EUROPEAN TRANSPORT CONNECTIONS WITH SCANDINAVIA AND EASTERN EUROPE - THE ROLE OF GERMAN BALTIC PORTS

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1. THE CHANGES IN FOREIGN TRADE AND TRANSPORT RELATIONS ON THE BALTIC.

The small Baltic Sea which spreads over a total area of around 370,000 km², only,but is very important as a transport medium. Around 300 Mn. t of goods are annually transported over the Baltic, which accounts for nearly 8% of the world sea trade. This is reflected in the economic structure of the countries that lie on the Baltic. As shown in Tab. 1 around 45 Mn. people live in 1.5 Bn.km² on the periphery of the Baltic.

Table 1:Basic Data for Baltic States.

State	Area (1000 km²)	Population (Mn.)	Popln. density (Inh./km²)	Coastline (km.)
Schleswig- Holstein	15.7	2.55	162	313
Mecklenburg-Vorpommern	23.8	1.96	82	340
Sweden	410.9	8.46	21	2000
Denmark	43.1	5.13	119	800
Finland	338.1	4.94	15	1200
Norway	387.0	4.21	11	2358
Poland (Baltic regions)	62.2	4.95	80	694
Russia	101.0	4.79	47	510
Lithuania	65.2	3.68	56	75
Latvia	64.5	2.67	41	475
Estonia	45.1	1.57	35	680
Total	1560	45.08	29	9345

In this area there are a lot of rapid political and economic changes taking place. Till recently 8 neighbouring countries surrounding this sea were governed by 2 different political systems and were divided into 3 economic groups.

The economic relations were therefore divided into 3 groups as follows:

Firstly the economic and foreign trade relations between the West European countries to each other, where the close relations to the Scandinavian countries were more accentuated.

Secondly the East-block countries were more oriented towards each other. This was manifested by the high degree of raw material imports into the GDR from the USSR over the Baltic route, on the other hand the trade between the USSR and Poland as well as that between Poland and the GDR was mainly overland.
Thirdly the trade between the East and the West block was not developed to a great extent. This is not in contradiction to the fact that in this relation too, large quantities of goods were transported but these were mainly raw materials.

This traditional structure is now changing. Here the effects of three European processes, which are clearly evident in the Baltic region, play a vital role.

The first is the end of confrontation between the two systems accompanied by the collapse of the socialistic system, as a result of which the political map of Europe is changing.In light of the German unification one country - the GDR - has disappeared, but on the other hand through the founding of Russia, Latvia, Estonia and Lithuania the total has increased by 10. New possibilities have opened up with the transition of these countries into a market orientation for their inclusion into the European division of labour.
Figure 1 clearly highlights the dimension of the economic gaps in East and Central Europe at the end of the last decade. These also indicate the chances and growth potential which the restructuring and a deeper involvement in the world economy can bring about. One can, in the long term, see the beneficial prospects of a unified European economy and the East-West transport corridor but at the same time it is difficult to forecast, in what steps and over which time frame consolidation and growth can be achieved.

The second process - the German unification - has clearly shown that the change from a centrally planned system to a market oriented free economy is not without its own problems. In the new German states the sudden changeover to a free economy and direct confrontation with the world markets has led overnight to a reduction in tradional economic branches and a drastic fall in employment levels. The improvement in transport conditions has a key role in this changing economy, as it is only through this that the positive factors of the Eastern part of Germany can be encashed.

The third process in respect of a unified Europe can be realised in a new dynamic of the integration concept of the EEC. With the realisation of a common market and the other goals of a unified Europe, the integration develops deeper, at the same time the activities of a string of nations demonstrate that the EEC will expand further. Sweden and Finland have decided to join the EEC and Norway is also seriously contemplating this step. This would lead to a strengthening of the existing EEC orientation of the Scandinavian countries. **Table 2** indicates that the share of export and import of the North European countries is between 44% (Finland) and 65% (Norway), supporting the conclusion, that the traffic on the Baltic would grow more rapidly, not only in relation to the growth of the GDP but also to the increase in total foreign trade of these countries.

