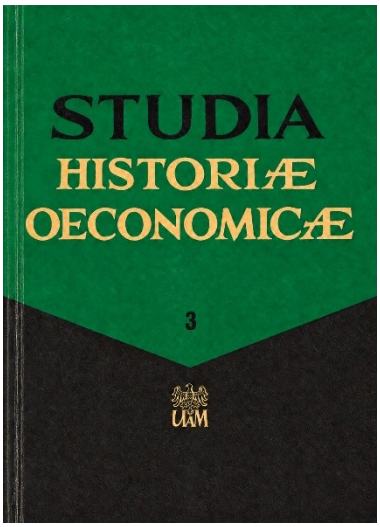

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THE SOUND TOLL ACCOUNTS AND THE BALANCE OF ENGLISH TRADE WITH THE BALTIC ZONE 1565—1646

Three books have recently been published that throw much light on the mechanism of English trade with the Baltic in the sixteenth and seventeenth centuries. R. W. K. Hinton and B. E. Supple have examined its connection with the functioning of the English economy and H. Zins has dealt with the direct connections between the ports of the two regions, such as the link provided by the Eastland Company [1]. We know that the conditions of trade in the Baltic distinguished between the English merchants and those of other nationalities, particularly the Dutch. However, the problem of the trade balance, which is important from both mercantile and contemporary considerations, has not yet been finally settled.

In studying the problem, Hinton and Zins availed themselves of the Sound Tables [2]. This publication, after a short period of great enthusiasm, was subjected by historians to sharp criticism. Supported by work on other source materials, it must still be regarded as the foundation of any work concerning northern European trade since the middle of the sixteenth century. However, it seems that the existence of the printed "abstracts" — Tables — has hindered historians from consulting the manuscript toll accounts in the Copenhagen Rigsarkivet. One of the aims of the present paper is to demonstrate that even a very limited investigation of the toll accounts and a partial comparison with the Tables might yield interesting results.

Hinton writes that "in the sixteenth and seventeenth centuries, it is

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[1] B. E. Supple, *Commercial Crisis and Change in England 1600—1642*, Cambridge 1957; R. W. K. Hinton, *The Eastland Company and the Common Weal in the Seventeenth Century*, Cambridge 1959; H. Zins, Anglia a Bałtyk w drugiej połowie XVII wieku (*England and the Baltic in the Latter Half of the Seventeenth Century*) Wrocław 1967.

[2] *Tabeller over Skibsfart og Varetransport gennem Øresund, 1497—1660*, edited by N. Bang, K. Korst, vol I, IIA, IIB, København 1906—1933; cited: Sound Tables.

generally held, the complete balance of trade in the sea-borne trade through the Sound was heavily in favour of the Baltic. In England's trade, however, we have suggested that in the earlier phase the balance was favourable to England". Zins goes even further and says that in the light of the Sound Tables before the foundation of the Eastland Company the trade balance of English merchants with the Baltic was slightly in debit but immediately afterwards it became clearly positive. At the end of the sixteenth century exports and imports were roughly equal and from the beginning of the seventeenth century to the Civil War in England, the trade balance was favourable for Britain. He has two reservations: 1) it was possible to take into account only those goods which were shipped by the English (we have no data concerning goods carried to England by Baltic and other merchants, particularly the Dutch); 2) those years which were chosen by the publishers as representative „cannot be treated as average years in England's trade with the Baltic". As a result "a rough and ready balance existed between the Baltic exports and imports of the English merchants, since there is no evidence of a major transfer of specie, which was always a regulating factor in the country's balance of payments". Hinton also has certain reservations which lead to the conclusion that westward cargoes were less correctly declared than eastward corgoes. In spite of this Hinton considers that the material is "sufficiently complete to show the range of commodities and their relative importance" [3].

So although the figures we have may not be precise, they are still very valuable, particularly considering that they were recorded in the prestatistical era. We also have different opinions on the subject of England's trade balance with the Baltic. More accurately, we can detect not so much difference between precisely formulated opinions but rather a certain timidity in drawing definite conclusions from the figures that the Editors of the Tables calculated for the total values of the cargoes declared in the Sound. However, it would be hard to disregard the source any longer if only for the reason that the critical research on it has recently made considerable progress [4].

Table I gives the prima facie value of the English, Scottish and French cargoes that were declared in the Sound in nine sample years. In contradistinction to Zins — we do not consider these figures to be representative of the Baltic trade balance of English merchants since they only refer to the prices in ports of departure. The effect on

[3] Hinton, op. cit., p. 42 f.; Zins, op. cit. p. 283,

[4] We have derived particular benefit from P. Jeannin, *Les comptes du Sund comme source pour la construction d'indices généraux de l'activité économique en Europe (XVIe—XVIIIe siècles)*, „Revue Historique", fasc. 470, 1964.

values and prices of the water space between the ports of the Baltic and England was included in the profit margin and freight charges. In connection with this E. F. Heckscher thought that the Sound Toll Accounts could not be used for research into the trade balance since the research should be conducted with reference to the port of exchange, that is, at a Baltic port, on the basis of local prices [5]. Although we agree with Heckscher in theory, we would like to demonstrate that it is now possible to make estimations which will overcome the obstacles to which he referred. The figures in Table I suggest that, unlike the Scots, French, "and others", the English were able to obtain a considerable favourable balance of exports over imports. Questions therefore arise: to what extent can the years for which data are available be considered as representative for English trade to the Baltic? to what extent do they reflect the state of the English were able to obtain a considerable favourable balance of export surplus in English trade at a time when the West as whole experienced — as is generally assumed — an unfavourable balance in its trade with the Batic zone?

There can be many different criteria and standards for judging whether a sample is typical. In this case we wish to establish whether in the years under discussion the balance was more or less active than in the years immediately preceding and following. To this end we shall make use of data concerning the export of cloths which also determined the volume of transactions.

Table II indicates that certain sample years represent their periods quite well. In view of the fact that turnover fluctuated considerably from year to year, deviations of even 20% should be regarded as slight. In fact only 1625 shows a serious deviation for cloth. However, it should be borne in mind that the years 1620—1629 saw a crisis in the cloth trade (1620 and 1621) and the war between Sweden and Poland (from 1626 onwards). During the war Elbląg and Gdańsk were cut off from their hinterland. Average exports of cloth for 1622—26 come to 46.4 thousand pieces, agreeing with the sample year. Similarly, using the data for sample years we are able to see in which direction and to what extent they deviate from the ten-year averages. But can the exports of cloth be regarded as a sufficiently precise index of turnover in the Baltic trade? Can something be substituted for it? The final columns of Table II indicate that in the years under investigation the number of ships employed in the English Eastland trade was not al-

[5] E. F. Heckscher *Öresundtullrekenskaperna och deras behandling*, „Historisk Tidskrift", Stockholm 1944. The Swedish scholar was concerned with the problem of calculating the balance of trade in the Baltic zone and not of some western country in contact with the Baltic.

