

TRANSMITTAL SLIP		DATE
		3 March 1982
TO: C/NIC		
ROOM NO.	BUILDING	
REMARKS:		
<p>I called Andy to tell him that [redacted] misinterprets the meaning of "hidden inflation" and misuses the calculation.</p> <p>Maurice Ernst</p>		
FROM: NIO/Econ		
ROOM NO.	BUILDING	EXTENSION

4 DSOVA

STAT

FORM NO. 241
1 FEB 55

REPLACES FORM 36-8
WHICH MAY BE USED.

(47)



OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

DIRECTOR OF NET ASSESSMENT

19 February 1982

MEMORANDUM FOR HARRY ROWEN

SUBJECT: Ruble Estimates of Defense Burden

I recently received the attached letter from Professor [redacted] raises an important problem given that Defense and others make regular use of the CIA's ruble estimates and particularly the dollar cost numbers.

STAT
STAT

[redacted] argument about Agency underestimates of the ruble cost of Soviet defense effort has some plausibility, and apart from his own version of the argument about why the numbers need to be revised, the people at CIA (he says) are convinced that they may have to adjust the ruble estimates sometime in the not too distant future. Jumping from about 15% to a burden rate of around 20% will require an explanation if the whole enterprise is not to be called into question.

STAT

After you have read this, let us talk about how best to get the whole set of problems addressed in a constructive way. Defense has a great stake in the continued production and repute of these estimates.


A. W. MARSHALL

February 9, 1882

STAT

Andrew Marshall
OSD/NET Assessment
3A930 Pentagon
Washington, D.C. 20301

Dear Andy,

I would like to alert you to a problem that has arisen which may seriously complicate national security policymaking in the near future. The CIA is on the verge of discovering that its estimates of Soviet defense spending are off the mark in 1980 by nearly as much as they were in 1970. The agency's own data indicate that the Soviet defense burden was in the vicinity of 20 percent in 1980, a fact which when made public is likely to cause a political malestrom. Critics of U.S. national security policy will almost certainly challenge the veracity of this figure by noting that CIA estimates of the Soviet defense burden have implausibly jumped from 6.5 percent in 1975 to 11-13 percent in 1976, to 20 percent in 1980. I am concerned that criticisms of this sort will not only be used to discredit the agency's official ruble and dollar estimates, but will be employed by extension to disparage the wide range of corroborative evidence confirming the existence of a rapid Soviet arms buildup.

My judgment that the agency will soon be compelled to revise its burden estimate upward is based on information provided at the CIA conference on "Price Change in the Soviet Defense Sector," December 7-8, 1981, held in Northern Virginia. During the course of these sessions, remarks made by [redacted] revealed that CIA estimating procedures yield three widely divergent measures of the Soviet defense burden in 1980. Table 1 summarizes these measures computed variously at established prices and at factor cost. The official direct cost estimates for 1980 are 12.4 percent at established prices and 13.9 percent at factor cost. The agency's corresponding best current value estimates, assuming a 4 percent rate of hidden inflation are 18.8 percent and 21.2 percent, and its residual method estimates are 20.3 percent and 22.7 percent.

STAT

Andrew Marshall
Page 2
February 9, 1982

As is readily apparent, the CIA believes that the Soviet defense burden measured at current prices is at least 50 percent greater than its estimate in constant 1970 prices, using the direct cost method. This means, other things equal, that the agency should scrap its direct cost estimates predicated as they are on outmoded 1970 prices, and endorse the higher burden figures which reflect prevailing 1980 opportunity costs.

This revision however has been resisted to date because it will embroil the CIA in further difficulties. Although the agency believes that the 50 percent increase in the Soviet defense burden is attributable to hidden inflation, it has virtually no evidence to support this conjecture. At the conference on "Price Change in the Soviet Defense Sector" it was acknowledged, for example, that preliminary statistics issued by the Soviets as part of their 1982 price reform indicate that machinebuilding prices will be unchanged from 1970, and even more telling it was asserted that no ruble weapons prices have been collected since the early seventies.

The absence of corroborating evidence places the CIA in an awkward position. On one hand the agency wishes to argue that hidden inflation has caused the 1980 Soviet defense burden to increase to 20 percent, but cannot convincingly demonstrate the existence of hidden inflation, making its belief vulnerable to preemptory challenge. On the other hand, the agency is reluctant to put forward its residual method estimates as proof of the 20 percent burden level because it would have to seriously entertain the possibility that the 50 percent disparity between its 1970 price and current price estimates is explained by real increases in Soviet procurement undetected by the direct cost method.

