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ECONOMIC INTELLIGENCE REPORT

**DEPENDENCE OF THE SOVIET BLOC
ON FOREIGN VESSELS
IN SEABORNE FOREIGN TRADE
1958 AND 1965 PLAN**



CIA/RR 59-48

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CENTRAL INTELLIGENCE AGENCY

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DEPENDENCE OF THE SOVIET BLOC ON FOREIGN VESSELS
IN SEABORNE FOREIGN TRADE*
1958 AND 1965 PLAN

Summary

In 1958 the seaborne foreign trade of the Soviet Bloc is estimated to have been about 50.7 million metric tons,** of which about 32.8 million tons were carried by foreign vessels. A minimum estimate of the non-Bloc vessel capacity needed to transport this cargo is 2.9 million deadweight tons (DWT),*** and the actual tonnage of the vessels used, including liners, may have amounted to almost 4 million DWT. It is estimated that the requirements by the Bloc for foreign vessels during 1958-65, although declining as a percentage of total capacity needed, will remain at about present levels. These estimates of foreign vessel capacity required by the Bloc have only recently been made possible by the development of a methodology that analyzes interrelationships among cargo tonnages, vessel capacities, and average lengths of haul.

I. Introduction

The extent to which the Soviet Bloc depends on foreign vessels has hitherto been determined by analysis of (1) statements by countries of the Bloc concerning the share of their seaborne cargoes carried by their own fleets and (2) information on Bloc charters of non-Bloc vessels. The first approach yields the tonnage of the cargo to be carried by foreign vessels but not the amount of foreign vessel capacity needed. The second approach yields inconclusive results, because the available information on charters probably is

* The estimates and conclusions in this report represent the best judgment of this Office as of 1 November 1959.

** Cargo tonnages are given in metric tons throughout this report.

*** Deadweight tonnage is the carrying capacity of a vessel in long tons -- that is, the difference between the displacement light and the displacement loaded.

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incomplete and also excludes the use of liner service* and of tramp vessels not under charter to the Bloc. In addition, the information on charters thus far has provided only annual totals of the shipping space chartered, most of which actually was chartered for periods of less than 1 year.

The estimate made in this report is of the average amount of foreign vessel capacity needed by the Soviet Bloc, including both direct charters and all other nonchartered space used. This estimate is only an indicator of magnitude, which provides a measure of the average requirement throughout the year without provision for seasonal variations, and the margin of error may be as much as plus or minus 15 percent. Only recently has enough information become available to permit estimates of the amounts of cargo carried in foreign vessels as well as estimates of average lengths of haul. As more data are gathered, particularly on average amounts of cargo carried per deadweight ton of vessel capacity at varying lengths of haul, the method outlined here may permit more reliable estimates to be made.

II. 1958

In 1958 the seaborne foreign trade of the Soviet Bloc probably amounted to about 50.7 million tons. Bloc vessels carried 17.9 million tons of this total, leaving an excess of about 32.8 million tons to be carried by foreign vessels, as shown in Table 1.**

The amount of foreign vessel capacity needed to carry the excess 32.8 million tons varies by country according to the average length of haul of the traffic involved. After allowing for such differences, it is estimated that an average of 10.6 tons of cargo could have been carried per deadweight ton of vessel capacity in 1958. This figure would indicate that an average of approximately 3.1 million DWT of foreign vessel capacity was needed throughout 1958 to carry the excess seaborne foreign trade of the Soviet Bloc.*** It is estimated, however, that about 700,000 tons of East German and Czechoslovak cargo were carried by Polish vessels and that about 2 million tons of Satellite cargo were carried by Soviet vessels. Probably about

* Liner service is service on a prescheduled, advertised route with multiple prearranged ports of call. It is open to booking by shippers all along the route of cargo to be loaded and discharged at different ports en route. If a vessel that is usually on liner service takes a full load of cargo for one shipper to be discharged at a port or ports agreed on with the shipper, the vessel by definition has been withdrawn from the ship operator's liner service.

