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# Diagnosis of Malmö port competitiveness and market opportunities in the light of the Öresund fixed link and the joint venture with Copenhagen port

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# DIAGNOSIS OF MALMÖ PORT COMPETITIVENESS AND MARKET OPPORTUNITIES

## -In the Light of the Öresund Fixed Link and the Joint Venture with Copenhagen Port-

By

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**Morocco**

A dissertation submitted to the World Maritime University in partial fulfilment of the requirement for the award of the degree of

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in

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1999

# Declaration

I certify that all the material in this dissertation that is only my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the university.

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# ABSTRACT

Title of Dissertation: **DIAGNOSIS OF MALMÖ PORT COMPETITIVENESS AND MARKET OPPORTUNITIES -In the Light of the Öresund Fixed Link and the Joint Venture with Copenhagen Port-**

Degree: **MSc**

The research paper proposes a diagnosis of both Malmö port's internal and external environments, by identifying the interactions between those two aspects in shaping port's operations, performances, and strategies. Special emphasis points out the port's competition aspects in the light of evolving market changes and mutations. This supposes an appropriate and positive use of the diagnosis approach, and a broad conception and analysis of market condition and changes.

With that respect, the study addresses three broad areas of reflection and analyses:

- A diagnosis of the internal environment of Malmö port through an overview of technical, legal, organisational, financial, commercial, and marketing aspects of the port organisation.
- A diagnosis of port's external environment in the light of current market condition and future changes. Beyond the SWOT analysis, the study invokes market segmentation and port market share, and looks upon port responses to the predicted market and traffic changes.
- A reflection on the port's joint venture with the port of Copenhagen, both as a strategic response to market changes under the future Öresund link, and a new tool in ports' co-operation and partnership.

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# LIST OF ABREVIATIONS

AB: Aktjebolag: Co Ltd.

Adm.: Administration

Art: Article

BPO: Baltic ports' Organisation

CIF: Cost-Insurance- Freight

CMP: Copenhagen Malmö Port

Cont.: Container(s)

CR: Current Ratio

DKK: Danish Crones Currency

DWT: Dwelling Time

EBRD: European Bank for Reconstruction and Development

EC: European Commission

EDI: Electronic Data Interchange

EFTA: European Free Trade Association

EEA: Economic European Area

ESPO: European Sa Port Organisation

Exp.: Export

EU: European Union

FDI: Foreign Direct Investment

FF: Freight Forwarders, Freight Forwarding

FLT: Forklift Trucks

FOB: Free-On-Board

FSI: Federation of Swedish Industries

Hrs: Hours

GATT: General Agreement on Tariffs and Trade

GC: Gantry Crane

GDP: Gross Domestic Product

GNP: Gross National Product

Imp: Import

LOA: Length Over-all

L-T: Long-term

IBRD: International Bank for Reconstruction & Development: World Bank

IMO: International Maritime Organisation

IPP4: Improving Port Performance 4

ISA: Institute of Shipping Analysis

IT: Information & Technology

Max: Maximum

Min: Minimum

NGO: Non- Governmental Organisation(s)

JV: Joint Venture

OECD: Organisation for Economic and Co-operation Development

OD- Matrix: Origin-Destination Matrix

R&D: Research and Development

Ro-Ro: Roll-on /Roll-off

ROI: Return On Investment

ROTA: Return On Total Assets

ROE: Return On Equity

SAF: Swedish Employers' Federation

SFA: Swedish Freight Association

SEK: Swedish Crones Currency

SPSA: Swedish Ports and Stevedores Association

S-T: Sort-term

SWOT: Strength, Weaknesses, Opportunities, and Threats

TEU: Twenty-Foot Equivalent Unit

UK: United Kingdom

UN: United Nations

UNCTAD: United Nations Conference on Trade and Development

US: United States

USD: US Dollar Currency

VAT: Value Added Tax

WMU: World Maritime University

WTO: World Trade Organisation

# Introduction

## I- Diagnosis Concept

The diagnosis function, besides the dimension of the analysis, differs from the auditing and controlling ones with respect to the normative and objective frameworks. While the audit & controlling analyses act in "postériori" and refers to pre-established norms and references, the diagnosis approach analyses the organisation's structure and identifies its competitive potentialities with regards to its declared mission and future objectives **(Marion, 1993).** Three important aspects point out the demarcation lines between the diagnosis analytical approach and other forms of analyses:

1. *Diagnosis Scope*: It concerns all firms' aspects from the traditional organisational, financial, and social sets to the more recent ones such as IT & information aspects. Furthermore, the diagnosis concept offers a unique opportunity of linking and gathering all those aspects in a broader and unified approach. It strengths the interactions and flows between different functions within an organisation, and tries to find out how and in which extent those functions intersect between each other.

2. *Methodology*: The diagnosis methodology involves a connection of both the analysis and synthesis approaches. While the first refers to a breakdown and segmentation process by reaching the smaller possible homogenous units, the second consists of the totally opposite mechanism by gathering the dispersed small functions to the possible larger ones for the purpose of a broader vision and perception to the organisation's structure. The usefulness of the diagnosis reasoning resides in its ability to gather the two approaches and take advantage of the benefits of each of them.

3. *A Positive Approach*: The diagnosis concept is based on a positive approach through an emphasis of the specificity of each situation as such, whereas other analytical tools are more normative and supposed a pre-designed norm according to which every organisation should refer.

## II- Diagnosis and Port Organisation

The diagnosis of a competitive function in a given firm supposes an analysis of both the internal and external environments of the organisation. In order to analyse such function, one should study each case separately and try to find out the objective proper norms, either through internal historical performance comparison, and/or appropriate benchmarking methods.

In the sea port organisation, such an analysis should take into account all eventual factors influencing, in a way or another, port competitiveness and market share. Those elements are particularly important considering both the complexity of the port internal environment and the composition and nature of its external ones:

- In the internal environment, the permanent preoccupation for reaching a more efficient and effective position in a complex and multi-functional port organisation requires more than a traditional and simple controlling or auditing analytical tools.
- In the external environment, the heavy impacts of external factors on a seaport in a large competitive and totally dependent market entails a deep analysis of port responses and policies in face of continuous changes of exogenous and complex variables: market fluctuations and trends, public economic policies, future legal aspects, etc. Thus, a systemic and methodological analysis of both endogenous and exogenous variables imposes itself for a strategic and long-term management and planning.

## III- Malmö Seaport Case

Malmö seaport is a port with important activities in cargo handling and port operation services and facilities. With that respect, it is proposed a diagnosis of port competitiveness and market changes taking into account the following essential elements:

- The future Öresund link that will permit an extension of the current market to a larger and broader area, but may threat the performance of different port activities.
- The ongoing integration of the Baltic Sea region as a possible larger port hinterland with both new threats and opportunities.
- The future joint venture with the port of Copenhagen conceived as a strategic port response to market changes and a new form of co-operation in the port sector.

## IV: Topic Description and Research Methodology

The research project consists of the diagnosis of current and future Malmö port's competitiveness and market share in the light of evolving market changes and mutations. That requires a positioning of the concerned port within its respective market environment, and an interacted analysis/synthesis study of various related internal and external aspects. Concretely, it supposes the following:

* A continuous reference to theoretical works related to the port and transport sectors as developed by scholars, professionals, and specialised organisations,
* An empirical diagnosis of the port functions through a consistent interaction with the port strategic and day-to-day management,
* An identification of port hinterland and market share through the involvement of the current and potentially future competing actors in the port and transport sectors,
* An analysis of market changes and future mutations with respect to port's strategic responses and future vision, and
* A reflection on the joint venture co-operation between Malmö and Copenhagen ports with regards to common backgrounds and practical functionality and implementation.

# Chapter I:

# Overview of Malmö Port: Diagnosis Approach

## I: Technical Description

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I.4: Ferry/Passenger Terminal

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In this chapter, the author aims to give a general overview of the port of Malmö from the diagnosis approach rather than the descriptive one. The diagnosis function, besides the dimensions of the analysis, differs from the auditing and controlling ones with respect to the normative and objective frameworks. While those analyses act in "postériori" and refer to a pre-established norms, the diagnosis approach analyses the organisation's structure and identifies its competitive potentialities with regards to its declared mission and planned objectives. **(Marion, 1993).** Particularly in the port sector, the diagnosis approach should be widely adopted instead of a simple normative analysis. The complex organisational pattern of the seaports and the diversity of assessment approaches of port performances, limit seriously the reliability of the normative analysis and require a real reference to the diagnosis approach. With that respect, the overview will focus more on the general aspects of the concerned port by offering to the reader comprehensive and concise information about Malmö port. Thus, the information needed should concern the description of the port organisation from the technical, legal, organisational, and financial aspects, the identification of the port customers and competitors, and the analysis of its performances and productivity indicators. For the purpose of the dissertation's adopted methodology, it is intended in this chapter to perform a more "static" diagnosis based on the current and nearly past situation rather than a "dynamic" one involving future market expectations. One simple and convincing reason behind such an approach is the further discussion of the port response to market changes and mutations. **(Chapters II & III)**

## I: Technical Description of Malmö Port

Malmö is the third largest Swedish city with a population of 250000 inhabitants. Situated in the southern tip of Sweden at the entrance of the Baltic Sea between a latitude of N 55°37´ and a longitude of E 013°00´, the port of Malmö is located in a strategic position and encompasses a large hinterland with highly developed communication and transport systems. According to the type of cargo handling, Malmö seaport consists of four principal harbours. **(www.malomohamn.se), (Annexes 1 & 2)**

## I.1: Bulk Harbour

The bulk or Swede Harbour is the largest bulk harbour for dry bulk, with 13.5 metres of water depth capable of accepting pan max ships. The principal goods are coal, sugar, wood, chips, cement, and scrap iron. **(http://www.malmohamn.se/)**

## I.2: Oil Harbour

The Oil Terminal consists of modern installations including technical equipment, resources and storage facilities. Over 1.2 million tons of oil products and 100.000 ton chemicals pass through the terminal annually, which makes it one of the largest oil harbours in Sweden. The oil is mostly shipped from Russia and the Baltic States during the summer to be distributed to West and South Europe during the winter.

## I.3: Free Port

The Free Port resources allow the handling of containers, Ro-Ro- and car transport ships as well as conventional cargo and consignments. Thanks to efficient customs procedures and large storage facilities, shippers can store cargoes free of tax for an agreed period. The cargo stored concern mainly new cars, metals, paper, fertilisers, and sugar. The Container Terminal is situated in the northern part, and serves also as a storage area of 100.000 square metres for containers and general cargoes.

## I.4: Ferry and Passengers Terminals

The following docks are used:

*The ***Inner Dock*** is the oldest and most central of the Port's establishments. Hence the intensive passenger traffic between Sweden and Denmark as well as the transfer to/from the Copenhagen International Airport in Kastrup. **(3 mill passengers annually)**

*The ***New Dock*** is used for the German and Polish traffic with an annual average of 250.000 passengers, 60.000 cars, and 200.000 lorries/trailers.

***Limmhamn*** is the harbour for lorries and passengers to Dragoer on the Danish side. An average of 2 million passengers and 300,000 vehicles pass through the terminal annually.

***General Characteristics of Different Terminals at Malmö Port***

| | *Length of quay (m)* | *Depth of Water (m)* | *Max Draft (m)* | *Max LOA (m)* | *Cranes & handling facilities* | *Storage Area* |
|---|---|---|---|---|---|---|
| ***Bulk Harbour*** | 200 | 13.5 | 12.5 | 260 | 2 units & one conveyor scale | 100.000 $m^2$ of which 11.500 $m^2$ are warehouses |
| ***Oil harbour*** | | 12 | 11.4 | 260 | Loading/unloading capacity:10.000 tons per day | Tank storage: 210.000 $m^3$ |
| ***Free port*** | 1.100 | 9.2 | 8.6 | 225 | 10 cranes | 100.000 $m^2$ in |
| ***In which container Terminal*** | 500 | 9.2 | 8.6 | 225 | 2 units in which one is a gantry crane | 100.000 $m^2$ in of which 6000 $m^2$ refrigerated |
| ***Ferry & Passenger Terminals*** | | | | | | |
| ***Inner Dock*** | | 6.0 | 5.5 | | | |
| ***New Dock*** | | 7.2 | 6.6 | | | |
| ***Limmhamn*** | 117 | 10 | 8.4 | 170 | | |

Harbour dues, pilot and agency fees, and tug charges are determined as follows:

- **Harbour Dues**…… **3,25 SEK/GRT**
- **Agency Fees**…… **10,000 SEK on average**

***Pilot Fees (GRT-SEK)**

**500 …… 940**
**1000 …..1053**
**1500 …..1179**
**2000 …..1320**
**3000 …..1478**

**4000 …..1656**
**5000 …..1855**
**8000 ……2077**
**12000 ….2327**
**20000 ….2606**
**30000 ….2919**
**60000 ….3662**
**(Increasing @ 12%)**

***Tug Charges (LOA/BEAM-SEK)**

| LOA * BEAM |
|---|
| 500 ……..2130 |
| 750 ……..2680 |
| 1000 ……. 3160 |
| 1500 …….4690 |
| 2000 ……..6380 |
| 2500 ……..8350 |
| 3000 ……10260 |
| 3500 …. ..12120 |
| 4000 …. ..13760 |
| 45000 …..3269 |

**Source: Malmö port: Price and Dues, 1999**

# II: Legal and Organisational Aspects

By analysing the legal and organisational aspects of Malmö port, one tries to understand different interactions and factors influencing port performances and strategies, as well as the nature of relationships the port maintains and develops vis-à-vis its partners and users.

## II.1: Legal Aspects

In order to shape the port's legal framework, reference should be done to legal aspects related to the Swedish ports in general before analysing the current port's legal situation.

### II.1.1: Legal Aspects of Swedish Ports

The role and scope of public involvement in the port sector has been shaping, and still does, the legal status of ports and harbours in Sweden. Indeed, the development of the Swedish public policy in the maritime field has limited the degree of intervention in the port sector via public entities at national, regional, and municipal levels.