Table 2 : Foreign trade commitments of Scandinavian countries with Europe for 1989

Country	FLow	Total (Bn.US$)	Share of country Groups. (%)		
			EEC	EFTA	COMECON
Sweden	Export	51.6	53.3	19.1	2.2
	Import	49.0	55.0	17.0	3.5
Danmark	Export	28.1	50.0	24.2	2.5
	Import	26.7	50.0	22.8	2.9
Norway	Export	26.9	65.2	16.3	1.2
	Import	23.5	64.1	20.9	2.4
Finland	Export	23.3	43.9	20.2	16.2
	Import	24.6	44.5	19.0	14.0

To summarise, these processes are based on the facts that the political boundaries and the economic blocks which were limited and resulted in regional onesidedness are being overcome.This can, as a result of the flourishing economic ties between the countries on the Baltic, result in it's becoming one of the important economic regions of Europe. It would certainly take some time before the East European countries in the region achieve the same level of foreign trade as exists between the West European and Scandinavian countries.

2. STRUCTURAL CHANGES IN TRAFFIC PATTERNS AND THE ROLE OF FERRY SERVICES.

Around 60% of the existing annual traffic of 300 Mn. t on the Baltic has it's origin or destination outside the region. Table 3 shows that the internal traffic is comprised, on one hand of the cabotage particularly in Sweden, Denmark and Finland and on the other, of international traffic between the Baltic nations.

The external traffic is mainly in terms of raw materials and the internal is dominated by finished and half finished goods. This is to the extent of 75 - 80% in Finland and Sweden and 60 - 65% in Denmark and Norway of the total imports and exports. This is one of the reasons why in the Baltic region traditional sea transport has been continiously replaced by ferry and Ro/Ro services.

Table 3 : Sea - Traffic on the Baltic 1989

Traffic details	Total (Mn. t)
1. Total traffic	* 300
2. External traffic	* 180
3. Internal traffic	* 120
cabotage Sweden, Denmark, Finland	40
4. International traffic between the Baltic countries	77
4.1. Scandinavia - Germany	25
-- Schleswig-Holstein	17
-- Mecklenburg-Vorpommern	8
4.2. Scandinavia - East Europe	27
-- USSR	21
-- Poland	6
4.3. Intra - Scandinavian	16
-- Sweden - Denmark	9
-- Sweden - Finland	6
-- Finland - Denmark	1
4.4. Germany - East Europe	5
4.5. Intra - East Europe	4

note: * approximation

The demands on the quality of transport services has been constantly increasing as the value of the goods increased and more and more industries switched over to the logistical approach and Just-In-Time production methods.

In overseas transport this resulted in containerisation. Under the prevailing conditions on the Baltic Sea - marked by shorter stretches of sea transport - it is worthwhile to ferry the vehicles, hence minimising the transfer or unloading time and costs.

Road transport dominates the overland transportation at both ends and it is logical that a greater portion of the ferry and Ro/Ro traffic is made up of road transport vehicles. On the German transport scene over the Baltic, 40% of the goods are transported by rail, 30% by road, correspondingly 30% by rolltrailers.

The Baltic does not cater to goods traffic alone. The increasing mobility of the people also makes up for a yearly passenger traffic of millions. The tourists form a major portion of such traffic and businessmen form the other. Another specific element of such travel is the opportunity for "Duty Free" shopping.

Today the Baltic is crisscrossed by a network of ferry services as evident in figure 2. Next to transport connections to the North Sea one can roughly differentiate between the following traffic zones: traffic between the Danish islands, Sweden, Norway and the coastal regions thereof; the north-south connection on the Western Baltic; network between Finland and Sweden at the entrance of the Botnish gulf; connection from the Danzig bay to Sweden, Finland and Latvia and finally the long routes in the east-west crossing. A few stray ferry services exist so far between Russia and the new Baltic States on one hand and Sweden and Finland on the other. It is a foregone conclusion that awaited economic prosperity in the East European countries would foster the speedy growth of new ferry connections between these countries and their Scandinavian neighbours.