These irreconcilable contradictions suggest that the time has come for the CIA to cut the Gordian Knot. If the agency sticks with its direct cost estimates, it will necessarily suppress the mass of evidence showing that the burden is 50 percent higher than is presently acknowledged, thereby impairing objective national security policy assessment. If it endorses the 20 percent burden level, but tries to explain the disparity away by appeal to hidden inflation, its critics will make the agency appear ridiculous. And if it takes the bull by the horns, accepting its own residual estimates, it will have to come to terms with the fact that its direct costing method is faulty.

Under the circumstances, the only way out is a thorough review to determine once and for all why the agency's estimates of Soviet defense spending behave so aberrantly. My own work on intervintage parametric cost estimating bias and learning curve distortion may be of some assistance in this regard. Whether it is or not however is less

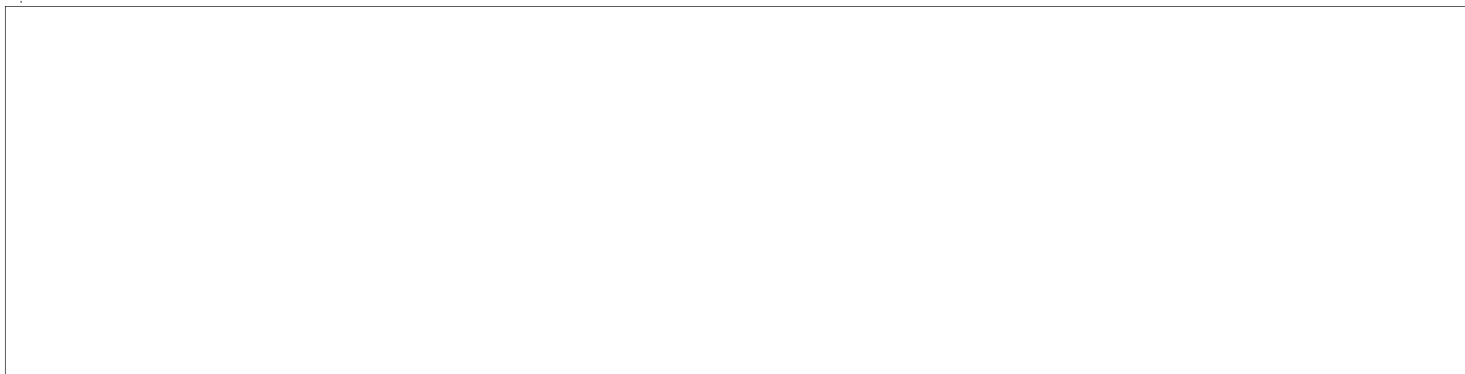
Andrew Marshall
Page 3
February 9, 1982

important than the need to achieve a clear disposition of the problems
obscuring the true dimensions of the size, rate and momentum of the
Soviet arms buildup.

Best regards,

Sincerely,

STAT



**Alternative CIA Estimates
of the 1980 Soviet Defense Burden
(Mean Values)**

Table 1

	Established Prices	Factor Cost
1. Official Direct Cost	12.4	13.9
2. Official Direct Cost (Adjusted for Hidden Inflation)	18.8	21.2
3. CIA Residual Method (1970 prices)	21.9	24.5
4. CIA Residual Method (1980 prices)	20.3	22.7

Sources: Table A1, and CIA, The Soviet Economy in 1978-79 and Prospects for 1980, ER80-10328, June 1980.

Method: The GNP estimates reported in Table A1 are converted to mean values consistent with published CIA burden statistics by adjusting them for the CIA's factor cost estimate of Soviet GNP growth. According to agency calculations real Soviet GNP grew 3.5 percent per annum 1970-79, compared with the official Soviet NMP rate of 5.1 percent per annum. As a consequence, the CIA's estimate of Soviet GNP in 1980 (extrapolated 1979-80) is 15 percent lower than the official estimate, and its burden estimate is correspondingly higher (see The Soviet Economy in 1978-79, Table 2, p. 25).

Notes: The burden estimates reported above will be 15 percent lower if the official Soviet NMP growth rate is used to compute GNP. See Table A1. Also some of late year estimates, which were confirmed by the agency, are based on planning data and may be too high. This bias is offset to a limited extent because the agency's 1970 GNP estimates are too low. Given the "new information" discovered in 1975, GNP at established prices in 1970 (including the underestimate of MBMW) should be 391.6 billion instead of 380.7 billion rubles, and 350.2 instead of 340.2 billion rubles at factor cost. (See Rosefielde, False Science, appendix 5).