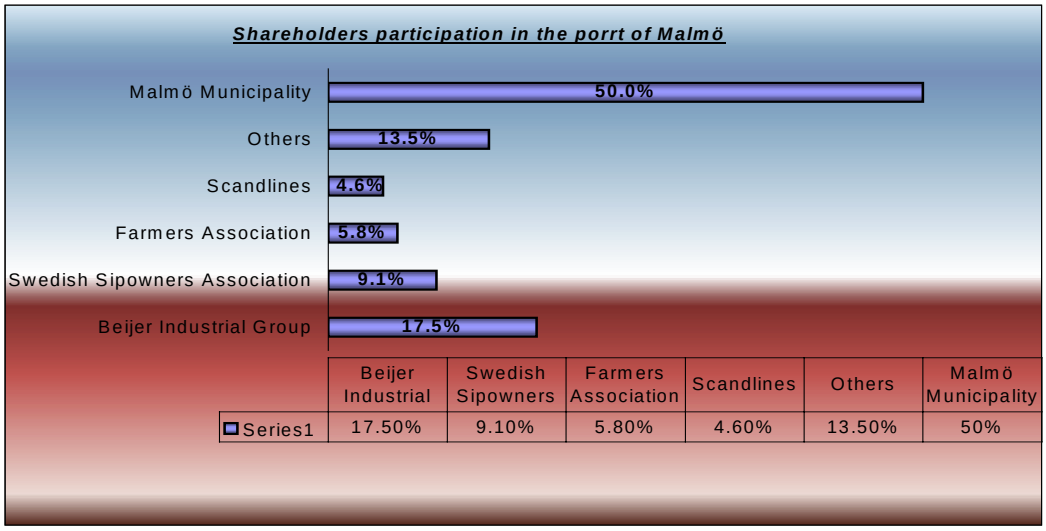
Nygren (1995) summarises the development of the Swedish port policy in four stages:

- Up to the middle of the nineteenth century, the ports had been owned by the states, but ruled and managed by provincial governments.
- From 1862 up to the 1950ies, the ownership and the management of ports had been decentralised to the municipal level. However, the central state had kept an overall control on different ports in the country by reviewing and approving taxes and tariffs and controlling new investments and infrastructures.
- From 1951 till 1981, the state abandoned its role as a state port policy in favour of more self-determination of municipalities in the port activity.
- From 1981, the Swedish port could act as a totally private company, both from the ownership and managerial aspects. This has been crystallised in most ports by the emergence of the municipal port administration and private local stevedore company into an integrated enterprise, either totally private, municipally owned or with mixed ownership.

One can explain such port's development by the dispersion of the harbours along the country's coasts. The geographical aspect, the dispersion of the population, and the poor infrastructure of other transport means (mainly railway and road transport systems) in the 1$^{st}$ quarter of this century; justify such a large number of ports.

### II.1.2: Legal Situation of Malmö Port

As a Swedish harbour, the port of Malmö has been affected by various changes in the port sector as induced by the national maritime and port policy. With a mixed ownership via the integration of the different terminals, the municipal port administration, and the private local stevedoring company, the port of Malmö has acquired a new legal structure. The new Malmö Hamn AB company, renewed in 1997 from Malmö Sjöterminal, is 50% owned by the city of Malmö and 50% by 35 private investors.




**Source: Malmö Annual Report (1998)**

Though apparently, Malmö port tends to be considered as a municipal port, its management is totally run in a different way. Two arguments prove such a statement:

- ***The delineation of responsibility between Malmö Municipality and the port of Malmö defines clearly the scope and level of municipality intervention.***

| Malmö Municipality | Port of Malmö |
|---|---|
| • Harbour Policy and Public Authority Responsibility | • Commercial Operator |
| • Harbour Owner | • Harbour "Leaseholder" |
| • Investments in Fixed Assets | • Investments in Movable Assets, Cargo Handling, and Equipment. |
| • Shareholder & Joint owner of the Port of Malmö | |

Source: Malmö Port reports (1998)

- ***Malmö Hamn AB is operated as a private company under the commercial and fiscal Swedish law. It holds a "contractual commission to manage and develop the city harbour installations", and can expand its activities within the transport and logistics chain.***

## II.2: Organisational Aspects

With reference to the organisational aspects, the author aims to emphasise the importance of the organisational management and behaviour within each organisation both from the operational and strategic considerations, i.e. respectively the day-to-day running of the organisation and the strategic planning and achievement of its objectives.

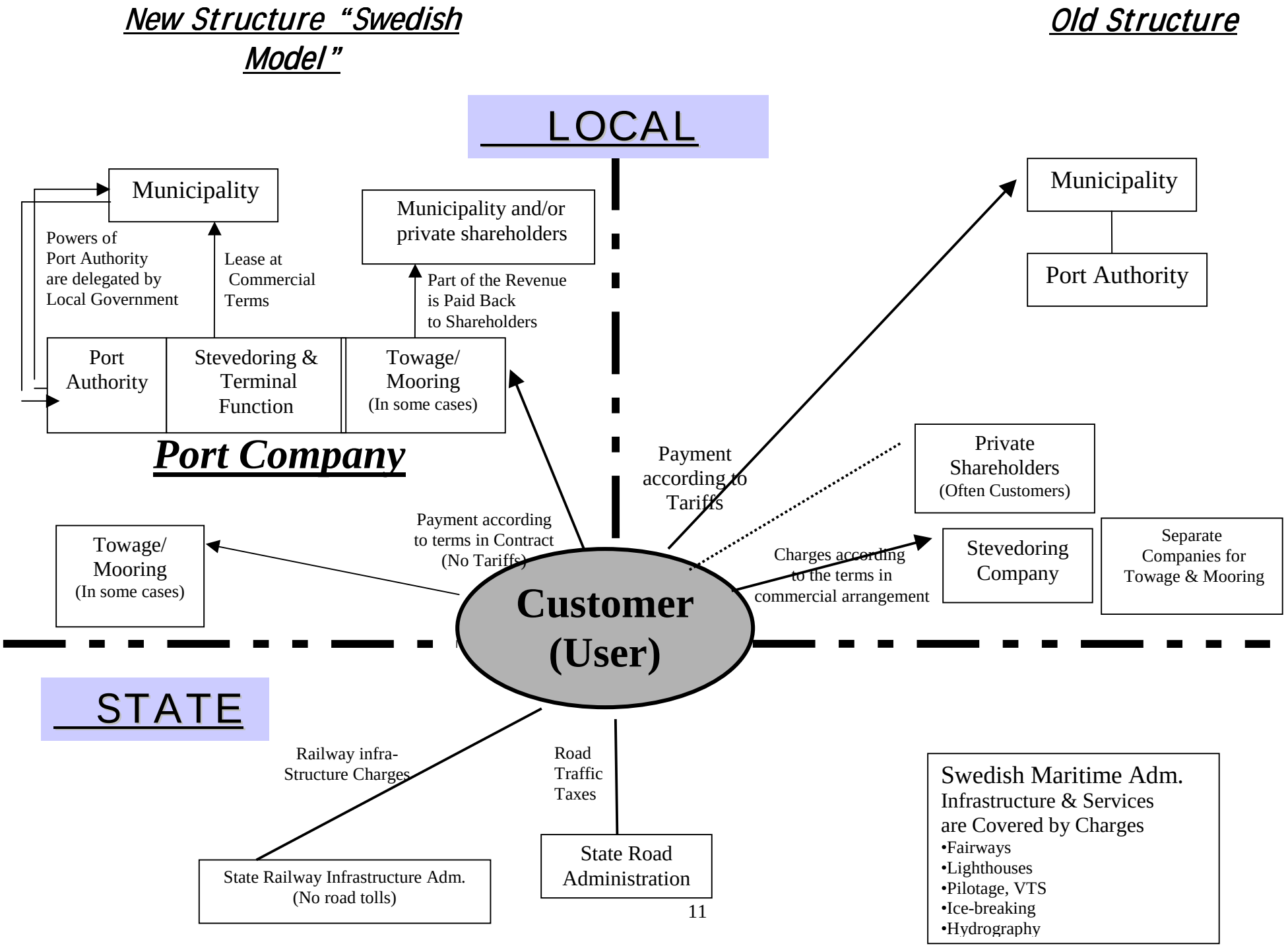
In his paper "Diagnostic de l´Organisation et du Management", Wissler (1993) makes reference to the three organisational pillars in each entity: the instrumental, the political, and the cultural dimensions. Applying such a concept in the port sector, the organisational diagnosis should be done carefully bearing in mind the complexity and diversity of actors within the port entity. Indeed, the port gathers number of activities, which although inter-dependent on each other, remain separated to a large extent from the managerial and organisational aspects. Each activity is distinguished from the other via institutional criteria before being subject to organisational and managerial comparative analyses. Therefore, one can approach the organisational diagnosis of the port of Malmö by analysing:

- The instrumental dimension by reference to the organisational model(s) in use.
- The political dimension through the interaction of powers within the organisation.
- The cultural dimension reflecting the role of culture in shaping the port management.

### II.2.1: Organisation of Ports and Organisational Model in Sweden

The administrative and organisational model adopted by Sweden proves again the particularity of the structural aspects of Swedish organisations. The structure of the public administration in Sweden gives to the decentralised entities at different spatial levels enough margin of freedom by developing and implementing local plans without being obliged to obtain previous approvals from the central government. **(Swedish Maritime Code); (Plant, 1998).**

Particularly, the ports in Sweden are considered as municipal entities whereby the weight of the local authority is predominant. Even though since 1981 the "port company" acts more as a totally private company, none can deny the role of local authorities for which the port has been always, and still is, a matter of political and electoral influence. In sum, one can summarise the port structure in the Swedish model as follows: **(http://www.sjofartsverket.se/)**

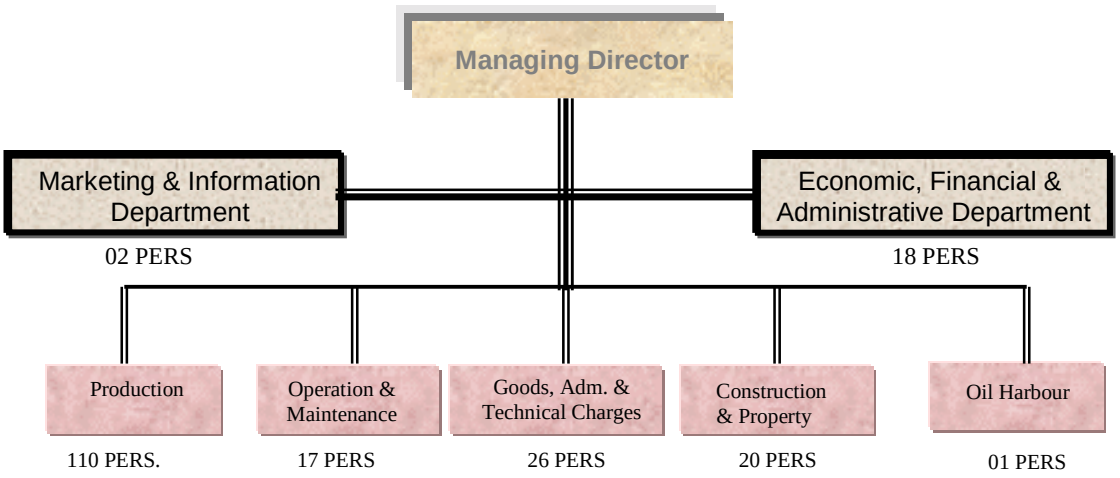

New Structure "Swedish Model"
Old Structure
LOCAL
Municipality
Municipality and/or private shareholders
Powers of Port Authority are delegated by Local Government
Lease at Commercial Terms
Part of the Revenue is Paid Back to Shareholders
Port Authority
Stevedoring & Terminal Function
Towage/ Mooring (In some cases)
Port Company
Municipality
Port Authority
Payment according to Tariffs
Private Shareholders (Often Customers)
Payment according to terms in Contract (No Tariffs)
Towage/ Mooring (In some cases)
Customer (User)
Charges according to the terms in commercial arrangement
Stevedoring Company
Separate Companies for Towage & Mooring
STATE
Railway infra-Structure Charges
Road Traffic Taxes
State Railway Infrastructure Adm. (No road tolls)
State Road Administration
Swedish Maritime Adm.
Infrastructure & Services are Covered by Charges
•Fairways
•Lighthouses
•Pilotage, VTS
•Ice-breaking
•Hydrography

## II.2.2: Organisational Diagnosis of Malmö Port

By performing such a diagnosis, one tries to understand the impacts of the organisational structure on the managerial aspects of the company as well as its capacity to cope with the changes in its external environment. In this paper, neither the scope nor the purpose of the study allows deeper organisational diagnosis of the port's structure. Hence the limitation of the diagnosis to a simple analysis of the company's organisational chart, as well as the roles and responsibilities of its shareholders.

### *A- Analysis of the Organisational Chart*

The organisational chart as adopted by the port of Malmö is presented as follows:




**Source: Port of Malmö**

From the structure above, one can draw the following observations:

- The breakdown of activities and operations in the organisational chart informs about the existence of a matrix organisational model.
  - On the bottom line, the activities are broken down according to an operational criterion with large rooms for flexibility. The production department gathering most employees seems to be a kind of *"umbrella department"* which can supply other functional departments with labour and equipment whenever it is needed.

- On the top line, different approach is applied and strengthens the managerial and administrative aspects of port management commonly called “port administration”. An obvious observation refers to the imbalance between the respective number of employees of the two department: the economic/ administrative department, and the marketing /information one. Even though, the comparison should focus more on the amount of work justifying the number of employees in each department, one can observe the lack in the marketing and information department. However, we should obstinate at that stage to pronounce about marketing performances of the port company.

- The definition and delimitation of authority refers again to the Swedish organisational and managerial model. In other terms and with the obvious exception of the managing director, there is no declared real authority(ies) within departments despite the existence in practice of a designed responsible of each of them.