3. GERMAN BALTIC PORTS AS TRANSIT CENTRES IN VIEW OF THE GERMAN UNIFICATION.

The German Baltic ports play a dominant role for the traffic between West Europe and the Scandinavian countries. Today this entails around 28 Mn. t annually, of which nearly 80% is transported over the ferry routes.

In this regard like the ports in the northern countries the numerous German ports on the Baltic compete with each other. The important ferry connections are schematically potrayed in figure 3.

Till 1990 the competetive relations between the corridors of transport were stable, which have been catapulted into motion by the German unification. The ports in the German state of Mecklenburg-Vorpommern are competing today with those in the state of Schleswig-Holstein on an equal political footing for the traffic on the Baltic. Hence new ferry services have started between Rostock at one end and Gedser in Denmark and Trelleborg in Sweden at the other. The share of both the states on the ferry services will naturally shift.

This is evidenced already in the passenger ferry sector by the fact that in 1989 out of 13 Mn. passengers to Scandinavia around 1 Mn. took the ferry from Mecklenburg-Vorpommern. This figure reached around 2.7 Mn. passengers in 1991 who took the ferry from Saßnitz, Rostock and Warnemunde (all in Mecklenburg-Vorpommern), a staggering increase in just a span of two years.(Tab.4.)

The distribution of transport between the two German states is being hotly debated. The forecasts must be invariably based on geographic facts as regards transportation. These indicate that the ports in Schleswig-Holstein are geographically closer over the sea to Denmark and West Sweden.

The so called "birds' line of flight" is particularly favourable in this regard. On the other hand the places to the east of Gothenburg lie closer to Mecklenburg-Vorpommern.

The lines of equal inland distances are highlighted in figure 4. The ports in Schleswig-Holstein are geographically favourable for all traffic emanating from and destined for places lying to the west of Gothenburg. Vice-versa the ports in Mecklenburg-Vorpommern are favourably placed to serve even the hinterland lying west of the line of equidistance covering southern and

Tab. 4: Cargo and passenger ferry traffic between German and Scandinavian Baltic ports 1989 and 1990/91*

Scandinavia		Schleswig-Holstein			Mecklenburg-Vorpommern			Total
		Lübeck-Travemünde	Puttgarden	Kiel	Saßnitz	Warnemünde	Rostock	
1. Sweden								
- Mn. t	1989	4.9	-	0.5	4.8	-	-	10.2
	1991	5.6	-	0.4	3.6	-	-	9.6
- Mn. Passengers	1989	1.2	-	0.8	0.5	-	-	2.5
	1991	1.1	-	0.8	1.0	-	-	2.9
2. Denmark								
- Mn. t	1989	1.1	4.3	.	-	0.2	-	5.7
	1991	0.6	5.3	-	-	0.1	0.3	6.3
- Mn. Passengers	1989	1.4	7.6	0.6	-	0.4	-	10.0
	1991	0.8	7.8	0.6	-	0.9	0.7	10.8
3. Finland								
- Mn. t	1989	2.7	-	-	-	-	-	2.7
	1991	3.3	-	-	-	-	-	3.3
- Mn. Passengers	1989	0.2	-	-	-	-	-	0.2
	1991	0.2	-	-	-	-	-	0.2
4. Norway								
- Mn. t	1989	-	-	0.4	-	-	-	0.4
	1991	-	-	0.4	-	-	-	0.4
- Mn. Passengers	1989	-	-	0.4	-	-	-	0.4
	1991	-	-	0.4	-	-	-	0.4
5. Total								
- Mn. t	1989	8.7	4.3	0.9	4.8	0.2	-	19.0
	1991	9.5	5.3	0.8	3.7	0.1	0.3	19.7
- Mn. Passengers	1989	2.9	7.6	1.8	0.5	0.4	-	13.2
	1991	2.2	7.8	1.8	1.0	0.9	0.7	14.4

