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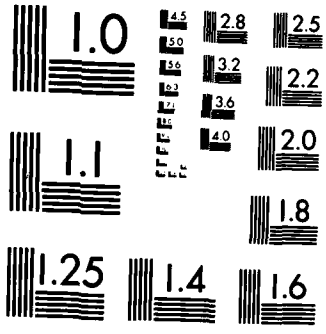

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Executive Briefing

Daniel F. Kohler

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Economic Cost and Benefits of Subsidizing Western Credits to the East

Executive Briefing

Daniel F. Kohler

February 1985

Prepared for the
Office of the Under Secretary of Defense
for Policy

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PREFACE

This report contains the text of a briefing presented to the Rand Board of Trustees on April 12, 1984. It summarizes the main findings of research conducted for the Office of the Under Secretary of Defense for Policy. It is part of Rand's research program on international economic policy and should be of interest to policymakers concerned with international resource flows. It provides estimates of resource flows to the Soviet bloc resulting from Western trade policies and analyzes the effects of these policies on the economies of the member states of the Organization for Economic Cooperation and Development and of the Soviet bloc.

Other Rand publications prepared under this project include the following:

- Daniel F. Kohler and Kip T. Fisher, *Subsidization of East-West Trade Through Credit Insurance and Loan Guarantees*, N-1951-USDP, January 1983.
- Keith Crane and Daniel F. Kohler, *The Effect of Export Credit Subsidies on Western Exports to the Soviet Bloc*, N-2106-USDP, June 1984.
- Daniel F. Kohler, *Incentives and Insurance in International Financial Markets*, N-2117-USDP, June 1984.
- Stephen W. Salant, *Export Subsidies as Instruments of Economic and Foreign Policy*, N-2120-USDP, June 1984.
- Daniel F. Kohler, *Economic Cost and Benefits of Subsidizing Western Credits to the East*, R-3129-USDP, July 1984.

These documents should also inform the current debate on international export competition and the problem of excessive debt burdens by some borrowing countries (or excessive lending by Western governments and banks).

ECONOMIC COST AND BENEFITS OF SUBSIDIZING WESTERN CREDITS TO THE EAST: EXECUTIVE BRIEFING

In the hope of increasing sales for their export industries, Western governments subsidize credits extended to foreign purchasers of their export products in two ways: directly, by offering loans at rates below their own cost of funds, and indirectly, by guaranteeing repayment of loans, thus absolving the borrower of the need to pay a risk surcharge. The research summarized here estimates the value of these subsidies to the Soviet bloc and analyzes the effects that they have on economic welfare in the exporting and importing countries. Our analysis suggests that the costs to Western governments of subsidizing trade to the Soviet bloc are substantial and probably exceed the benefits.

Chart 1 shows the components of the subsidies that we consider. The interest rate charged by uninsured private lenders to borrowers from the Eastern bloc is higher than what Western governments would

