Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

The Claim of the Soviet Military Establishment on Economic Resources

21 November 1962

by

STATINTL [redacted]

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

The Claim of the Soviet Military Establishment on Economic Resources

The claim of the Soviet military establishment on the economic resources of the USSR is readily ascertainable only within rather broad limits from open sources of information. Not only is the Western scholar in this position, but so too are the vast majority of the Soviet citizenry, the intelligentsia, and the bureaucracy. Such circumstances exist for reasons which are not wholly independent — a heritage of pathologic secretiveness, a neofeudalistic regime, and doctrinaire techniques for accounting and economic analysis.

The State Budget

Each year the Soviet government promulgates what is essentially a consolidated cash budget covering the planned expenditures for all the national regional, and local governments of the USSR. These expenditures are grouped under five general headings: National Economy, Social-Cultural Measures, Defense, Administration, and a substantial unspecified remainder, "Other". In Table 1, the latest published Soviet information on actual expenditures (for 1961) has been set out to indicate the magnitudes involved. As the table demonstrates, almost 45 percent of total expenditures is accounted for under the heading National Economy. The reason is quite simple. The Soviet government owns outright virtually all of Soviet industry and a large proportion of Soviet agriculture. In general, some two-thirds of the funds expended under this heading

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 1

Soviet State Budget
1961

	Billion Current Rubles	Percent
National Economy	32.6	43
Social-Cultural Measures	27.2	36
Defense	11.6	15
Administration	1.1	1
Other	3.8	5
Total	76.3	100

Source: USSR, Central Statistical Administration. Narodnoye khozyaystvo SSSR v 1961 godu (The National Economy of the USSR in 1961), Moscow, 1962, p. 761.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

represents the year's infusion of new state capital for Soviet industry and agriculture. Thus, in the USSR, expenditures "for the national economy" include the equivalent of the year's aggregate long-term loans and new capital stock issues of private firms in a western country.

Expenditures under the heading Social-Cultural Measures account for an additional 35 percent of Soviet budgetary expenditures, as shown in Table 1. Here, too, the scope of activity covered is very much broader than the equivalent entries in the budgets of Western governments. Again, the Soviet state budget consolidates all the equivalent activities undertaken by state and local governments — education, research, public health, welfare, and pensions. Further, the state budget includes funds for the equivalent of much private activity in the West. The equivalent of private schools and hospitals, private insurance companies, private research foundations, and an independent press or radio and television industry do not exist in the USSR, and all these activities are provided for, to some degree, by the social-cultural outlays of the budget.

Defense Expenditures

The bulk of the remainder of Soviet budgetary expenditures is made under the heading Defense, as shown in Table 1. The relationship of this amount to total budget expenditures (15 percent) is a favorite

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

means that the USSR uses for showing how peace-loving the government is. For example, the 1960 Soviet statistical yearbook[1] presents the following statements of expenditures for defense as a percentage of total expenditures:

1940	32.6
1955	19.9
1958	14.6
1959	13.3
1960	12.7

The facts are that in the 1940-55 interval this percentage got as low as 18 in 1947-48 and crept up to 23 in 1952-53. Since the revision of the Soviet defense budget announced in mid-1961, the trend has shifted. The 1961 defense expenditures were 15 percent and the 1962 plan calls for 17 percent of total expenditures to be devoted to defense.

Obviously, these low percentages may be useful in international propaganda, but it is quite clear that the swollen scope of the total Soviet budget relative to its typical Western counterpart renders the comparison completely meaningless. However, such lack of meaning is minor when compared with the very real probability that the scope of the activities financed by the Soviet defense appropriation is considerably

1 USSR, Central Statistical Administration. Narodnoye khozyaystvo SSSR v 1960 godu (The National Economy of the USSR in 1960), Moscow, 1961, p. 845.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

smaller than that covered by Western defense appropriations.[2]

The scope of the Soviet expenditure account Defense is a moot point. Certainly, those definitions which are offered in Soviet technical literature do nothing to resolve the question. For example, the defense category is stated in a Soviet textbook to include "the monetary and material allowances for armed force personnel, payment for supplies and repair of combat equipment, maintenance of military institutions and schools, military construction, and other expenditures included in the estimate of the Ministry of Defense of the USSR" [emphasis supplied].[3] As the underscoring above is intended to emphasize, this sort of definition tends to say that defense is defense and thus to raise suspicions. In the Russian, the formulation of "supplies and repair of combat equipment" is equivocal with respect to whether or not procurement of major equipment is covered. "Military construction" is a term which is more likely to bespeak earthworks than facilities such as airfields, training camps, barracks, depots, and missile sites.

---

[2] Outright falsification on the part of the USSR is not implied here, although that possibility exists. The point of view taken here is that in its pronouncements on defense budgets the Soviet government, in general, gives information which is not basically untrue. The problem is that it is usually impossible to be sure in what sense a statement is true because of very great deficiencies in the relevant definitions of terms and of the scope of categories.

[3] Dymshits, I.A., et al. Finansy i kredit SSSR (Finance and Credit in the USSR), Moscow, 1956, p. 223.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Moreover, the budget as a whole reinforces these suspicions. The constituent details of the defense "line" have not been published. The reported allocation for scientific research, largely under Social-Cultural Measures, has had large annual increases, with the 1962 planned level standing at 400 percent of the 1953 level. There are institutional reasons for believing that this allocation encompasses a considerable amount of research and development for complex military equipment such as aircraft and missiles and for nuclear energy and space activities. The published details for the constituent activities under the heading National Economy consistently fail to explain the total allocation, and the unexplained portion has at least tripled since 1950, whereas the total budget has only doubled during that time. Finally, the general expenditures residual category Other, at 5 to 10 percent of the total, has continued to exist over the period without any really adequate explanation for its purpose.

Table 2 has been prepared to illustrate the problem. This table represents a collection of actual or implied statements made by the USSR covering the period from 1950 to date, with some interpolations to fill in certain gaps. In several of the years, more detailed data which would permit some refining were reported, but in the interest of obtaining a series with at least superficial consistency over the time period, these few details were not taken into account in preparing the table.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 2

Selected Soviet Published Information
of Possible Defense Significance
1950-62

Billion Current Rubles a/[4]

Year	Published Defense Expenditures	Science b/	National Economy Residual c/	General Expenditure Residual d/ e/
1950	8.3	0.9	3.0	5.0
1951	9.3	(0.9) f/	4.8 e/	4.2
1952	10.9	(1.0)	5.1 e/	4.4
1953	10.5	1.1	(5.2)	4.0
1954	10.0 e/	(1.3)	(5.3)	4.5
1955	10.7	(1.5)	5.3	4.7
1956	9.7	1.7	4.7	5.6
1957	9.1	(2.1)	6.2	6.3
1958	9.4	2.4	8.9	5.0
1959	9.4	2.8	11.3	5.9
1960	9.3	3.3	11.3	6.2
1961	11.6	3.8	10.8 e/ g/	6.3
1962	13.4 e/	4.4 e/	10.1 e/	4.7

[4] Footnotes follow on p.8.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 2

Selected Soviet Published Information
of Possible Defense Significance
1950-62
(Continued)

a. Converted where necessary to new rubles at the rate of 1 new ruble for 10 old rubles.

b. Includes funds of enterprises. In this series interpolations were made between the data given in the official Soviet economic handbook series rather than use earlier data from other sources. This was deemed necessary in the interest of obtaining a series which is comparable over time in view of the fact that apparently the scope of this account was changed by the Soviets.

c. Includes allocations for trade, and the municipal economy.

d. Includes the contingency funds of the Council of Ministers and the loan service.

e. Planned; the other numerical data refer to reported actual expenditures.

f. The parentheses indicate that the data within them represent interpolations.

g. The published information for this heading for 1961 implied residual actual expenditures of 13.6 billion rubles, from which 2.8 billion rubles (the 1960 actual figure) was subtracted to remove the allocation for transportation and communications in order to derive an entry which is reasonably comparable with the other entries in the column.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Generally, reported actual expenditures are presented if they were to be found. Otherwise, reported planned expenditures or interpolations were used. One exception to this rule is to be found in the general expenditure residual Other. For that heading, planned expenditures were presented exclusively because no complete set of implied announcements referring to detailed actual expenditures could be found, and the manipulation of a significant portion of this residual (the contingency fund of the Council of Ministers) makes planned expenditures and actual expenditures inconsistent by definition.

The column covering published defense expenditures indicates the single defense "line" allocation referred to and commented on above. The column covering science includes not only the budgetary allocations but also the allocations from enterprise funds. According to published Soviet material, in 1960 this allocation would seem to cover the financing of some 3,500 research institutes and scientific and experimental stations, employing some 200,000 scientists. Activities supported by this allocation appear to cover a large portion of all research and development, civilian and military (and space), for the entire country. This allocation, however, would not cover all the activities encompassed by the US concept of research, development, test, and evaluation (RDT&E). Substantial end-product development, test, and evaluation of national significance (considerable amounts of which are undoubtedly military and space) seem to be covered

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

elsewhere in the budget.