Note: * Schleswig-Holstein: 1990; Mecklenburg-Vorpommern: 1991

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western economic regions in Germany and Europe for the traffic with south and east Sweden, Finland, Russia and the new Baltic states. Thus leading to an overlap of the potential hinterland regions over each other to a great extent.
Moreover this geographic coherence can only function when the quality of road and rail inland connections is comparable. This not being the case a lot needs to be done to improve the transport infrastructure in Mecklenburg-Vorpommern, which is lacking to a great degree. There exists an electrified rail network connecting the south which is being presently renovated. The road network connecting the ferry port on the island of Rügen is inadequate, whilst a highway connects Berlin to the port in Rostock.
A coastal highway is planned under the framework of **"Transport Project for the German Unification"**, which will connect Lübeck to the highway between Berlin-Stettin. Over and above this an efficient road and rail network directly connecting the west German core areas via Hannover/Wolfsburg need to be built.

4. TRAFFIC WITH NORTH AND EAST EUROPE - CHALLENGES FOR EUROPEAN TRANSPORT POLICIES.

Not only the ever increasing trade and transport streams in the Baltic but also the significant changes resulting from the explained political and economic processes, set up new challenges for European transport policies.
Out of a plethora of questions three are tackled here as being of utmost importance.

Firstly the transport connections to north and north-east Europe demand greater attention of all international organisations in Europe dealing with transportation. Of great relevance here is the shape of the transport infrastructure in future. The transport connections in these regions have to be amalgamated in the total European transport network.
This concerns in one instance the rail connections with the problem of incorporating these into the high speed European rail network.This scheme of the EEC in it's present form is not comprehensive as it does not tackle the changes which have already occurred and those which are forseeable.
In the other instance it concerns also the total European road network which connects West and South Europe to North and Northeast Europe. Here similar views hold good, so that new rethinking is urgently called for.

Secondly the development of the modal split for these transport connections throws up similar questions as in continental Europe- the increasing tendency

towards road transport is in contradiction to the demands of preserving an ecological balance. Rail transport would see a further decline if the existing framework continues. The Scandinavian countries have to an extent gone further ahead than the countries on the Continent in the matter of segregating the railway from the rail network. They must be quickly incorporated in the plans of the EEC. Moreover, the modal related ecological costs must be allocated to the mode. Due thought should be given also to the building up of a network of Goods Transport and Distribution Centres in order to promote a combined transport system.
The short sea transport plays an important role in these regions. The ecologically acceptable sea transport can play a greater part than it does at present in the traffic between the Baltic with countries on the North Sea, Atlantic and on the Mediterranean. The flexibility of sea transport is of great interest which allows it surely to transport greater volumes of cargo, for example, aid to the new Baltic countries in a short span of time.

Thirdly the problem of fixed crossings must be tackled which are close to the first two points made.
The connection between the Danish islands Seeland and Fünen across the Great Belt is now under construction. This will improve the connections within Denmark but will have only a marginal effect on European transport connections.
A fixed connection between Sweden and Denmark via Öresund, which is planned to be operational by 2000 would strenghten the position of the transit road via Denmark along the "Birds' line of flight".
Studies are underway for a third project traversing the Fehmarn Belt between Germany and Denmark. Once realised this project would have a telling effect on the existing ferry connections.
A number of interesting questions come up in regard to this proposal, eg. the effects on the ecology or the foreseen private financing of the project.