Direct and indirect credit subsidies

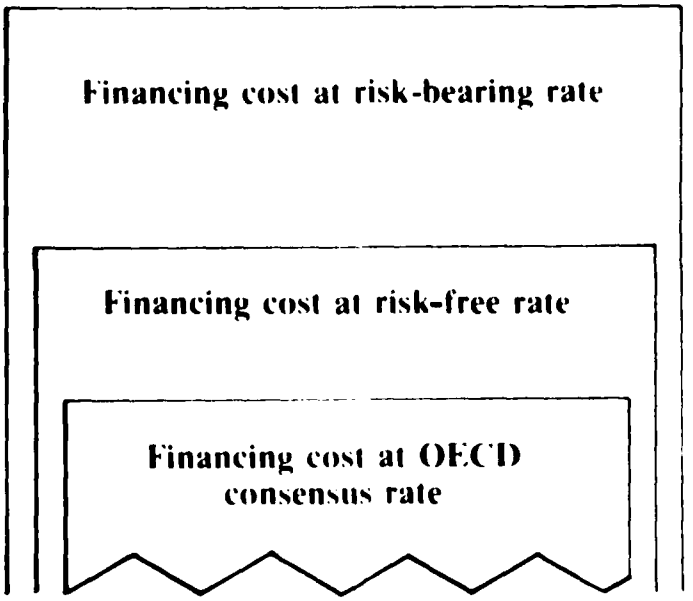


Chart 1

have to pay, because private lenders perceive Eastern bloc governments to be higher-risk debtors than Western governments and thus impose a surcharge on loans to them. By assuming the risks through a repayment guarantee, the Western governments in effect enable the foreign borrowers to obtain credits at lower rates than they could obtain in the private market. The resulting savings in financing costs is what we term the *indirect subsidy*. Financing costs to Eastern bloc borrowers are further reduced through a *direct subsidy*. Western governments provide loans to Eastern bloc purchasers of their exports at interest rates that are often lower than what the Western governments themselves have to pay for the money they borrow. The Organization for Economic Cooperation and Development (OECD) tries to limit this practice by setting guidelines regarding the minimum rates governments should charge for such export loans. However, these so-called consensus rates are not binding; the OECD member governments may ignore this gentlemen's agreement if they want to.

The consensus rates are uniform for all lending countries and in most instances are below the governments' own cost of funds. They vary with respect to the borrower's ability to pay and therefore contain an implicit foreign-aid component. In effect, poorer countries receive a higher direct subsidy than rich countries. Table 1 presents some consensus rates for three categories of borrowing countries.

Table 1

OECD CONSENSUS RATES FOR COMMUNIST COUNTRIES
(Annual interest rates)

	1981[a]		1984	
	2–5 Years	Over 5 Years	2–5 Years	Over 5 Years
Category I: Czechoslovakia, East Germany, USSR (since 7/6/82)	—	—	12.15	12.4
Category II: Albania, Bulgaria, Hungary, Cuba, North Korea, Poland Czechoslovakia, East Germany, USSR (until 7/5/82)	8.0	8.5	10.35	10.7
Category III: China, Vietnam	7.25	7.75	9.5	9.5

[a]Until 11/15/81.

In 1981, all communist countries, including the Soviet Union, were in Category II; thus the USSR was able to borrow at the same rates as many third world countries. In 1982, the Soviet Union, Czechoslovakia, and East Germany were upgraded to Category I, reducing the foreign-aid component of the direct subsidy. However, all the other communist countries still receive this form of development aid along with the third world.

Direct subsidies can be easily measured, since they are the difference between financing costs at consensus rates and those at rates the lending governments must pay to borrow funds, the risk-free rate from a Western lender's point of view. For example, in 1981, when the OECD consensus rate was about 8 percent, the U.S. Treasury bill rate, the risk-free rate at which the United States could itself borrow funds, was about 12 percent. By lending at 8 percent interest, the U.S. government subsidized foreign borrowers directly. The total direct subsidies from the West to the centrally planned economies (CPEs) of the Eastern bloc in 1981 amounted to approximately $1.3 billion.

Indirect subsidies are more difficult to measure, because they depend on the risk-bearing interest rate, which in turn depends on how risky Western lenders would perceive Eastern borrowers to be (the perceived probability of default). In this analysis, we have used data from a variety of sources to estimate the Western perceptions of risk for loans to CPEs and have used those estimates to infer the risk-bearing rates. We calculate that the indirect subsidies to the communist countries amounted to $1.7 billion in 1981. In sum, OECD governments granted subsidies of approximately $3 billion on loans to the communist world in 1981, roughly 20 percent of the total value of new loans granted that year with government support.

ESTIMATING THE PERCEIVED PROBABILITY OF DEFAULT

The lender's perception of the probability that a borrower will default on a loan, the perceived probability of default, or its counterpart, the perceived creditworthiness, defined as 1 minus the perceived probability of default, determine whether and at what interest rate a loan will be extended. To estimate this probability, we have analyzed five sources of data:

- Historical experience.
- Residual risks on insured loans.
- Insurance rates charged by private insurers.

- Surveys and interviews.
- Forfaiting discounts applied by private banks.

Historical Experience. The historical experience of interest here is essentially the repayment experience of those governments who have extended loans to the Soviet Union and other CPEs. Table 2 summarizes some of these data, comparing the percentage of the scheduled payments not received by the Export-Import Bank of the United States (EXIM Bank), the American provider of repayment guarantees on loans to foreign borrowers, and by Hermes, its German counterpart.