The national economy residual and the general expenditures residual are also of interest. Because of the possibility that substantial activities of defense (and space) significance may be financed from these portions of the budget, these two residuals have, accordingly, been entered in Table 2. These two residuals, as derived, cover some items not of military significance. The national economy residual includes allocations for financing trade, agricultural procurement, and municipal services. Similarly, the general expenditure residual, as compiled, includes the service of the national debt[5] and the planned contingency fund of the Council of Ministers. Most of these contingency funds eventually show up as actual expenditures for financing activities under the heading, National Economy. However, these residuals are not without interest as possibly financing activities of military (and space) significance. It is conceivable that these residuals may cover some or all of the following:

- the development, test, and evaluation of military and space hardware and systems;
- the procurement of some if not most major military and space equipment;
- strategic stockpiles of other military materiel, such as petroleum products, food and so forth;

5 It should be noted that Mr. Khrushchev seems to be inclined to regard the US debt service as a defense item.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

the construction of military base facilities;

the support of militarized security forces;

some intelligence activities; and

some civil defense activities.

Evaluation

Table 2 has deliberately not been summed. Its purpose is to show the fact and general location of the considerable uncertainties which, at 20-30 billion rubles per year, account for about 40 percent of annual Soviet budgetary expenditures fairly consistently.

To achieve what is probably a better appreciation of the range of uncertainty, the data in Table 2 can be adjusted in gross terms to remove the most plausible overstatements. The results of such an adjustment are summed with the published defense allocations and shown graphically for 1950-62 as the "Possible Total Defense and Space Allocation" in the accompanying charts Figures 1 and 2. In the charts these sums are also compared with the published defense allocation to indicate the range of uncertainty with which, in a sense, the Soviet government confronts the world and the Soviet people.

The adjustments made to the data which were presented in Table 2 are as follows:

a) Published defense expenditures -- none.

NOTE: Footnote 6 has been deleted.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

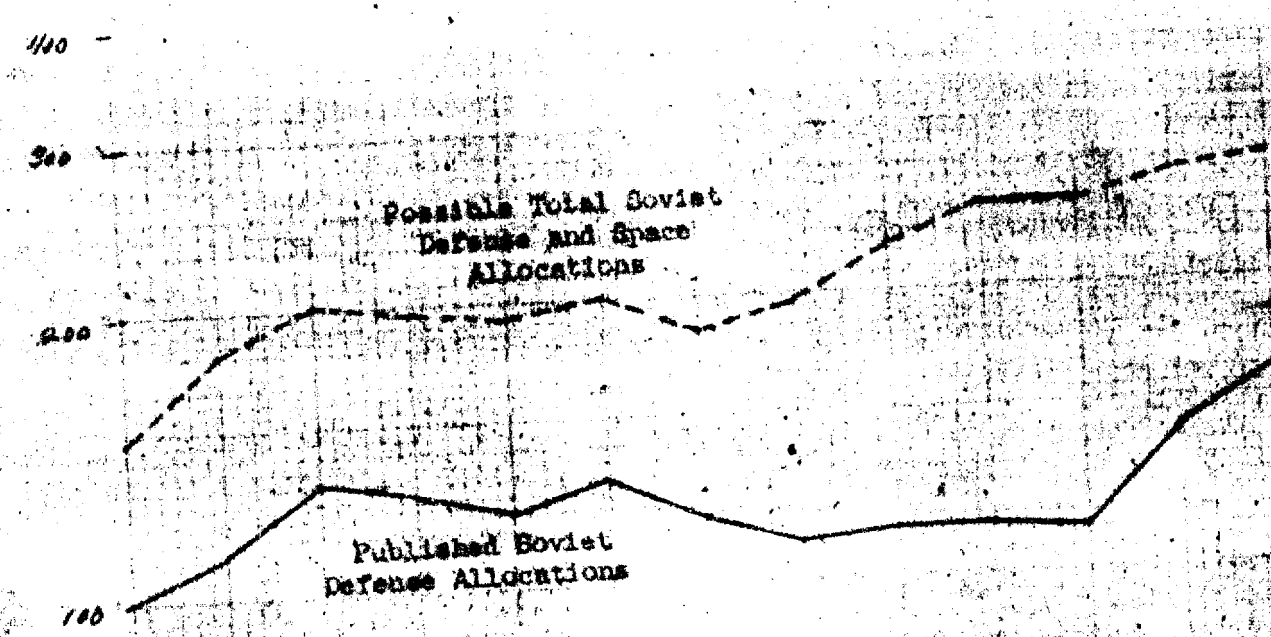
BEST COPY

AVAILABLE

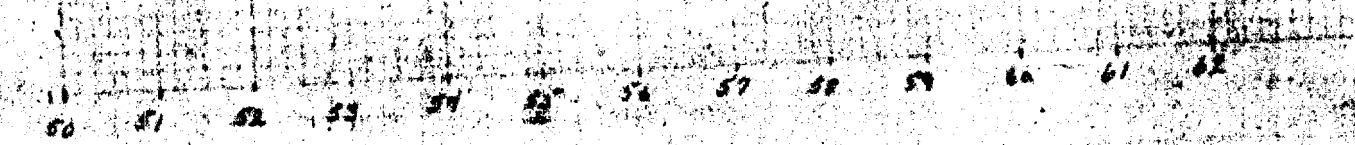
Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Allocations to Defense and Space



100 = 1950 Published Defense Allocation

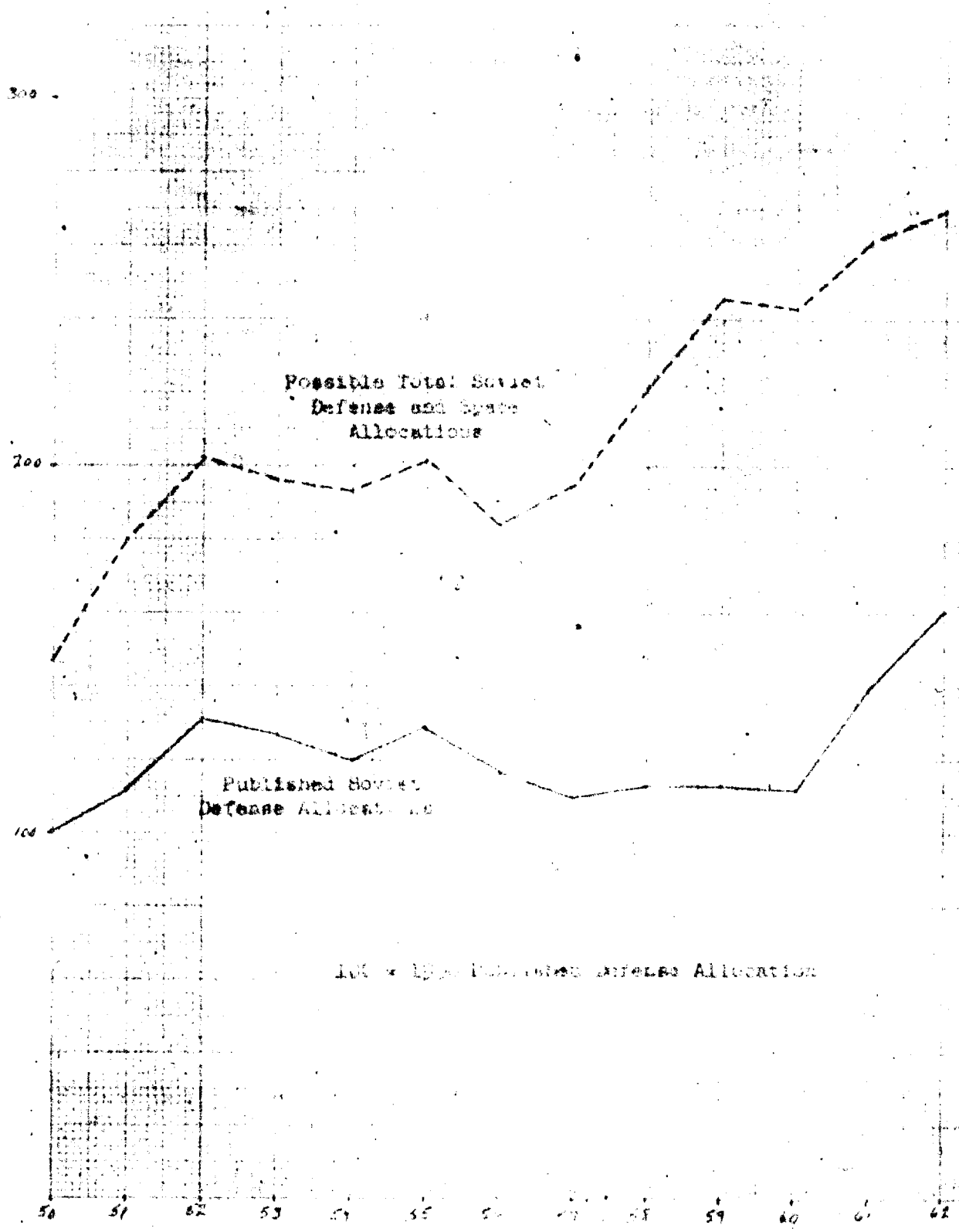


Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Figure

Soviet Allocations to Defense and Space



Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Data for Figures 1 and 2

Year	Published a/	Possible a/
1950	100	147
1951	112	180
1952	131	202
1953	127	196
1954	120	193
1955	129	201
1956	117	184
1957	110	195
1958	113	222
1959	113	246
1960	112	243
1961	140	261
1962	161	270

a. 100--1950 published Soviet defense allocation.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

b) Science-- for 1950-57, reduced to the undisclosed amounts implicit in the Soviet social-cultural[7] handbook and projected, through 1962 on the basis of the 1956 relationship between the undisclosed amount and the published total allocation for science.

c) The national economy residual-- expenditures for the municipal economy removed utilizing available published data and interpolating to supply estimates for other years. It would be most desirable to remove expenditures for agricultural procurement and trade as well. However, combination of the devaluation of the Soviet foreign trade ruble, the lack of information on expenditures for agricultural procurement, and possible accounting shifts between the two accounts makes it difficult to remove the influence of these accounts from the residual. As the result the amplitude of the movement of the "possible" series may well be overstated in the latter part of the 1950's and understated in the final years.