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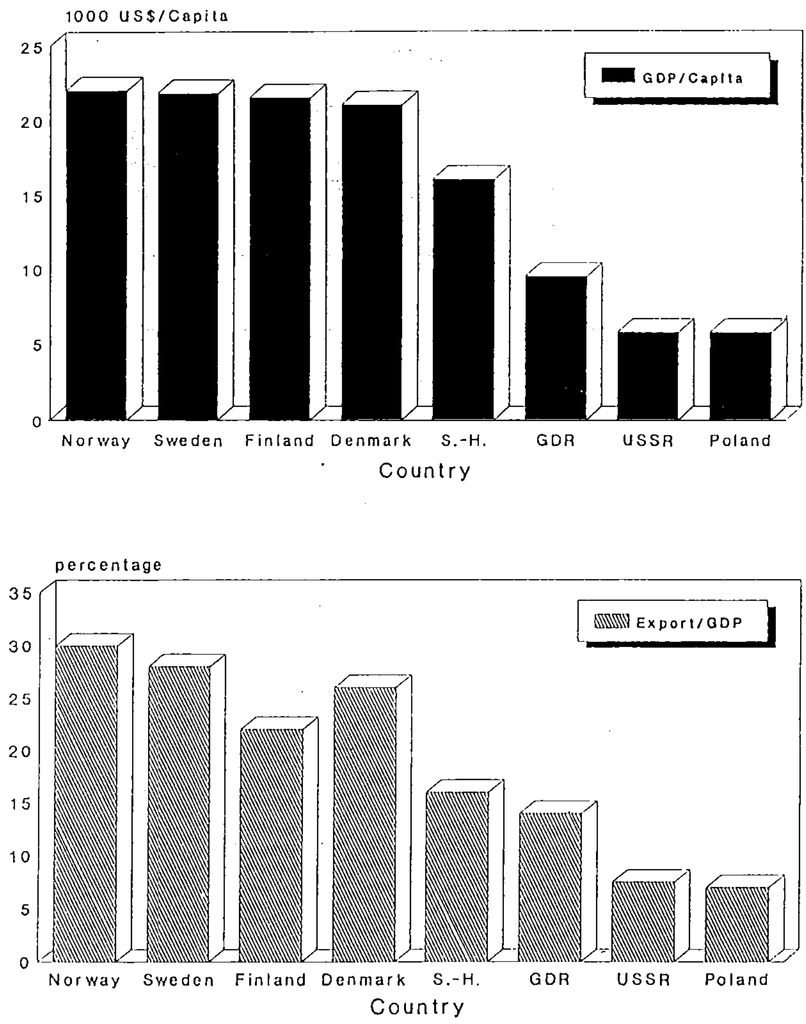
The Baltic region and transport connections with the countries in North and Northeast Europe raise many complex and difficult questions pertaining to transport, which need to be studied and analysed thoroughly.
Last but not least I would like to recommend,therefore that a forum of transport experts interested in this topic, be formed, for joint research as well as for co-operation in the fields of training and education.