Values of goods declared

	1565		1575		1585		1595	
	Eastwards E	Westwards W	E	W	E	W	E	W
Englishmen's goods								
in English ships	101	48	188	123	408	221	461	236
in foreign ships	2	97	4	106	18	69	11	246
in all	103	145	192	229	426	290	472	482
Balance*	−42		−37		+136		−10	
Scotsmen's goods								
in Scottish ships	14	21	28**	62	11	20	9	57
in foreign ships	2	4	1	18	4	13	3	38
in all	16	25	31**	80	15	33	12	95
Balance*	−9		−49		−18		−83	
Frenchmen's goods								
in French ships	11	35	10	23	10	15	29	100
in foreign ships	—	—	2	1	3	4	1	11
in all	11	35	12	24	13	19	30	111
Balance*	−24		−12		−6		−81	

* i.e. total value declared when passing through the Sound westwards substracted from the value declared eastwards.

** Evident error in the notes to Sound Tables vol. II A: 28123+1056=30979,5.

*** Another error: 78924,5+31274=116198,5.

Based on Sound Tables, vol. II A.

F. a. s. values of shiploads declared by skippers (in rixdollars). Eastward bound and westward bound shiploads balanced (English goods only: English and foreign ships)

Explanation of symbols in the Tables I—V

— does not occur

O quantity less than could be shown in the Table

· complete lack of information

ways in agreement with the variations in export of English cloth. It is advantageous so far as the sample years are concerned, but we regard the turnover of cloth as a more precise index. Cloth predominates in exports, and sometimes also in bilateral trade. This is in conformity with the opinion of both the Eastland Company merchants and the English mercantilists, who agreed that only cloth provided the means to buy Baltic goods such as linen, potash and timber, which were necessary for the English economy. It is therefore possible to put forward the hypothesis that, in the years when the export of cloth was low, the pressure on the balance of trade increased. This may be checked to a certain extent by taking the figures for sample years, and comparing Tables I and II. In 1585 when the value of exports f.a.s., that is, calculated on the basis of wholesale prices in the port of lading, exceeded

Table I

at the Sound

1605		1615		1625		1635		1646	
E	W	E	W	E	W	E	W	E	W
576	224	555	180	572	253	548	479	542	436
5	96	7	158	—	10	13	47	7	65
581	320	562	338	572	263	561	526	549	501
+261		+224		+309		+35		+48	
33	34	22	26	79	68	131	117	59	109
10	18	7	19	31	14	5	20	16	6
43	52	29	45	116***	82	136	137	75	115
−9		−16		+28		−1		−40	
11	20	7	15	14	22	25	51	·	·
1	4	3	17	—	12	4	6	·	·
12	24	10	32	14	34	29	57	·	·
−12		−22		−20		−28			

the value of imported goods calculated in a similar way, the export of cloth exceeded the mean by over 16%; in the remaining sample years in the sixteenth century the export of cloth did not reach the ten-year-average while at the same time the value of export f.a.s. did not reach the value of goods imported. Only the year 1575 appears to reflect the weakness of export trade in the corresponding ten year period. However, it should be noted that the data for 1570—73 are missing and in 1577 the export of cloth fell sharply as a result of the Gdańsk war (3.8 thousand pieces).

A way must be found of estimating the balance of trade from the figures in Table I. Elsewhere we have put forward propositions on this subject which we now wish to supplement and develop. The following items should be taken into account in determining the balance of trade between England and the Baltic zone:

a. The f.a.s. value of Englishmen's goods exported in English ships.

b. The value of goods as at (a) above but exported in foreign ships.

c. The increase in value of goods (a) resulting from the difference between the f.a.s. price and that in the port of destination, that is, the merchants profit plus freight.

Table II

Decennial Averages and Selected Years

Period	No. of years considered	Cloth			Employed ships		
		Average export ooo's	Export in the selected years ooo's	Deviation from the average in %%	Averages	Selected years	Deviation from the average in %%
1560–69	8	8,7	6,9	−20,7	64	26	−59
1570–79	6	8,8	8,6	− 2,3	128	87	−32
1580–89	10	17,8	20,7	+16,3	127	84	−34
1590–99	10	24,7	20,6	−16,7	135	182	+39
1600–09	10	33,3	28,5	−14,4	108	98	− 9
1610–19	10	31,4	33,7	+ 7,3	110	146	+32
1620–29	10	31,7	47,3	+48,5	86	92	+ 7
1630–39	8	33,8	33,3	− 1,5	149	142	− 5
1640–49	10	21,7	24,4	+12,4	131	111	−11

Sound Tables vol. I, II A. Figures for ships enclose English ships passing through the Sound westward and Baltic and Scandinavian ships eastward bound at the Sound from England. For separate figures since 1591 see Hinton, op. cit., Appendix D.

d. The merchant's profit on goods carried in foreign ships (vide b).

e. The freight paid by Englishmen to foreign shipmasters.

Items a+b+c+d—e give the net value of English exports to the Baltic. The value of imports may be obtained from the following items:

f. The f.a.s. value of goods imported by Englishmen on English ships.

g. The value of similar goods imported on foreign ships.

The sum of items f and g gives the value of imports arranged by English merchants. Their profit resulting from the difference in prices and also the profits of English shipmasters, skippers and sailors are a matter of the division of the national income in England; their value does not affect an estimate of the balance of trade. However, since a portion of the goods brought by Englishmen in the Baltic were carried on foreign ships, it is also necessary to subtract:

h. Freight paid for the carriage of goods imported on foreign ships.

If the balance of trade between England and the Baltic is to be supplemented by the transactions of foreign merchants it is necessary to add:

i. The f.a.s. value of goods exported by foreigners.

j. The freight paid to Englishmen by foreign merchants in connection with the Baltic trade. And subtract:

k. The f.a.s. value of goods imported from the Baltic by foreigners.

