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Intelligence Report

Impact of Increased Oil Prices on Eastern Europe

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ER IR 74-10
May 1974

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Impact of Increased Oil Prices on Eastern Europe

KEY JUDGMENTS

Increased oil prices should not hurt Eastern Europe seriously through 1975. The outlook for 1976-80, however, is much gloomier.

- Soviet oil deliveries are expected to level off after the 1971-75 trade agreement expires; prices paid for Soviet oil probably will then be raised in line with world prices.
- If prices stabilize at roughly US \$10 a barrel for crude, the East Europeans in 1980 would have to pay \$5.9 billion more for net oil imports—\$3.9 billion to the USSR and \$1.9 billion to the West.
- The projected 1980 oil bill would add about 20% to projected imports from the USSR and 10% to hard currency imports.
- Bulgaria will be by far the hardest hit, followed by Czechoslovakia, East Ger-

many, and Hungary; Poland still relies heavily on coal and Romania is a net oil exporter.

To pay for Soviet oil, Eastern Europe will have to boost greatly its exports of consumer goods and machinery and must pour more investment into the Soviet resource base. Moscow probably will have to offer new credits or deferred payments for oil in return for East European investment.

To pay for Western oil, Eastern Europe will need more barter agreements with the Middle East or long-term credits like those the oil-producing countries are likely to provide to the LDCs.

Even with Soviet and Western assistance, most East European countries will not be able to avoid strains on their balances of payments and on their domestic economies in 1976-80.

Note: Comments and queries regarding this report are welcomed. They may be directed to the Office of Economic Research,

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DISCUSSION

Introduction

1. The Middle East war, the oil embargo, and higher world market prices produced a hectic winter in Eastern Europe.¹ Beginning in November 1973, gas and fuel oil rationing, Sunday driving bans, lowered speed limits, and higher gasoline prices appeared. The oil crunch also sent the East Europeans scurrying for oil supplies, some of it commanding exorbitant prices of \$16 or more a barrel. Moreover, after 8 years of listless negotiations, Hungary, Czechoslovakia, and Yugoslavia suddenly agreed in February to build the Pan Adria Pipeline to bring in Middle East oil. And the East European planners went to work trying to find ways of coping with the high prices expected for both Soviet and Western oil in 1976-80.

The Role of Soviet Oil

2. All of the East European countries except Romania have depended on the USSR for most of their oil needs. In 1973, Moscow supplied more than nine-tenths of the crude oil required in Czechoslovakia and Poland, about three-fourths in Bulgaria and East Germany, and three-fifths in Hungary. In addition, Bulgaria and East Germany obtain some of their supplies from the Middle East on Soviet account. Romania, which relies on its own resources and some imports of Middle East crude, is a net exporter of petroleum.

3. The USSR began encouraging the East Europeans to convert to oil and develop their petroleum refinery and petrochemical industries in the early 1960s. This process was spurred by the completion in 1963 of the first Friendship Pipeline, which feeds refineries in all of the countries except Romania and Bulgaria. The availability of Soviet oil has pushed East European oil consumption from 9% of all energy sources in 1960 to an average of 17% in 1970. Moreover, the oil-dependent industries—chemicals, transportation, and oil refining itself—have become a key factor in overall economic growth in Eastern Europe.

4. The conversion to oil has gone farthest in Bulgaria and Hungary (see Table 1). Poland, with large

1. Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Romania.

Table 1

Importance of Oil in East European Energy Consumption

	Oil as a Percent of Total Energy Consumption		Imported Oil as a Percent of Total Oil Consumption	Imported Oil as a Percent of Total Energy Consumption
	1960	1970	1970	1970
Total	9	17	69	12
Bulgaria	16	46	96	44
Czechoslovakia	7	17	98	17
East Germany	5	14	99	14
Hungary	16	29	68	19
Poland	5	10	95	9
Romania	29	23	Negative ¹	Negative ¹

1. Romania is a net exporter of oil.

deposits of high-quality coal, relies relatively little on oil; the share is somewhat larger in Czechoslovakia and East Germany, which also are heavy users of coal. In Romania, Eastern Europe's only major crude oil producer, the share of petroleum has declined with the rapid exploitation of natural gas resources.