** Table 1 follows on p. 3.

*** For methodology, see Appendix A, p. 7, below.

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Table 1

Estimated Seaborne Foreign Trade of the Soviet Bloc
Carried by Domestic Vessels and by Foreign Vessels
1958

Million Metric Tons

<u>Country</u>	<u>Total</u>	<u>Carried by Domestic Vessels</u>	<u>Carried by Foreign Vessels</u>
USSR a/	24.5	13.6	10.9
Poland	13.7 b/	2.7 c/	11.0
East Germany	5.5 d/	0.5 e/	5.0
Rumania	5.0 f/	0.2 g/	4.8
Czechoslovakia	4.0 d/	0.2 h/	3.8
Bulgaria i/	1.2	0.5	0.7
Hungary d/	0.9	0.1	0.8
Albania	0.7 j/	0.1 k/	0.6
Total	<u>55.5</u>	<u>17.9</u>	<u>37.6</u>
Estimated duplicate traffic between Bloc countries	4.8		4.8
Balance	<u>50.7</u>	<u>17.9</u>	<u>32.8</u>

a. See Table 3, p. 14, below.

b. See Table 4, p. 15, below.

d. See Table 5, p. 16, below.

e. 2/

f. For methodology, see Appendix A, p. 17, below.

g. Estimate based on 1957 data on the fleet and tonnage carried
and on the 1958 fleet. 3/

h. Estimate based on 1956 data on the fleet and tonnage carried
and on the 1958 fleet. 4/

i. 5/

j. 6/

k. 7/

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200,000 DWT of Polish and Soviet vessels were used for this purpose and therefore should be subtracted from the figure of 3.1 million DWT, leaving a balance of 2.9 million DWT of non-Bloc vessel capacity needed. Estimates of the requirements, by Bloc country, are shown in Table 2.*

Distinct from the concept of vessel capacity needed is the concept of the total deadweight tonnage of the vessels involved. Both East Germany and Czechoslovakia have been using liner service heavily. All other countries of the Soviet Bloc also use liner service, but no estimates can presently be made on the volume involved. Cargo so shipped (in less than shipload lots) would involve more vessels, and, therefore, more deadweight tonnage would be counted than was used. It is believed that about 30 percent of East German and Czechoslovak cargo moves on liners. If provision were made in the above estimates for the use of liner service -- which would include the vessel tonnage actually involved although not necessarily that required -- the estimate of 2.9 million DWT would be raised to about 3.8 million DWT.** Use of liner service by the rest of the Bloc will increase this figure, although to an unknown extent. The figure of 2.9 million DWT is, therefore, a minimum estimate of the non-Bloc vessel capacity needed by the Bloc in 1958. The practical dependence -- that is, the vessel tonnage involved -- probably was closer to 4 million DWT. The difference of almost 1 million DWT is a result of Bloc use of liner service and represents the amount of vessel tonnage that could have been dispensed with in 1958 if the Bloc had been able to use tramp service exclusively, including chartered vessels.

III. 1965***

On the basis of plan announcements by the USSR, Poland, East Germany, and Czechoslovakia, which together accounted for about 82 percent of all cargo of the Soviet Bloc carried by foreign vessels in 1958, it is possible to estimate requirements of these Bloc countries for foreign vessels in 1965. Soviet plans indicate that the share of Soviet seaborne foreign trade to be carried by foreign vessels will be 23.5 percent in 1965 compared with 44.4 percent in 1958. In spite of this proportionate decline, the absolute tonnage of Soviet trade to be carried by foreign vessels probably will increase from 10.9 million tons in 1958 to 11.8 million tons in 1965. The share of Polish cargo to be carried by foreign vessels probably will decline from 80.4 percent in 1958 to 56.8 percent in 1965, reflecting an

* Table 2 follows on p. 5.