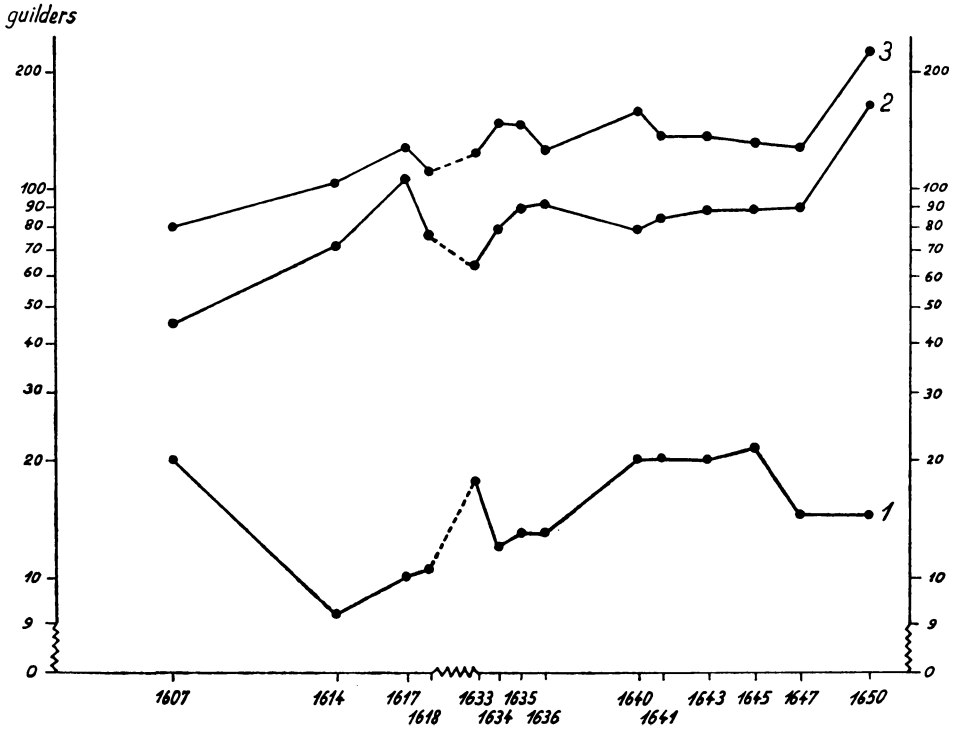
l. The increase in their value resulting from the difference in prices.

To sum up: the profits from the Baltic trade are obtained from

items a, b, c, d, i and j. The balance of trade is obtained by subtracting from this sum items e, f, g, h, k and l.

Obviously all this applies only to direct transactions between England and the Baltic zone which do not involve western middlemen, excluding in particular the lively trade route between the Baltic and England via Amsterdam. Not all the items mentioned can be arrived at to a useful degree of accuracy, while not all of them are particularly important, even though, as will be shown below, certain items (i, k) show appreciable fluctuations.

The overall f.a.s. value (a, b, f and g) can be obtained from the Sound Tables (cf. Table I) bearing in mind that they give quantities which have been depressed (particularly for exports) by the concealment of parts of the cargo from customs officers. Our knowledge of freight costs (e, h and j) is particularly poor. Recently valuable information on Dutch freight charges has been published by M. Bogucka



1. Dutch freights rates for one last of corn Amsterdam-Gdańsk-Amsterdam and corresponding prices of rye

1 — freight rates
2 — prices in Gdańsk } in Dutch guilders
3 — prices in Amsterdam

who was kind enough to make available the manuscripts of articles which were to appear and was able to throw light on a number of points. Thus freight was calculated by the Dutch by comparison with the rate for grain or salt carried over a given route. This price took into account the possibility of carrying goods in the reverse direction. If the freight was based on salt, then the merchant could carry Baltic goods in the reverse direction after unloading the salt; if the grain rate was used, payment for western goods was not taken [6]. It can be seen from graph I that the freight did not vary in proportion to the price of rye either in Amsterdam or in Gdańsk. It appears that the

Table III

Cloth in the Total Turnover of the English Trade with Eastland
(Rixdollars to the nearest thousand)

Year	Total Value of Exported and Imported Goods	Value of Exported Cloth		
		in Dr.	in %% of the Total Value of Exported & Imported Goods	
1565	149	78	*52*	
1575	311	141	*45*	*52*
1585	629	373	*59*	
1595	697	425	*61*	
1605	800	528	*66*	*66*
1615	735	524	*71*	
1625	825	545	*65*	
1635	1027	480	*47*	*55*
1646	978	512	*52*	

Sound Tables vol. II A (see Table I). Declared values only; goods brought in English ships. Using figures from Table V one would not get a very different result.

relationship is rather inversely proportional: the curve showing the price of rye in Gdańsk is almost the mirror image of the freight curve. In the six cases where the freight is cheapest (up to 13 guilders/last) it averages 13.5% of the price of rye in Gdańsk; where it is not lower

[6] It appears that the merchants of Gdańsk who accused the English privateers in 1589 made freight payments in a similar manner. At any rate they do not mention freight for their goods on the return route to the Baltic. In view of the possibility of further investigations it is worth noting that the profits which the Gdańsk merchants expected from the carriage of goods to Lisbon were considerably higher than those arrived at here for the route between Gdańsk and Amsterdam and indirectly from Gdańsk to England. See: *Elementa ad Fontium Editiones*, vol. IV, *Res Polonicae Elizabetha I Angliae regnante conscriptae, edited by* C. H. Talbot, Romae 1961, nos. 73, 80, 86. This collection of sources indicates that sixteenth century records of losses at sea are worth at least as much attention as is devoted to the fifteenth century Hanseatic protests.

than 20 guilders/last the freight averages 24.4% of the rye price. The value of the turnover can be compared with freight costs only for 1635; so we shall assume the price of freight to be one fifth of the price of rye in Gdańsk.

It is not known how freight charges were arrived at for English ships nor how much was demanded from Englishmen by the Dutch. It is unlikely that salt and grain, which were of secondary interest to the English, would have been used as a basis here. Probably the level of these rates was arrived at by methods fundamentally similar to those set out above, although it must be remembered that the freight on Dutch ships was regarded as cheap [7] while the value of the goods traded by the English was relatively high for their weight (this applies to exported cloth and skins and even to imported linen and flax). Since we require the overall cost of freight in relation to the total value of English imports and exports, this may be calculated by way of the corresponding quantity calculated for Dutch trade. The data required are available in approximate form for 1635. On the prices obtaining in Gdańsk and Elbląg the value of goods imported in Dutch ships plying to the Baltic was from 1.9 to 2 million rixdollars while export was between 2.8 and 3 million rixdollars. The rixdollar was then equivalent to 2.52 guilders which leads to a total figure of about 12.2 million guilders [8]. During this time Dutch ships carried 57 590 lasts of grain, flour and barley from the Baltic. Reckoning on a charge of 13 guilders per last the freight amounted to about 750 thousand guilders which is 16% of the f.a.s. value for the goods imported. However, we know from the graph that the rate for freight and the price of wheat did not vary together. Let us work from the figures for the year 1640 when freight was one ninth lower than in 1635. Caeteris paribus (55.6 thousand lasts of grain were imported) we obtain an overall freight of about 1.16 million guilders, i.e. 26% of the f.a.s. value. A difference of about 20% certainly fitted between these quantities so this would accomodate the freight charges. This appears fairly probable.

In some cases we require not an estimate of the freight but the difference between prices in the Baltic and English ports (items c, d and 1). So far as Gdańsk is concerned the publication of J. Pelc is available

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[7] V. Barbour, *Dutch and English Merchant Shipping*, Essays in Economic History, edited by M. Carus-Wilson, vol. I, London 1954, p. 249. Cf. also the Eastland Company document of June 1620 which holds that the Dutch with their ready money... buy 30 in the 100 better cheap than the English because the English carry cloth and other native commodities... and beside they [vis. the Dutch] have a great advantage in the... prices of their freights..." Supple, op. cit., p. 83.