---

[7] USSR, Ministerstvo Finansov. Raskhody na sotsial'no-kul'turnyye meropriyatiya po gosudarstvennomu byudzhetu SSSR (Expenditures for Social-Cultural Measures in the State Budget of the USSR), Moscow, 1958.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

d) The general budgetary residual-- discounted by 75 percent in an attempt to remove in a gross way the planned contingency funds of the Council of Ministers (which appear as actual expenditures under other headings) and other miscellaneous items.

The purpose of Figure 1 (which utilizes the arithmetic scale) is to show in absolute terms that over the period 1950-62 the amount of what one might term Soviet budgetary obfuscation has changed from time to time and has tended to increase until, perhaps 1960, 1961, and 1962.

On the other hand, the purpose of Figure 2 (which utilizes the logarithmic, or ratio scale) is to show in relative terms the behavior of the series over time and with respect to each other. What this presentation shows is that the two series, the possible total and the published total, tended to move about the same way during the period 1950-56, but that after 1956 the trends were quite different with published defense allocation quite flat during the period, 1956-60 and with the possible total the flatter during 1960-62. The figure also shows that the proportion of what was referred to above as Soviet budgetary obfuscation tended to increase through the period 1950-60 but that this tendency seems to have been reversed in 1961-62 when, as a result of Soviet accounting shifts, some of the expenditures previously carried under other headings in the budget were probably shifted to Defense.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

In summary, the Soviet data suggest defense (and space) expenditures varying between 8 billion and 11 billion rubles in 1950 and 13 billion and 21 billion rubles in 1962. These values are only general orders of magnitude which probably bracket the truth. The data should be interpreted as suggesting nothing about year-to-year changes and very little about trend other than that Soviet expenditures on defense (including space) are perhaps half again as great today compared with the early 1950's. That Soviet defense expenditures fell off somewhat in the middle of the decade and have since risen is probable but cannot be considered to be established definitively herein when the inherent data difficulties involved in this analysis are considered.

The Claim in the Aggregate

In Western concept, the appropriate measure of the claim of an end-use (consumption, investment, defense, etc.) on an economy in the aggregate is best measured in terms of a percentage of gross national product (GNP) at factor costs. In Soviet terms the closest appropriate equivalent measure is Soviet national income (SNI), which measure differs from the western concept of national income. The conceptual differences as well as the Soviet attitude towards western concepts are perhaps best illustrated by the following quotation:

> "US statistics include in the production of the national income not only the material production but also the

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

> production of services, thereby artificially raising the volume of national income.... For purposes of comparison with the USSR, the US natinnal income was recomputed by the methods used in Soviet statistics, i.e., without the income of the nonproductive branches.[8]

In short, Soviet national income (SNI) is considerably less broad in scope than seemingly equivalent western concepts.[9]

If one compares the defense series developed above with Soviet national income, one conceivably is approximating the relative claim on economic resources as viewed by the Soviets despite the fact that to some extent this claim may be overstated in terms that would be deemed more

---

[8] USSR, Central Statistical Administration. Narodnoye khozyaystvo SSSR v 1960 godu (The National Economy of the USSR in 1960), Moscow, 1961, p. 901.

[9] Ostensibly, in general terms, GNP less value added in the non-productive (service) sector, less indirect taxes, subsidies and capital consumption equals SNI. The interested reader will find a useful introduction to the conceptual and statistical problems involved in estimating Soviet national income both in terms of Soviet and Western concepts in Kaser, Michael C., "Estimating the Soviet National Income", The Economic Journal Vol. LXVII, March 1957, pp. 83-104. Since Kaser's article was published the Soviet official handbooks have included the Soviet official estimates in absolute terms which permits one to approximate the values represented by the index numbers published for earlier years.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

appropriate in the West. Such a comparison is shown in Figure 3 which indicates that in Soviet terms defense absorbed 15-25 percent of SNI in the early 1950's and have been absorbing 8-15 percent of SNI since 1956. Where within these ranges the actual claim lies and how the actual percentages change from year-to-year are not intended to be suggested by the figure. The most the figure can portray is that the defense claim in the Soviet Union is and has been a substantial one and that in all probability the claim was, in a statistical sense, relatively more burdensome during the early fifties than it has been since 1956.[10]

Claims on Specific Resources

Given the difficulties involved in attempting to measure with any precision the claim of the Soviet military establishment on resources in aggregate terms, the measurement of claims on specific resources is even more difficult. It is the purpose of this section to establish a general appreciation of these claims historically — principally in terms of military manpower, and defense and space systems procurement.

[10] For a comparison of Soviet defense and Soviet GNP estimated in accordance with the western concept see the Cohn article in this series. There, the author finds the 1960 defense claim on GNP to be of the order of 10 percent.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

BEST COPY

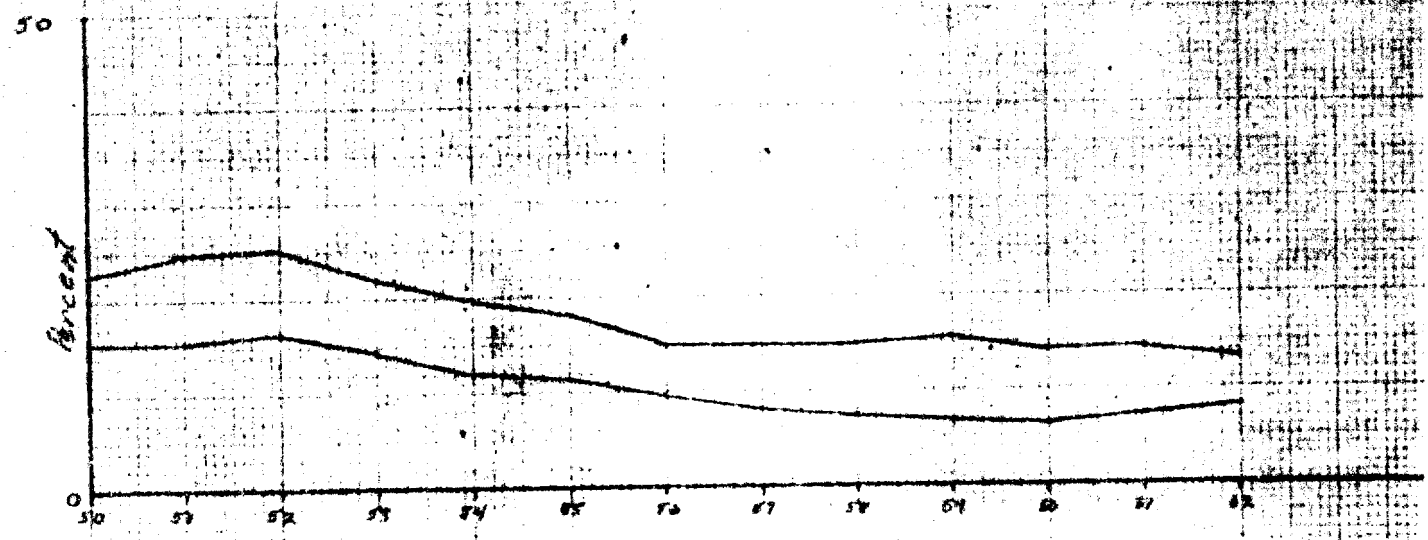
AVAILABLE

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Figure 3

Soviet Defense Claims Related to National Income (Soviet Concept)



Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Data for Figure 3

Year	Published	Possible
1950	15.5	22.7
1951	15.4	24.8
1952	16.3	25.1
1953	14.3	22.2
1954	12.2	19.5
1955	11.6	18.2
1956	9.5	14.9
1957	8.3	14.8
1958	7.6	14.9
1959	7.1	15.4
1960	6.5	14.2
1961	7.6	14.2
1962	8.2	13.6

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Manpower

Within recent years a variety of Soviet announcements permit the derivation of a crude measure of what the levels of active military manpower in the Soviet forces probably have been since 1950. The data and the derived series are presented in Table 3, where it can be seen that the USSR probably had (in man-year terms) over 4 1/2 million men under arms in 1950, had increased this level to 5 3/4 million (or more?) during 1952-54, and had cut down to 3 1/4 million-3 1/2 million men by 1959-62. This series seems generally plausible in view of the probable influence of the Korean War during the early 1950's and the fact that the USSR faced a sharply shrinking availability of conscripts by reason of the drastic reduction in the birth rate during 1942-45.

