| d. <u>296/</u> | j. <u>301/</u> | p. <u>307/</u> |
| e. <u>297/</u> | k. <u>302/</u> | q. <u>308/</u> |
| f. <u>298/</u> | l. <u>303/</u> | r. <u>309/</u> |
| g. <u>299/</u> | m. <u>304/</u> | s. <u>310/</u> |

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APPENDIX D

RETIREMENT OF HOUSING IN THE USSR

In order to determine the amount of housing existing at any given time in the USSR it is necessary to estimate loss (retirement) of housing from dilapidation, fire and flood, abandonment, and wrecking for purposes of relocation and reconstruction. Despite the fact that most housing in the USSR is substandard, the rate of retirement is low because of the extreme housing shortage.

The quality of construction is the major determinant of the age at which a dwelling must be retired because of dilapidation. Residences are not torn down in the USSR because they are unsafe or unsanitary. Although the basic structural elements of Soviet house-building probably are comparable to foreign work, the quality of finishing work is very poor so that disproportionately large sums must be spent on capital repair. It is estimated that under current housing conditions, retirement because of dilapidation is negligible. Losses from fire are small because of strict fire-prevention regulations and because dwellings are so crowded at all hours that fires are detected immediately. It is difficult to estimate the extent of losses from wrecking for purposes of reconstruction and relocation. In the postwar period there has been considerable replanning of urban areas involving demolition of small 1- and 2-story dwellings and replacement by multistory apartment buildings. Members of the US housing delegation, however, thought that most of these urban development schemes were being deferred because of housing shortages. This view is supported by the fact that most of the state housing to be constructed during the Sixth Five Year Plan is to be located in new development areas outside of cities. Although losses of this nature will become increasingly important in the future, especially in private housing, they are not significant at present.

In the early 1930's Soviet housing was retired at a rate of about 0.5 percent per year. ^{311/} Broner discusses several studies of retirement done in the late 1930's in which it appears that the rate ranged from 0.2 to 0.4 percent per year. ^{312/} From the housing stock figures presented in the handbook for 1950 and 1955, it is possible to determine the rate of retirement during this period. A problem arises, however, as to whether the above-plan state housing built during this

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period (about 10 percent of state construction) was included in the stock figures for 1955. It has been assumed for a number of reasons that this housing was not included. The rate of retirement used for state construction was 0.7 percent per year; for private construction, 0.4 percent per year; and for both combined, 0.6 percent per year.

Another indication of the average life of Soviet housing is found in a speech of Khrushchev at the All-Union Building Conference in December 1954 in which he stated that the walls, floors, and ceilings of current housing construction are of quality good enough to stand for 100 years (a retirement rate of 1 percent) but that finishing work would not last this long. A life expectancy of 100 years for most of the housing built in the immediate postwar period and for all private construction is too high because of the inferiority of materials used. On the other hand, most of the urban housing built before the Revolution and some of the housing built by industrial ministries in the postwar period is of excellent quality and probably will last 200 years.

Official amortization rates are 1 percent of replacement cost for stone houses and 2 percent for wood houses; however, these rates do not reflect the actual rate of retirement of Soviet housing. 313/

In statistics presented herein, the same rate of retirement was used for the 1946-50 period as that indicated above for the 1951-55 period. This rate applied to total housing space. For living space a rate of 0.55 percent per year was used during the entire postwar period. It is estimated that a somewhat higher rate of retirement should be applied in the future -- 0.8 percent or an average life expectancy of 125 years. For rural housing a retirement rate of 1 percent has been used. There are no empirical data to support this estimate. Major considerations influencing this estimate are the following:

1. Abandonment of rural housing because of consolidation of kolkhozes and sovkhoses, movement of rural dwellers to urban areas, and forced migration of some kolkhozniki (for example, Ukrainians after World War II).
2. Dilapidation -- most rural dwellings are wooden or mud structures which probably stand 50 to 100 years.
3. Fire, flood, and other natural calamities.

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Until a census provides more accurate data on the stock of rural housing, determination of the rate of retirement will remain fairly academic.