[8] Estimated on the basis of the Sound Tables, vol. IIA.

and the nearest equivalent to this in the West appears to be the first volume of the work by N. Posthumus, although it refers not to England but to Amsterdam [9]. Obviously the general deductions are not relevant here but the price series are indispensable. These are relatively easier to obtain for rye, herrings and salt, while they are missing for raw materials, hides and skins and also for cloth. However for 1621 or the following year Hinton quotes a calculation made by John Ramsden a merchant from Hull [10]:

cost of one kersey in England	30s.
overheads	7s.
price in Poland	33s.9d.
loss	3s.3d.

However, "a few years ago" the same merchant received 47s.3d. In that case his profit must have been lower than 10s.3d. since in a prosperous year the prices were higher in England and the overheads (including ad valorem customs duty) were somewhat higher. The merchant was concerned to emphasize the existing trade crisis and so he no doubt drew a rather optimistic picture of the past. On the other hand he could have added something to the price he actually paid for the cloth which he was then selling. Working from the sum of 30s. quoted, the gross profit in previous years would have amounted to less than 57.5% and the net profit to less than 34.2%. At the exchange rate of 1 rixdollar to 4s. 6d. the price of one piece of kersey in Poland (in Elbląg or Gdańsk) in 1621 or 1622 would have stood at 7.5 rixdollars while in England it would have been 6.7 rixdollars. Up to a point it is possible to check this (Table IV).

It appears that the fall in quantity of English cloth exported to the Baltic was much more marked during the depression of 1620—21 than the fall in price. The price of 6.7 rixdollars obtained on the basis of Ramsden's calculation agrees very closely with the data in the Sound Tables. For prosperous years therefore we may assume an increase of about 50% in the value of cloth transported from England to the Polish ports, of which two fifths would result from freight charges and customs dues while three fifths would get the merchant as profit. This indicates costs to a value of 23.3% of the cost price, while freight can again be put at the constantly recurring figure of 20%.

[9] J. Pelc, Ceny w Gdańsku w XVI i XVII wieku (*Prices in Gdańsk in the Sixteenth and Seventeenth Centuries*), Lwów 1937; N. Posthumus *Inquiry into the History of Prices in Holland,* vol. I, Leiden 1946.

[10] Hinton, op. cit., p. 17 and ff.

Table IV

Prices of English Cloths declared at the Sound
(in rixdollars)

Year	Kerseys	Single dozens	Double dozens	Broadcloth
1615	8,15	12,45	·	40,84
1619	7 - 8	11 - 12,5	18?	·
1620	6 - 8	8 - 12,5	16	32 - 34
1621	7	11	14	25 - 40
1625	6,68	11,18	·	36,09

1615 and 1625 — weighted average prices declared at the Sound by Englishmen, based on thousands of pieces and scores of declarations. Sound Tables vol. II A, notes.

1619 - 1621 — Prices declared by seven selected English shipmasters who passed many times through the Sound. In all 36 prices, each concerning from a few to 3660 cloths. 1619 there was most probably a mistake: broadcloth (Danish: Klaede) for 18 Dr.; supposedly that was a Double dozen (dobbelt Dossin): By analogy 1620 — for 16 Dr. Rigsarkivet, Copenhague, Øresundstoldregnskaber, sub anno.

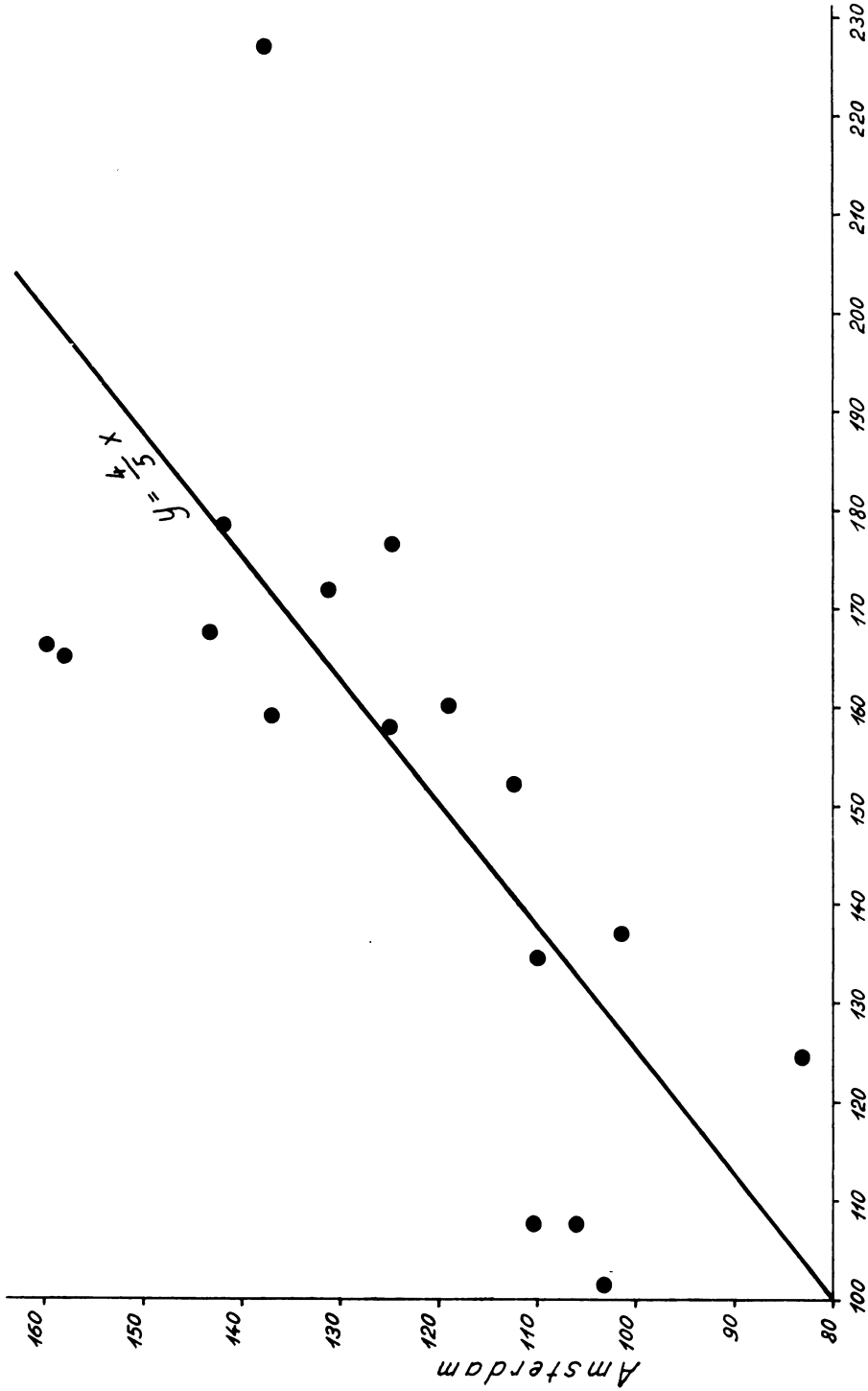
Obviously these are only guesses. At the same time we have obtained the information that the profit in the crisis years fell catastrophically: the added value did not exceed 12.5% while the profit became a negative quantity. Theoretically it may be accepted that the profit in the cloth trade was subject to long term trends which were similar to the well known fluctuations in profit in the grain trade. The considerable elasticity of demand for luxury goods such as English cloth in the Polish market [11] must, however, have caused particularly wide fluctuations in profit.