***B: Analysis of Shareholders' Roles and Responsibilities***

In order to analyse the role and level of intervention of the company shareholders, reference should be done to the characteristics and core business of each of them. Hence, two categories can be distinguished:

1. The public entity: Represented by the municipality that holds 50 % of the shares. Its role and scope of intervention remain in large extent important and strategic though it does not interfere in the port operational aspects. Indeed, this omnipresence of the municipality is justified on one hand by the holding of the absolute majority of the shares (i.e.50%), and on the other hand by the ownership of the infrastructure of the port and the responsibility for its extension and development. Such a situation is quite unique comparing with most of port organisational models: Malmö municipality owns the infrastructure, leases it to a unique operator: the port company (Malmö Hamn AB) in which it holds the absolute majority of share.

2. The private entity: Represented by four main private shareholders, respectively Beijer industrial group (17,5%), Swedish shipowners association (9,1%), Farmers association (5,8%), and Scandlines firm (4,6%). While the presence of the shipowners' and farmers association is justified by their involvement in shipping and sea transport, the participation of the two other private companies comes from their previous participation

in the local stevedoring company before its integration with the municipality port administration.

With respect to the above organisational analysis, one can underline the particularity of such a port organisation reflecting a *mixture of landlord and service port models*. Hence, two important aspects:

a) The municipality is the investor and the owner of the land and infrastructure and leases it exclusively to Malmö port company in which it holds 50% of shares. The company therefore owns and invests in the superstructure and movable assets and equipment.

b) Malmö Hamn AB is the unique operator in all port terminals and harbours. Thus, Malmö port is in charge both of port operations and management aspects.

# III: Financial Diagnosis of Port Operations

Through the financial diagnosis of port operations, the author aims to focus on the breakdown of financial results by port activity, as well as the identification of the capital structure and its impacts on the financial and investment strategy of the company. Three financial aspects will be discussed accordingly: the capital structure, the solvency and liquidity, and the profitability of the company.

## III.1: The Capital Structure

Analysing the capital structure of the company usually refers to the measurement of the relative proportion of the two different types of capital employed in the company, namely the fixed interest's debts, and the shareholders' equity. **(Donner, 1998)**.

The principal ratio of measurement in such cases is the gearing of the company, which informs both about the level of risk taken by the equity shareholders, and the company's ability of self financing and borrowing of capital by maximising the means of leverage.

By calculating the gearing ratio for the five last consecutive years, the table below shows *an average value of gearing of 45% which limits the risk to the equity shareholders for the creditors, but does not guarantee a high return on dividends per share*.

**Financial Key Figures During the Period 93-97, in 1000 SEK**
***(COMPILED INFORMATION)***

| *Sales, Results & Position* | *1997* | *1996* | *1995* | *1994* | *1993* |
|---|---|---|---|---|---|
| **Net Sales: Turnover** | 204950 | 188105 | 173103 | 166510 | 165747 |
| **Operating Profit/Loss** | 1328 | 7377 | 6623 | 4892 | 7192 |
| **Results from Financial Items** | 5844 | 12092 | 10289 | 9302 | 9535 |
| **Equity Ratio: Gearing** | 42 | 39 | 51 | 46 | 47 |
| **Cash position** | 246 | 175 | 265 | 220 | 278 |
| **Sales per Employee** | 1010 | 918 | 809 | 734 | 775 |
| **Average Number of Employees** | 203 | 205 | 214 | 227 | 214 |

## III.2: The Solvency & Liquidity

- The concept of liquidity measures the ability of the company to acquire cash to meet its immediate obligations. It is measured through the current ratio:

**Current ratio (CR)** = Current Assets/Current Liabilities

**CR (97) = 75062/30489 = 2.46** **CR(96) = 69345/40361 = 1.7**

- Solvency is usually expressed in terms of net working capital (difference between the total current assets and the total current liabilities), and gives good indication of the solvency and degree of liquidity of the company. An adequate solvency enables the company to meet current debts, extend favourable terms of customers, and take advantage of cash discounts. **(Mottram, 1998)**

A comparison of the net working capital and the annual revenue gives a more adequate information when expressed in terms of months or days:

$$\text{Ratio} = \frac{\text{Net Working Capital} \times 365 \text{ days}}{\text{Annual Revenue}}$$

**In 1997, Ratio = *79.70 days*** **In 1996, Ratio = *56.24 days***

**Key Figures of Balance Sheet for the Years 96-97 (In 1000 SEK)**

| | ***1997*** | ***1996*** |
|---|---|---|
| Tangible Fixed Assets | 72840 | 76322 |
| Financial Fixed Assets | 1600 | 13602 |
| **Total Fixed Assets** | ***74440*** | ***89924*** |
| **Current receivables** | ***32763*** | ***27157*** |
| Short-term Investment | 35531 | 22799 |
| Cash & Bank Balances | 6768 | 19389 |
| **Total Current Assets** | ***75062*** | ***69345*** |
| ***Total Assets*** | ***149502*** | ***159269*** |

| | ***1997*** | ***1996*** |
|---|---|---|
| **Total Equity** | ***49061*** | ***46031*** |
| Untaxed Reserves | 18655 | 19424 |
| Provisions | 22261 | 21917 |
| **Long-term Liabilities** | ***29036*** | ***31536*** |
| **Current Liabilities** | ***30489*** | ***40361*** |
| **Total Equities & Liabilities** | ***149502*** | ***159269*** |

Source: Port of Malmö annual report, 1998.

## III.3: The Profitability

The profitability of a company is usually expressed in terms of the following ratios: return on equity and return on total assets. The table below gives necessary values for the calculation of the two profitability ratios:

**Calculation of the net profit/loss of Malmö Hamn AB for the period 1996-1997 (In 1000 SEK)**

| | ***1997*** | ***1996*** |
|---|---|---|
| **Net Sales** | **204950** | **188105** |
| Other External Costs | 110691 | 100706 |
| Personnel Costs: *wages, etc* | 77260 | 71833 |
| Depreciation | 8747 | 8392 |
| Other Operating Expenses | 100 | 200 |
| Items Affecting Comparability | 6824 | 403 |
| ***Operating Profit/Loss*** | **1328** | **7377** |
| Other Interest Income | 7431 | 6871 |
| Interest Expenses | 2915 | 2156 |
| *Results from Financial Items: Ordinary Profit* | **5844** | **12092** |
| Appropriations | 768 | 2360 |
| Tax on Net Profit/Loss | 1854 | 3347 |
| ***Net Profit/Loss*** | ***1010*** | ***918*** |

**Source: Port of Malmö annual report, 1998.**

- **Return on Equity:**

$$ROE = \frac{\text{Ordinary Profit – Tax}}{\text{Average Equity}}$$

Therefore, the ROE corresponding to the 1996-1997 period, is as follows:

- Average equity = (62530 + 60053) /2 = **61291.5** thousands SEK
- Ordinary Profit – Tax = 5844 – 1854 = **3990** thousands SEK

***ROE = 6.5 %***

- **Return on Total Assets: (RTA)**

$$Ratio = \frac{\text{Ordinary Profit + Financial Expenses}}{\text{Average Total Assets}}$$

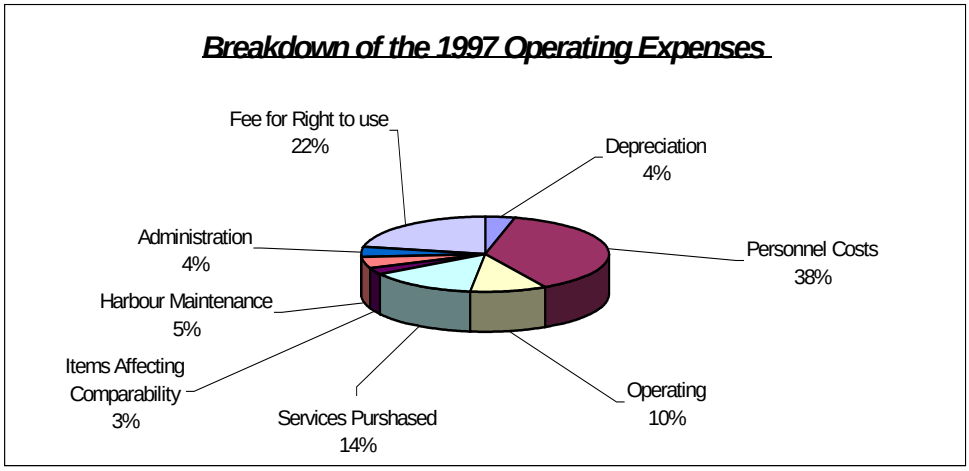
- Av. Total Assets = (149502 + 159269)/2 = 154385.5
- Ordinary Profit + Financial Expenses = 5844 + 2915 = 8759

***RTA = 5.67 %***

From the above financial data, it appears clearly that Malmö Hamn AB company is profitable enough to satisfy its shareholders. Particularly, the municipality justifies its participation in the port company not only by achieving political, electoral, and regional development objectives; but also through sufficient profitable gains.

Nevertheless, number of questions can be risen concerning mainly the risk of deviation from the port's core business. In other words, by trying to satisfy the shareholders, the company may look for profitable investments even outside the core of the port activity.

The following figure shows the 1997 operating expenses of Malmö port company:




## IV: Port Competitors: Drawing the Map of the Port Market

Competition in the port sector has been, and still it does, rising a large discussion among scholars, port users, and public authorities in line with the evolving of privatisation and deregulation of the port business. Confusion and ambiguity are the main key words in these discussions since there are no regulatory instruments neither at the international, nor at the national or local levels. Various involvement forms of public entities in the port sector and the "non-movable" physical assets of the port organisation explain largely such an ambiguity. Furthermore, the complex aspect of a seaport renders competition in the sector much more difficult to identify and regulate. The interference of different bodies (port authority, stevedoring, logistic companies, etc) on one hand, and the growing diversification of port activities on the other, makes practically complex the study of competition strategy of any given seaport. Thus, the analysis in this chapter will be limited to a general overview of competition policies and regulations and an identification of the port respective market and potential competitors. Market segmentation and port market share will be discussed largely in the next chapter.

## IV.1: Competition Rules in the Port Market

By defining the port market as the current and potential port's hinterland, one wants to further the analysis beyond the local and national levels.

### IV.1.1: Competition Rules in the EU

The main EU competition policy related to the port sector is pointed out in the "*white and green papers*" which gathers a "global and sustainable mobility approach" to transport development in the community and some "individual policy initiatives". The general principle consists on a free and fair competition between European ports involved either in intra-trade within member States or/and international trade with the rest of the world. **(Green Papers on Commerce and Transport, 95-96), (EC, 1998).**

Van Miert (1997) emphasises four aspects in port competition within the EU:

1- ***Free access to the port,*** meaning the access to the market. The general principle is that no favourable restriction has to be applied by the port organisation. In such a case, two different situations could occur:

* Either the port, or a part from it, is owned and used by a given company. This later should not offer to its competitors less favourable conditions than those related to its proper services. **(Art 86 of EC treaty).** The European commission decisions concerning Sealink shipping company in the port of Holyhead in Wales and Danish railway company DSB owning and using R¢dby port prove such position.

* Or the port is not related to any company. Hence, no restriction or discrimination should be applied by the port. The European commission has also been pronouncing about such a problem in the Elsinore and Roscoff cases, respectively Danish and French ports.

2- ***Fair competition between ports,*** whereby land and maritime operators should not apply any kind of restriction practices. With that respect, the European commission has taken in Mars 1994 a decision against the German Railway Company Deutsche Bahn discriminating, through tariff practices, the ports of Rotterdam and Antwerp in favour of Bremen and Hamburg German ports. **(EU Decision of 29 Mars 1994)**

3- ***Liberalisation and access to port services***, which should be offered to everybody with no discrimination practices. The port of Genoa in Italy has been subject of a European court decision against the monopoly of Dockers. **(EU Decision n° 97/744/EC)**

4- ***Public finance and subsidy of ports and port investments:*** Here, the EU approach distinguishes state aid to infrastructure opened to all users in the public interest from the one for the benefit of certain exclusive operators. While the former case is allowed and accepted largely as far as it serves the general public, the last one is forbidden except some exemptions in case for example of regional development purposes.

### IV.1.2: Competition Rules in Sweden

In Sweden, competition is regulated and monitored via the "Swedish Competition Authority" with main reference to the new "Competition Act" entered into force on the 1st of July 1993. Based on the same principles as those that apply in the EC, the act expresses that:

> *"Competition shall take place on equal conditions. It should be possible for new undertakings to enter the market. There must also be rules to prevent undertakings from anti-competitive co-operation and abuse of a dominant market position".* (Competition act, 1993)

Such principles are reinforced by the 1981 decision of the Swedish parliament abolishing the interference of the state in investments by means of tax and tariff control. As a matter of fact, just from the following financial year (1st January 1982), most of Swedish ports increased their prices and tariffs on vessels and goods by 35-40%.

Concerning competition from other means of transport, one should underline the discriminatory state policy in favour of rail transport both at the financing and tax level.