** For methodology, see Appendix A, p. 17, below.

*** For the tonnage to be moved in 1965, see Appendix A, p. 13, below.

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Table 2

Estimated Requirements of the Soviet Bloc for Foreign Vessel Capacity a/
1958

Country	Cargo to Be Moved <u>b/</u> (Million Metric Tons)	Estimated Average Length of Haul <u>c/</u> (Nautical Miles)	Cargo Factor: Cargo Tons per Deadweight Ton <u>d/</u>	Foreign Vessel Capacity Needed (Thousand Deadweight Tons)
USSR	10.9	2,200	11.6	940
Poland	11.0	2,600	10.9	1,009
East Germany	5.0	4,500	8.4	595 <u>e/</u>
Rumania	4.8	2,500	11.0	436
Czechoslovakia	3.8	4,000	9.0	422 <u>e/</u>
Bulgaria	0.7	3,300	9.8	71
Hungary	0.8	3,000	10.2	78
Albania	0.6	2,000	12.1	50

a. Columns have not been totaled, because the first and last columns each contain duplicate traffic. East German exports to the USSR, for example, are included under East Germany and also under the USSR.

b. Figures are taken from Table 1, p. 3, above.

c. For methodology, see Appendix A, p. 10, below.

d. For methodology, see Appendix A, p. 7, below.

e. Of the total of 1,017,000 DWT shown to be needed by East Germany and Czechoslovakia, it is estimated that about 100,000 DWT were supplied by Polish-flag vessels. Some of the remaining 900,000 DWT (possibly 100,000 DWT more) were supplied by Soviet vessels.

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absolute decrease from 11.0 million tons in 1958 to 8.3 million tons in 1965. East German cargo carried in foreign vessels may total about 10 million tons in 1965 and that of Czechoslovakia about 5.2 million tons.

In aggregate, the Soviet, Polish, East German, and Czechoslovak cargo to be carried by foreign vessels may increase from 30.7 million tons in 1958 to 35.3 million tons in 1965, so that the considerable decline in the share of seaborne foreign trade left for foreign vessels in 1965 will have only a slight effect on the actual requirements for foreign shipping needed to move this trade.

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APPENDIX A

METHODOLOGY

1. Cargo Factor: Cargo Tons Carried per Vessel Deadweight Ton

The following method is used in this report to find a reasonable factor to determine vessel capacity required over a period of a year to move any given amount of cargo. It is axiomatic that the amount of vessel capacity needed to move cargo will vary with the distances that the cargo must be moved. The problem is to find first a usable pattern between specific distances involved and the amount of cargo that can be moved by each deadweight ton of vessel capacity used. Once such a relationship is established, the total amount of cargo to be moved may be divided by the tons of cargo possible per vessel deadweight ton (called here the cargo factor) established for the particular distance involved. The result will be the total number of vessel deadweight tons (the vessel capacity) needed to move the cargo. For example, if 10 million tons must be moved in 1 year for an average distance (average length of haul) of 3,000 miles* and the pattern has been established that 10 tons can be moved per vessel deadweight ton (a cargo factor of 10) at that distance, then 1 million DWT of vessel capacity will be needed.

If several different groups of cargo must be moved, each for a different average length of haul, and an over-all factor is needed for the combined groups -- as is here the case for the Soviet Bloc as a whole -- the cargo factor for each group of cargo must be weighted by the proportion that group bears to the total of all the groups of cargo.

The mechanics of establishing an over-all factor for the Soviet Bloc, within the method outlined above, were as follows. In order to find a pattern, if any, in the relationship between the average length of haul and the volume of cargo moved per deadweight ton, the performance of the Polish fleet was used because only for the Polish fleet was enough information (tons moved, ton-miles performed, and deadweight tonnage of the vessels used) available to permit relating the performance to the fleet capacity. It was necessary to adjust the resulting cargo factors for the Polish fleet to arrive at estimated cargo factors for foreign vessels, inasmuch as the performance of foreign vessels carrying the same cargo will be more efficient. The performance of the Polish fleet includes, for example,

* All mileages in this report are given in nautical miles.