5. East European imports of Soviet crude oil increased from 6 million metric tons² in 1960 to about 50 million tons in 1973. Shipments under the current trade agreements (1971-75) have been on schedule and seem assured through the period at fixed prices of roughly \$2.50 a barrel. Deliveries in 1975 should reach 59 million tons, which—allowing for some conservation efforts—would fall 17 million tons below East European import requirements (see Table 2).

6. Moscow so far has remained silent regarding shipments beyond 1975. Given its own production problems and rising consumption requirements, not much more than 65 million tons of Soviet crude would be available for Eastern Europe in 1980—50 million tons short of estimated import requirements of 115 million tons. Soviet output of crude oil fell below plan in 1972-73, and drilling difficulties encountered in old oilfields and in Western Siberia are driving up costs. Soviet exports of refined products probably will not rise much; in fact the growth of East European refining capacity is expected to dampen demand for Soviet products.

2. One metric ton of oil is equal to 7.3 barrels.

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Table 2

Eastern Europe's Imports of Crude Oil¹

	Million Metric Tons							
	1960	1965	1970	1971	1972	Preliminary 1973	Projected 1975	Projected 1980
Eastern Europe	6.5	18.9	39.4	45.7	54.6	61.9	76.5	115.0
USSR	6.2	18.4	34.4	38.6	44.4	N.A.	59.0	65.0
West	0.2	0.6	5.0	7.2	10.2	N.A.	17.5	50.0
Bulgaria ²	Negl.	2.2	5.7	7.5	8.3	9.7	13.0	20.0
USSR	....	2.2	4.8	5.8	6.4	N.A.	10.0	11.0
West	....	0.1	0.9	1.8	1.9	N.A.	3.0	9.0
Czechoslovakia	2.3	6.1	9.8	11.5	12.6	14.3	17.0	25.0
USSR	2.3	6.0	9.4	10.7	11.9	N.A.	15.5	17.0
West	....	0.1	0.4	0.8	0.7	N.A.	1.5	8.0
East Germany ²	1.9	5.1	10.3	10.9	14.9	16.3	18.0	25.0
USSR	1.8	4.9	9.2	9.8	11.2	13.0	15.0	16.0
West	0.1	0.2	1.1	1.2	3.7	3.3	3.0	9.0
Hungary	1.5	2.3	4.3	4.9	6.1	6.6	9.0	14.0
USSR	1.4	2.1	4.0	4.4	5.2	5.4	6.5	8.0
West	0.1	0.2	0.3	0.5	0.9	1.2	2.5	6.0
Poland	0.7	3.2	7.0	7.9	9.7	11.2	13.5	21.0
USSR	0.7	3.2	7.0	7.9	9.7	10.9	12.0	13.0
West	....	....	....	....	....	0.3	1.5	8.0
Romania	....	....	2.3	2.9	3.0	3.8	6.0	10.0
USSR	....	....	....	....	....	....	....	....
West	....	....	2.3	2.9	3.0	3.8	6.0	10.0

1. Because of rounding, components may not add to the totals shown.

2. Part of Bulgarian and East German crude oil is shipped from the West on Soviet account.

7. In any case, the USSR probably will raise the price on its deliveries to Eastern Europe after 1975. CEMA countries usually readjust their foreign trade prices at the beginning of each five-year period. Most East Europeans expect a large hike in oil prices when the current long-term agreements expire. An article in a Polish journal in January 1974, for example, concluded that long-run oil prices in trade among the Socialist countries cannot differ greatly from prices on the world market. Also, Hungary's National Bank President Andor Laszlo in a January press conference left only a small ray of hope when he said intra-CEMA trade "will follow such world price trends as are judged to be permanent."