The EXIM Bank experience is not impressive. In 1982, almost 75 percent of the scheduled repayments were not received. This failure to meet payments was primarily due to Poland's difficulties, but even in earlier years repayment performance was spotty. Germany's experience has been markedly better. This is in part due to the fact that German exporters are allowed to insure only 90 percent of their loans and are thus forced to carry some of the risk themselves. If the loan is not repaid, they bear 10 percent of the loss. Therefore, German exporters have much stronger incentives to obtain sufficient collateral and resolve any differences that might arise with the borrower, so that they actually get paid back. The EXIM Bank insures 100 percent of the loan, so the exporter has no incentive to take any precautions to ensure repayment.

Table 2

REPAYMENT EXPERIENCE WITH CENTRALLY PLANNED ECONOMIES (Except Yugoslavia)

	Percent of Scheduled Payments Not Received	
Year	EXIM Bank (U.S.)	Hermes (FRG)
1975	0.0	0.3
1976	4.0	0.5
1977	22.7	1.5
1978	5.0	0.7
1979	2.0	1.2
1980	19.4	0.5
1981	21.4	8.8
1982	74.2	...

Residual Risks on Insured Loans. If a lender is required to carry some portion of the risk himself, he will demand a surcharge over the risk-free rates even if the loan is insured. Unfortunately, data on these surcharges and the risk assumptions they imply are not readily available. In addition, lenders may view the residual risk on a loan that is otherwise guaranteed by the government as different from the risk that exists when the government is not involved at all. One estimate based on available residual risk data[1] yielded a probability of default of about 4.7 percent, which is consistent with other estimates of perceived risk.

Insurance Rates Charged by Private Insurers. Private insurance companies underwrite approximately one-third of the political risk insurance business in the United States. Unlike official insurers, private companies charge different rates to different borrowers. In addition, they demand higher collateral, insist on coinsurance, and generally follow business practices that appear to keep their losses below those of government-owned insurers such as the EXIM Bank in the U.S. and Hermes in Germany. Therefore, the risks implicit in the insurance premiums charged by private companies are smaller than most other perceived risks. For example, insurance premiums quoted by officials of private insurance companies in the summer of 1982 for three-year loans to the Eastern bloc reflect a probability of default of approximately 2 percent per year.[2]

Surveys and Interviews. The most reputable risk survey available is the one that has been conducted semiannually since 1979 by *Institutional Investor.* Questionnaires are sent to executives of U.S. firms that conduct a substantial portion of their business abroad, asking them to rate the creditworthiness of all countries on a scale of 1 to 100.

The perceived creditworthiness of the communist countries as measured by these surveys has deteriorated substantially over the past few years. The Eastern bloc countries rank far below many developing countries with lower per capita income, e.g., Algeria, Malaysia, and South Korea. Even the Soviet Union, which was initially in position 17, dropped to position 28 in the March 1983 ranking—below China.

These ratings provide a good indication of the market's broad assessment about risk. However, to some extent, the responses depend on who does the ranking. For example, a similar survey conducted among Japanese businessmen ranks the Soviet Union unambiguously above China. A far more serious drawback, for our purposes, is that

[1]D. F. Kohler and K. T. Fisher, *Subsidization of East-West Trade Through Credit Insurance and Loan Guarantees,* The Rand Corporation, N-1951-USDP, January 1983.

[2]Ibid.

these ratings cannot be readily translated into perceived probabilities of default and/or risk surcharges that private lenders would demand.

Forfaiting Discounts. Data from the four sources discussed above, while they are suggestive, cannot be directly translated into a probability of default, i.e., a number that can be incorporated into an estimate of the risk-adjusted lending rate. To make that calculation, therefore, we have used data from forfaiting discounts. Forfaiting is a European banking practice in which banks buy securities from exporters or from other banks, forfaiting their right of recourse to the original lender. The bank that purchases the securities at the discount assumes all the risks. Therefore, by looking at the discount rates that the banks apply to these forfaiting transactions, one can compute that probability of default at which the bank will break even. Unfortunately, forfaiting data are not always complete, and we are forced to estimate some data points. To do this, we have used predicted values from a regression of the available forfaiting rates on *Institutional Investor* ratings, assuming that both series of data reflect a country's creditworthiness.