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time lost during repair of vessels, whereas foreign vessels would be hired only during the time that the vessels were in operation. In 1956 the proportion of time lost by Polish ships, whether for repair or for other reasons, was 16 percent. ^{8/} The corresponding cargo factors for foreign vessels, therefore, have been increased by 15 percent above the cargo factors for the Polish fleet. The cargo factors indicated by the performance of the Polish fleet* for varying average lengths of haul, together with the corresponding cargo factors for the use of foreign vessels, are as follows:

<u>Average Length of Haul</u> (Nautical Miles)	<u>Cargo Factor:</u> <u>Cargo Tons per Deadweight Ton</u>	
	<u>Polish Fleet</u>	<u>Foreign Vessels</u>
2,000	10.5	12.1
2,500	9.6	11.0
3,000	8.9	10.2
3,500	8.3	9.5
4,000	7.8	9.0
4,500	7.3	8.4
5,000	6.9	7.9
9,000	4.5	5.2
10,000	4.0	4.6

* Performance figures for the following four segments of the Polish fleet were used: the entire state-owned fleet minus its domestic traffic, those vessels under the control of the Central Administration of the Polish Merchant Marine (Centralny Zarzad Polskiej Marynarki Handlowej -- CZ-PMH) only, the CZ-PMH vessels operating between Polish and foreign ports only, and those vessels owned by Poland but not under the control of CZ-PMH. ^{9/} Vessels in the last category apparently were all on the Far East run, with lengths of haul of from 7,000 to 11,000 miles.

The available data permitted the charting of 20 relationships between average length of haul and cargo tons carried per deadweight ton. From the resulting curve, all relationships of cargo factor to length of haul given in this report were obtained. The fact that the curve is based on only 20 relationships is a major source of error. It may be only coincidental that of the 20 relationships plotted, only 7 were away from the resulting curve, and only 3 of these were extremes. If 200 relationships were available, the trend conceivably might be different.

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The cargo factor for each of the Soviet Bloc countries, derived from the plotted curve mentioned above, is as follows:

<u>Country</u>	<u>Estimated Average Length of Haul* (Nautical Miles)</u>	<u>Cargo Factor: Cargo Tons per Deadweight Ton</u>
USSR**	2,200	11.6
Poland	2,600	10.9
East Germany	4,500	8.4
Rumania	2,500	11.0
Czechoslovakia	4,000	9.0
Bulgaria	3,300	9.8
Hungary	3,000	10.2
Albania	2,000	12.1

After the cargo factor has been obtained for each of the Bloc countries, it is necessary to derive an over-all factor for the Bloc by weighting each country's factor by the share which its cargo represents of the total Bloc cargo to be carried by foreign vessels, as follows:

<u>Country</u>	<u>Cargo to Be Moved on Foreign Vessels (Million Metric Tons)</u>	<u>Percent of Total Bloc Cargo</u>	<u>Weighted Cargo Factor***</u>
USSR	10.9	29.0	336
Poland	11.0	29.3	319
East Germany	5.0	13.3	112
Rumania	4.8	12.8	141
Czechoslovakia	3.8	10.1	91
Bulgaria	0.7	1.9	19
Hungary	0.8	2.1	21
Albania	0.6	1.6	19
<u>Total</u>	<u>37.6</u>	<u>100.0****</u>	<u>1,058</u>

* Methods and sources for the estimates of average lengths of haul will be found in 2, below.