STAT

Raw Data Underlying the Burden
Estimates Reported in Table 1

Table A1

	Established Prices	Factor Cost
1. Official Direct Cost Burden Estimated Valued in Constant 1970 Prices	9.4-11.8 (10.6)	10.5-13.2 (11.9)
2. Adjusted Official Direct Cost Burden Valued in 1980 Prices Assuming Hidden Inflation (4 percent per annum)	14.3-17.9 (16.1)	16.1-20 (18.1)
3. CIA Residual Method Burden Valued in 1970 Prices	17.2-20.1 (18.7)	19.2-22.5 (20.9)
4. CIA Residual Method Burden Valued in 1980 Prices	15.9-18.6 (17)	17.8-20.9 (19.4)

Sources: CIA, Estimated Soviet Defense Spending in Rubles, 1970-1975, SR76-10121U, May, 1976; CIA, Estimated Soviet Defense Spending: Trends and Prospects, SR78-10121, June 1975; Rosefielde, False Science: Underestimating the Soviet Arms Buildup, Transaction, 1982; William Lee, "Testimony" in CIA Estimates of Soviet Defense Spending, House Committee on Intelligence, Washington, D.C., September 3, 1980, p. 22; Narodnoe Khoziaistvo SSSR, 1979, p. 405.

Method: A. GNP Estimates: Soviet GNP in 1980 can be calculated either in established prices or at factor cost by extrapolating the CIA's 1970 Soviet GNP estimates to 1980 either with the official real or nominal Soviet NMP growth index. The former produces estimates in constant 1970 rubles, the latter in 1980 rubles. Soviet GNP for 1980 computed in established 1970 prices is 628.4 billion rubles, at established 1980 prices, 602.6 billion rubles. Soviet GNP for 1980 calculated at factor cost for 1980 is 561.2 billion rubles valued in 1970 prices and 538.2 billion rubles in 1980 prices. Nominal GNP estimates (in 1980 prices) have been extrapolated from 1979 to 1980 at the compound nominal NMP growth rate 1970-79, 4.7 percent per annum. Real GNP estimates (in 1970 prices) have been extrapolated from 1979 to 1980 at the compound real NMP growth rate 1970-79, 5.1 per annum.

B. Burden: 1. The CIA estimates that Soviet defense expenditure in 1970 were between 40 and 50 billion rubles valued at 1970 prices. During the seventies the agency contends defense outlays rose 4 percent per annum. 1980 Soviet defense expenditures therefore can be estimated at

$40(1.04)^{10} = 59.2$ billion rubles using the lower bound U.S. defense definition and $50(1.04)^{10} = 74$ billion rubles using the upper bound Soviet definition of defense. These estimates divided alternatively by GNP measured at 1970 established prices and 1970 factor cost produce the burden estimates reported above.

2. At the CIA conference on "Price Change in the Soviet Defense Sector" the agency repeated its often stated position that Soviet military machinebuilding prices have been rising 4 percent per annum due to hidden inflation. The effect of hidden inflation can be taken into account by multiplying the direct cost estimates valued in 1970 prices by $(1.04)^{10}$ which yields an established 1980 price estimate of 86.4 billion rubles, and a 1980 factor cost estimate of 107.9 billion rubles. The burden is then computed by dividing these estimates respectively with 1980 GNP valued at 1980 established prices and at 1980 factor cost.

3. At the CIA conference on "Price Change in the Soviet Defense Sector" [redacted] revealed that the agency's residual estimates of Soviet defense spending corresponded closely with Lee's. According to Lee Soviet defense outlays in 1980 were between 108 and 126 billion rubles valued at 1970 prices. The associated burdens for 1980 are computed by dividing Lee's estimates with 1980 GNP valued at 1970 established prices and 1970 factor cost.

STAT

4. The CIA's residual estimates can also be expressed in 1979 prices by adjusting procurement with the official Soviet machinebuilding price index (including turnover tax), $.8(66) - .8(74) = 52.8 - 59.2$ billion rubles, and nonprocurement with the aggregate retail price index $1.02(42) - 1.02(52) = 42.9 - 53.1$ billion rubles. The corresponding aggregates 95.7 and 112.3, divided by 1980 GNP valued at 1980 established prices and 1980 factor cost, produce the desired residual burden estimates at current prices.

Alternative CIA Estimates of the 1980
Soviet Defense Burden
(Mean Values: Official Soviet GNP)

Table 2

	Established Prices	Factor Cost
1. Official Direct Cost	10.4	11.6
2. Official Direct Cost (Adjusted for Hidden Inflation)	15.8	17.8
3. CIA Residual Method (1970 Prices)	18.3	20.5
4. CIA Residual Method (1980 Prices)	17.0	19.0