The price of rye on the Amsterdam exchange was on the average 45% higher than in Gdańsk. It should, however, be noted that when wholesale prices in Gdańsk were high the margin of profit fell, only to rise when the prices were low [12].

No doubt the position was different for some of the other goods for mass consumption such as herrings. Graph II shows the price of Mathiasherring in Amsterdam by comparison with the prices in Gdańsk. The diagonal line corresponds to the average relation between the prices in Gdańsk and Amsterdam, equivalent to ratio of 5 : 4. So here the gross profit, that is the increase in value, amounted to 25%. The provisional nature of this result should be emphasized since Posthumus also notes a dearer variety of herring (full herring); if this price series were to be taken as the basis for our calculations the mean margin would be appreciably lower.

[11] Supple, op. cit., Chapter I 4 i.

[12] Based on N. Posthumus, op. cit., vol. I, and data on the prices of rye in Gdańsk obtained from the Sound toll rates for the ffity years between 1597 and 1647 — Rigsarkivet, Copenhague, Øresundstoldregnskaber together with source notes kindly made available by Professor S. Ellehoj.



2. Prices of herrings in Amsterdam and in Gdańsk in Dutch guilders for 1 last 1624 - 1649

The prices of salt were different again: a certain positive correlation is found between the prices declared in the Sound by the English, the Scots, the French and others and the quantity of salt imported to the Baltic [13]. On the other hand, the price in Gdańsk in some years was even lower than in Amsterdam. In general, the difference in price between the two ports may be accepted as small.

Both a theoretical consideration of the elasticity of supply and demand for individual categories of goods and also the examples cited above suggest that considerable fluctuations occurred in the profit margin and freight rates. However, an order of magnitude can be obtained if we accept constant values for these quantities in relation to the value of goods in the port of lading: freight charges of 20% and profit margin of 25%.

The results are shown in Table V. The supplements and corrections introduced have given a favourable balance for English trade with the Baltic even before 1618, when the strict inspection of cargoes in the Sound was introduced. We should remember that, as Hinton writes, "westward cargoes were less correctly declared than eastward cargoes". The data in Table V, like those in Table I, may be checked by comparison with the ten year averages for the export of cloth and the number of ships employed in Anglo-Baltic trade (cf. Table II).

However, since the English balance of trade was so invariably favourable it is appropriate to raise two further points: what is the explanation of the English merchants' complaints against the regulations hindering or completely forbidding the export of currency from Enggland? And how can the activity of the English balance of trade be reconciled with the stagnation of the general balance of trade between the west and the Baltic?

Hinton has indicated that the memoranda on the Baltic trade sent to the Government by the English merchants, although obviously partisan, are a good source for the drawing of deductions. If the merchants took up the problem of the circulation of cash, it is evident that this problem was of importance for them. It is known that fluctuations in the values of exports and imports were considerable. Even if the final balance was favourable for the English they might have felt a lack of ready cash in the Baltic ports, which would immediately have constituted a serious handicap, particularly by comparison with their Dutch competitors. The overall balance of trade was made up of rather heterogeneous elements, as is shown in the graphs. Here we have the

[13] Discussed separately in a critical study on the subject of the prices noted in the Sound toll accounts.

Table V

The Balance of English Trade with Eastland, 1565 - 1646
(in rixdollars to the nearest thousand)

	1565	1575	1585	1595	1605	1615	1625	1635	1646
a. Value f.a.s. of Englishmen's goods in English ships	101	188	408	461	576	555	572	548	542
b. ut supra — in foreign ships	2	4	18	11	5	7	—	13	7
c. Increment of value (0.45*a*) = estimated difference of prices in Eastland and in England	45	85	184	208	259	250	257	246	244
d. Profits (estimated) from the goods brought to the Eastland in foreign ships (0.25*b*)	1	1	5	3	1	2	—	3	2
i. Minimum value of goods brought to the Eastland by foreigners	32	—	—	—	O	O	2	16	14
j. Freight paid by foreigners for goods brought in English ships (0.20*i*)	6	—	—	—	O	O	1	3	3
e. Freight paid by Englishmen for goods brought in foreign ships (0.20*b*): to be subtracted from the above total	O	1	4	2	1	1	—	3	1
„Net value" of exported goods	187	277	611	681	840	813	832	826	811
f. Value f.a.s. of Englishmen's goods in English ships	48	123	221	236	224	180	253	479	436
g. ut supra in foreign ships	97	106	69	246	96	158	10	47	66
h. Freight paid for goods brought in foreign ships (0.20*g*)	19	21	14	49	19	32	2	9	13
k. Value f.a.s. of goods brought by foreigners in English ships	—	1	O	—	2	—	3	21	O
l. Increment of value (0.25*k*) less freight (0.20*k*)	—	Q	O	—	O	—	O	1	O
„Net value" of imported goods	164	251	304	531	341	370	268	557	515
Net surplus	+23	+26	+307	+150	+499	+443	+561	+269	+296
Net surplus in proportion to the value of exports (%%)	*12*	*9*	*50*	*22*	*59*	*54*	*68*	*33*	*58*

Items *a*, *b*, *i*, *f*, *g*, *k* from Sound Tables vol. II A. Hinton, op. cit., Table 6, p. 38, calculates the values of all goods brought to England in Baltic ships (for 1625, 1635 and 1646 only); we prefer values f.a.s. given in notes (see *g*).

value (on the basis of prices in the ports of lading) of cargoes declared as English goods carried in both directions through the Sound. Ships (according to the names and nationalities of the skippers) are only taken into account if, in the course of a single year, they sailed through the Sound an even number of times. On the whole these are English ships since the English usually made use of the services of foreign shipmasters only for the import of goods from the Baltic. The further the points lie from the diagonal line $y=x$, the greater is the disproportion between the values of the cargoes. Where the cargo exported from the Baltic was valuable this indicates that in view of the known weakness of credit in this area it must have been necessary to cover the difference in cash. Strictly speaking these units are not altogether appropriate, since as a rule the cargo of a ship did not belong to a single merchant. Even where there was a high general favourable balance some of the merchants, for example those mainly interested in the import of linen, might have felt the lack of cash acutely. From the review of cargoes it appears that where a ship carried an appreciable quantity of cloth it was not easy to find its equivalent in the east. Several contrasted examples will be given [14]:

Jornn Peersson, Ipswich

30th May 1564 carrying from Ipswich			11th of November carrying from Gdańsk		
cloth	17962.5	rixdollars	flax	1311	rixdollars
rabbit skins	1900		ashes	1090	
lamb skins	80		iron bars	390	
fox skins	35		pig iron	140	
			rope	787—29	
	19977.5		"Kaberørp" (?)	179	
			Rød [red dye]	45	
				3942—29	

Jornn Feltorn, Northwick

30th May 1564 carrying from Northwick			30th June carrying from Gdańsk		
cloth	1575	rixdollars	pitch	279	rixdollars
rabbit skins	460		tar	60	
fox skins	6		staves	10	
	2041			349	

[14] According to Rigsarkivet, Copenhague, Øresundstoldregnskaber, sub anno.