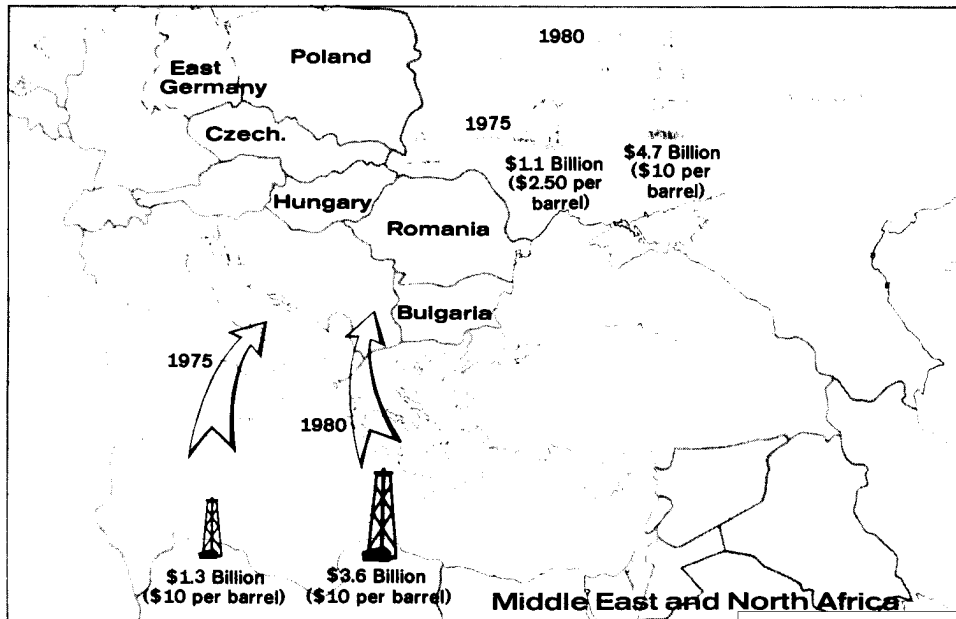
8. The prices the Soviets are now charging the Yugoslavs suggest what is in store for the CEMA countries.

A Yugoslav correspondent in Moscow complained in February that, "At the beginning of last year a ton of oil cost about \$20 [\$2.70 a barrel] now it costs about \$71 [\$10 a barrel] at the most favorable world prices, but Soviet producers are asking even more."

9. Assuming that world market prices settle out at \$10 a barrel for crude and that the USSR charges the East Europeans this price, the bill for Soviet crude would come to \$4.7 billion in 1980 (see the map). Adding net imports of \$0.5 billion worth of refined oil products (at an assumed price of \$20 a barrel) brings the total oil bill to \$5.2 billion. This is \$3.9 billion more than the cost would have been if early 1973 prices had prevailed (see Table 3) and represents about one-fifth of projected total imports from the USSR in 1980.

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EASTERN EUROPE The Crude Oil Bill in 1975 and 1980



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Table 3
Eastern Europe's Increased Bill for Soviet Oil in 1980¹

	Million US \$		
	Increase for Crude Oil	Increase in Net Cost of Products	Total
Total	2,140 to 3,560	240 to 365	2,380 to 3,925
Bulgaria	360 to 600	130 to 200	490 to 800
Czechoslovakia	560 to 930	30 to 45	590 to 975
East Germany	525 to 880	....	525 to 880
Hungary	265 to 440	20 to 35	285 to 475
Poland	430 to 710	80 to 120	510 to 830
Romania	....	-20 to -35	-20 to -35

1. These estimates are based on the assumption that the price of crude oil will be \$7 to \$10 a barrel and of petroleum products \$15 to \$20 a barrel. The base price used to calculate the increased bill is that obtaining in 1972—about \$2.50 for crude oil and \$5 for products.

Imports from the West

10. The share of the West in East European imports of crude oil has risen from only 13% in 1970 to about 20% in 1973. Most of the Western crude is either bought, refined, and resold to the West by Romania or sent to Bulgaria and East Germany on Soviet account. By 1975 the East Europeans will be buying nearly one-fourth of their imported crude from the West; by 1980 the share could exceed two-fifths.

11. Eastern Europe also has been importing petroleum products from the West—mostly from Western Europe. All of the countries except Bulgaria, however, are net exporters of oil products to the West. In 1972, net exports of petroleum products—mainly from Romania—were about 3.5 million tons. Both imports and exports of refined products should level off in the remainder of this decade.