The vertical axis in Chart 2 shows perceived creditworthiness, based on forfaiting rates and *Institutional Investor* ratings. The level of creditworthiness represents a Western lender's perception of how much more risky it is to lend to the countries listed than to invest in Treasury bills or similar instruments. The creditworthiness of Great Britain or the United States, which are risk-free from a Western lender's perspective, would be 1—on the horizontal line.

Perceived creditworthiness of CPE borrowers

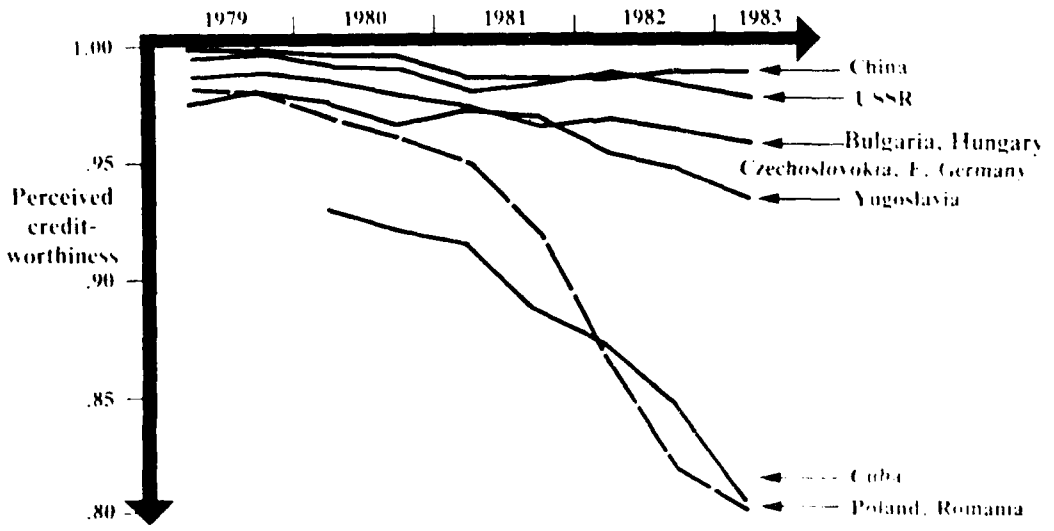


Chart 2

The Soviet Union has had high perceived creditworthiness throughout the five years plotted. However, it has been declining since its peak in September 1979 and is now probably at about 98 percent. This means that when lenders calculate an uninsured loan to the Soviet Union, they assume a default probability of about 2 percent and adjust the interest rate accordingly.

Bulgaria, Hungary, Czechoslovakia, and East Germany have lower perceived creditworthiness than the Soviet Union, but their positions still look very sound compared to Cuba, Poland, and Romania.

China's progress is rather remarkable. Although it is in many ways still a third world country, the PRC is now considered more likely to repay its debts than the Soviet Union. It is important to note that perceived creditworthiness, while implicitly including ability to repay, also includes the lenders' assumptions of the borrowing country's *willingness* to repay. This factor has become increasingly important, since many countries who are, strictly speaking, able to repay have chosen to postpone their repayments and seek reschedulings.

Table 3 puts creditworthiness of the CPEs in a broader context. It shows the world average, including all third world countries, along with values for several individual nations. The Soviet Union is considered more risky than Brazil, Algeria, and Malaysia, but less risky than the Ivory Coast, which, in turn, is considered a better risk than the rest of Eastern Europe. And even Iran scores ahead of Poland, Romania, and Cuba.

EVALUATING THE DIRECT AND INDIRECT SUBSIDIES

Given these probabilities of default, we can now calculate the interest rates that a lender would charge if he wished to fully cover his expected losses. Chart 3 summarizes the results of that calculation. The direct and indirect subsidies shown total about $3 billion in 1981, or slightly over 21 percent of the total volume of government-supported loans to CPEs in that year. This is the approximate cost of an aircraft carrier at Western prices.