Fig. 1: Productivity levels and foreign trade of Baltic states 1988



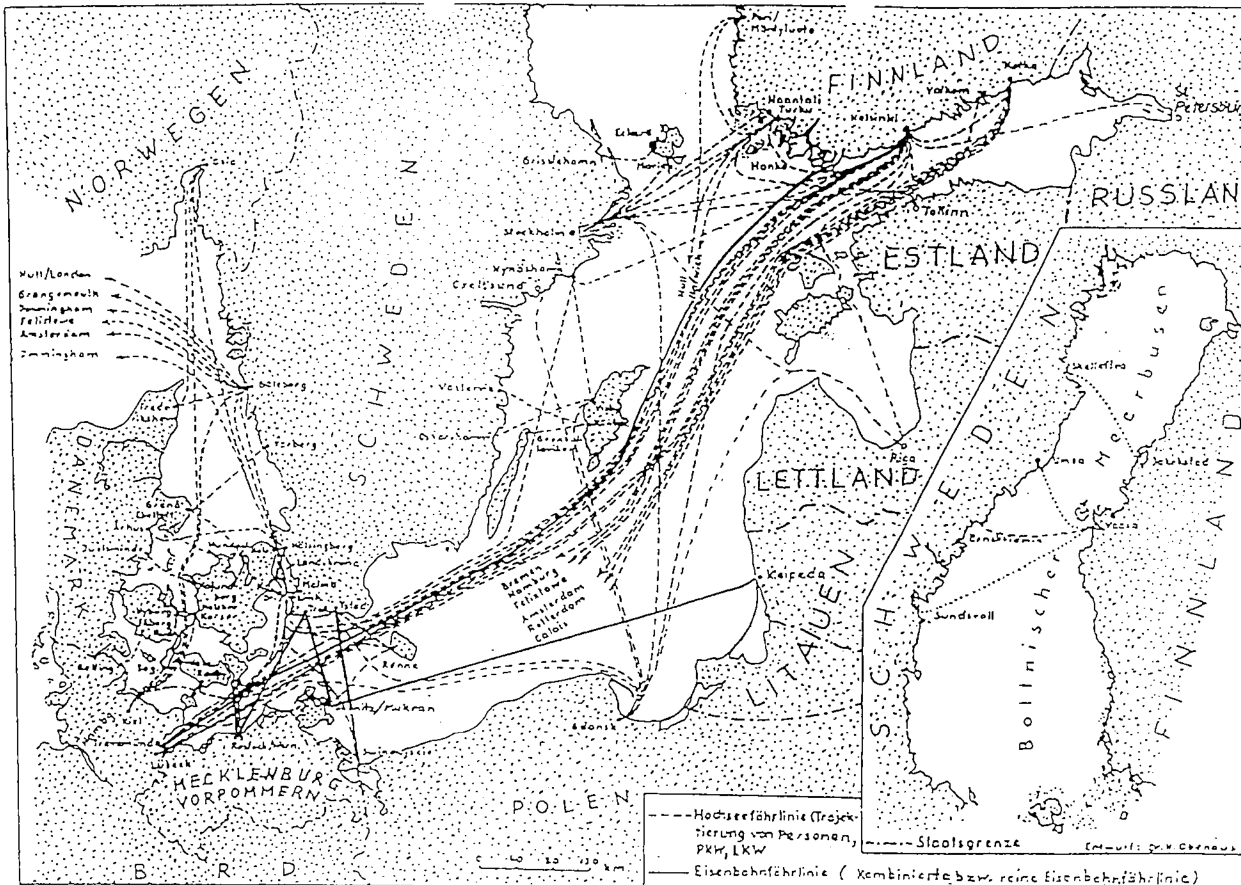


Figure 2: Baltic ferry connections

Figure 3: Important ferry connections between German ports on the Baltic and Scandinavian countries