** It has been estimated that about 4 million tons of the Soviet cargo is POL carried in foreign tankers and that about 450,000 tons is lumber carried on vessels chartered for consecutive voyages. The performance of tankers would be about 60 percent higher than the average performance of dry cargo vessels because tankers spend about 80 percent of their time at sea in contrast to about 50 percent of the time spent at sea by dry cargo vessels. Moreover, tankers and lumber carriers hired on a time or consecutive-voyage [footnotes continued on p. 10]

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The total of the weighted factors for the countries of the Soviet Bloc, 1,058, divided by 100 gives an over-all weighted cargo factor for the Bloc of 10.58. The total Bloc cargo carried by foreign vessels, 32.8 million tons (37.6 million tons minus 4.8 million tons which are estimated to be duplicate traffic), divided by the factor of 10.58 gives 3.1 million DWT,* the foreign vessel capacity needed by the Bloc in 1958.

2. Average Lengths of Haul

a. USSR

In 1957 the statement was made in the Soviet press that the average length of haul by the Soviet fleet of import and export cargoes was 1,400 miles in 1955, whereas the average length of haul by chartered foreign vessels was about 2,000 miles. 10/ Recently it has been possible to estimate from statements of various percentage increases and decreases 11/ that the average length of haul by Soviet vessels engaged in foreign trade in 1958 was almost 2,000 miles. This figure includes not only Soviet import and export cargoes but also shipments between foreign ports. Partial data concerning the direction of total Soviet seaborne foreign trade on both Soviet and foreign vessels indicate that the length of haul by foreign vessels may have increased since 1955 but not so rapidly as the length of haul by Soviet vessels. Therefore, the tentative figure of 2,200 miles has been used for the average length of haul by foreign vessels carrying Soviet foreign trade in 1958. As more data are gathered on the origins and destinations of Soviet seaborne foreign trade, it should be possible to determine more reliably the average length of haul by foreign vessels.

b. Poland

The origins and destinations of Polish seaborne trade in 1957 are available in detail as well as the shares carried and the average lengths of haul by the Polish fleet. 12/ On the basis of these data, 10.7 million tons of cargo were carried, and it is estimated that about 26.5 billion ton-miles were performed in 1957. Of this amount,

basis run one way in ballast, thus lowering performance 50 percent. These calculations have been made, but the results affect the total of 3.1 million DWT too slightly to justify including them here.

*** Product of percent of total Bloc cargo and cargo factor (as shown in the above tabulation).

**** Because of rounding, percents do not add to total shown.

* Not subtracting the 200,000 DWT of Soviet and Polish vessels estimated to have carried other Satellite cargo.

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2,625,000 tons were carried by the Polish fleet for a total of 5.9 billion ton-miles, leaving about 8.1 million tons carried by foreign vessels for a total of 20.6 billion ton-miles, or an average length of haul of about 2,600 miles performed by foreign vessels.

c. East Germany

The origin and destination of about 85 percent of East German seaborne foreign trade has been identified with fair reliability. ^{13/} The result indicates a length of haul of 4,400 miles, and if, as is possible, the missing 15 percent were Southeast Asian and/or Far Eastern cargo, the average length of haul would be close to 4,700 miles. The compromise figure of 5,500 miles has been used.

d. Rumania

Of the 5 million tons of Rumanian cargo carried by domestic vessels, about 1.5 million tons probably moved in the Black Sea on hauls of 200 to 400 miles. The remaining tonnage moved primarily to and from Northern Europe (about 4,000 miles), the Far East (about 7,000 miles), and the Mediterranean (about 1,000 miles). The average length of haul is tentatively estimated to be 2,500 miles.

e. Czechoslovakia

Czechoslovak seaborne foreign trade has been partly identified, ^{14/} and more Czechoslovak cargo than East German cargo moves in the South American and South Asian ranges (both about 6,000-mile hauls), and apparently less Czechoslovak cargo moves in the longer Far Eastern range. A tentative estimate of 4,000 miles for the average length of haul of Czechoslovak cargo has been made in comparison with the estimate of 4,500 miles for the average length of haul of East German cargo, taking into consideration the fact that the cargo carried by the Czechoslovak fleet itself was engaged in long-distance hauls.

f. Bulgaria

Bulgarian and Hungarian lengths of haul were estimated on the basis of the performance of the domestic fleets.* The fact that Bulgarian vessels were engaged in the Murmansk-Varna trade and in the South American trade (both long-distance hauls) probably weighted the length of haul by the Bulgarian domestic fleet more heavily than the length of haul by foreign vessels. The average length of haul of Bulgarian cargo carried by foreign vessels is estimated to be 3,300 miles.