In Table 3 the cost of this manpower is also computed, utilizing Mr. Khrushchev's remark that a reduction of 1.2 million men would result in a saving of 16 billion to 17 billion (old) rubles, implying an average cost of about 1,375 (new) rubles per man. It is assumed that the reference was to the personnel-related costs of these men, including pay, food, clothing, and other services. It is also further assumed that this cost factor is applicable over the period -- that is to say that such declining prices as were experienced were more or less made up for by increasing standards (more highly remunerated technicians, improved rations and quarters, and enhanced ancillary services and perquisites) and by some price increases.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 3

Soviet Military Manpower and its Costs
1950-62

Year	Soviet Published Series (Million men at beginning of year)	Derived Series a/[11] (Million men at beginning of year)	Derived Series a/[11] (Million man-years)	Cost b/ (Billion new rubles)
1948	2.87	2.9		
1949	n.a. c/	3.6		
1950	n.a.	4.3	4.7	6.5
1951	n.a.	5.0	5.4	7.4
1952	n.a.	5.8	5.8	8.0
1953	n.a.	5.8	5.8	8.0
1954	n.a.	5.8	5.8	8.0
1955	5.76	5.8	5.4	7.4
1956	5.12	5.1	4.8	6.6
1957	n.a.	4.5	4.2	5.8
1958	3.92	3.9	3.8	5.2
1959	3.62	3.6	3.6	5.0
1960	3.62	3.6	3.3	4.5
1961	n.a.	3 d/	3.3 d/	4.5
1962	d/	3 + d/	3.3 d/	4.5

11 Footnotes follow on pages 21 and 22.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 3

Soviet Military Manpower and its Cost
1950-62
(Continued)

Sources: The data in the column headed "Soviet Published Series" represents an amalgamation from Mr. Khrushchev's statement of 14 January 1960 and the series of previous announcements of reductions in the Soviet armed forces.

a. In deriving the series for manpower levels at the beginning of the year, the published Soviet levels were used if available. For 1952 the level of 5.8 million men (the 1955 level) was assigned. Mr. Khrushchev stated that this level had been achieved "by 1955". Because he was shying away so obviously from the period 1950-54, it seems equally obvious that the Soviet forces were at quite high levels of manpower strength for some considerable time before 1955, and the beginning of 1952 was arbitrarily selected as equal in level to the beginning of 1955 to reflect this situation in a general way. The levels for the beginning of the various intervening years were obtained by interpolation. For the levels taken for 1961 and 1962, see footnote b/ below.

To obtain the derived series in terms of man-years the midpoints between the series in terms of the levels at the beginning of the year were taken as representative of the average man-years for each particular year. For the level taken for 1961 and 1962, see footnote b/ below.

b. Computed on the basis of 16.5 billion (old) rubles (midpoint of Mr. Khrushchev's 16 billion-17 billion "saving") for 1.2 million men converted at the rate of one new ruble for 10 old rubles -- resultant: 1,375 rubles per man.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 3

Soviet Military Manpower and its Cost
1950-62
(Continued)

---

c. Not available.

d. Originally, according to the announcement of 14 January 1960, the USSR planned to reduce its forces to 2.4 million men by the end of 1961. This reduction, however, was halted, not later than mid-1961, and at least part of a class of conscripts was retained in service while a new class was inducted in the fall of 1961. In the derived series the level of 3 million men was assigned arbitrarily for the beginning of 1961 and 3-plus million for 1962. In man-year terms the 1960 level (3.3 million) was continued arbitrarily for 1961 and 1962. No inference of a January 1963 military manpower projection on the part of the author should be drawn.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Defense and Space Systems Procurement

Defense and space systems procurement here is defined to cover all defense and space expenditures not directly related to military personnel. As thus defined, the term covers not only traditional machinery and metal products but also such items as electronic equipment, construction and construction materials, petroleum products, research and development, propellants and explosives, and nuclear weapons. Although this concept of procurement seems superficially to lack analytical definiteness and clarity, it actually reflects a reality which has emerged during the past decade in military economics. No longer is it possible to think of the mix of defense procurement as munitions oriented primarily in the direction of large tonnages of steel, copper, aluminum, and other basic materials. Rather, the defense (and now the space) procurement mix tends more and more to reflect the increasing embodiment of technical manpower and sophisticated materials and components which themselves in turn embody a great deal of such manpower. Also, to a growing extent, the composition of this manpower is increasingly being weighted more heavily with the skilled and the professional. The emphasis has partly shifted away from bigger and heavier equipment to better, smaller (even miniature), but especially more precise, more reliable, and more efficient equipment. This phenomenon is particularly evident in the field of missiles and space but may also be found in high performance aircraft, in airborne equipment, and in equipment for special forces.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Thus, by subtracting the probable level of Soviet expenditures for military personnel derived as indicated in Table 3 from the data underlying the indices presented in Figures 1 and 2, the patterns of Soviet procurement of defense and space systems (as defined above) can be derived. The indexes of the results of such procedure are shown in Figure 4. The "published" defense and space systems procurement series is that derived from the published defense allocations; the "possible" defense and space systems procurement series is derived from the possible total allocation described earlier in this paper.

The purpose of Figure 4 (ratio or logarithmic scale) is to show in relative terms the behavior of the series over time and with respect to each other and the rather substantial range of uncertainty engendered by Soviet pronouncements. What these series tend to show is that a considerable increase in the level of systems procurement occurred in the early 1950's, probably in connection with the Korean War. From then until 1956-57 the movement of the series was essentially sideways,[12] perhaps owing to changing objectives coincident with the shiftings of the balance of power within the Soviet hierarchy following the death of Stalin. Beginning about 1957-58, the series suggest that there was

[12] The sharp dip in the "published" series in 1954 probably should be discounted to some considerable extent because the basic datum at that time is a plan announcement. The USSR has carefully avoided giving out much information about that year, thus suggesting a considerable (upward) divergence of the actual performance from the plan.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

BEST COPY

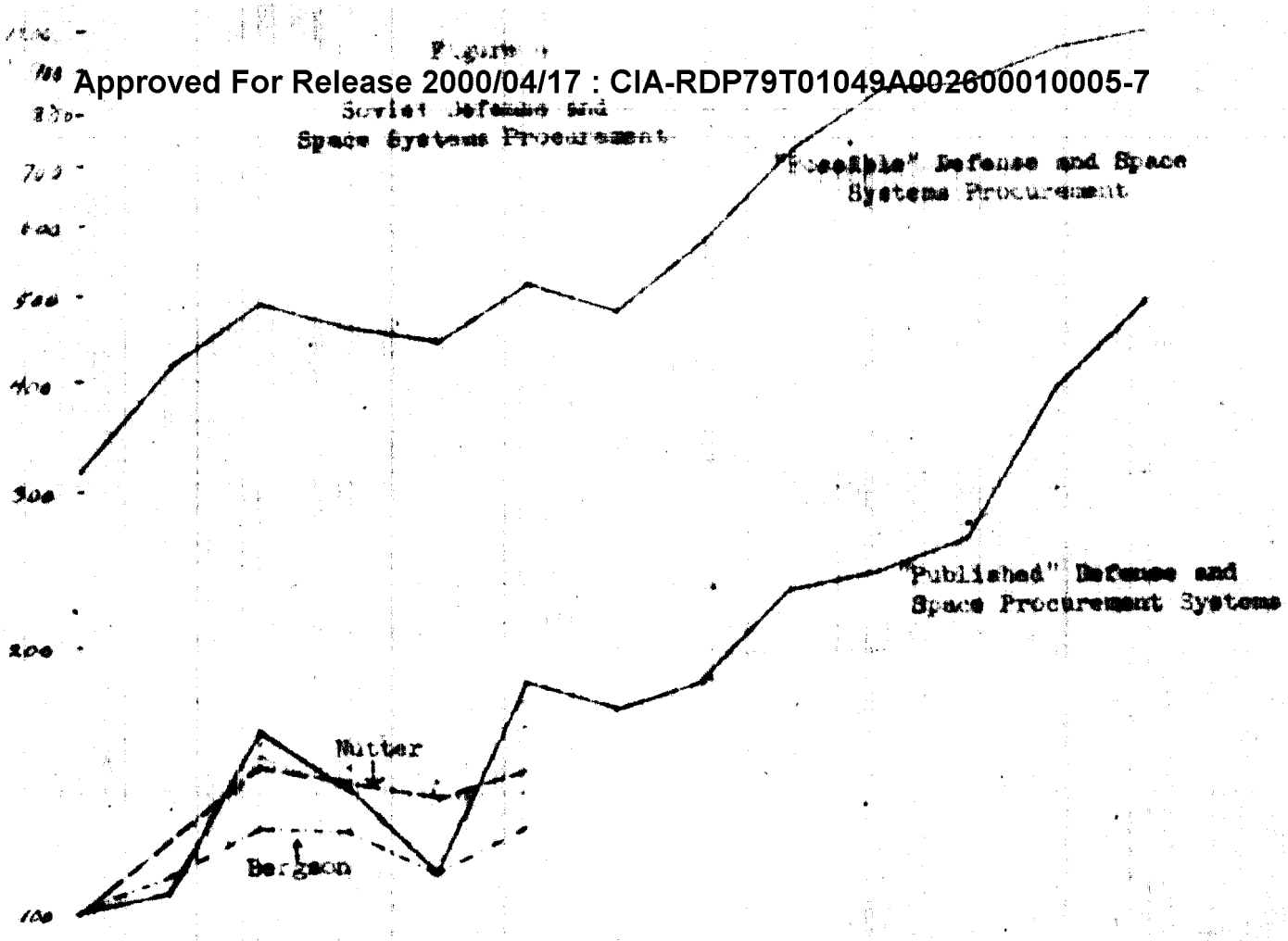
AVAILABLE

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Figure 1

Soviet Defense and
Space Systems Procurement



100 = 1950. In the case of the "possible" series the 1950 level of the "published" series = 100.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Data for Figure 4

Year	"Published" a/	"Possible" a/	Bergson b/	Nutter b/
1950	100	317	100	100
1951	106	417	109	121
1952	161	489	124	147
1953	139	461	124	142
1954	111	444	112	136
1955	183	517	125	146
1956	172	483		
1957	183	578		
1958	233	733		
1959	244	856		
1960	267	872		
1961	394	956		
1962	494	994		

a. 100 = 1950 defense and space systems procurement derived from the 1950 published defense allocation.

b. 100 = 1950 level of each of the underlying series.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

another increase in the level of Soviet defense and space systems procurement which, in spite of the manpower cuts, undoubtedly was the inevitable consequence of decisions to proceed with sputniks, luniks, missiles, and other modern weapons.[13] Considerable doubt, however, must be entertained with respect to the timing or with respect to the extent of such increase in view of the real possibility that significant accounting shifts were also occurring at the same time.