As Chart 4 indicates, about one-fourth of this total went to the Soviet Union. Most of this is direct subsidy, because in 1981 the Soviet Union was still considered a Category II country and as such had access to 8 percent interest loans from the Western governments, which were themselves paying about 12 percent. Eastern Europe's substantial share is dominated by Poland, which has a very high indirect subsidy component because it is considered a very risky borrower.

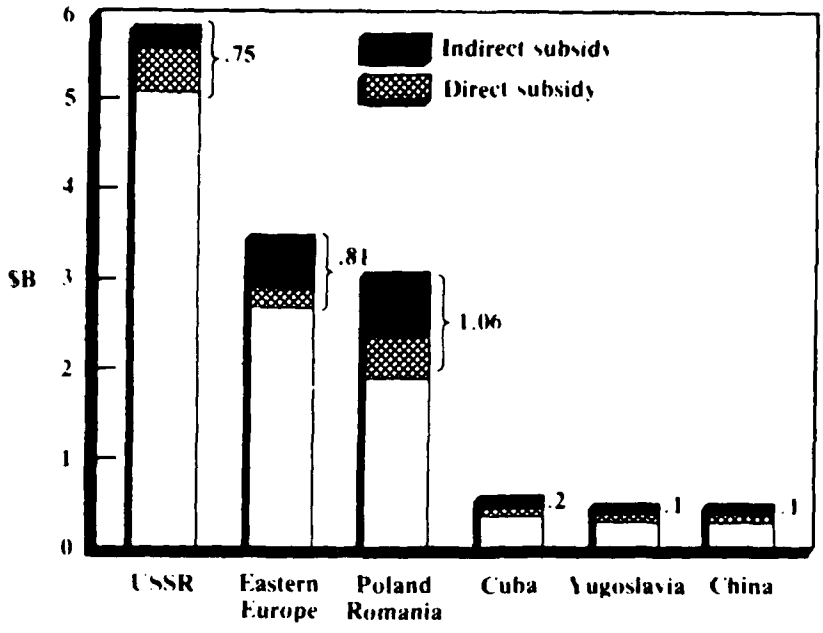
Table 3

IMPORTING COUNTRIES, RANKED BY PERCEIVED RISK (1983)

Country	Perceived Risk		Country	Perceived Risk	
	March 1981	March 1983		March 1981	March 1983
Japan	—	—	Tunisia	3.49	1.89
Switzerland	—	—	United Arab Emirates	1.94	1.98
West Germany	—	—	Venezuela	1.56	(2.08)
United States	—	.07	Trinidad & Tobago	(2.17)	2.24
Canada	.46	.23	USSR	2.17	2.32
Netherlands	.47	.24	Colombia	3.66	2.32
Austria	.41	.25	Thailand	(2.62)	2.75
Norway	.30	.29	Brazil	4.05	(3.14)
United Kingdom	.58	.33	Chile	2.57	3.76
Singapore	.41	.33	Hungary	(2.15)	(3.86)
Australia	.41	.37	Bulgaria	3.71	4.12
Belgium	.77	.38	Czechoslovakia	2.89	(4.34)
Sweden	.77	.49	Paraguay	(3.44)	(4.36)
Hong Kong	.41	.51	East Germany	2.89	(4.74)
France	.53	.66	Panama	2.88	(4.79)
Finland	.77	.70	Mexico	1.19	(5.14)
New Zealand	.77	.75	Ivory Coast	(3.72)	(5.20)
Italy	1.08	.83	Philippines	4.82	(5.41)
Taiwan	3.00	.90	Peru	4.11	5.61
Malaysia	3.22	.99	Ecuador	3.66	5.96
Spain	1.99	1.15	Argentina	2.66	6.58
Ireland	(.86)	1.21	Iraq	(3.68)	(6.66)
Denmark	1.04	(1.24)	Yugoslavia	(3.05)	(6.87)
South Africa	1.87	1.27	Morocco	(4.54)	(6.90)
China	1.63	1.30	Iran[a]	(14.25)	(14.19)
Saudi Arabia	.77	1.32	Bolivia[a]	(9.94)	(15.23)
Kuwait	1.51	1.40	Romania[a]	3.30	(16.27)
Algeria	(2.08)	1.48	Cuba[a]	(8.82)	(19.99)
Iceland	(1.74)	1.61	Poland[a]	(7.15)	(23.84)
Greece	1.19	1.62			
Portugal	2.21	1.63	Mean, all countries listed	.0238	.0329
South Korea	2.97	1.86	Mean, excluding non-bankable risk	(.193)	(.0226)

SOURCE: Calculated from forfeiting discounts published by Finanz AG Zurich. Values in parentheses were estimated from a regression on institutional investor ratings.