## IV.2: Map of the Port Market

By drawing the sectoral map in the region, one tries to define the port market allowing easy identification of port competitors. One should pointed out at this stage that such a map concerns only the port sector and does not extend to different competing modes in other sectors. Hence, two aspects will be taken into consideration:

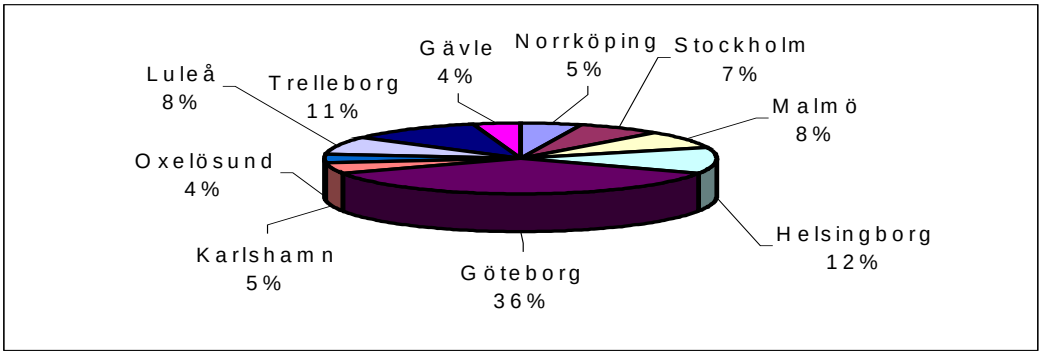
## IV.2.1 Port's size, Type and Impacts on the Economy:

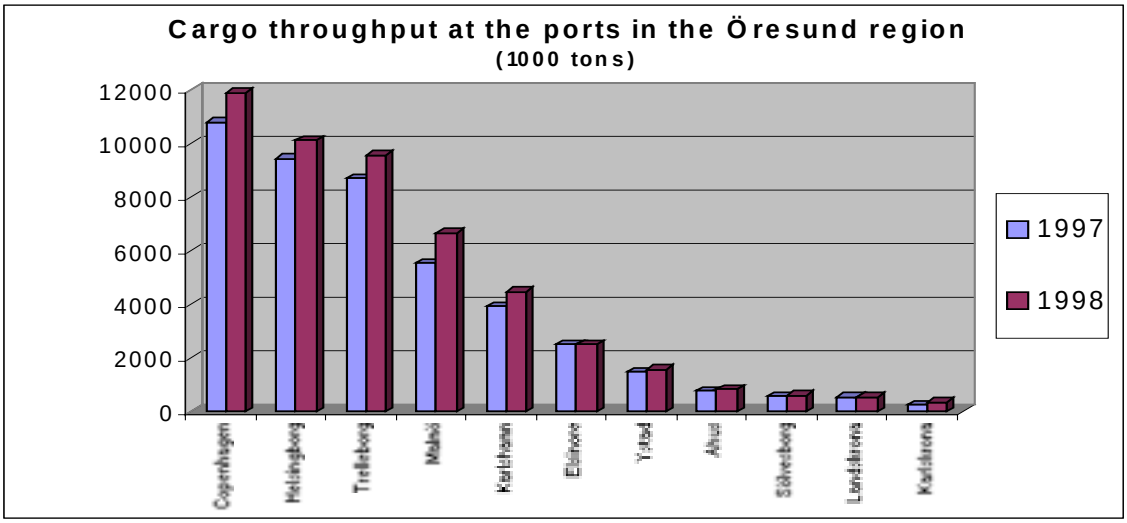
This is assessed through a synthesis of port's turnover and cargo volume from the large potential market to the most specific one. Hence, two steps are followed:

***A-*** First, by integrating the port in a large and broad market. In our case, the Baltic Sea region constitutes the port's large ultimate hinterland. The total freight turnover in the region has increased from 211,9 million tons in 1993 to 234,4 million tons in 1996, in which the passenger turnover has reached 95,7 million passengers in 1996. The traffic distribution by deep sea was 25% exports against 75% imports. **(Green paper on Sea ports and maritime infrastructure, 1998), (Annex 1).**

***B-*** Second, by identifying the port national and regional scale. This is possible through a comparative analysis of ports' turnovers in the region. **(Annex 1).**

Cargo throughput at the top ten Swedish ports in 1998



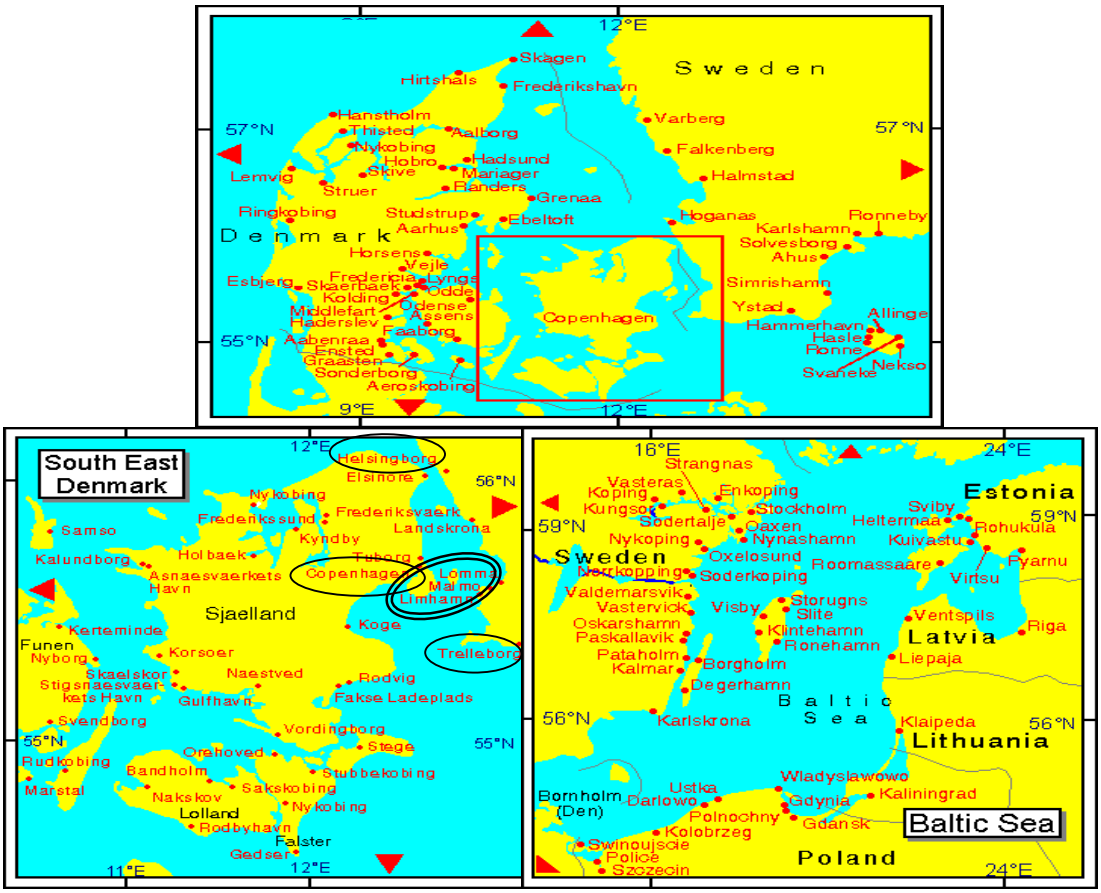




**Source: ESPO, 1998**

From the above, the port of Malmö reveals as a regional port by serving both the Southern part of Sweden and the neighbouring Danish side. The port's throughput and size limit its ability to expand spatially in order to serve the whole country. The spatial characteristics of Sweden as a large country with dispersed population makes difficult, if not even impossible, for any port to serve the whole national economy in all segments as it is done by some ports in North Europe. (e.g. Le Havre, Antwerp, Rotterdam, and Hamburg.)

## IV.2.2 Structure of the Port Sector:

Porter (1982) underlines the effects of the structure of a sector in tailoring the competition aspects and strategies. In other words, it is quite difficult to draw a spatial map of a global industry except in case of an essay of segmentation of different activities within the given industry. The seaport being almost unmoveable, it is possible to determine its spatial market with no need for market or product segmentation.




Source: Fairplay World ports

## IV.3: Identifying Port Competitors:

The identification of port competitors requires a first enhanced study of port competitive environment. Thus, relevant information should be available and should concern:

- The local, national, and international ports' competitive environment.
- The competitiveness within the transport chain and logistics activity.

In the case of the port of Malmö, one may consider the competition within the port almost non-existent due to the monopoly of Malmö Hamn AB in performing most port activities. Therefore, we will concentrate only on the two following aspects:

### IV.2.1: Inter-Port Competitors

The analysis of the inter-port competition should refer to the port respective size, services and markets. Thus for example, the port can compete with others in a given niche of the market (e.g. type of cargo or commodity), but not in the whole maritime traffic in the region, and vice versa. Furthermore, the analysis of inter-port competition refers to the comparison between different ports according to their respective characteristics, which supposes a pre-analysis of their potentialities, equipment, commercial policies, etc. At this stage, the author tries to limit the inter-port analysis by discussing the factors influencing such a competition without falling into a pure comparison between strategies and potentialities of the ports in the region.

Ma, S (1999, a) summarises the factors related to inter-port competition as follows:

#### ***A- Inland Transport System***

The inland transports system in Sweden in general and in the Skåne region in particular, is very well developed in both road and railway connections. Furthermore, considering the captive market of the port of Malmö, one should look also at inland connections in Copenhagen area, which again is as developed as the Swedish part of Öresund region.

With the fixed links (both the bridge and tunnel connections), the inland transport system in the region will be totally connected and highly developed, which means more connections with the neighbouring ports in detriment of Malmö port market share.

### ***B- Transhipment***

Most, if not all, ports in the region are not big enough to constitute hub ports serving transhipment activities and cargoes. However, in terms of type of commodity, some port's terminals can be developed in order to serve transhipment purposes, e.g. the oil and coal terminals in the port of Malmö.

### ***C- Freight Forwarder / Multimodal Transport Operator***

The inception and development of "door-to-door" intermodal transportation concept has been increasing and strengthening the role and influence of freight forwarders in the whole transport chains. Particularly, freight forwarders by representing the interests of more and more shippers, become so influent so that they can shift easily from a port to another. Hence, one of the following strategies can be adopted by port decision-makers:

- Either trying to attract freight forwarders by offering number of incentives and responding to their commercial and operational requirements.
- Or competing with them by performing forwarding services within the port activity.

Obviously, each adopted strategy has its positive and negative sides that vary largely from port to port. In the case of the port of Malmö, and as mentioned above, the port is adopting a mixing strategy by offering freight forwarding services to its customers and users without trying to monopolise the forwarding business related to the port activity. In fact, such policy aims more to reach an horizontal integration in the logistic chain business and diversification of source of revenues rather than an only prospectus of competition with freight forwarders in the region. **(Olsson, 99)**

### ***D- Political and Economic Barriers***

The liberal character of the Swedish economy both as such and as a part of the European Union, has been leading to free movement of cargo within the EU area and consequently to an increased competition from neighbouring foreign ports.

From the factors above-mentioned, it appears that the competitive environment in the port market is open enough to involve all competing ports into a more or less "fair" competition.

### IV.2.2: Competitors within the Logistic and Transport Sector

Land transports (roads and railways) and, in a much less extent, air transport is more and more gaining shares in the whole transport sector. Despite the fact that shipping and maritime transport are more directly threatened by intermodal transport competition, the impacts on the port sector can be even greater and determinant. Possible impacts on the port of Malmö, facing future competition from fixed link connections are a typical example of threats/opportunities derived from intermodal transport developments.

# V: Port Performances and Productivity Indicators

Being possible through a collection of information related to port traffic and activity, port performances and productivity indicators are useful tools for statistical control and projection of future port investments. They also permit normative comparisons of the concerned port performances with those of other ports. **(De Monie, 1987)**

Since the financial information related to the port activity has been already analysed, only physical and quality indicators will be treated in the following.

## V.1. Physical Performance Indicators

Considered as "the output of the existing facilities", physical indicators are mainly concerned with the port's performance in the following areas: **(Francou, 1999)**

- *The duration of the ship's stay at port,*
- *The performance measures for cargo handling and storage facilities, and*
- *The measures of occupancy.*

The following table informs about Malmö port physical performances:

| Indicator | | Performance Result |
|---|---|---|
| **Berth Output** | Containers | 26,000 teu |
| | Ferry | 3,5 mil |
| | Bulk | 1,4 mil tons |
| | Oil | 1,5 mil tons |
| **Berth Service** | Waiting Time | None |
| | Service Time | 4 hrs |
| **Berth Utilisation** | Berth Occupancy | Low |
| | Working Time | High |
| **Gang Output :** WSO: (ctnrs/hrs) | | 30 moves |
| **Gang Size** | | 5 men |
| **Av. Gang/Ship** | | 1 gang |
| **Utilisation Ratio** | Crane Utilisation | Low |
| | Yard Equipment | Low |
| **Storage Operations** Av. Dwelling time…….Imports | | 12 hrs |
| | Freeport | long |
| | Exports | 24 hrs |

Source: Compiled Calculations from Malmö Port Statistics.

From the above results, the performances of the output facilities reveal to be quite good and satisfactory, mainly concerning berth and handling operations. However, one should underline the low utilisation of those facilities which informs about the over-capacity in terms of quays, berths, storage facilities, etc.

## V.1.2: Quality Performance Indicators

The quality performance indicators rely more on qualitative than quantitative measures of port performances. They refer mainly on the quality of the service offered by the port as a major factor in port competition and marketing. In fact, reliability and flexibility aspects are more predominant nowadays than the only price or tariff ones in setting and implementing competition and marketing policies.

Again, one should point out that the quality performance of the port is dependent in a large extent upon other factors such as efficiency and effectiveness of port workers as well as smooth responses to customers needs in terms of organisational and managerial aspects. Malmö port quality indicators are presented as follows:

| Indicator | Performance Result |
|---|---|
| **Flexibility Indicators** | |
| Working Hours……...Handling Tug/Pilot | **0700-1600**<br>**Upon request** |
| **Reliability Indicators** | |
| Punctuality | **Good** |
| Pilferage | **None** |
| Litigation | **Low** |
| Agreement | **High** |
| Workdays Lost | **26%** |

**Source: Group 5 presentation, Port Regional Seminar 1999, WMU, Sweden**

Hence, it appears clearly that Malmö port is reliable and flexible enough to offer good quality service and respond to quality requirements from its customers.

## Conclusion

In this chapter, different aspects constituting the port's internal environment have been analysed separately and extensively. The diagnoses allowed a general overview of the port of Malmö, and made in prospect the interactions between its different components toward a comprehensive and understandable framework of the port organisation.

Nevertheless, one should retain, as mentioned in the beginning of this chapter, the adopted static diagnosis approach based on the current and nearly past port situation in order to reproduce a spot picture of the port's condition disregarding the on-going changes both in its internal and external environments.

The next chapter will, therefore, deal largely with the port's external environment and market changes and mutations. A "dynamic" diagnosis of port's market share and competitiveness will be performed taking into consideration the impacts of current and future external changes on port's performance and position in a global and heterogeneous port market.