In their scholarly works, Professors Bergson a/ and Nutter b/ have dealt, for the period 1950-55, with essentially the same subject matter as is under consideration in this report. On methodological grounds,

---

[13] The data underlying these series and the implications of data on the Soviet Seven Year (1959-65) and Twenty Year Plans are of such quality that it would be foolhardiness to attempt to project future Soviet defense and space systems procurement therefrom.

a. Bergson, Abram, The Real National Income of Soviet Russia Since 1928, Cambridge, 1961, p. 364.

b. Nutter, Warren G., The Growth of Industrial Production in the Soviet Union, Princeton, 1962, p. 319.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

their findings[14] as to trend are to be compared with what has been termed the "published" series in Figure 4. Such a comparison reveals no fundamental disagreement as to the gross shape of events over the time period covered. The seeming discrepancies between the three series are probably more apparent than real and are due to variant assumptions as to definitions, levels of military manpower, and the like. It is worthwhile to note, however, that consideration of the possible application of other unexplained funds in the Soviet budget suggests sufficient uncertainty about the levels and trends of Soviet weapons and space systems procurement that sole reliance probably should not be placed on the published Soviet defense budget allocations as a benchmark. Nor should a constant or consistent relationship over time between the published and total defense budgets be assumed.

---

[14] The specific reference at this juncture is to the Bergson and Nutter series in current rubles. Attempts to develop and apply a price index to the procurement series were eschewed on the grounds of practical if not conceptual impossibility. This author is aware of no way of developing a satisfactory price index for a rapidly shifting mix with new products introduced in rapid succession and with these "new" products rapidly becoming obsolescent and being phased out. On balance, it seems best to use current rubles arguing that the largest input, labor, is roughly at constant cost over considerable ranges of time because increased wages and increased productivity tend to cancel out most of the possible movement.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Thus, it seems probable that Soviet defense and space procurement claims on economic resources have passed through at least one and one-half cycles during the past 12 years. When these claims have been on the increase, the resources (machinery, equipment, and industrial manpower in general, and skilled and professional personnel in particular) have been made available by some deceleration in the over-all investment program and Soviet economic growth. This phenomenon stems virtually axiomatically from the Soviet government's continuing policy of forced full employment and has been noted to occur in the episodes of both the early and the late 1950's.[15]

---

[15] For a discussion of this phenomenon as it relates to Soviet industrial production for the period 1950-61, see the [redacted] article, p. 17 (circa).

STATINTL

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

The Claim of the Soviet Military Establishment on Economic Resources

2 October 1962

by

STATINT [redacted]

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

The Claim of the Soviet Military Establishment on Economic Resources

The claim of the Soviet military establishment on the economic resources of the USSR is ascertainable only within rather broad limits from open sources of information. Not only is the Western scholar in this position, but also the vast majority of the Soviet citizenry, the intelligentsia and the bureaucracy. Such circumstances exist for reasons which are not wholly independent -- a heritage of pathologic secretiveness, a neo-feudalistic regime, and doctrinaire techniques for accounting and economic analysis.

The State Budget

Each year the Soviet government promulgates what is essentially a consolidated cash budget covering the planned expenditures for all the national, regional and local governments of the USSR. These expenditures are grouped under five general headings: National Economy, Social-Cultural Measures, Defense, Administration, and a substantial unspecified remainder, "Other". In Table 1, the latest published Soviet information on actual expenditures (for 1960) has been set out to indicate the magnitudes involved. As the table demonstrates, almost half of the total expenditures are accounted for under the heading, National Economy. The reason is quite simple. The Soviet government owns outright virtually all of Soviet industry and a large proportion of Soviet agriculture. In general, more than two-thirds of the funds expended under this title represents the year's infusion of new state

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 1

Soviet State Budget
1960

	Billion Current Rubles	Percent
National Economy	34.1	46.7
Social-Cultural Measures	24.9	34.1
Defense	9.3	12.7
Administration	1.1	1.5
Other	3.7	5.0
Total	73.1	100.0

Source: 1960 Handbook, p. 885, JPRS translation.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

the following expression of expenditures for defense as a percentage of total expenditures:

1940	32.6
1955	19.9
1958	14.6
1959	13.3
1960	12.7

The facts are that in the 1940-55 interval this percentage got as low as 18 in 1947-48 and crept up to 23 in 1952-53. Since the revision of the Soviet defense budget announced in mid-1961, the trend has shifted. The 1962 plan calls for 17 percent of total expenditures to be devoted to defense.

Obviously, these low percentages may be useful in international propaganda but it is quite clear that the swollen scope of the total Soviet budget relative to its typical Western counterpart renders the comparison completely meaningless. However, such lack of meaning is trivial when compared with the very real probability that the scope of the activities financed by the Soviet defense appropriation is considerably smaller than that covered by Western defense appropriations.*

* Outright falsification on the part of the Soviets is not implied here although there is that possibility. The point of view is that in its pronouncements on defense budgets the Soviet government, in general, gives information which is not basically untrue. The problem is that it is usually impossible to be sure in what sense a statement is true because of very great deficiencies in the relevant definitions of terms and of the scope of categories.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

The scope of the Soviet expenditure account, Defense, is a moot point. Certainly, those definitions which are offered in Soviet technical literature do nothing to resolve the question. For example, the defense category is stated in Soviet textbooks to include "the monetary and material allowances for armed force personnel, payment for supplies and repair of combat equipment, maintenance of military institutions and schools, military construction, and other expenditures included in the estimate of the Ministry of Defense of the USSR" (emphasis supplied).* As the underscoring above is intended to emphasize, this sort of definition tends to say that defense is defense and thus to raise suspicions. In the Russian the formulation of "supplies and repair of combat equipment" is equivocal with respect to whether procurement of major equipment is covered. "Military construction" is a term which is more likely to bespeak earth works than facilities such as airfields, training camps, barracks, depots and missile sites.

Moreover, the budget as a whole reinforces these suspicions. The constituent details of the defense "line" have never been published. The reported allocation for scientific research, largely under, Social-Cultural Measures, has been growing at rates of 15-20 percent per year since 1953 and there are institutional reasons for believing that this allocation encompasses a considerable amount of research and development for complex

* Dymshits, I. A., et al. Finansy i kredit SSSR (Finance and Credit in the USSR), Moscow, 1956, p. 223.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

military equipment, such as aircraft and missiles, and for nuclear energy and space activities. The published details for the constituent activities under the heading, National Economy, consistently fail to explain the total allocation and the unexplained portion has at least tripled since 1950, whereas the total budget has only doubled during that time. Finally, the general expenditures residual category, Other, at 5-10 percent of the total, has continued to exist over the period without any really adequate explanation for its purpose.

Table 2 has been prepared to illustrate the problem. It represents a collection of actual or implied statements made by the Soviets covering the period from 1950 to date, with some interpolations to fill in certain gaps. In certain of the years more detailed data which would permit some refining were reported, but in the interest of obtaining a series with at least superficial consistency over the time period, these few details were not taken into account in preparing the table. Generally, reported actual expenditures are presented if they were to be found. Otherwise, reported planned expenditures or interpolations were used. One exception to this rule is to be found in the general expenditure residual, Other. For that heading, planned expenditures were presented exclusively because only six implied announcements referring to detailed actual expenditures could be found, and the manipulation of a significant portion of this residual (the contingency fund of the Council of Ministers) makes planned expenditures and actual expenditures inconsistent by definition.

The column covering published defense expenditures indicates the single defense "line" allocation referred to and commented on above.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 2

Selected Soviet Published Information
of Possible Defense Significance
1950-62

Billion Current Rubles a/*

Year	Published Defense Expenditures	Science b/	National Economy Residual c/	General Expenditure Residual d/
1950	8.3	0.9	2.8p e/	5.0p e/
1951	9.3	(0.9) f/	4.8p	4.2p
1952	10.9	(1.0)	5.1p	4.4p
1953	10.5	1.1	(5.2)	4.0p
1954	10.0p e/	1.3	(5.2)	4.5p
1955	10.7	(1.5)	5.3	4.7p
1956	9.7	1.7p	4.6	5.6p
1957	9.7p	(2.1)	6.2	6.3p
1958	9.4	2.4	6.0p	5.0p
1959	9.4	2.8	10.8p	5.9p
1960	9.3	3.3	11.9p	6.2p
1961	11.9	3.8p	10.7p g/	6.3p
1962	13.4p	4.4p	10.1p	4.7p

Sources: Soviet publications too numerous to document in detail.