[a]Nonbankable risk.



Western credits and credit subsidies to the Eastern bloc (1981)

Chart 3

Total western credit subsidies to Eastern bloc (1981)

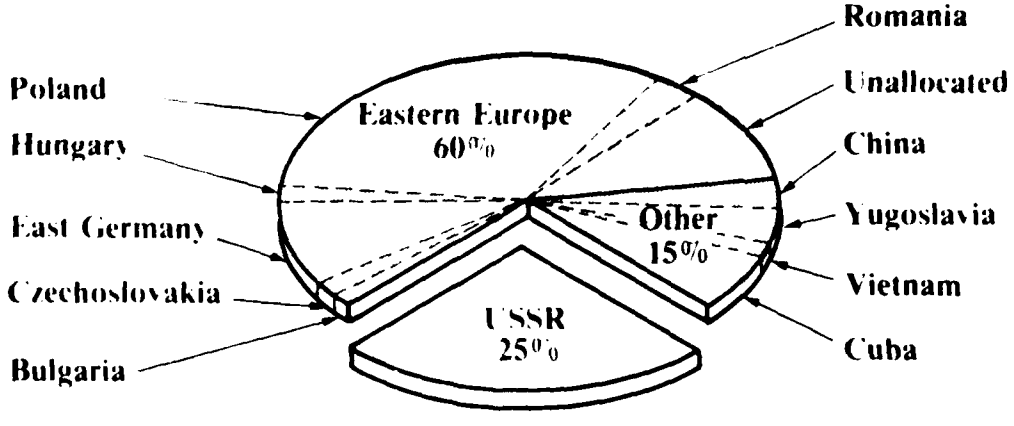


Chart 4

ASSESSING THE BENEFITS OF SUBSIDIES

Presumably, the purpose of export subsidies is to increase exports. Is that always a desirable result? If resources are fully employed, the answer is no. We pay foreign governments to take our goods, but because we have to pay a subsidy, we end up with only slightly more money, and fewer goods.

The more common argument in favor of subsidies is that they maintain jobs. However, a complete, though elementary, economic analysis readily shows that the cost of the subsidies must be covered somehow—either by taxes or by charging higher interest rates to domestic borrowers. These added costs to the economy destroy or prevent the formation of more jobs than are maintained by the exporting industry. Subsidizing exports is therefore not the optimal policy in the long run. It might be appropriate to help specific industries during a business slump. However, the institution of subsidized credit to foreign borrowers is a permanent fixture in the OECD countries and cannot be excused by this argument.

Sustained and indiscriminate subsidization of export credits is therefore bad economic policy. In fact, if the importer has market power, the optimal policy is not to subsidize exports, but to tax them. For example, during the construction of the gas pipeline, the Soviet Union was virtually the only buyer in the market for pipe and equipment. Nevertheless, the Western governments provided loans to finance these purchases at highly subsidized rates. Not subsidizing these purchases would probably have led to higher growth in the West, and taxing them would have increased economic welfare even further.

Abandoning export subsidies thus seems to make good economic sense. However, such a policy change would be strongly opposed by those industries that are dependent on exports. We therefore asked, How much would Eastern bloc imports from Western Europe and from the United States be reduced if export subsidies were discontinued?

We used a model of Eastern bloc response to prices to calculate the probable reduction in Eastern bloc imports from the West that would have occurred in 1981 if no subsidies had been granted.[3] Table 4 shows some of the results of that calculation for different categories of exports from different sources. For the United States, the reduction in food exports to the Eastern bloc would be the largest. Because the United States is one of the major suppliers of food to the Eastern bloc, eliminating subsidies would affect U.S. exports more than it would affect Europe as a whole in this category. However, in the context of

[3]K. Crane and D. F. Kohler, *The Effect of Export Credit Subsidies on Western Exports to the Soviet Bloc*, The Rand Corporation, N-2106-USDP, June 1984.