# Chapter II

# Diagnosis of Port's Environment and Market Changes

## I: Analysis of Port Strengths and Weaknesses

I-1: Review of Port's Strengths and Weaknesses

I-2: Port's Comparison vis-à-vis Current Competitors

**I.2.1: Status and Mission Statement**
**I.2.2: Comparison of Elements of Strengths and Weaknesses**

## II: Market Segmentation and Identification of Port Market Share

II.1: Segmentation of Port's Market

**II.1.1: Activity Segmentation**
**II.1.2: Customer's Segmentation**

II.2: Current Market Share

**II.2.1: Port Share within the Port Sector**
**II.2.2: Port Contribution in the Transport Sector**

## III: Port's External Environment and Market Changes

III.1: Market Overview and Scanning

**III.1.1: The Öresund Level**
**III.1.2: The National Levels**
**III.1.3: The Baltic Sea Level**

III.2: Market Outlook and Port Traffic Forecasting

**III.2.1: Market Outlook and Future Perspectives**
**III.2.2: Mutation of the Transport Sector and Spatial Model Perspectives**

III.3: Assessment of External Threats and Opportunities

III.4: Port Response to New Market Changes

**III.4.1: Horizontal Integration in the Transport and Logistics Sector**
**III.4.2: long-term Vision with New Investments and Market Reposition**
**III.4.3: Joint Venture Co-operation with the Port of Copenhagen**

Duet, D (1995) refers to the two main methodological approaches applied as analytical tools for the strategic appraisal of a firm's environment:

1- The school of strategic rationality: Based on a purely competitiveness context by prevailing technico-economic aspects on the political and organisational ones. Different schools belong to that current mainly:

- The "Harvard model" known currently by its SWOT analysis,
- The school of matrix positioning (BCG, ADL, etc),
- The quantitative school using statistical techniques and methods, and
- The "Porter" model based on industrial analyses.

2- The school of strategic behaviour: With more emphasis on sociological and managerial aspects. Three schools are mainly grouped under this category:

- The behavioural school (Simon, March, Mintzberg) based on an objective analysis of decision processes.
- The systemic school (Crozier) focusing on social system analyses, and
- The incremental school (Peters & Waterman) moving towards pragmatism of strategic decisions, and prevailing concrete operational actions.

In the port literature, reference is usually made to technical approaches as main tools of port analysis (SWOT analysis, BCG matrix, etc) without checking their usefulness and adaptability to the specificity and characteristics of the port sector in general and to the concerned port as such in particular. Indeed, those models are based on implicit and quantitative hypotheses usually borrowed from military strategic tools that ignore the political, social, and organisational dimensions while determining the firm's strategic responsive instruments. This is particularly true in the port sector characterised by a diversity of partners and users both at institutional and organisational levels. Thus, in a complex and multiform reality, there is no universal tool or methodological scheme of analysis. Reference may be made to all those tools to appraise each port aspect from a different approach, and confront it to the concrete reality and daily practices.

In this paper, neither the scope nor the span of the dissertation permits a crossing of all those analytical instruments. Nevertheless, the author tries to be more objective by

applying some adopted port's literature tools with a more positive approach than a totally normative one.

# I- Analysis of Port's Strengths and Weaknesses

The evaluation of strengths and weaknesses of an organisation refers to an assessment of its internal environment by focusing on the competitiveness of the organisation in comparison with its current and potential competitors. Applied to the port sector, this involves a breakdown of different activities and items subject to evaluation, and their comparison with competing ports. Following the research methodology adopted in this paper, the analysis of Malmö port strengths and weaknesses will be done only in comparison with the current competing ports as identified in the previous chapter. This implies mainly the ignorance, at that stage, of the future Öresund link leading to eventual new competitors.

## I-1: Review of Port's Strengths and Weaknesses

Sources of strengths and weaknesses in the port sector has been progressively identified and reviewed in line with the development of the ports and the extension of their activities. Nowadays, those sources are mainly related to the physical assets and services as well as financial, legal, and labour port's aspects. **(Ma, 1999 b)**

In its monographs on strategic port planning (IPP4), the UNCTAD (1999) enumerates the main sources of port's strengths and weaknesses as follows:

1- Location: It is related to the geographical location of the port and its proximity both to the suppliers and the customers of the maritime transport.

2- Assets: They encompass all physical assets in terms of various facilities and equipment offered by the port organisation. Reference is made to the port's berths and their respective water depths, as well as equipment and storage facilities.

3- Experience, know-how: It assesses the ability of the port in handling different types/forms of commodities and cargoes in comparison with the competing ports.

4- Manpower: It involves both labour skills and social environment in the port. Troublesome social climate, lack in professionalism and poor management are examples that can lead to disastrous effects on port reliability and performances.

5- Performance: This item is related to port productivity and performance indicators. However, only quantitative indicators are considered since the quality of port services is part of its experience and know-how.

6- Adaptability, resourcefulness: It refers to the ability of the port to respond to different customer requirements. This implies a certain attitude of the port towards its customers and an effective response to their specific and diversified needs.

7- Complementary services: They are extra services offered by the port without necessary being part of its core business. They may concern both vessel and cargo, as well as logistics, finance, information technologies, etc.

8- Financial condition**:** It evaluates the financial health of the port organisation through an assessment of different financial indicators.

## I.2: Port's Comparison vis-à-vis Current Competitors

The objectives of port's comparison can differ from just specific and limited aspects to wider and large ones. Before comparing port's strengths and weaknesses, reference must be made to ports' statuses and mission statements.

### I.2.1: Status and Mission Statement

The first and foremost step of comparison is to go through different statuses and mission statements of each of the ports in the region. This is a crucial point since it identifies the port's organisation and informs about its long-term vision. It is possible, therefore, to foresee the markets and businesses each port is serving and/or planning to serve.

#### *A- Status*

A port can be a terminal, a stevedores, an administration or authority, a private or public organisation, etc. It is important to detect the real port status in order not to mix up various components of port's community or confuse their tasks and responsibilities. The latest statuses of the different ports in the region are as follows:

- Copenhagen: Governed under the 1992 act, Copenhagen port is a private foundation independent both from the state and Copenhagen municipality. It has a status of a proprietary institution comprising the parent company-the port authority- and its wholly owned subsidiary: the Copenhagen free port & stevedoring Co.Ltd (KFS).
- Trelleborg: The port is a 100% municipally owned organisation established under a Swedish limited company: Trelleborg Terminal AB.

- Malmö: The port is a commercial operator company and a harbour "Leaseholder" from the municipality, which holds 50% of the company's share. The remaining 50% are owned by private shareholders.
- Helsingborg: The port company is 100% owned by the municipality and gathers port authority, stevedores and terminal operations, and also a tugboat company.

### B- *Mission Statement*

The status of the port bounds the extent of its vision and strategy, and hence its mission statement. The followings are the mission statements of the four major ports:

| Copenhagen | Trelleborg | Malmö | Helsingborg |
|---|---|---|---|
| ▪ To serve as a commercial harbour for sea transport<br>▪ To carry out urban development of port areas for residential offices, commercial properties, etc. | To be a dedicated and first ferry port in the region | ▪ To confirm its market position in the ferry business in the region.<br>▪ To offer wider range of services to the port customers through a more integration into the logistics and forwarding business. | ▪ To offer the most efficient cargo & terminal handling and through this fact<br>▪ To give its customers competitive advantage in one of the most important transport centres in Sweden, and<br>▪ To develop new ways of co-operation with the transport, export and import industries. |

## I.2.2: Comparison of Elements of Strengths and Weaknesses

The main elements above will be discussed in detail for comparison purposes.

### A- *Location:*


Compiled graphic
Source: Map of Europe (www.ins.anl.gov/)

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Thanks to its strategic position at the entrance of the Öresund and Baltic regions, the port of Malmö can be related to major maritime trading routes in the Baltic Sea, the North Sea, and the Atlantic Ocean.

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Hence, assuming that the Öresund region constitutes the essential of the port hinterland, the port is then serving a market that accounts for more than 3,2 million

inhabitants with high production supply and consumption needs. However, such strength looses its value once shared with other competitors: Large numbers of ports

of small and medium sizes are dispersed all along the region, and benefit from the same strategic location and market proximity.

### ***B- Assets***

Major port's assets should be analysed separately in comparison with those of the competing ports. The next table provides the necessary needed information:

| ASSETS<br>PORTS | Depth (m) | Quay Length (m) | Handing equipment | Storage facilities |
|---|---|---|---|---|
| ❑ **Copenhagen** | ▪ 10<br>(12 for bulk terminal) | 10.900 | ▪ 3 GC, 2 mobile cranes<br>▪ 7 straddle carriers,<br>▪ 10 container trucks,<br>▪ 10 terminal tractors,<br>▪ 3 container movers,<br>▪ 50 forklifts. | ▪ Open sheds and warehouses,<br>▪ 100.000 $m^2$ covered stores |
| ❑ **Trelleborg**<br>New harbour<br>Western pool<br>Eastern pool | <br>8.0<br>8.0<br>8.0 | 470 | ---------- | ▪ 77.600 $m^2$ area of warehousing facilities,<br>▪ 27.000 $m^2$ total capacity silo buildings |
| ❑ **Malmö**<br>Bulk harbour<br>Oil harbour<br>Free port<br>Ferry/pass. terminal | <br>13.5<br>12<br>9.2<br>10 | 7.600 | ▪ 14 cranes, one is a GC<br>▪ 50 Forklifts,<br>▪ 3 container champs,<br>▪ 1 wheel loader, and<br>▪ 14 tug masters. | ▪ Open sheds and warehouses,<br>▪ 150.000 $m^2$ covered stores<br>▪ Refrigerated warehouses,<br>▪ tank storage |
| ❑ **Helsingborg**<br>North harbour<br>West harbour<br>South harbour<br>Bulk harbour | <br>10<br>13<br>13.5<br>10.5 | 7.600 | ▪ Ro-Ro ramps,<br>▪ jib cranes Ro-Ro,<br>▪ 2 GC, mobile crane,<br>▪ discharging devices,<br>▪ ship loaders | ▪ Open sheds and warehouses,<br>▪ 60.000 $m^2$ covered stores<br>▪ Refrigerated warehouses,<br>▪ Container repair shop shield-roof, silos |

Source: Compiled information (ports information, Baltic ports organisation)

### ***C- Experience, know-how***

This is related to port's experience with operating various types of vessels and handling divers kind of cargoes. Some comments can be given in the following:

- Concentrating only on the ferry business, the port of Trelleborg has a solid experience with that type of vessels' operation.
- Copenhagen is the largest cruise port in northern Europe. It is also the largest land and property owner in the Copenhagen area.
- Malmö port has strong position with regard to storage of oil products and some bulk commodities (e.g. sugar, timber), and performs also forwarding activities.
- Helsingborg is a leading fruit port in Sweden. It has a good reputation of handling reefer ships and storing their respective cargoes.

Sample of the largest vessels handled by the different ports

| | *Container Capacity/ year* | *Max lifting (tons)* | *Largest Vessel handled (meter LOA x meter draft)* | | | |
|---|---|---|---|---|---|---|
| ***Trelleborg*** | ------- | --------- | * Max Size: 15.00 dwt | | | |
| ***Copenhagen*** | 250.000 TEU | 125 | Freeport | Industrial harbour | Oil/Bulk harbour | |
| | | | 260 x 9.5 | 260 x 9.5 | 260 x 12 | |
| ***Malmö*** | 100.000 TEU | 64 | Free port | Industrial harbour | Oil harbour | Bulk harbour |
| | | | 225 x 8.6 | 170 x 8.4 | 260 x 11.4 | 260 x 12.5 |
| ***Helsingborg*** | 125.000 TEU | 45 | 230 x 12.3 | | | |

Source: Compiled Information, *: Information available only by maximum size

### ***D- Manpower***

In order to evaluate the social aspects of the port organisation, comparative analyses supported by empirical surveys are needed. Due to the scope and extent of this research paper, the assessment will be mainly based on the organisational diagnosis performed in the first chapter. Accordingly, one can point out the following:

- The port benefits from well skilled workers and employees with high professionalism and performances. Such a quality is largely acquired from the Swedish and the Scandinavian work culture, and consequently can not create for the port an advantage of differentiation.
- In line with such a culture, Malmö port follows the Swedish macro-economic and labour policy by which the real needed employment is usually matching the nominal one. The case of Kockums shipyard provides a typical example at that level.
- Another common characteristic is the perfect social climate thanks to an efficient social security system and homogenous labour regulations. All ports in Sweden are members of the Swedish Employers' Confederation (SAF). (http://www.saf.se/)
- A final observation concerns the port interactions vis-à-vis its customers. Competing ports seem to hold better communication and contacts with their customers. The ports of Helsingborg and Trelleborg, for instance, have been awarded as the best information providers and receptive destinations.