* Footnotes follow p. 8.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 2

Selected Soviet Published Information
of Possible Defense Significance
1950-62
(Continued)

a. Converted where necessary to new rubles at the rate of one new ruble for 10 old rubles.

b. Includes funds of enterprises.

c. Includes allocations for trade, procurement and the municipal economy.

d. Includes the contingency funds of the Council of Ministers and the loan service.

e. p = planned; the other numerical data refer to reported actual expenditures.

f. The parentheses indicate that the data within them represent interpolations.

g. The published information for this heading for 1961 implied residual actual expenditures of 13.2 billion rubles from which 2.5 billion rubles (the published plan figure) was subtracted to remove the allocation for transportation in order to derive an entry which is reasonably comparable with the other entries in the column.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

The column covering science includes not only the budgetary allocations but also the allocations from enterprise funds. According to published Soviet material, in 1960 this allocation would seem to cover the financing of some 3,500 research institutes, and scientific and experimental stations, employing some 200,000 scientists. Activities supported by this allocation appear to cover a large portion of all research and development, civilian and military (and space), for the entire country. This allocation would not however, cover all the activities encompassed by the US concept of research, development, test, and evaluation (RDT&E). Substantial end product development, test, and evaluation of national significance (considerable amounts of which are undoubtedly military and space) seems to be covered elsewhere in other unrevealed places in the budget.

The national economy residual and the general expenditures residual are also of interest. Because of the possibility that substantial activities of defense (and space) significance may be financed from these portions of the budget, these two residuals have, accordingly, been entered in Table 2. These two residuals, as derived, ostensibly cover some items not of military significance. The national economy residual includes allocations for financing trade, agricultural procurement, and municipal services. Similarly, the general expenditure residual, as compiled, includes the service of the national debt* and the planned contingency fund of the Council of Ministers.

* It should be noted that Mr. Khrushchev is inclined to regard the US debt service as a defense item.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Most of these contingency funds eventually show up as actual expenditures for financing activities under the heading, National Economy. However, these residuals are not without interest as possibly financing activities of military (and space) significance. It is conceivable that these residuals may cover some or all of the following:

the development, test, and evaluation of military and space hardware and systems,

the procurement of some if not most major military and space equipment,

strategic stockpiles of military operational materiel, such as petroleum products, food and so forth,

the construction of military base facilities,

the support of militarized security forces,

some intelligence activities, and

some civil defense activities.

Evaluation

Table 2 has deliberately not been summed. Its purpose is to show the fact and general locus of the considerable uncertainties which, at 20-30 billion rubles per year, account for about 40 percent of Soviet annual budgetary expenditures fairly consistently.

To achieve what is probably a better appreciation of the range of uncertainty, the data in Table 2 can be adjusted to remove the most plausible overstatements in a gross sort of fashion. The results of such an adjustment

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

are summed together with the published defense allocations and shown graphically for 1950-62 as the "possible total defense and space allocation" in Figures 1 and 2. In these figures these sums are also compared with the published defense allocation to indicate the range of uncertainty with which, in a sense, the Soviet government confronts the world and the Soviet people.

The adjustments made to the data which were presented in Table 2 are as follows:

a) Published defense expenditures - none.

b) Science - for 1950-57, reduced to the undisclosed amounts implicit in the Soviet social-cultural* handbook and projected through 1962 on the basis of the 1957 relationship between the undisclosed amount and the published total allocation for science.

c) The national economy residual - expenditures for trade, agricultural procurement, and the municipal economy removed, utilizing published data if available and interpolating to supply estimates for other years.

d) The general budgetary residual - discounted by 75 percent in an attempt to remove in a gross way, the planned contingency funds of the Council of Ministers (which appear as actual expenditures under other headings) and other miscellaneous items.

* USSR, Ministerstvo Finansov. Raskhody na sotsial'no-kul'-turnyye meropriyatiya po gosudarstvennomu byudzhetu SSSR (Expenditures for Social-Cultural Measures in the State Budget of the USSR), Moscow, 1958.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