Table 4

PROJECTED DECLINE IN EASTERN BLOC IMPORTS (1981)
(Percent)

	Food	Raw Materials	Machinery	Intermediate and Consumer Goods	Total
Europe	5.3	5.7	4.5	4.1	4.7
U.S.	5.5	5.1	3.4	5.0	5.2
Japan	—	3.9	3.3	2.5	2.9
Other OECD	3.4	4.4	5.4	6.6	3.7
Total OECD	4.9	5.4	4.3	3.9	4.5
Non-OECD	3.8	5.8	4.3	4.1	4.6
Total	4.4	5.6	4.3	3.9	4.5

the total volume of U.S. and European trade, the 5.2 and 4.7 percent reductions, respectively, in exports are not very large.

Although the benefit of export subsidies to the exporting country is doubtful at best, it is unambiguous for the importer. The direct and indirect subsidies to the Eastern bloc transfer resources that make the importing countries better off. Chart 5 shows the estimated range of these benefits for the Soviet Union. The increase in their resource base makes it possible for them to increase their military spending

The effect of export credit subsidies on the Soviet economy

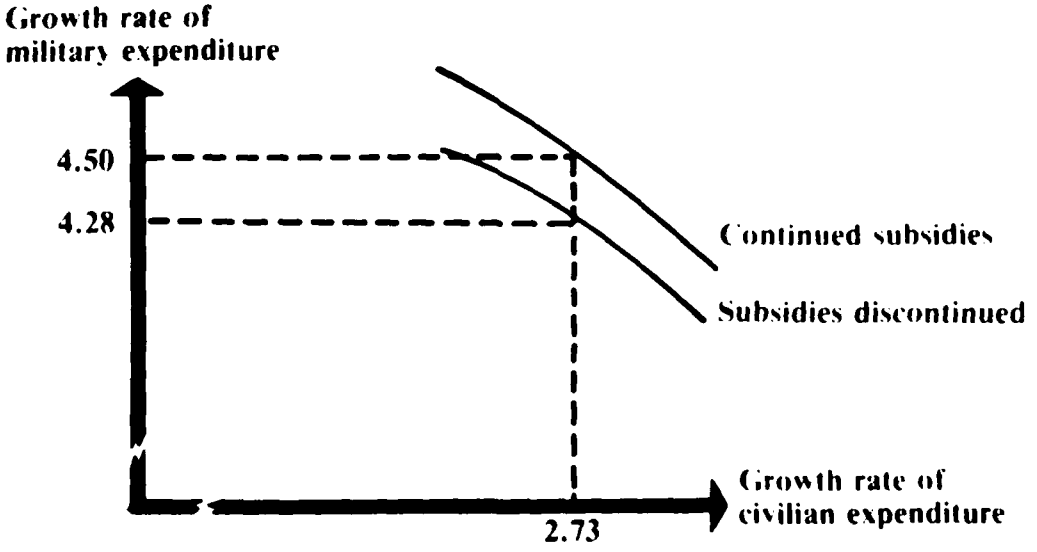


Chart 5

without decreasing their civilian spending or vice versa. If the subsidy were removed, assuming that they maintain a constant civilian spending rate, they would be forced to reduce their military expenditures by about .22 percent per annum.

CONCLUSIONS

To summarize:

1. Credit subsidies unambiguously benefit the importing countries.
2. They also unambiguously benefit the exporting industry.
3. They harm the exporting countries' consumers and taxpayers who must bear the economic cost of the subsidies.

On balance, the second and third factors are likely to result in overall harm to the exporting countries' economies.

Obviously, the first point is an unintended side-effect. Export credit and guarantee programs in the West were not created for the purpose of transferring resources to the East. Nevertheless, they have had that effect, and the sums involved are substantial. The other two points are directly relevant to economic policymaking in the West and touch on the intended effects of the export credit subsidy programs. The economic cost of these programs to Western consumers and taxpayers amounted to $3 billion in 1981, a substantial sum that has probably not been offset by the economic benefits to the Western exporters.

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