12. The bill for Western oil will not present much of a problem until after 1975. At \$10 a barrel, Eastern Europe will pay \$1.3 billion for Western crude oil in 1975. Expected net exports of products (at \$20 a barrel) should bring the total oil bill down to \$0.8 billion. At the higher prices, the East Europeans would be paying some \$200 million more than at early 1973 prices—only 2% of projected East European hard currency imports in 1975.³

13. The outlook for 1980 is another story. At \$10 a barrel, East European expenditures for Western crude would come to \$3.6 billion. After deducting East European exports of oil products, the bill would be \$2.5 billion, or \$1.9 billion more than the cost of imports from

3. Hard currency imports are primarily those from the industrial West. It is assumed that the OPEC countries will demand hard currency in payment for much of the oil they ship to Eastern Europe.

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the West at early 1973 prices (see Table 4). The higher costs of Soviet and Western oil may force the East Europeans to pay an additional \$5.9 billion for net oil imports in 1980. Even if prices fall well below current quotations—say to \$7 a barrel for crude and \$15 a barrel for products—the increased import bill would still total \$3.5 billion.

14. Bulgaria will be the hardest hit. The net increase in its bill for Western oil could add 50% to hard currency imports by 1975 and more than 100% by 1980 (see Table 5). Furthermore, increased Soviet oil prices would boost total imports from the USSR in 1980 by one-fifth.

15. For Czechoslovakia, East Germany, and Hungary the increased bill in 1980 could add as much as one-fourth to imports from the USSR and raise hard currency imports by one-sixth. Polish imports of oil would add one-fifth to imports from the Soviets but only 5% to hard currency imports. Romania would be in the best position; its imports of Western crude will continue to be offset by earnings from exports of oil products.

Paying for Soviet Oil

16. To meet the increased bill for Soviet oil after 1975, the East Europeans will have to boost their exports to the USSR substantially and get started on longer term investment in Soviet energy development. Moscow undoubtedly will want more manufactured consumer goods, certain raw materials, and perhaps machinery that it now receives from Eastern Europe. The Poles reportedly have been asked for more coal, part of which might be sold in the West for hard currency to be credited to the Soviet account. In addition, the USSR may demand some products that the East Europeans are selling successfully in the West, such as processed foods.

17. The USSR also is eager to obtain more East European investment in its resource base, especially in fuels. So far, final agreements have not been signed for East European investment in Soviet oil development, and because of the long time needed for exploration and development of new fields, such investment is unlikely to pay off until after 1980.

18. In view of the potential strain on Eastern Europe, Moscow probably will find it necessary to grant

some concessions and credits. The USSR, in fact, could defer payment for oil until after 1980 in return for the large East European exports of machinery and labor already slated for investment in Soviet raw materials projects. After 1980, when Soviet repayments in products begin, Eastern Europe would have to increase investment or exports to keep trade in balance. Indeed, part of the condition for deferring payments might be that Eastern Europe use the breathing spell to beef up industries of interest to the USSR. Without some concessions, the East Europeans would find it nearly impossible to import what they need from both the USSR and the West in the next few years.

Paying the West

19. Eastern Europe almost certainly will not be able to increase hard currency exports sufficiently to cover the higher costs of oil imported from the West. Some of the best hard currency earners—such as processed foods and low-sulphur Polish coal—may have to be diverted partly to the Soviet market. Furthermore, the fairly strong demand for East European semi-finished manufactures in the industrial West may drop off because of the West's own difficulties in paying for oil.

20. To ease the import burden, Eastern Europe is trying to conclude barter and cooperation arrangements for Western oil. Several deals have already been signed. Poland, Hungary, Bulgaria, and Czechoslovakia recently signed agreements to deliver equipment, complete plants, and technical services to Libya in exchange for crude. Poland is to obtain increasing amounts of Libyan oil through 1980 in exchange for cargo and tanker ships and designs, technical assistance, and equipment for petroleum, power, transportation, and other projects. Libya also agreed in February to supply Romania with 12 million tons of crude through 1977 in return for assistance in building a refinery and aid to Libyan agriculture and housing. In November, Poland agreed to supply refineries in exchange for Iraqi oil. In 1971, Romania granted Iraq a credit for petroleum development to be repaid in Iraqi oil, and under a 1969 agreement the Czechs will receive Iraqi crude oil to repay a \$27 million loan used in building a refinery at Basrah.