* The average length of haul of the Bulgarian fleet in international trade was 3,500 miles in 1957, ^{15/} and that of the Hungarian fleet was 2,500 miles in January and February 1958. ^{16/}

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g. Hungary

Only partial and contradictory information is as yet available on the direction of Hungarian seaborne trade. Hungarian vessels were engaged only in the local Mediterranean trade, however, and the length of haul for foreign vessels therefore was estimated to be 3,000 miles, in the belief that foreign vessels carried more long-distance cargo.

h. Albania

Albanian cargo is believed to have moved primarily in three areas, to and from the Black Sea (about 1,000 miles), the Adriatic (300 miles), and the Baltic (3,300 miles). The average length of haul by foreign vessels is estimated to be 2,000 miles or less.

i. Effects of Errors

The extent to which errors in the estimation of average lengths of haul might affect the conclusions in this report can be tested. The most important average lengths of haul are those for the USSR and Poland. If the estimated average length of haul of Soviet cargo on foreign vessels is increased to 2,500 miles and if the estimated lengths of haul for the Satellites also are increased to what is presently considered to be a maximum, the results would be as follows:

<u>Country</u>	<u>Average Length of Haul (Nautical Miles)</u>	<u>Cargo Factor: Cargo Tons per Deadweight Ton</u>	<u>Percent of Total Bloc Cargo</u>	<u>Weighted Cargo Factor</u>
USSR	2,500	11.0	29.0	319
Poland	2,800	10.5	29.3	308
East Germany	5,000	7.9	13.3	105
Rumania	3,000	10.2	12.8	131
Czechoslovakia	5,000	7.9	10.1	80
Bulgaria	3,500	9.5	1.9	18
Hungary	4,500	8.4	2.1	18
Albania	2,000	12.1	1.6	19
Total			<u>100.0*</u>	<u>998</u>

* Because of rounding, percentages do not add to the total shown.

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If the total of the weighted factors is divided by 100, the over-all factor for the Soviet Bloc, therefore, would be 9.98 instead of 10.58, and the foreign vessel capacity needed would be 3.29 million DWT instead of 3.1 million DWT.*

If, however, the average length of haul for Soviet cargoes is increased to 2,500 miles but the average lengths of haul and the factors for the Satellites remain at the original estimates, the over-all factor would be 10.41, and the requirement for foreign vessel capacity would be 3.15 million DWT. Neither change is significant. Changes in the estimated average lengths of haul for Hungary and Albania would not change the over-all cargo factor for the Bloc significantly, because the combined cargo for these two countries amounts to less than 4 percent of total Bloc cargo.

3. Seaborne Foreign Trade of the Soviet Bloc

a. USSR

The changing role of foreign vessels in the carrying of Soviet seaborne foreign trade during 1950 and 1955-58 and the role planned for them in 1965 are shown in Table 3.**

b. Poland

The seaborne foreign trade of Poland is shown in Table 4.***

The carrying capacity of the Polish fleet is expected to total 1.44 million DWT in 1965, including an amount estimated to be 190,000 DWT that may be under the Polish flag but may not be Polish owned. 17/ It is estimated that these vessels will carry about 9.2 million tons of cargo, of which about 6.3 million tons probably will be Polish foreign trade. Inasmuch as Polish foreign trade in 1965 is estimated to be about 14.6 million tons, the amount left to be carried in foreign vessels probably will be about 8.3 million tons.

c. East Germany, Czechoslovakia, and Hungary

The seaborne foreign trade of East Germany, Czechoslovakia, and Hungary in 1958 is shown in Table 5.****

* Not subtracting the 200,000 DWT of Soviet and Polish vessels estimated to have carried other Satellite cargo.