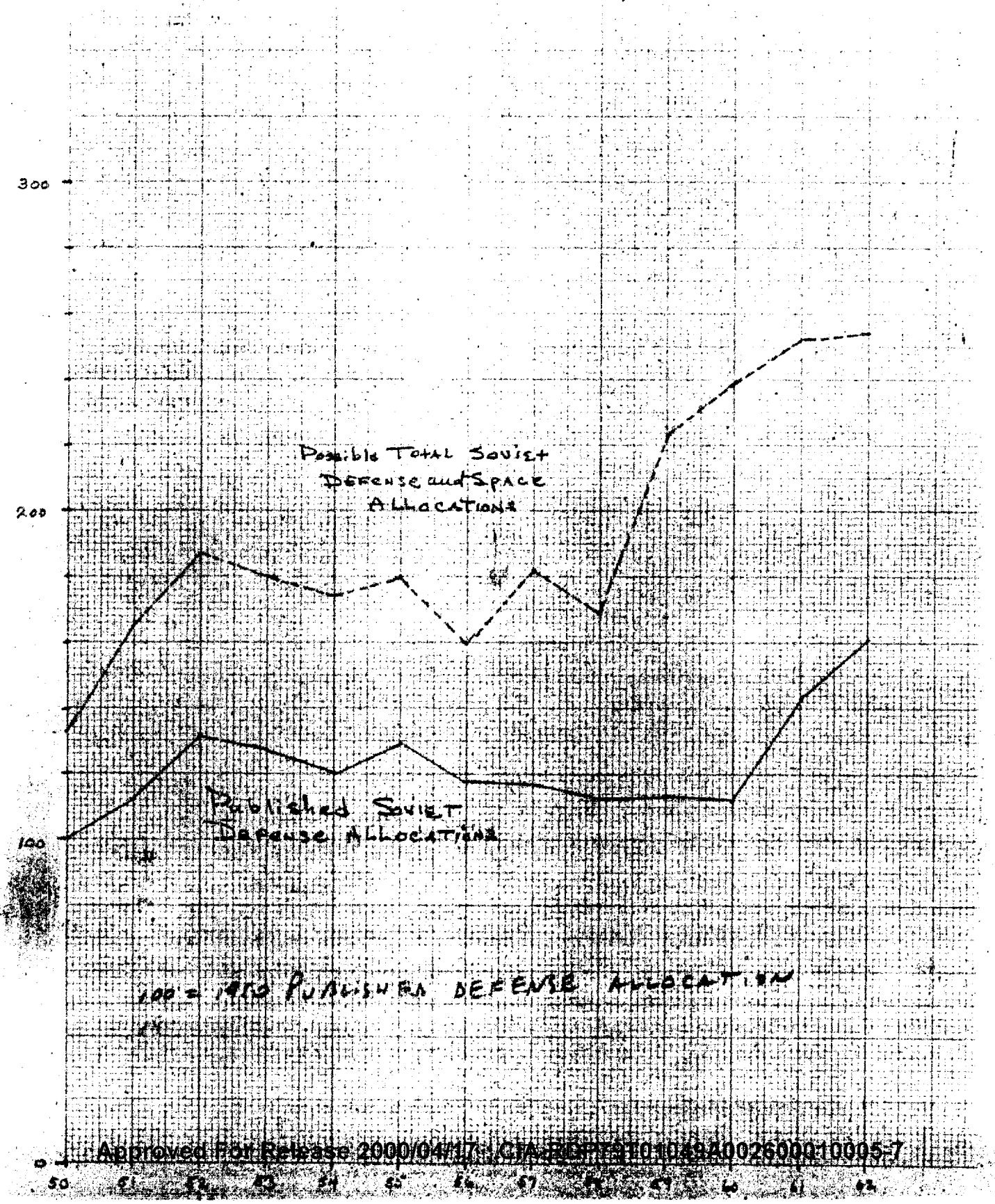
BEST COPY

AVAILABLE

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

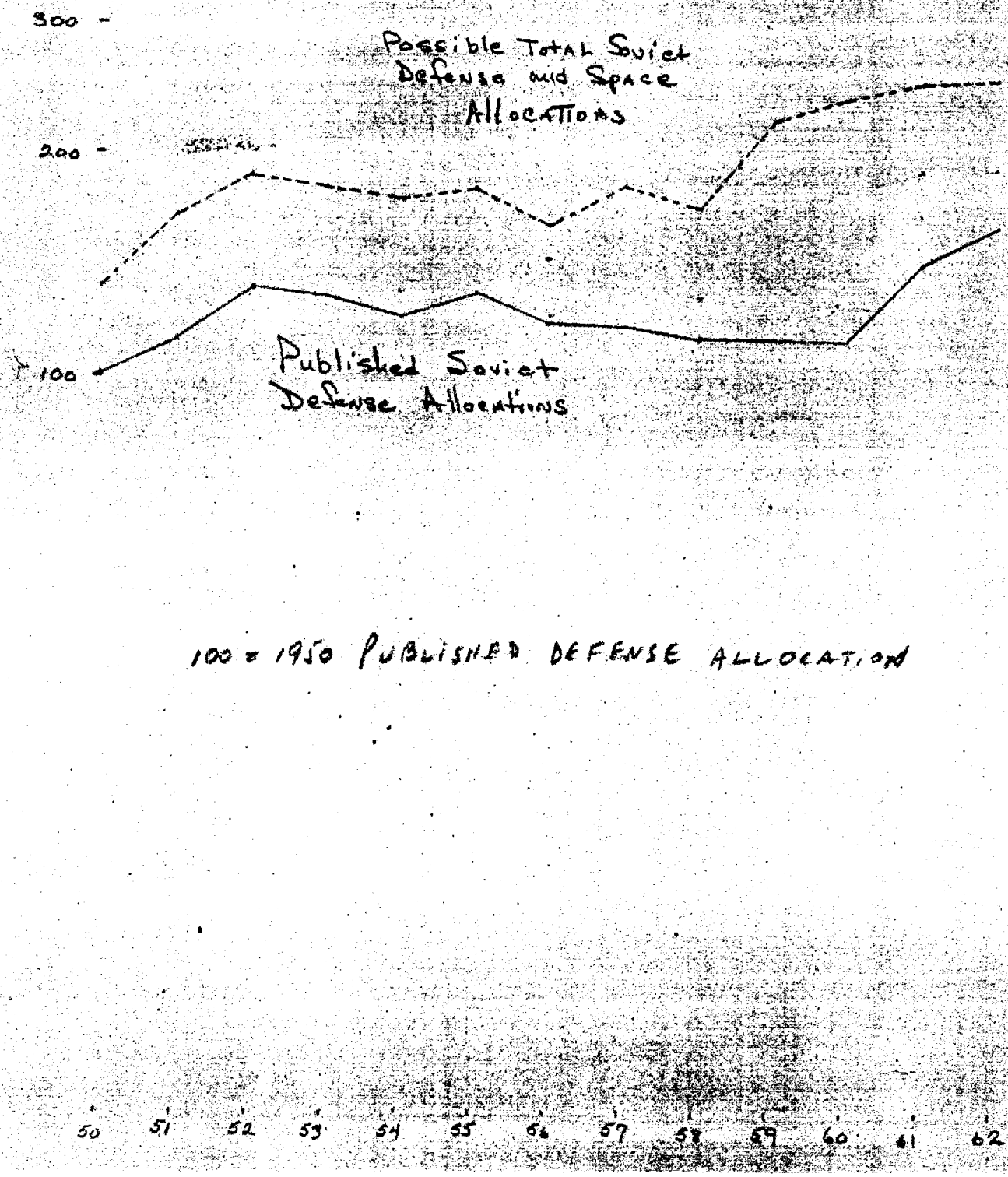
Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Figure 1



Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7



Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Data for Figures 1 & 2

Year	Published a/	Possible a/
1950	100	133
1951	112	165
1952	131	187
1953	127	180
1954	120	174
1955	129	180
1956	117	160
1957	117	182
1958	113	169
1959	113	223
1960	112	239
1961	143	252
1962	161	254

a. 100 = 1950 published Soviet defense allocation.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

The purpose of Figure 1 (which utilizes the arithmetic scale) is to show in absolute terms* that over the period 1950-62 the amount of what one might term Soviet budgetary obfuscation has changed from time to time and has tended to increase until, perhaps, 1961 and 1962.

On the other hand, the purpose of Figure 2 (which utilizes the logarithmic or ratio scale) is to show in relative terms the behavior of the series over time and with respect to each other. What this presentation shows is that the two series, the possible total and the published, tended to move about the same way during the period 1950-54, but that after 1954 the trends were quite divergent. The figure also shows that the proportion of what was referred to above as Soviet budgetary obfuscation tended to increase through the period 1950-60, but that this proportion seems to tend to decrease for 1961-62 as a result of Soviet accounting shifts to Defense, some of the expenditures previously carried under other headings in the budget.

In summary, the Soviet data suggest defense (and space) expenditures varying between 8-11 billion rubles in 1950 and 13-21 billion rubles in 1962. These values are only general orders of magnitude which probably bracket the truth. The data should be interpreted as suggesting nothing

* Because of their tenuous nature, the series are shown in terms of index numbers to reduce for the reader the temptation to make more of the absolute magnitudes than he legitimately should.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

about year-to-year changes and very little about trend other than that Soviet expenditures on defense (including space) are perhaps half again as high today as compared with the early 1950's. That Soviet defense expenditures fell off somewhat in the middle of the decade and have risen again since then is intuitively probable but cannot be considered to be established definitively herein when one considers the inherent data difficulties involved in this analysis.

Claims on Specific Resources

Given the difficulties involved in attempting to measure with any precision the claim of the Soviet military resources in aggregate terms, the measurement of claims on specific resources is even more difficult. It is the purpose of this section to establish an illustrative example of what these claims might well have been — principally in terms of manpower and in terms of defense and space systems procurement.

Manpower

Within recent years a variety of Soviet announcements permit the derivation of a crude measure of what the levels of active military manpower in the Soviet forces probably have been since 1950. The data and the derived series are presented in Table 3 where it can be seen that the Soviets probably had (in man-year terms) almost 5 million men under arms in 1950, had increased this level to almost 6 million 1952-55 and had cut down to 3 1/4 - 3 1/2 million men by 1959-62. This series seems

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 3

Soviet Military Manpower and its Cost
1950-1962

Year	Soviet Published Series (Million men at beginning of year)	Derived Series b/ (Million men at beginning of year)	Derived Series b/ (Million man years)	Cost c/ Billion (new) rubles
1948	2.87	3		
1949	n.a.*	3 1/2		
1950	n.a.	4 1/4	4 5/8	6.4
1951	n.a.	5	5 3/8	7.4
1952	n.a.	5 3/4	5 3/4	7.9
1953	n.a.	5 3/4	5 3/4	7.9
1954	n.a.	5 3/4	5 3/4	7.9
1955	5.76	5 3/4	5 1/2	7.6
1956	5.12	5	4 3/4	6.5
1957	n.a.	4 1/2	4 1/4	5.8
1958	3.92	4	3 3/4	5.2
1959	3.62	3 1/2	3 1/2	4.8
1960	3.62	3 1/2	3 1/4	4.5
1961	n.a.	3 a/	3 1/4	4.5
1962	? a/**	3 + a/	3 1/4 a/	4.5

* n.a. - not available.

** Footnotes follow on pages 16 and 17.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 3

Soviet Military Manpower and its Cost
1950-1962
(Continued)

Sources: The data in the column headed "Soviet Published Series" represents an amalgamation from Mr. Khrushchev's statement of 14 January 1960 and the series of previous announcements of reductions in the Soviet armed forces.

a. Originally, according to the announcement of 14 January 1960, the Soviets planned to reduce their forces to 2.4 million men by the end of 1961. This reduction, however, was halted, not later than June 1961, and at least part of a class of conscripts was retained in service while a new class was inducted in the fall of 1961. In the derived series the level of 3 million men was assigned arbitrarily for the beginning of 1961 and 3-plus for 1962. In man-year terms, the 1961 level (3 1/4 million) was continued arbitrarily for 1962. No inference of a January 1963 military manpower projection on the part of the author should be drawn.

b. In deriving the series for manpower levels at the beginning of the year, the published Soviet levels were used if available. For 1952 the level of 5 3/4 million men (the 1955 level) was assigned. Mr. Khrushchev stated that this level had been achieved "by 1955". Because he was shying away so obviously from the period 1950-1954, it seems equally obvious that the Soviet forces were at quite high levels of manpower strength for some considerable time before 1955, and the beginning of 1952 was arbitrarily selected as equal

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Table 3

Soviet Military Manpower and its Cost
1950-1962
(Continued)

---

in level to the beginning of 1955 to reflect this situation in a general way. The levels for the beginning of the intervening years were obtained by interpolation and rounded to the nearest quarter-million in the attempt to remove the suggestion of precision. For the levels taken for 1960 and 1961, see footnote a/ above.

To obtain the derived series in terms of man-years the mid points between the series in terms of the levels at the beginning of the year were taken as representative of the average man-years for each particular year. For the level taken for 1962 see footnote a/ above.

c. Computed on the basis of 16.5 billion (old) rubles (mid-point of Mr. Khrushchev's 16-17 billion "saving") for 1.2 million men converted at the rate of one new ruble for 10 old rubles — resultant: 1,375 rubles per man.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

generally plausible in view of the probable influence of the Korean War during the early 1950's and the fact that the Soviets faced a sharply shrinking availability of conscripts (who enter service in their 18th or 19th year) by reason of the drastic reduction in the birth rate during 1942-45.

In Table 2, the cost of this manpower is also computed, utilizing Mr. Khrushchev's remark that a reduction of 1.2 million men would result in a saving of 16-17 billion (old) rubles, implying a cost of about 1,375 (new) rubles per man. It is assumed that the reference was to the primarily personnel related costs of these men, including pay, food, clothing, and other services. It is also further assumed that this cost factor is applicable over the period, that is to say that such declining prices as were experienced were more or less made up for by increasing standards — more highly remunerated technicians, improved rations and quarters, enhanced auxiliary services and prerequisites and so on.