21. Other arrangements call for Romania and Poland to cooperate with several Latin American countries in the exploration and development of oil resources.

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Table 4

Eastern Europe's Increased Bill for Western Oil¹

Million US \$

	Increase for Crude Oil		Increase in Net Earnings from Sales of Products		Total	
	1975	1980	1975	1980	1975	1980
	Total	575 to 955	1,655 to 2,750	525 to 790	540 to 815	50 to 165	1,115 to 1,935
Bulgaria	100 to 165	300 to 495	....	....	100 to 165	300 to 495
Czechoslovakia	50 to 80	265 to 440	35 to 55	35 to 55	15 to 25	230 to 385
East Germany	100 to 165	300 to 495	75 to 110	75 to 110	25 to 55	225 to 385
Hungary	80 to 135	195 to 330	35 to 55	35 to 55	45 to 80	160 to 275
Poland	50 to 80	265 to 440	15 to 20	30 to 45	35 to 60	235 to 395
Romania	195 to 330	330 to 550	365 to 550	365 to 550	-170 to -220	-35 to 0

1. These estimates are based on the assumption that the price of crude oil will be \$7 to \$10 a barrel and of petroleum products \$15 to \$20 a barrel. The base price used to calculate the increased bill is that obtaining in early 1973—about \$2.50 for crude oil and \$5 for products. The values of net earnings on oil products may be overstated because in 1972 the average price of oil products imported by Eastern Europe from the West was about twice the average price of products exported.

Table 5

Eastern Europe's Increased Bill for Net Imports of Petroleum and Petroleum Products as a Percent of Total Projected Imports¹

	As a Percent of Imports from the USSR	As a Percent of Hard Currency Imports	
	1980 ²	1975	1980
	Total	12 to 19	Negl. to 2	6 to 10
Bulgaria	12 to 20	29 to 48	65 to 107
Czechoslovakia	13 to 22	1 to 2	9 to 15
East Germany	14 to 24	1 to 3	7 to 12
Hungary	9 to 15	5 to 8	10 to 16
Poland	12 to 20	1	3 to 5
Romania	-2 to -3	-8 to -11	-1 to 0

1. Projections of imports do not take into account probable price increases for other products. Projections were based on trends in the early 1970s and on the assumption that some of the East European countries will cut back the growth of imports from both the USSR and the West.

2. Prices for Soviet oil are assumed as fixed through 1975.

The Poles also are considering joining with Occidental Petroleum in exploring for oil in the Baltic, in Ecuador, and in the North Sea off the Norwegian coast. Even though the outlook for barter arrangements looks fairly bright, the oil-producing countries are unlikely to agree to as many deals as they would have before the recent Arab-Israeli war. A major incentive for bilateral deals was the limited market for government-owned oil. But with

the ownership shares of the oil producers beginning to pass 50%, their oil is now easily marketable and at high prices.

22. Eastern Europe also would welcome new medium-term and long-term credits from the West to help pay for oil. Such credits probably would take the form of Eurodollar loans by Western banks. For some countries such as Bulgaria—with a 40% ratio of debt service to exports—sizable new credits might put too much of a burden on the balance of payments. Bulgaria, and perhaps other East European countries, may be able to qualify for credits from the Social Development Fund recently set up by the OPEC to help developing countries. These credits are to run 25 to 30 years with an interest rate of about 2%. OPEC representatives indicated that the fund might initially amount to \$150 million.

23. In the absence of enough barter or credit deals, the East Europeans—especially Bulgaria, Czechoslovakia, East Germany, and Hungary—will have to cut back on plans for imports from the West. They are unlikely to sacrifice growth rates by reducing needed imports of raw materials or semi-manufactures. Instead, imports of manufactured consumer goods and perhaps some types of capital equipment will be the first to go.