Ridzer (Richard) Holborn, Newcastle			
19th August 1620 carrying from Newcastle		30 October carrying from Königsberg	
cloth	700 rixdollars	potash	1344 rixdollars
		hemp	654
		staves	20
		linen etc.	445
			2463

One of the graphs covering selected merchants for the years 1619—1621 enables an impression to be gained of the quantities handled by English merchants and the extent to which their transactions with the Baltic were regular. Obviously in so far as the choice of years is concerned the material shown here can only be regarded as a random sample; however in any given year we have tried to take account of all the ships sailing on the routes in question to ports in Poland and to Narva. Only a small number of ships proved impossible to identify; those that in one way or another managed to avoid customs dues or remained in the Baltic have been omitted.

We return to the question of passive balance of marine trade of western countries with the Baltic zone. If essentially the English balance is highly favourable, then correspondingly the balance of trade of other western countries at this time must have been highly unfavourable. This is noticeable in the data shown in Table I for the Scots and French, but the most important problem is that of the Dutch (Table VI). Since the latter imported large quantities of grain from Po-

Table VI

English and Dutch Export of Cloth and Import of Rye from Polish Ports

	1565/1575/1585	1595/1605/1615	1625/1635/1646
Proportion of cloth declared by English shipmasters	47.5	11.3	1.1
to that declared by the Dutch	1	1	1
	1	1	1
ut supra: rye	60.4	28.2	17.3

Calculated from Sound Tables vol. II B.

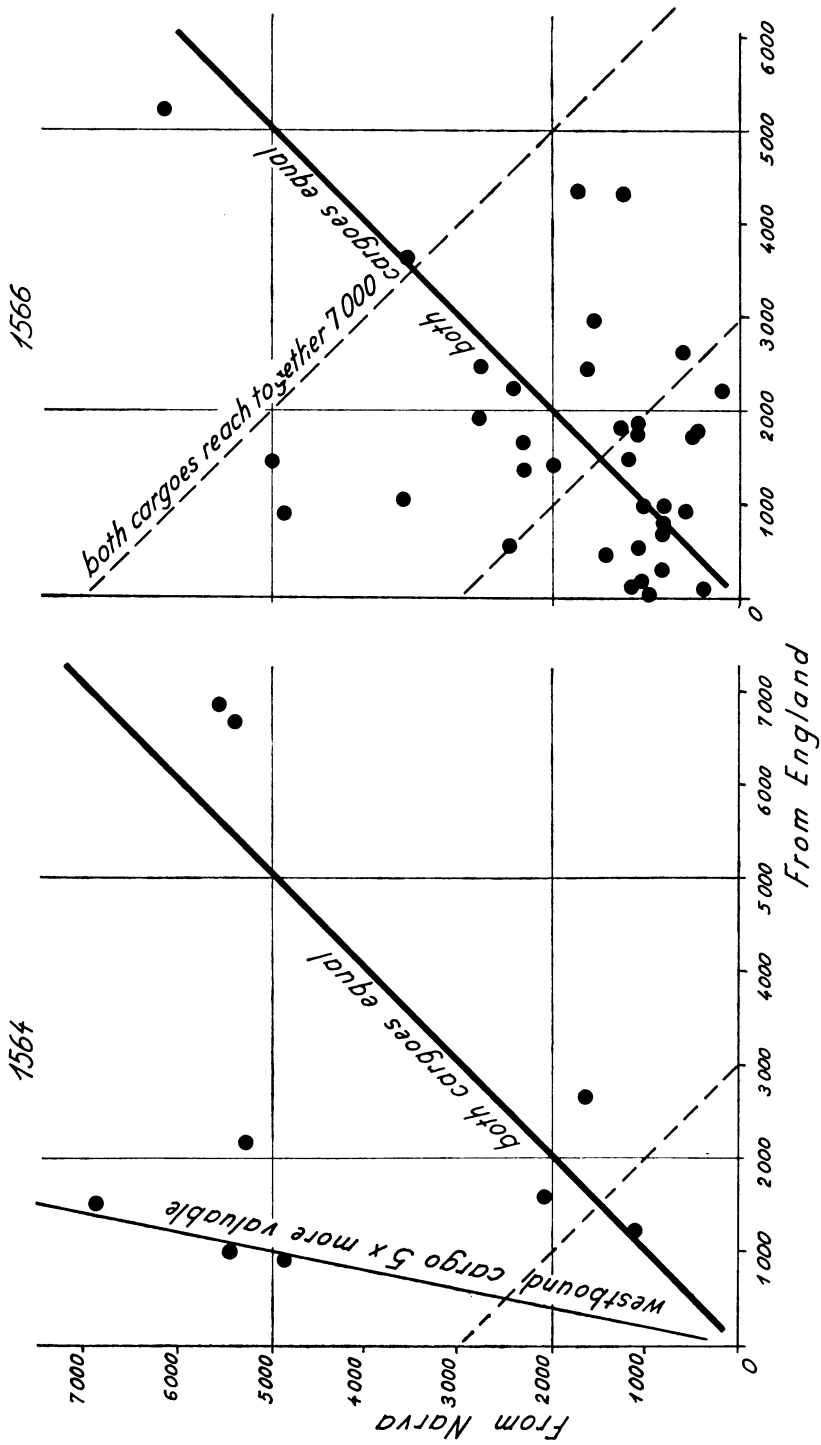
land and Livonia, but exported relatively little fabric by comparison with the English, while goods from the colonies were still in the sixteenth century of relatively minor importance, the theory of the unfavourable balance of trade appears to be consistent with the types of

goods involved in the Baltic trade. This follows from the estimations set out above but may also be supported with more accurate figures. To this end we may compare the import of fabric into Royal Prussia and Gdańsk with the export of grain, grouped according to the nationality of the skippers[15]. The comparison set out below covers only the numerical relationship between pieces of fabric and lasts of rye carried on English ships and those of the United Provinces. Since the Dutch carried a certain amount of grain bought in Prussia by Englishmen it is possible that the contrast between the figures should be reduced slightly, although English fabric was also carried.