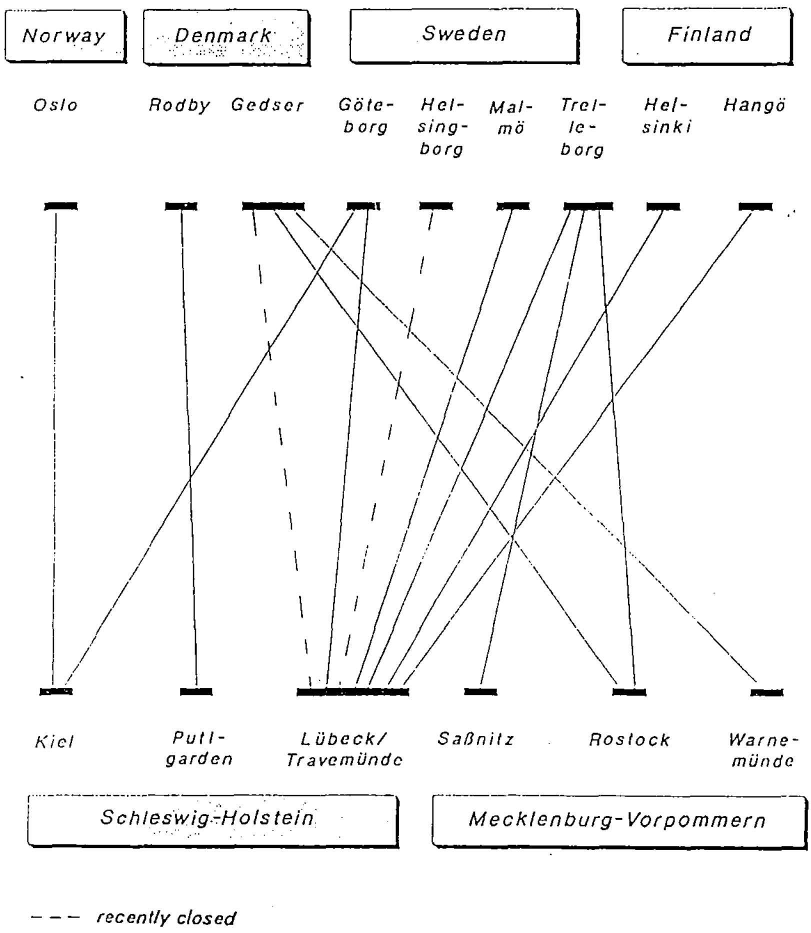
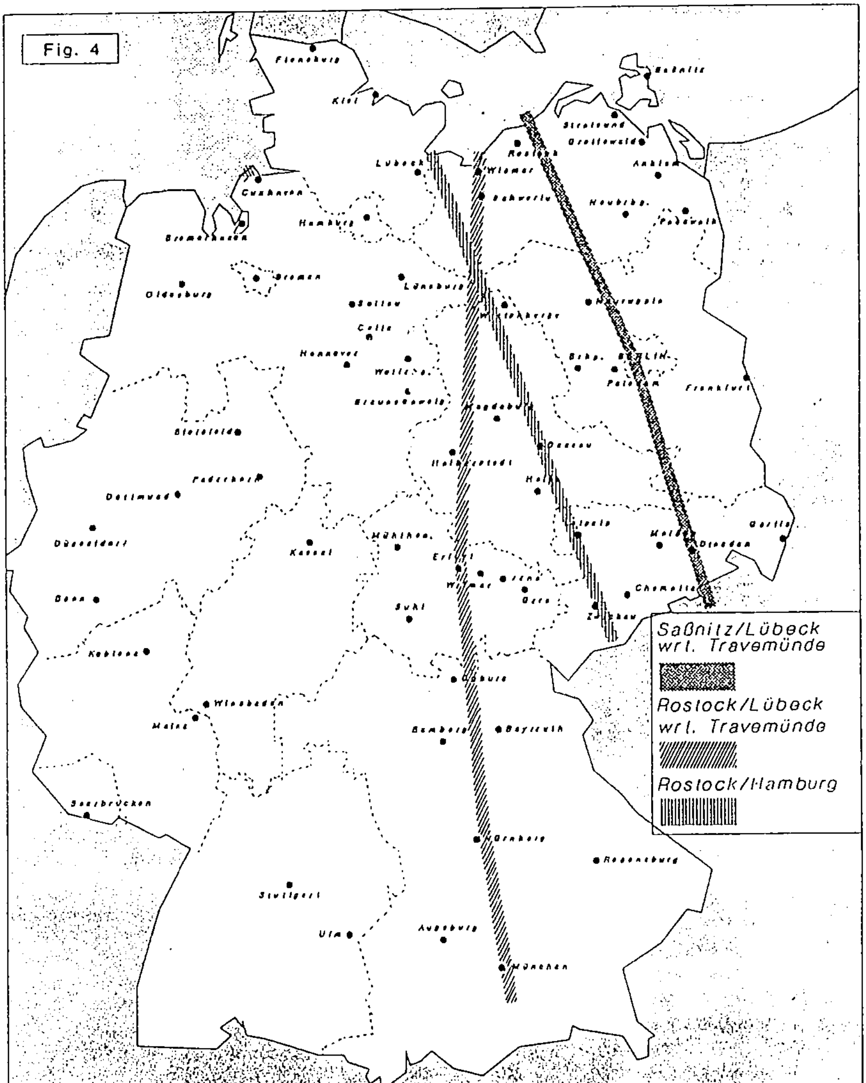


Fig. 4



Lines of equidistance among selected ports