### ***E- Performance:***

It measures the cargo handling, storage productivity, and berth/equipment utilisation. The next table gives comparative analysis of the ports' performances:

| | Average berth output | Berth service | Gang output | Average dwelling time | Utilisation ratio |
|---|---|---|---|---|---|
| **Copenhagen** | Cont. 100.000 TEU<br>Passengers: 4 mil<br>Bulk: 3,1 mil tons<br>Oil: 3,3 mil tons | Waiting time: None<br>Service time: --------- | Cont/hrs: 25 moves | Imp. 12 hrs<br>Exp. 24 hrs | Crane Util. Low<br>Yards equip. low |
| **Trellebrog** | Passengers: 2 mil<br>Wagons 130.000<br>Trucks :350.000 | Waiting time: None<br>Service time: --------- | --------- | None | ------- |
| **Malmö** | Cont: 30.000 TEU<br>Ferry:<br>Passenger: 5.3 mil<br>Vehicles: 581.600<br>Bulk: 1,3 mil tons<br>Oil: 1,5 mil tons | Waiting time: None<br>Service time: 4 hrs | Cont/hrs: 30 moves | Imp. 12 hrs<br>Exp. 24 hrs | Crane Util. Lower<br>Yard Equip. low |
| **Helsingborg** | Cont: 73.000 TEU<br>Ferry:<br>Passenger: 14 mil<br>Vehicles: 2.5 mil<br>Bulk: 1.7 mil tons<br>Oil: 0,5 mil tons | Waiting time: None<br>Service time: 4 hrs | Cont/hrs: 30 moves | Imp. 12 hrs<br>Exp. 24 hrs | Crane Util. Lower<br>Yard Equip. low |

**Source: Ports' annual reports**

### *F- Adaptability & Resourcefulness*

Ma Shuo (1999) provides a list of different elements related to port's adaptability and resourcefulness. With such reference, a questionnaire has been submitted to independent professionals in order to assess different ports' standings. **(Annex 3)**

| | Trelleborg | Malmö | Copenhagen | Helsingborg |
|---|---|---|---|---|
| Quality | ++ | ++++ (1) | ++ | +++(2) |
| Handling special cargo | + | +++ | ++ | +++ |
| Meeting needs of individual customers | ++ | +++ | ++ | +++ |
| Accommodating new service requirements | + | +++ | ++ | +++ |
| Flexibility of labour | +++ | +++ | +++ | +++ |
| Ability to contact for services | +++ | ++ | ++ | +++ |
| Efficiency of procurement and contract procedures | ++ | ++ | +++ | +++ |
| Simplified documentation requirements | +++ | +++ | +++ | +++ |
| Simplified tariff and building procedures (3) | +++ | +++ | +++ | +++ |

**+: Very Weak, ++: Weak, +++: Strong, ++++: Very strong**
**(1):** Port of Malmö is ISO 9002 certified from January 1999.
**(2):** The oil terminal in the port of Helsingborg is ISO 9002 certified from 1997.
(3): To refer to port prices & tariffs handbooks.

### *G- Complementary Services*

Those are services that are not directly related to the core business of the port:

- Helsingborg has its proper EDI system, and Copenhagen is implementing a new information system already developed by the port of Århus. **(Vang-Nielson, 1999)**
- The port of Malmö benefiting from highly developed intermodal connections largely performs cargo storage, consolidation, and forwarding services.

➢ Port of Copenhagen is a large distribution centre in Scandinavia and the Baltic region. Several companies have chosen the port as a their main distribution centre to these markets. (Roland, Sony, UNICEF, Peter Justesen, etc)

***H- Financial Condition***

By referring to general financial indicators, one can appraise the financial performance of each port. Two main points should be underlined:

- None of the ports invest directly in infrastructures, quay construction, and extension. The port of Copenhagen is, however, empowered to invest and develop dock land sites no longer required for port purposes.
- The financial guidelines and rules are almost homogenous between the Swedish side and the Danish one a part from the tax and fiscal system. The following are the 1997 main financial indicators for the four ports:

| | Assets Value (mill USD) | Total Revenue (mill USD) | Operating Surplus |
|---|---|---|---|
| Copenhagen | 152.7 | 45.0 | 7.6 |
| Trelleborg | Non- available | Non- available | Non- available |
| Malmö | 20.0 | ------ | 1,32* |
| Helsingborg | 77.9 | 42.0 | 7.1 |

**Source: Ports' annual reports**

*: 5 mill USD out of 6,32 mill is paid as a rent to Malmö city.

# II. Market Segmentation and Identification of the Port Market Share

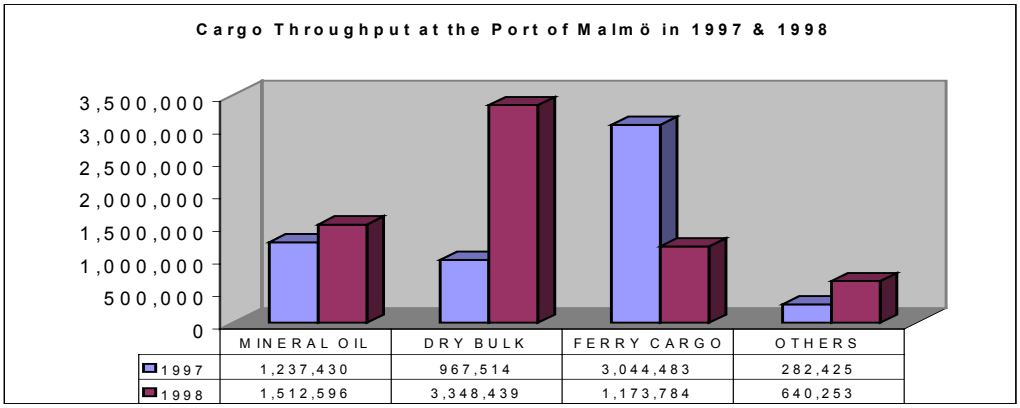
Once port's strengths and weaknesses are identified, the segmentation of port's market should be the next step before plunging into market forecast and assessment of external threats and opportunities.

## II.1 Segmentation of the Port's Market

Dividing the market into different segments is a useful tool for port decision-makings. It allows the port management to define its current and potential targets, and build-up suitable corresponding market strategies. In the port sector, market segmentation can be performed differently according to port's characteristics and market information. Two sets of segmentation are commonly used:

## II.1.1 Activity Segmentation:

It concerns the breakdown of different activities performed by the port. Cargo handling and logistic activities constitute the major part followed by some complementary services (cargo consolidation, information processing, etc). The activity segmentation at the port of Malmö shows an obvious predominance of services to ships and cargoes (73% for cargo handling and 19% for terminal commissions).




**Source**: Port of Malmö

## II.1.2 Customers' Segmentation

Different terminology is used to qualify those to whom port services are offered. From users to partners, this terminology may vary according to port's mission and organisational status (landlord, public, private, etc). **(Caude, 1998).** The identification of port users and customers reveals more difficult and complex (shippers, shipowners, forwarders, administrations/authorities, etc). Thus, a judicious marketing approach should integrate every partner in the port's community as an effective port customer. Concerning the port of Malmö, three groups of customers can be listed:

### *A- Shipping Companies & Shipping Agents*

A shipping line may either direct the port organisation or deal with it through its agent. To this category belong the ferry lines Nordö Link, Polferries, Scandlines, SAS and Pilen, and the shipping agencies ASECO, Gemek, Hasting agency, Hasting tanker, and Ingstad & Co.

### B- *Shippers*

Those are big companies able to handle their sea transport by themselves. They are mainly Danisco, Skånska, Lantmännen, Acerinox, Assi Domän, Korsnäs, Nordmills, Gotthards (Stena Metall), Tetra Pak, and Malmö Värme (Sydkraft).

**C- *Others***

In this category most of customers are those who use extra-port services such as storage and land rental. Major customers are the brokerage firms Scandinavian Tank Storage, the Gotthards shredder plant, and Skånska Lantmännen.

Sample of Malmö port's main customers


## II.2 Current Market Share

The evaluation of market share is usually a difficult and abstract task since it supposes a breakdown of the business activity into homogenous segments and the analysis of market demand and supply dynamics. Particularly in the port sector, market share analysis becomes more complex considering the multiplicity of port operations and diversity of partners and operators. At this stage, the assessment of the current market will be performed on the assumption of a static trade pattern and limited transport providers. As a result, the port market share will be considered at two levels:

### II.2.1 Port Share within the Port Sector

In this section, reference is made to the volume of cargo passing through the ports in the region and the contribution of Malmö port in it. This can be determined by following the four subsequent steps:

***A- Counting the Total Ports' Traffic in the Region***

Through a sum up of all ports' throughput in the Öresund region.

*Cargo Throughputs at the ports of the Öresund region (in 1000 tons)*

| | 1997 | 1998 | Average | Percentage of the total (%) |
|---|---|---|---|---|
| Copenhagen | 10800 | 11900 | 11350 | **24.21** |
| Elsinore | 2500 | 2500 | 2500 | **5.33** |
| Trelleborg | 8725 | 9573 | 9149 | **19.51** |
| Ystad | 1469 | 1586 | 1527.5 | **3.26** |
| Malmö | 5532 | 6684 | 6108 | **13.03** |
| Ahus | 785 | 825 | 805 | **1.72** |
| Karlskrona | 260 | 353 | 306.5 | **0.65** |
| Landskrona | 550 | 553 | 551.5 | **1.18** |
| Karlshamn | 3932 | 4486 | 4209 | **8.98** |
| Helsingborg | 9463 | 10112 | 9787.5 | **20.88** |
| Sölvesborg | 573 | 608 | 590.5 | **1.26** |
| **TOTAL** | **44589** | **49180** | **46884.5** | **100** |

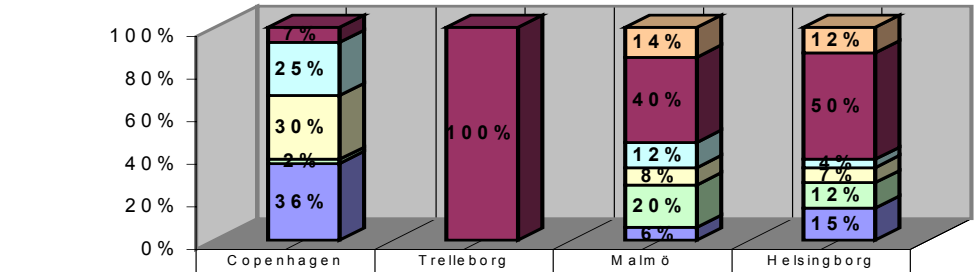
**Source: Ports' annual reports**

From the table above, it appears again the domination of the four ports (Copenhagen-Helsingborg range) with almost 80% of the total maritime traffic in the region.

### *B-* Breakdown of Ports' Traffic by Type of Cargo

This is done by type of transport and cargo handling (break/dry bulk, containers, etc.)

**Business profile of the four main ports in the region**




| | Copenhagen | Trelleborg | Malmö | Helsingborg |
|---|---|---|---|---|
| Others | | | 14% | 12% |
| Ferry/Passenger | 7% | 100% | 40% | 50% |
| Liquid Bulk | 25% | | 12% | 4% |
| Dry Bulk | 30% | | 8% | 7% |
| General Crago | 2% | | 20% | 12% |
| Containers | 36% | | 6% | 15% |

**Source: Compiled information from the four ports. (1997-1998 figures)**

### *C- Cargo Segmentation by Type of Commodities*

This implies a breakdown per commodity of each type of cargo handled as is it shown in the table below. With these regards, two observations have to be stated:

▪ In the ferry business, the predominance of the German destination for goods and the Danish one for passengers.

▪ In the dry bulk, cement, macadam, sand, and coal are the major handled cargo.

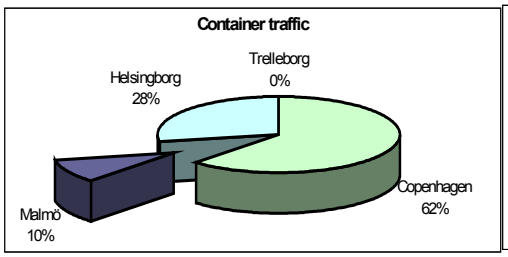
Cargo handled at the port of Malmö 1997-1998 (Source: Port of Malmö)

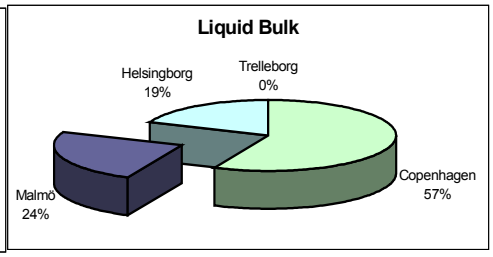
| Type of cargo | Commodities | 1997 | 1998 | Average | % of the type of cargo |
|---|---|---|---|---|---|
| **Mineral oil** | **Total mineral oil** | 1,237,430 | 1,512,596 | 1,375,013 | 100 |
| **Dry Bulk** | Agricultural products | 106,888 | 81,428 | 94,158 | 8 |
| | Salt | 25,119 | 37,224 | 31,172 | 3 |
| | Chemicals | 61,896 | 62,967 | 62,432 | 5 |
| | Sand | 95,439 | 138,237 | 116,838 | 10 |
| | Limestone | 25,955 | 28,620 | 27,288 | 2 |
| | Macadam | 129,530 | 293,618 | 211,574 | 18 |
| | Wood chips | 27,766 | 39,819 | 33,793 | 3 |
| | Coal & coke | 55,830 | 210,616 | 133,223 | 12 |
| | Cement | 184,586 | 273,427 | 229,007 | 20 |
| | Scrap Iron | 82,511 | 75,000 | 78,756 | 7 |
| | Other bulk cargoes | 171,994 | 107,484 | 139,739 | 12 |
| **Ferry goods** | Nordö-Germany | 2,720,302 | 2,850,369 | 2,785,336 | 90 |
| | Polferries-Poland | 137,944 | 124,436 | 131,190 | 4 |
| | Dragör-Denmark | 186,237 | 198,979 | 192,608 | 6 |
| **Containers** | Goods in containers | 128,805 | 131,859 | 130,332 | 82 |
| | Container Ro-Ro TEU | 10,961 | 7,905 | 9,433 | 6 |
| | Container Lo-Lo TEU | 18,902 | 18,665 | 18,784 | 12 |
| **Passengers** | Passenger Poland | 210,814 | 234,042 | 222,428 | 4 |
| | Passenger Germany | 0 | 0 | 0 | 0 |
| | Passenger dragör | 1,845,324 | 1,835,079 | 1,840,202 | 35 |
| | Catamaran-Copenhagen city | 1,494,075 | 1,604,105 | 1,549,090 | 30 |
| | SAS-Copenhagen Airport | 437,501 | 467,810 | 452,656 | 9 |
| | Pilen-Copenhagen city | 1,154,826 | 1,145,845 | 1,150,336 | 22 |
| **Other cargoes** | Fruit | 8,091 | 2,148 | 5,120 | 4 |
| | Iron | 50,142 | 172,137 | 111,140 | 89 |
| | New cars | 9,092 | 7,062 | 8,077 | 7 |