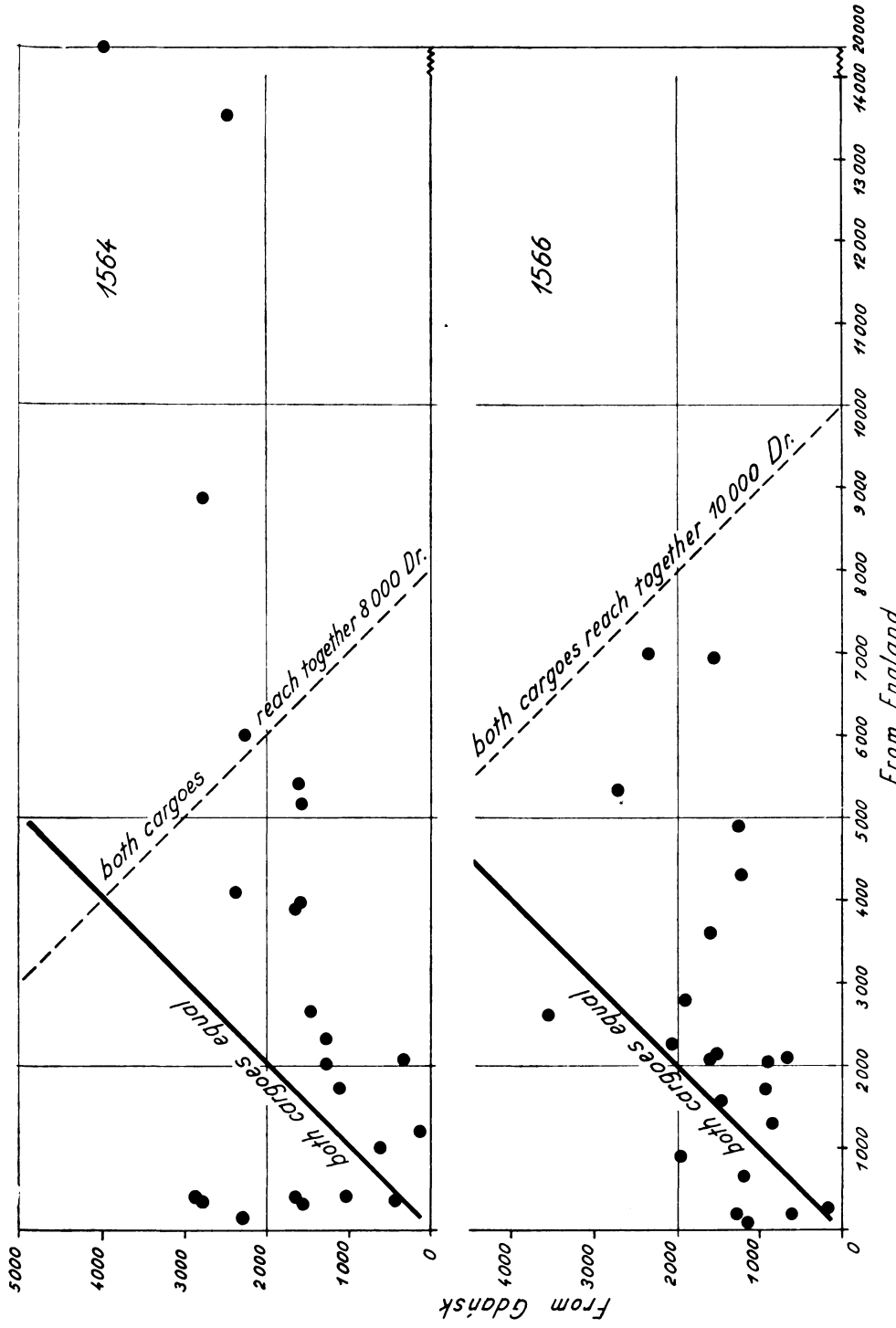
The consequences of these relationships for Gdańsk and Elbląg are a separate problem, affecting the Polish rather than the English balance of trade. The concentration of Dutch trade in Gdańsk and English trade in Elbląg must have led by the start of the seventeenth century to a striking disproportion between the trade structure of these two Polish ports: a high negative marine trade balance for Elbląg and a high positive balance for Gdańsk.

Various suggestions could be put forward as to how the high deficit of Elbląg may have been covered. The Eastland Company created an irrepeatable opportunity for this town. It is enough to compare the turnover for Elbląg in 1565, before the formation of the Company, with that during the Company's activity in this port, and with the turnover in the seventeenth century after the English had transferred their attentions to Gdańsk. This small centre was not equal to the opportunity that occurred. As may be expected, a comparison of the difference in marine trade balance between Elbląg and Gdańsk explains to a large extent why the Company was able to settle in Elbląg on such favourable conditions and why its members penetrated into the hinterland so easily. The merchant community of Elbląg was not able to take on the function of middleman with success and it was precisely such an intermediary that the English were looking for. It follows that the favourable conditions on which the English settled in Elbląg were not only the result of bargaining, the price paid by the town to attract merchants to the bay; they were an essential condition in view of the structure of the English trade and the monetary difficulties to which it gave rise in exchange on the Baltic. To what extent the English themselves penetrated to the internal market of Poland, and to what extent the functions of middlemen were taken up by Gdańsk, Elbląg and others, requires further investigation. This is an important element for the understanding of the mode of operation and the scale of profits of the Eastland Company.