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APPENDIX E

COST OF HOUSING IN THE USSR

It is extremely difficult to estimate an average cost per square meter for all Soviet housing construction. The following factors cause the cost variation: (1) the quality and type of material used in building: the type of material is similar to that used in other countries, although the quality of material used is inferior to that of Western countries; (2) the type of dwelling and services included: in the USSR many houses are built without any facilities, especially in rural areas, whereas others are fully equipped; (3) geographic location: construction materials and labor costs in the USSR vary according to price zones; and (4) the ownership of housing: this causes the most important variation in housing construction costs in the USSR. Private housing generally is built by the owner, whose only monetary outlay is for materials. Even including an allowance for labor, the cost per square meter of private housing construction is about one-third the cost of state housing construction. The relative simplicity of private dwellings and the absence of profit and overhead in private building account for the difference. State housing is of higher quality but, as stated above, it also bears an overhead cost of about 20 percent and profits of the builder. The quality of housing built by industrial ministries for their employees varies in direct relation to the desire of the government to retain an efficient and skilled labor force in a particular industry. Municipal housing construction invariably is of poorer quality than industrial housing construction, in which better materials and more skilled labor are used. 314/ The extent of variation in cost of state housing construction can be seen by examining the 1941 plan. The cost per square meter ranges from 300 rubles for the Ministry of Trade to 2,250 rubles for the State Bank. Important ministries such as aircraft, munitions, and the extractive industries received larger allocations per square meter as well as larger total allocations than the less important ministries. 315/

A general cost average, not the most accurate however, can be estimated by comparing total capital investment expenditures on housing with the total amount of state housing space built in that period. The time lag between ruble expenditures and completion of housing should not seriously affect the general average.

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The following data on the cost of state housing per square meter for selected periods are obtained by dividing total expenditures on state construction by total state-built living space.

Cost of State Housing per Square Meter of Living Space
Selected Periods, 1924-55

| <u>Period</u> | <u>Rubles*</u> |
|---------------------------------|-------------------|
| 1924-28 | 127.6 |
| 1929-32 | 169.9 |
| 1933-37 | 403.9 |
| 1938-41 | 632.8 |
| 1940 replacement cost (RSFSR) | 501.0 <u>316/</u> |
| 1946-50 Plan (1945 rubles) | 584.0 |
| 1946-50 actual (1950 rubles **) | 1,011.0 |
| 1951-55 actual (1950 rubles **) | 1,514.0 |

For state construction in 1956 the average cost per square meter of living space of state housing construction is planned at 1,500 rubles, although the actual cost is running closer to 1,800 rubles (material prices and norms of 1956).*** 318/ The goal and designs for the Sixth Five Year Plan specify a brick 2-story house with concrete floor and all facilities at 1,200 rubles per square meter. 319/

The following tabulation, giving data on the average cost of housing construction in Moscow, probably presents an accurate picture of costs in large cities. 320/

* See Tables 4 and 6, pp. 31 and 36, respectively, above.

** These averages are stated in terms of estimate prices. The cost per square meter was lower in the Fourth Five Year Plan because of inclusion of reconstruction as well as new construction.

*** A number of conflicting statements have been seen regarding the average cost of state housing construction. For example, in Stroitel'naya gazeta, 317/ it was stated in January 1956 that the average cost per square meter was then 2,350 rubles. Most statements seen have given a range between 1,500 and 2,000 rubles.

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| <u>Year</u> | <u>Rubles per Square Meter of Living Space</u> |
|--------------------------|--|
| 1949 | 2,391 |
| 1950 | 2,207 |
| 1951 | 1,797 |
| 1952 | 1,692 |
| 1954 | 1,600 to 2,500 |
| 1955 (southeast suburbs) | 1,700 to 2,000 |

There are no known data on the cost per square meter of private urban construction. A technique for determining the average cost is presented below, which indicates a cost per square meter of living space of approximately 600 rubles for postwar years. In the notes to Table 2 it is indicated that about half of private urban building utilizes state loans. Figures are available each year for the total amount of loans and the total housing built which utilizes loans. Terms of borrowing specify that the state will provide 50 to 70 percent of the total cost of the house, the owner providing the remainder in the form of cash or his own labor. 321/ Because some builders do not borrow the maximum allowed, 50 percent of the cost is assumed to be covered by loans and 50 percent by own labor. An estimate of cost per square meter is found by doubling figures announced each year for total loans for private construction and dividing by the amount of housing built with these loans.*

| <u>Year</u> | <u>Million Rubles</u> |
|-------------|-----------------------|
| 1946-50 | 595 |
| 1951 | 420 |
| 1952 | 396 |
| 1953 | 595 |
| 1954 | 662 |
| 1955 | 607 |

For rural housing an average cost per dwelling of 10,000 to 12,000 rubles (including labor) is suggested -- approximately 300 rubles per square meter of total space.

* For data on space built with the aid of state loans, see p. 24, above. For data on total loans, see Table 4, p. 30, above. Figures for 1951 and 1952 were obtained by doubling the figures presented by Yunik for the amount of loans per square meter of living space built. 322/ Estimates derived from loan figures presented in Table 4 are lower and are probably incorrect.

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