### *D- Port's Share by Type of Commodity:*

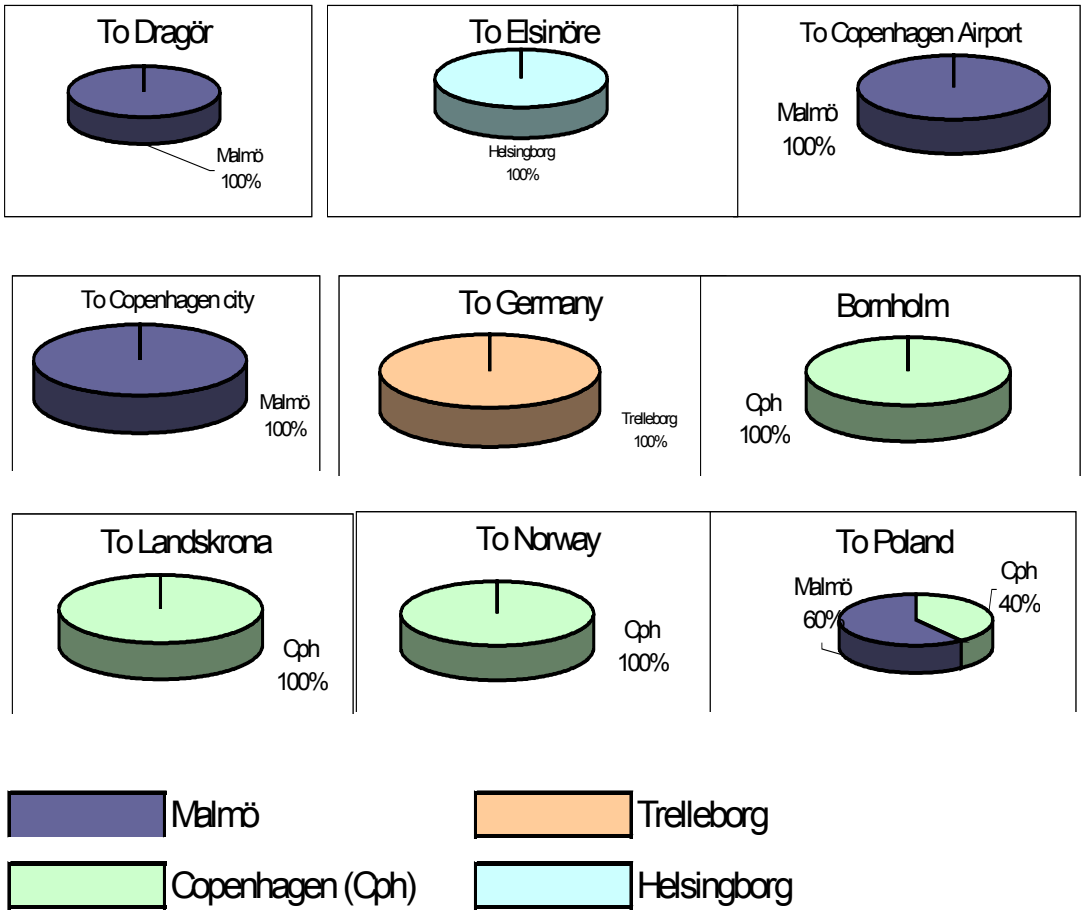
This refers to port's share in the maritime traffic in the region by type of commodity or group of commodities:

- *Containers and Liquid Bulk*



- *Passenger traffic*



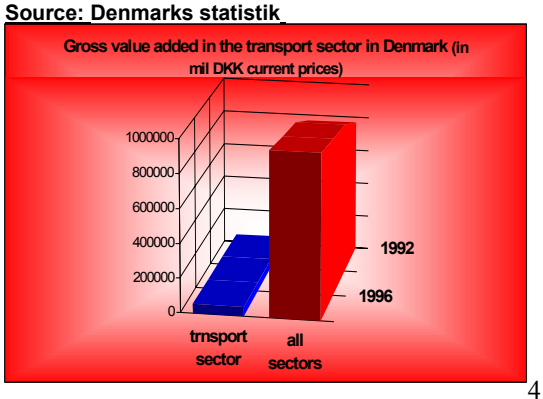

## II.2.2 Port Contribution in the Transport Sector

The port's contribution in the transport chain corresponds to its market share in the transport sector within its hinterland. Being not only a platform receiving and serving ships and vessels but also a logistic interface gathering different modes of transport, the port is an important chain of the intermodal transport system, and its contribution remains considerable as far as a significant amount of goods pass through its gates.

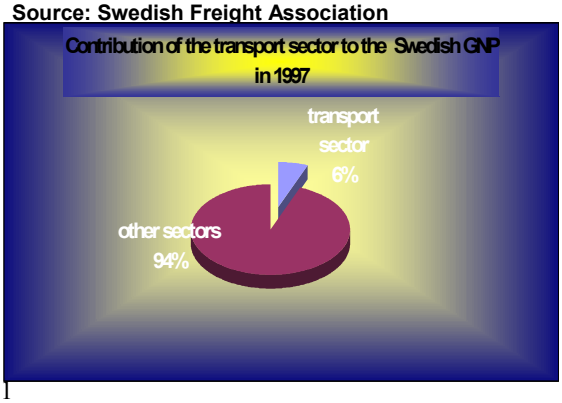
### *A- The Flows of Trade and the Contribution of the Transport Sector*

The transport sector in Öresund contributes by nearly 6% of a total regional GDP. Particularly in Sweden, the flows of transport differ spatially according to the proximity of the centres of production and distribution. (http://www.handelskammaren.com)

**Source: Denmarks statistik**

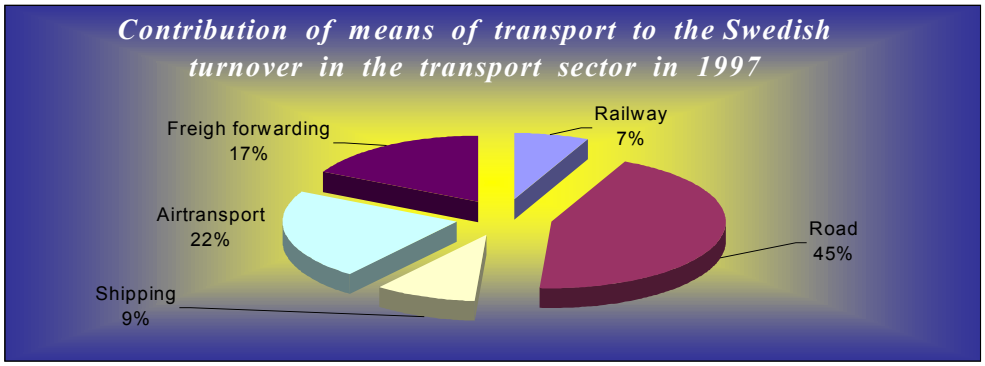


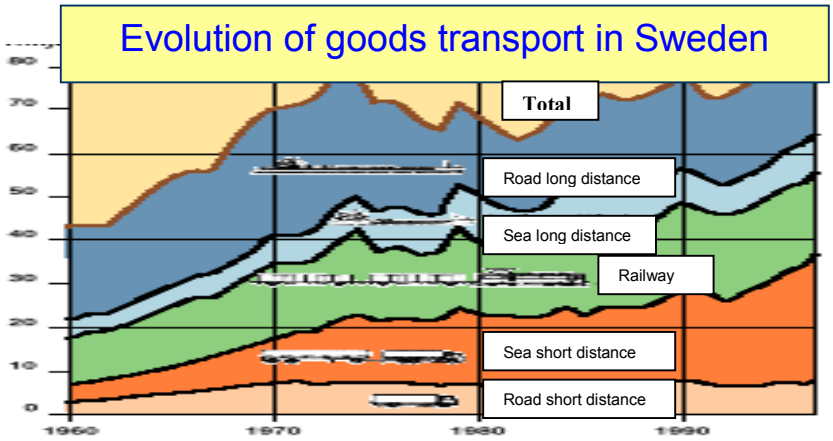

**Source: Swedish Freight Association**



### *B- The Proportion of the Sea Transport in the Whole Transport Sector:*

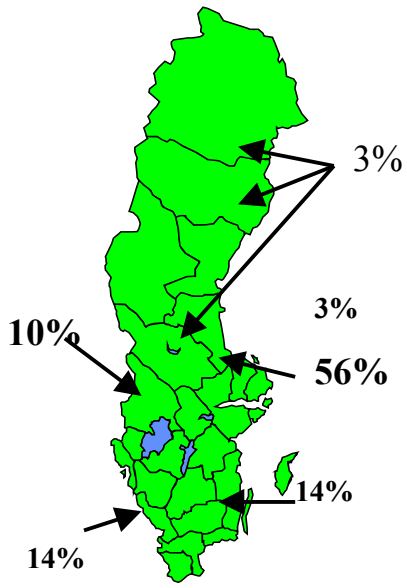
- In Sweden, the total freight transport mileage has amounted 87.2 billion ton/km in 1997, in which the sea transport is ranked first in volume and fourth in value.



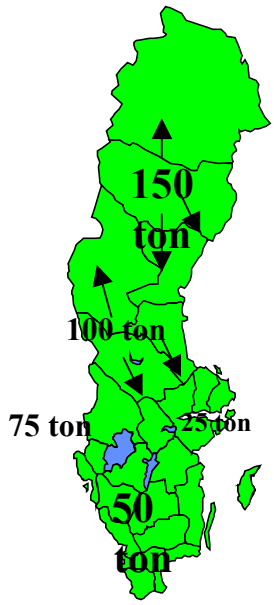




Source: www.swedfreight.se)

**Geographic distribution of Swedish export products in 1997**

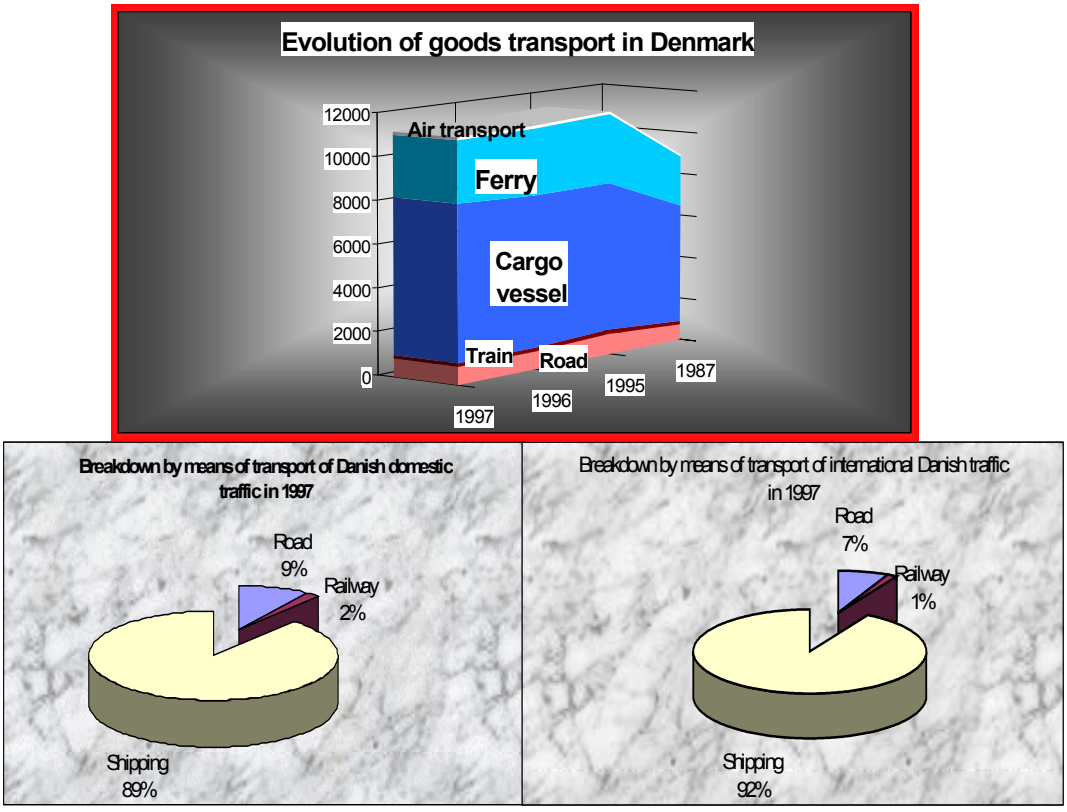



**Goods transport in Sweden per inhabitant & region in 1997**




Source: Rapport on Transport Pattern in Sweden. (Swedish Freight Association, 1997)

- In Denmark, the total goods transport exceeds the 110 million tons in 1997. Shipping remains the predominant mode of transport both in the domestic and international traffics, while the share of air transport remains still insignificant.




***Source***: Compiled Information from Statistiks Denmark (1997)

### *C- The Port's Share in the Maritime Transport in the Region*

The transport of goods in the Öresund region amounts nearly 50 tons per habitant. That makes for a population of 3,2 million inhabitants a goods-traffic of almost 152 million tons, in which the sea borne trade is contributing by 21,46% of the total goods transport in the region. With a 13% share in the sea transport, the port's contribution in the total transport sector can be estimated via one of the two following methods:

$$6{,}10/152 = 0{,}04018 = 4\% \quad \text{OR} \quad 0{,}013*(0{,}214*152) = 0{,}42 = 4{,}20\%$$

Thus, the port of Malmö shares 4% of the whole transport sector in the region. It is important to know such a contribution in order to assess the impacts of eventual changes of the regional transport pattern on the own port's business.

# III:Port External Environment and Market Changes

In the above, the internal environment of Malmö port has been assessed with regard to its current competitors. Being more static, the analysis did not take into consideration the dynamics of the port market and the changes in its external environment. This section will therefore deal with those external aspects through an assessment of market threats and opportunities and the respective port response strategies.