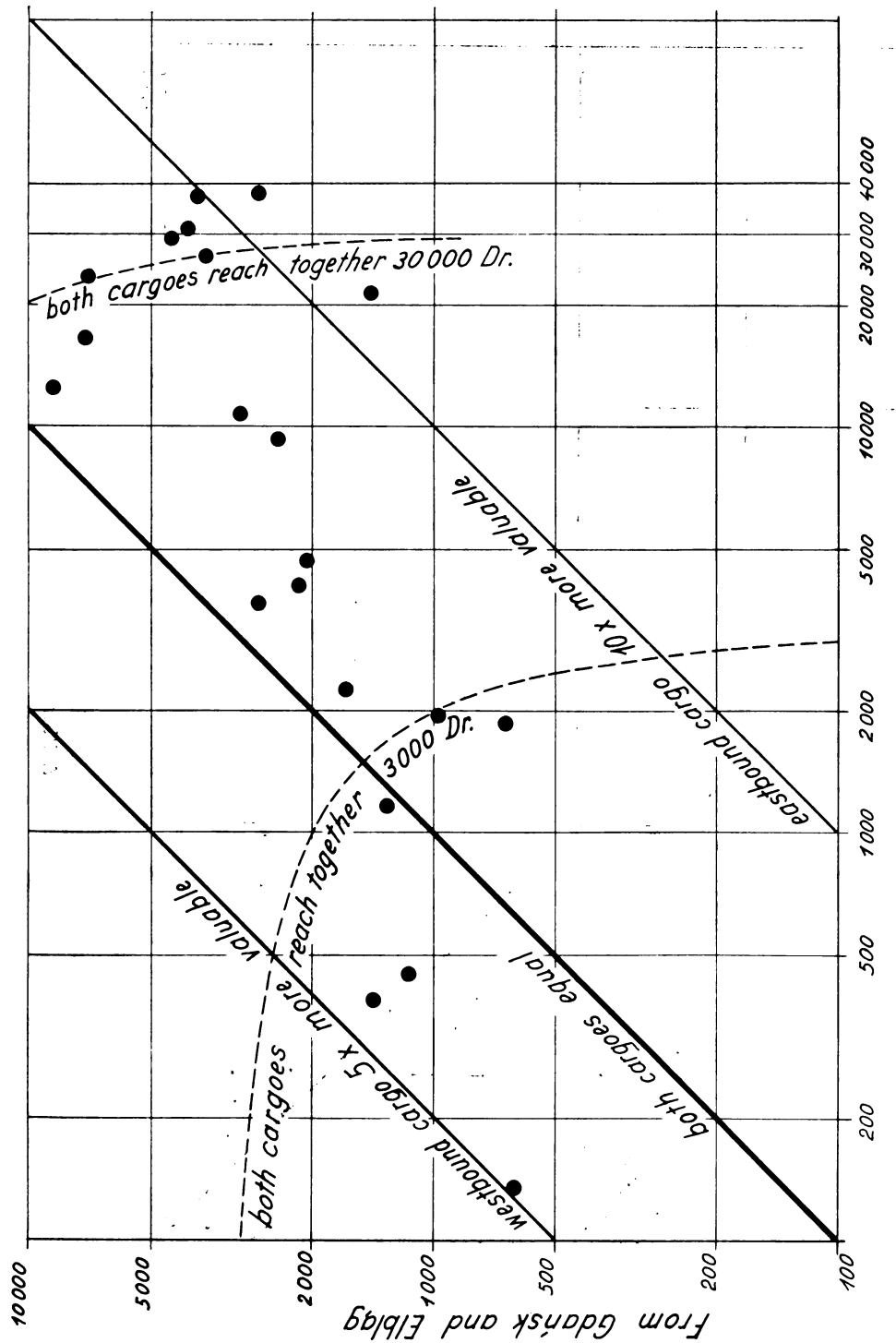
[15] Sound Tables, vol. IIA, passim.



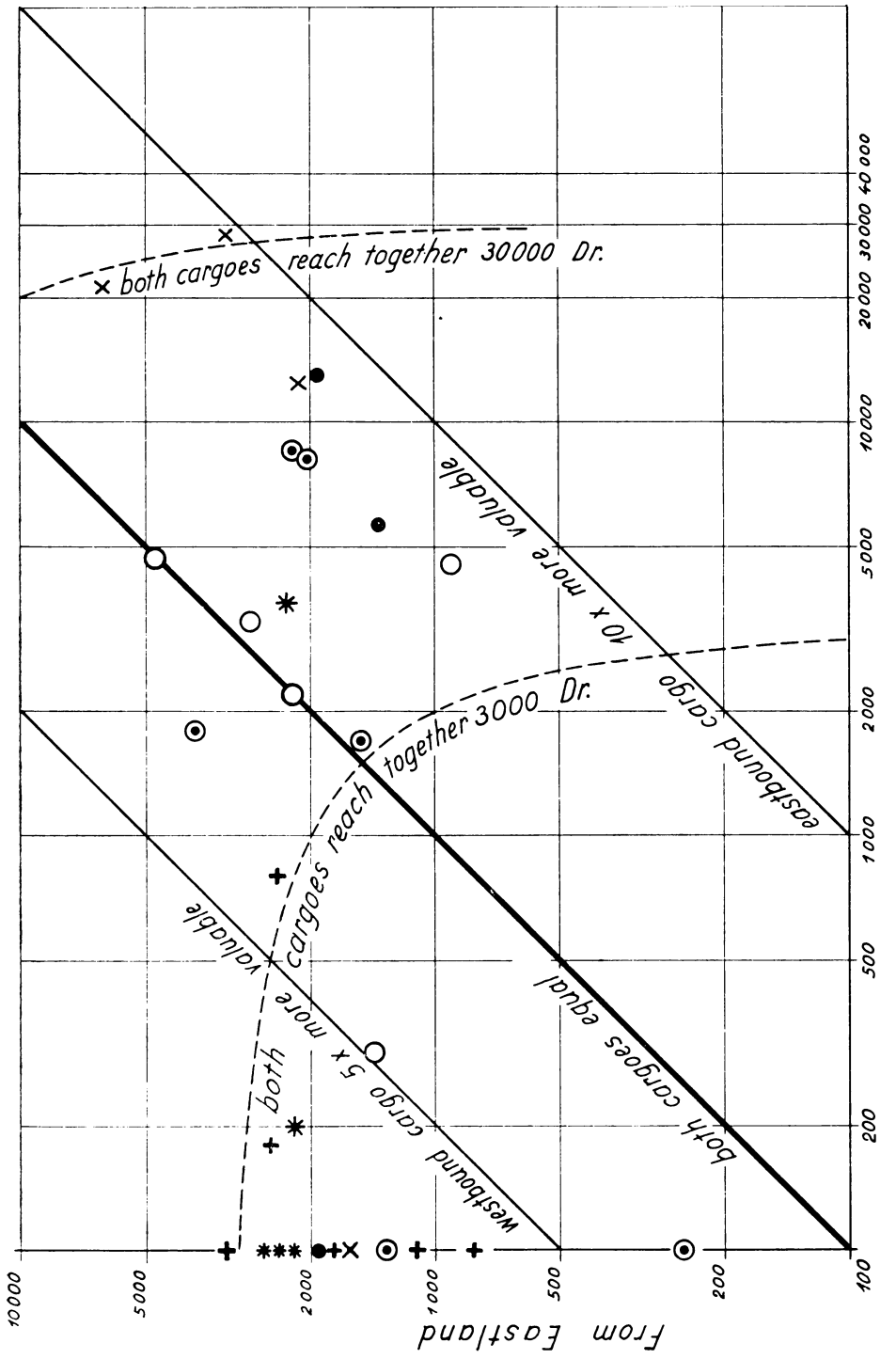
3. Ships heading for Narva and for England, 1564 and 1566
Arithmetic scale



4. Ships heading for Gdańsk and for England, 1564 and 1566
Arithmetic scale



5. Ships heading for Gdańsk or Elbląg and for England, 1619
Logarithmic two-way scale



6. Ships heading for Eastland and for England, 1619 - 1621 (Logarithmic two-way scale)
Six selected skippers only. Each sign means one skipper in all his journeys