** Table 3 follows on p. 14.

*** Table 4 follows on p. 15.

**** Table 5 follows on p. 16.

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Table 3

Estimated Seaborne Foreign Trade of the USSR
Carried by Domestic Vessels and by Foreign Vessels
1950, 1955-58, and 1965 Plan

Year	Volume (Million Metric Tons)			Percent by Soviet Vessels
	In Soviet Vessels	In Foreign Vessels <u>a/</u>	Total	
1950	7.1 <u>b/</u>	1.7	8.8 <u>c/</u>	80.7 <u>d/</u>
1955	8.0 <u>e/</u>	7.2	15.2 <u>f/</u>	52.6 <u>d/</u>
1956 <u>g/</u>	8.5	9.8	18.3	46.4
1957	11.9 <u>h/</u>	10.2	22.1 <u>i/</u>	53.9 <u>j/</u>
1958	13.6 <u>k/</u>	10.9	24.5 <u>i/</u>	55.6 <u>l/</u>
1965 plan	38.3 <u>m/</u>	11.8	50.1 <u>i/</u>	76.5 <u>n/</u>

- a. The difference between the total and the Soviet share.
- b. The 1956 figure divided by 120 percent. 18/
- c. The 1956 figure divided by 208 percent. 19/
- d. The Soviet share divided by the total.
- e. 112 percent of the 1950 figure. 20/
- f. 173 percent of the 1950 figure. 21/
- g. 22/
- h. The volume carried by Soviet vessels increased by 40 percent during 1957. 23/
- i. The volume carried by Soviet vessels divided by the percent carried by Soviet vessels.
- j. 24/
- k. The 1958 volume of foreign trade cargoes carried by Soviet vessels was 1.7 times the 1955 volume. 25/
- l. This figure is a plan figure. 26/ The actual performance is not yet known.
- m. Soviet authorities have stated that the volume of liquid cargo carried by Soviet vessels in foreign trade will increase by 150 percent during 1959-65 and the volume of dry cargo by 220 percent. On the basis of [] data for previous years, it is estimated that the volume of liquid cargo carried by Soviet vessels in foreign trade in 1958 was 7.5 million tons. The remaining 6.1 million tons of foreign trade cargo are assumed to have been dry cargo. Based on these figures, the volume of cargo in foreign trade planned to be carried by the Soviet maritime fleet in 1965 is 38.3 million tons.
- n. Plan figure, based on a statement that the share carried in Soviet vessels in 1965 will be from 75 to 78 percent, or an average of 76.5 percent. 27/

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Table 4

Estimated Seaborne Foreign Trade of Poland
 1956-58 and 1965 Plan

	Thousand Metric Tons			
	<u>1956 a/</u>	<u>1957 a/</u>	<u>1958</u>	<u>1965 Plan</u>
Total port traffic	<u>15,525</u>	<u>14,215</u>	<u>16,936 b/</u>	<u>20,000 c/</u>
Of which:				
Transit cargo	2,470	2,522	2,602 d/	4,500 e/
Bunkers and domestic traffic	921	979	657 f/	900 g/
Balance: Polish seaborne foreign trade h/	<u>12,134</u>	<u>10,714</u>	<u>13,677 i/</u>	<u>14,600</u>

- a. 28/
- b. 29/
- c. 30/
- d. 31/

[Redacted]

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f. This figure is a residual derived by subtracting transit traffic and foreign trade traffic from total port traffic. There is no explanation available for the drop from the level of 1956-57.

g. Estimated on the basis of the figures for 1956-57.

h. There have been small additional quantities of traffic entering and leaving via other European ports but not enough to be significant.

i. 33/

The carrying capacity of the East German fleet is expected to total more than 500,000 DWT in 1965. 34/ It is estimated that these vessels will carry about 2.1 million tons of a total foreign trade of about 12 million tons. 35/ This total would leave about 10 million tons of cargo to be carried by foreign vessels.