Defense and Space Systems Procurement

Defense and space systems procurement here is defined to cover all defense and space expenditures not directly related to military personnel. As thus defined, the term covers not only traditional machinery and metal products but also such items as electronic equipment, construction and construction materials, petroleum products, research and development, propellants and explosives, and nuclear weapons. While this concept of

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

procurement seems superficially to lack analytical definiteness and clarity, it actually reflects a reality which has emerged during the past decade in military economics. No longer is it possible to think of the mix of defense procurement as munitions oriented primarily in the direction of large tonnages of steel, copper, aluminum and other basic materials. Rather, the defense (and now the space) procurement mix tends more and more to reflect the increasing embodiment of technical manpower and sophisticated materials and components which themselves in turn embody a great deal of such manpower. Also, to a growing extent the composition of this manpower is increasingly being weighted more heavily with skilled and professional manpower. The emphasis has partly shifted away from bigger and heavier equipment to better, smaller (even miniature), but especially more precise, more reliable and more efficient equipment. This phenomenon is particularly evident in the field of missiles and space but may also be found in high performance aircraft, in airborne equipment, and in equipment for special forces.

Thus, by subtracting the probable level of Soviet expenditures for military personnel derived as indicated in Table 3 from the data underlying the indices presented in Figures 1 and 2, the patterns of Soviet procurement of defense and space systems (as defined above) can be derived. The indexes of the results of such procedure are shown in Figure 3. The "published" defense and space systems procurement series is that derived from the published defense allocations; the "possible" defense and space systems procurement series is derived from the possible total allocation described earlier in this paper.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

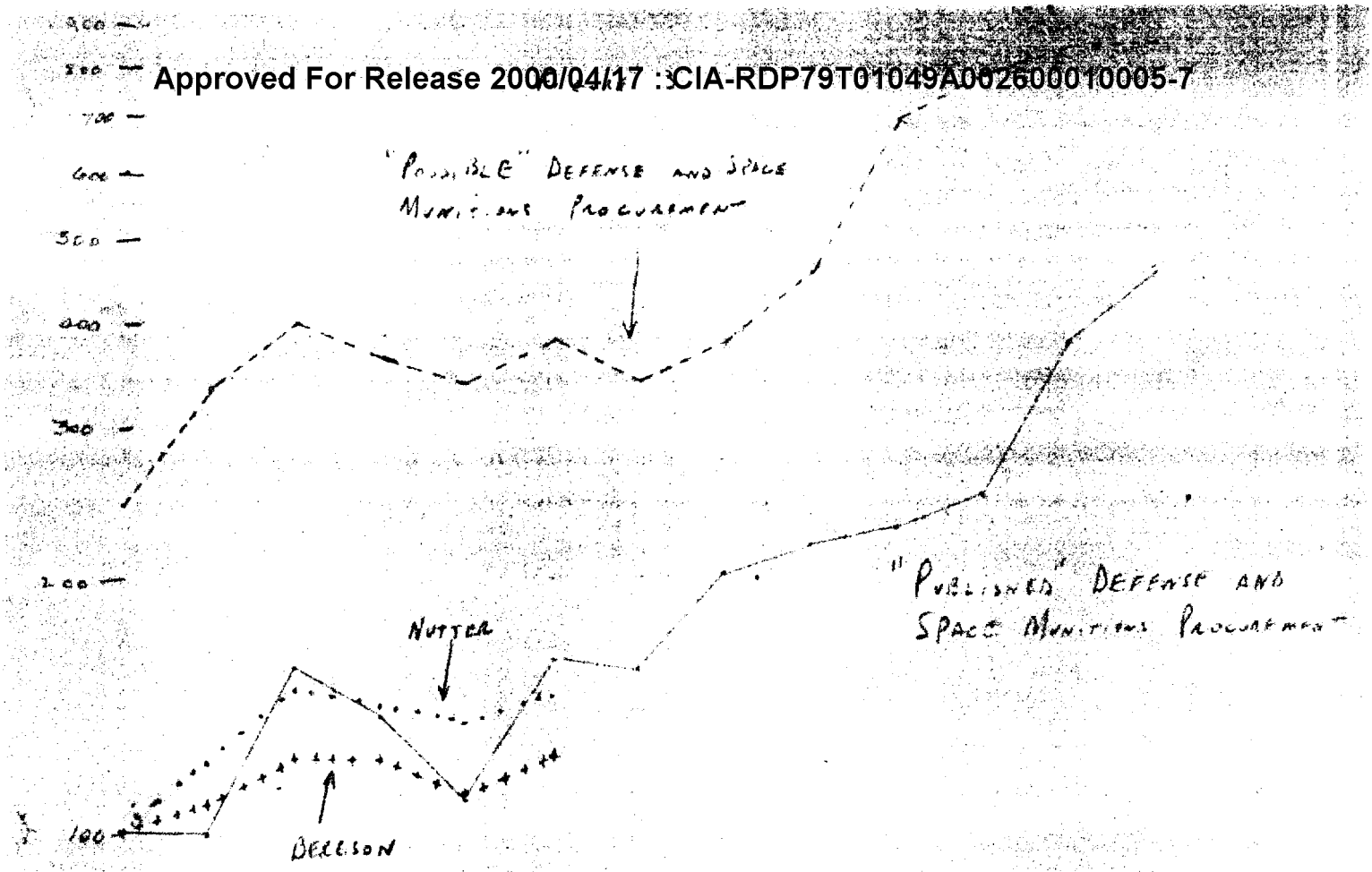
Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

BEST COPY

AVAILABLE

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7



100 = 1950. In the case of the "possible" series the 1950 level of the "published" series = 100.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Data for Figure 3

Year	"Published" a/	"Possible" a/	Bergson b/	Nutter b/
1950	100	242	100	100
1951	100	332	109	121
1952	158	400	124	147
1953	137	368	124	142
1954	111	342	112	136
1955	163	384	125	146
1956	158	347		
1957	205	384		
1958	221	463		
1959	232	710		
1960	253	805		
1961	389	863		
1962	468	874		

a. 100 = 1950 systems procurement derived from the 1950 published defense allocation (see text).

b. 100 = 1950 level of each of the underlying series.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

The purpose of Figure 3 (ratio or logarithmic scale) is to show in relative terms the behavior of the series over time and with respect to each other and the rather substantial range of uncertainty engendered by Soviet pronouncements. What these series tend to show is that a considerable increase in the level of systems procurement occurred in the early 1950's, probably in connection with the Korean War. Then, until 1956-58 the movement of the series was essentially sideways* with some indicated tendency to waver downward, perhaps due to changing objectives coincident with the shiftings of the balance of power within the Soviet hierarchy following the death of Stalin. Beginning about 1957,58, the series suggest, there was another increase in the level of Soviet defense and space systems procurement which, despite the manpower cuts, undoubtedly was the inevitable consequences of decisions to proceed with sputniks, luniks, missiles and other modern weapons.** However, considerable doubt must be entertained

---

* The sharp dip in the "published" series in 1954 probably should be discounted to some considerable extent because the basic datum at that time is a plan announcement. The Soviets have carefully avoided giving out much information about that year which suggests considerable divergence of actual from plan.

** The data underlying these series and the implications of Soviet Seven and Twenty Year Plan data are of such quality that it would be foolhardiness to attempt to project future Soviet defense and space systems procurement therefrom.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

with respect to the timing or with respect to the extent of such increase in view of the real possibility that significant accounting shifts were also occurring at the same time.

In their scholarly works Professors Bergson a/ and Nutter b/ have dealt for the period 1950-55 with essentially the same subject matter as is under consideration here. On methodological grounds their findings* as to trend are to be compared with what has been termed the "published" series in Figure 3. Such a comparison reveals no fundamental disagreement as to the gross shape of events over the time period covered. The seeming discrepancies between the three series are probably more apparent than real and are due to variant assumptions as to definitions, levels of

a. Bergson, Abram, The Real National Income of Soviet Russia Since 1928, Cambridge, 1961, p. 364.

b. Nutter, Warren G., The Growth of Industrial Production in the Soviet Union, Princeton, 1962, p. 319.

* The specific reference at this juncture is to the Bergson and Nutter series in current rubles. Attempts to develop and apply a price index to the procurement series were eschewed on the grounds of practical if not conceptual impossibility. This author is aware of no way of developing a satisfactory price index for a rapidly shifting mix with new products introduced in rapid succession and with these "new" products rapidly becoming obsolescent and being phased out. On balance, it seems best to use current rubles arguing that the largest input, labor, is roughly at constant cost over considerable ranges of time because increased wages and increased productivity tend to cancel out most of the possible movement.

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7

military manpower and the like. It is worthwhile to note, however, that consideration of the possible application of other unexplained funds in the Soviet budget suggests sufficient uncertainty about the levels and trends of Soviet weapons and space systems procurement that sole reliance probably should not be placed on the published Soviet defense budget allocations as a benchmark. Nor, should a constant relationship over time between the published and total defense budgets be assumed.

Thus, it seems probable that Soviet defense and space procurement claims on economic resources have passed through at least one and one-half cycles during the past twelve years. When these claims have been on the increase, the resources, machinery and equipment, industrial manpower in general and skilled and professional personnel in particular, have been made available by some deceleration in the overall investment program and Soviet economic growth. This phenomenon stems virtually axiomatically from the Soviet government's continuing policy of forced full employment and has been noted to occur in the episodes of both the early and the late 1950's.*

---

* For a discussion of this phenomenon as it relates to Soviet industrial production for the period 1950-61 see the [redacted]rticle, p. 17 (circa).

STATINTL

Approved For Release 2000/04/17 : CIA-RDP79T01049A002600010005-7