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Impact at Home

24. For Eastern Europe the Middle East crisis produced immediate restrictions on gasoline and fuel oil consumption. In November 1973, Bulgaria and Romania imposed general gas rationing, and in December, Poland introduced rationing on gasoline used in vehicles of government officials and of collectives and cooperatives. Several of the countries placed a ban on Sunday driving, lowered speed limits, and ordered a reduction in the consumption of heating oil. In January 1974, Poland increased prices of gasoline at the pump an average 75% and boosted prices of fuel to enterprises. In March, Bucharest exchanged its rationing program for higher gasoline prices. Czechoslovakia announced an 80% increase in gasoline prices in April but partially offset the rise by a drop in the road use tax.

25. The oil situation—and the uncertainty of prices—also has put a heavy burden on planners trying to get a head start on the 1976-80 plan. The next six years should see strong inflationary pressures, slower economic growth, some restructuring of output and consumption, and some pause in plans for increasing consumer welfare, possibly including a slowdown in the auto boom.

26. The oil import bill certainly will fan inflationary pressures in Eastern Europe. As in Czechoslovakia, Poland, and Romania, some of the higher fuel costs will be passed on to the consumer. But a large share of increased prices will be covered by subsidies, putting a substantial strain on state budgets. The Hungarians, for example, claim that if all of the oil prices of the past six months had been passed on to the consumer, the consumer price index would have jumped 5%. And Poland plans to subsidize 80%-90% of increased fuel prices to industry, hoping that the remainder can be met by fuel savings and not by another rise in prices.

27. Planners also may have to resign themselves to a slower rate of economic growth during 1976-80. The hardest hit by higher costs or any cutback in fuel supplies would be chemicals, metallurgy, agriculture, and food processing. These also are the industries relying most on imported Western equipment, which too may be trimmed. The Hungarians, for example, already are expecting output of the Budapest Chemical Works to be 25% below plan this year because of the high cost of Western chemicals for insecticides. But all industries—and agri-

culture which depends heavily on petroleum products—would be affected by high costs or shortages of fuel for transportation.

28. Furthermore, Moscow's desire for more consumer durables could cause the structure of investment and output to swing in the next few years toward older consumer industries such as food processing, textiles, leather, wood, and paper. Romania—even though the least affected by the oil situation—is hinting at both a slow-down in production and a shift in favor of consumer goods in the next plan period.

29. The East Europeans are also considering changes in the structure of energy consumption. The Hungarians hope to economize in the use of fuel oil and plan to use domestic coal as much as possible to feed powerplants. Poland is looking for assistance from West Germany and the United States in setting up pilot plants for the conversion of coal into liquid fuels. But any such scheme will probably not yield results until after 1980. Even the Romanians are concerned; by 1980 about one-half of their imports of crude oil will be needed for domestic consumption instead of being processed for export. The Romanian State Council issued an elaborate decree in November 1973 which called for the conservation of oil products and conversion to other sources of energy. Industrial use of fuel oil in Eastern Europe—especially in the electric power, metallurgical, and building materials sectors—could be reduced without great difficulty or loss of efficiency by converting to coal.

The Soviet Dilemma

30. East European planners undoubtedly are now juggling alternative sets of prices, imports, and output for the 1976-80 period, waiting for talks to begin on the new five-year trade agreements with the USSR. But Moscow too has some tough questions to answer in forming its policy toward Eastern Europe in the next plan period. If the USSR is to meet the needs of its own industries and consumers, it cannot appreciably increase oil deliveries to Eastern Europe. Certainly, Moscow would be reluctant to divert exports slated for Western hard currency markets. They probably also would not agree to shave the world market price of oil substantially. And yet, as a Soviet economist stated recently, the USSR must continue to take care of other CEMA countries and to supply oil to small countries such as Yugoslavia and

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Finland, as well as hold on to established markets in Western Europe.

31. The Soviet dilemma probably will be resolved in favor of concessions to Eastern Europe, especially to Bulgaria. On the one hand, Moscow cannot afford to drive

the East Europeans closer to the West by exacting all of the economic leverage at its command. On the other hand, concessions on oil in return for closer East European ties to the USSR clearly would promote Soviet policy toward CEMA integration.

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