The performance of the Czechoslovak fleet and the seaborne trade of Czechoslovakia in 1965 can only be estimated roughly on the basis of past performance. It is tentatively estimated that total seaborne foreign trade will be about 6 million tons, of which possibly 800,000 tons may be carried by domestic vessels, leaving about 5.2 million tons to be carried by foreign vessels.

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Table 5

Estimated Seaborne Foreign Trade
 of East Germany, Czechoslovakia, and Hungary
 1958

Transit Ports	Thousand Metric Tons		
	East Germany	Czechoslovakia	Hungary
East German ports	4,070 <u>a/</u>	120 <u>b/</u>	40 <u>b/</u>
Polish ports <u>c/</u>	557	1,785	182
Hamburg	835 <u>d/</u>	865 <u>d/</u>	55 <u>e/</u>
Rijeka <u>f/</u>	0	418	190
Trieste	0	57 <u>f/</u>	50 <u>g/</u>
Belgian and Netherlands ports <u>h/</u>	60	60	50
Black Sea ports	0	700 <u>i/</u>	300 <u>j/</u>
Total	<u>5,522</u>	<u>4,005</u>	<u>867</u>

a. Estimate based on performance in 1955-57. 36/

b. Estimate based on East German port figures for 1956, showing a discrepancy of 174,000 tons that were probably transit cargo. 37/

there is transit traffic through the East German ports.

c. 38/

d. 39/

e. Estimate based on data for 1957. 40/

f. 41/

g. Estimate based on data for 1956. 42/

h. Estimate based on data for 1957. 43/

i. Data on Black Sea ports are sparse. Estimates are based on known total transit traffic through Bulgarian ports of 217,000 tons in 1955 44/ and on estimated traffic of 265,000 tons in 1958 plus a vague statement that transit traffic in Rumanian ports (probably in 1957) totaled more than 400,000 tons and was increasing. 45/ It is believed that at least 100,000 tons transit the Soviet Danube seaport of Reni. Some of the transit cargo would be Hungarian.

j. Estimate based on the statement that the volume of imports from Near Eastern countries exceeds several times the capacity of the Hungarian maritime fleet. An indication that the Hungarian fleet carried from 60,000 to 75,000 tons in 1958 is provided in January and February figures of 5,000 tons for each month and in the statement that the maritime fleet must carry approximately 15,000 tons more in 1958 than in 1957. 46/

50X1
50X1

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d. Rumania

The port of Constanta probably handles as much as 85 percent of the seaborne foreign trade of Rumania. ^{47/} It is estimated that Constanta handled about 4.5 million tons of Rumanian foreign trade in 1958, including about 3.7 million tons of POL. ^{48/} The total seaborne foreign trade of Rumania, therefore, probably amounted to about 5 million tons.

4. Liner Service

To estimate the additional vessel tonnage that the Soviet Bloc requires because of its use of liner service, it has been assumed that 30 percent of Czechoslovak and East German cargo moves by liner* and that such cargo takes, on the average, one-fourth of a liner's capacity.** Thirty percent of the vessel capacity needed by East Germany and Czechoslovakia (1,017,000 DWT), as shown in Table 2,*** is 305,000 DWT. This figure multiplied by four gives the total deadweight tonnage of the liners involved -- 1,220,000 DWT. This amount added to the capacity of tramp vessels carrying the other 70 percent of the cargo (712,000 DWT) gives a total of 1,932,000 DWT of vessels actually used, or 915,000 DWT more than the vessel capacity required by East Germany and Czechoslovakia.

* It is probable that more than 30 percent of East German cargo and less than 30 percent of Czechoslovak cargo moves by liner.

** It is believed that this figure is a maximum average and that such cargo actually averages less than one-fourth of a liner's space.

*** P. 5, above.

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