## III.1: Market Overview and Scanning

By looking at market development, it is intended to scan available information on current market situation. Three spatial levels will be looked upon separately:

### III.1.1 The Öresund Level

Öresund region consists of Greater Copenhagen region in Denmark and Skåne region in Sweden. It benefits from steady developments towards a dense homogenous market thanks to the two countries' membership in the EU, the construction of the fixed link between Malmö and Copenhagen, and the ongoing integration between the two sides.


With a GDP of Bill USD 100, the region is ranked the 1st in Scandinavia and the 8th in Europe. It is also well supplied in R&D (n° 4 in Europe) and profits from a labour market employing more than 1.6 million in which 48% are women (1996 figures).

General features for the Öresund region

| | Greater Copenhagen | Skåne | Total Öresund |
|---|---|---|---|
| Population-99 | 1786254 | 1413746 | 3200000 |
| Area/km$^2$ | 2861,87 | 11027,07 | 13888,94 |
| Inhabitant/km$^2$ -95 | 607,8 | 100,3 | 204,9 |
| Establishments-92 | 90640 | 72882 | 163522 |
| Jobs in the region-96 | 1152000 | 448000 | 1600000 |

**Source: Sydsvenska industri-och handelskammaren (http://www.handelskammaren.com)**

The region constitutes a highly developed market with significant economic growth and production thanks to two major factors:

### ***A- Population:***

One third of Denmark's inhabitants live in the Copenhagen Region and 9.2% of the population in Copenhagen. In Sweden, Skåne represents the second most populated region in the country after Stockholm. The distribution of the population by age and educational level informs about the customer's demand and consumption behaviours.

*Distribution by age of Öresund's population (1999 figures)*

| | **Greater Copenhagen** | | **Skåne region** | | **Total Öresund average** | |
|---|---|---|---|---|---|---|
| | Absolute figures | % | Absolute figures | % | Absolute figures | % |
| **0-17 years** | 354086 | **20** | 268611.7 | **19** | 622697.7 | **19.45** |
| **18-24 years** | 162035 | **9** | 141374.6 | **10** | 303409.6 | **9.48** |
| **25-66 years** | 1040780 | **58** | 721010.4 | **51** | 1761790.4 | **55.05** |
| **67-79 years** | 158723 | **9** | 183786.9 | **13** | 342509.9 | **10.70** |
| **≥ 80 years** | 70630 | **4** | 98962.2 | **7** | 169592.2 | **5.29** |

**Source: Compiled information (http://www2.kk.dk/), (http://www.malmo.se/)**

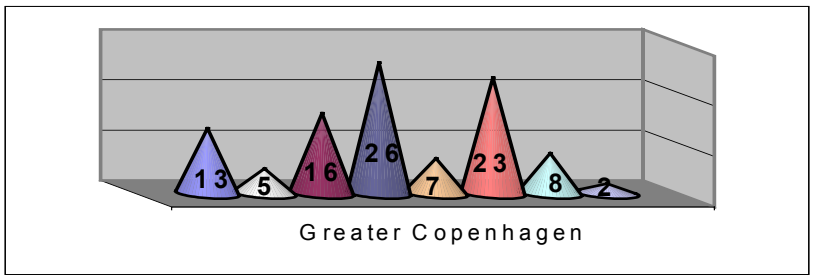
The high educational level in the region (n°1 in Europe) provides the labour market with a wide range of specialists and work force. Accordingly, the region's scientific production is ranked n°4 in Europe with a leading position in marine/water biology, civil engineering, and environmental sciences. (IMD report, 1999), (http://www.uni.oresund.org)

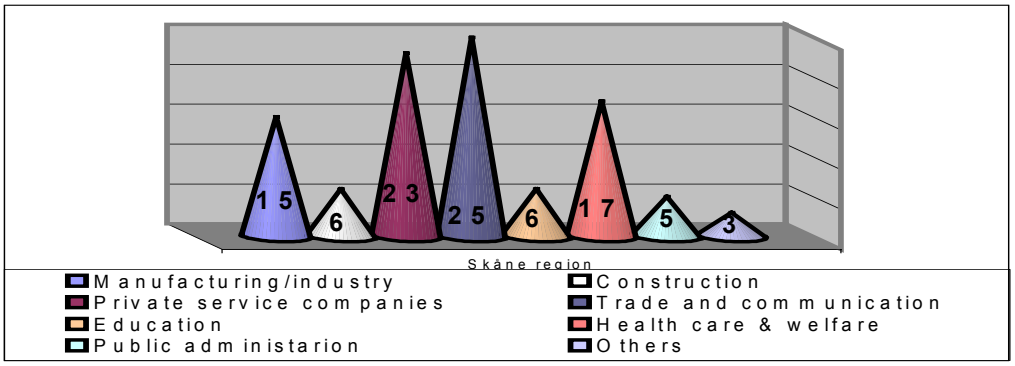
Population in the region enjoys high living standards with particular consumption behaviour: more expenditure on cultural, entertainment, and environmental products/services.

### ***B- Trade & Industry***

With a healthy economic condition, the region offers significant opportunities for port's development and expansion. Two key figures make it possible:

- *On the Swedish side, 70% of national exports pass through the Skåne region,*
- *On the Danish side, the region's GDP represents 37% of the national one.(1994 figures)*




The distribution of employed persons by economic branch shows a predominance of the tertiary sector in which the trade and transport activity holds the major share:

## III.1.2. The National Levels

Here, reference is done to the national economies of both Sweden and Denmark as a second spatial level. An overview of economic indicators of the two countries, and the structure of their respective trade and industry sectors reveals necessary before analysing the ports' strategic and long term planning.

### *A- Aggregate Economic Indicators*

They refer to key indicators, macro-economic figures, and consumer prices related to the two countries. (Annex 4)

Some key indicators of the Swedish and Danish economies

| | Sweden | | | Denmark | | |
|---|---|---|---|---|---|---|
| | 1995 | 1996 | 1997 | 1995 | 1996 | 1997 |
| GDP bill. $US at current prices | 165,5 | 171,4 | 177,3 | 112,4 | 118,0 | 131,4 |
| Exports FOB. bill. $US | 79,6 | 84,5 | 83,1 | 49,0 | 48,9 | 47,4 |
| Imports CIF. bill. $US | 46,6 | 66,6 | 65,7 | 43,6 | 43,1 | 43,2 |
| Unemployment rate | 7,7 | 8,0 | 8,0 | 7,0 | 6,9 | 6,8 |
| Exchange rate in $US (end of period) | 6,7 | 6,4 | 7,9 | 5,5 | 5,9 | 6,8 |
| Expenditure on education (% of GDP) | 5,4 | 5,4 | 5,6 | 7,3 | 7,6 | 7,6 |
| Expenditure on health (% of GDP) | 7,5 | 7,6 | 7,8 | 5,3 | 5,4 | 5,8 |

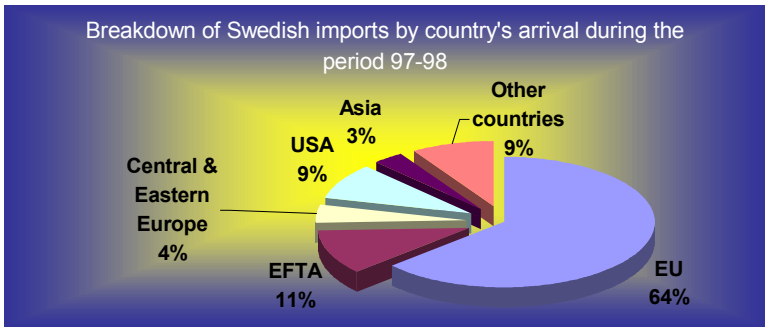
**Source: Compiled information (Statistics Sweden, Denmarks Statistik, WTO, & UN statistics)**

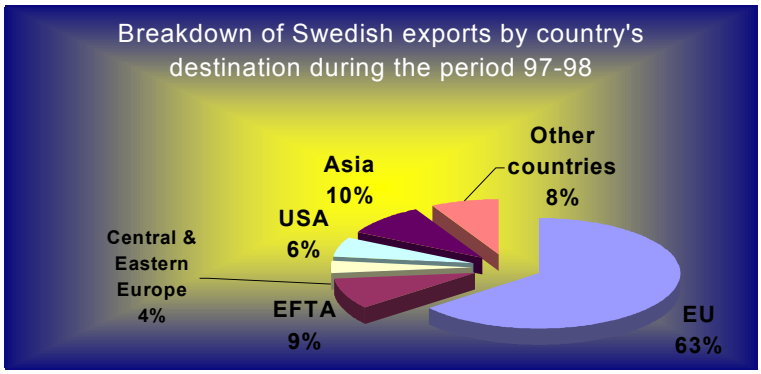
### *B- Economic Structure and Foreign Trade Indicators*

Learning about the economic structure and trade flows related to the two countries allows a further analysis by country and commodity. **(Annexes 5 & 6)**

1- In terms of trade flows: One will observe the domination of the European market as the major importer and exporter partner for the two countries:

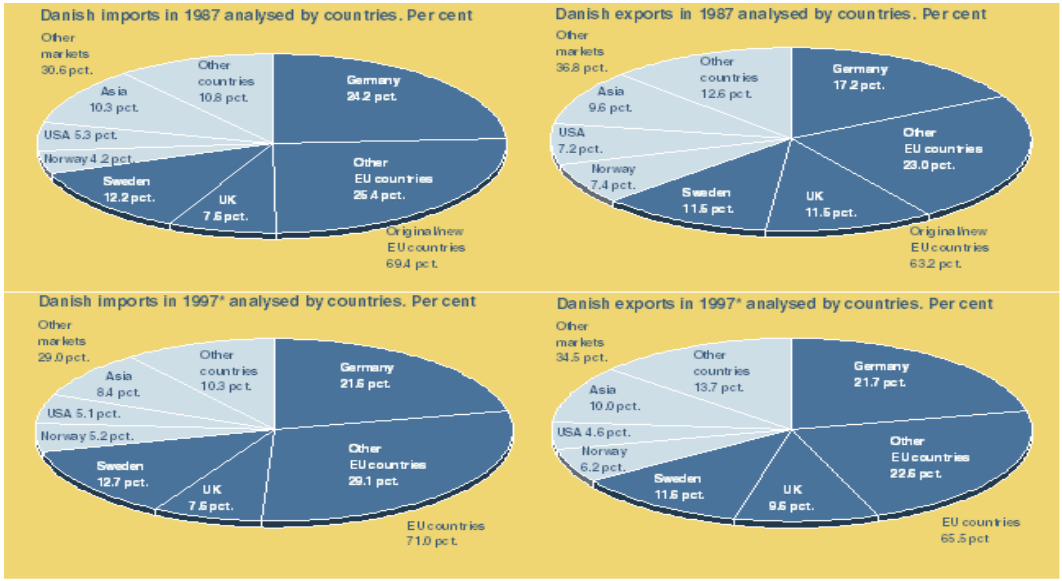
- In Sweden, 57 % of exports are destined to EU countries, 10% to EFTA (Iceland, Norway, Switzerland), 4% to Central and Eastern Europe, 8% to the US, 13% to Asian countries and 8% to other countries. For imports, 70% comes from EU countries, 10% from EFTA countries and 4% from Central and Eastern Europe. The U.S. supplies 6% of Swedish imports and the Asian countries 8%. **(average of 95-98 period)**




**Source: Sweden Statistics**

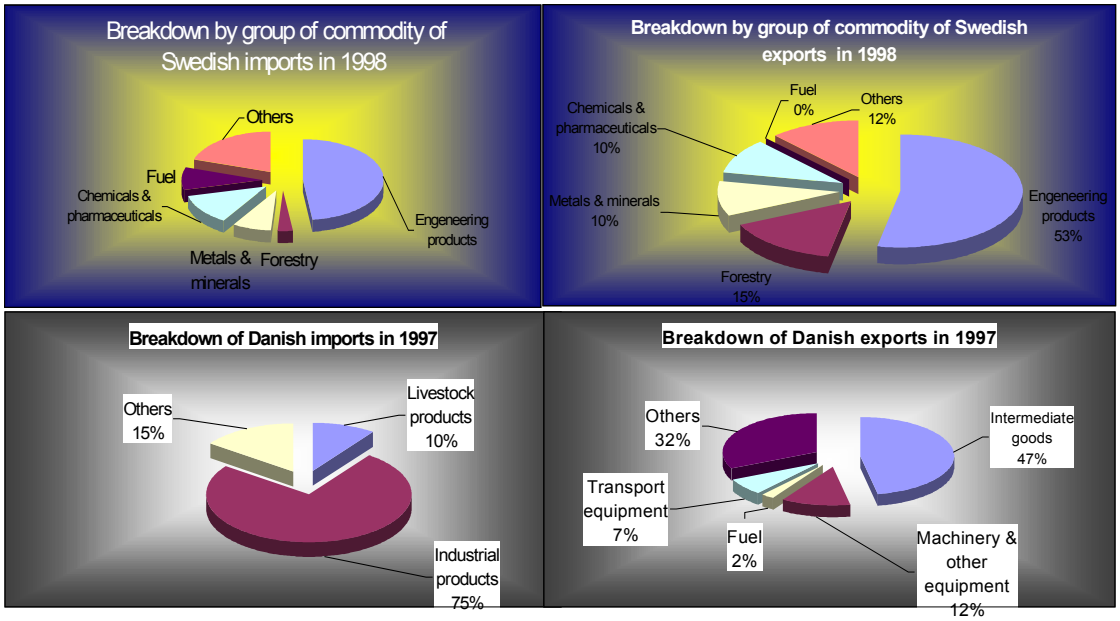
- In Denmark, The most important trading partner is Germany, accounting for more than 20% of both Danish imports and exports. Other important trading partners are Sweden and UK, with respectively 12% and 10% of trading shares.




**Source**: **Denmarks statistisks**

This may limit the ports' development ambitions in the region. However, one can not pronounce, at that stage, about trade opportunities before a broader analysis of market size and trade pattern in the Baltic Sea region.

2- In terms of commodity groups: The industrial and manufacturing products take by large the first place both for imports and exports. Most of manufactured import products are used for further processing and intermediate consumption.




**Source: Statistic Sweden (www.scb.se/), Statistic Denmark (www2.dst.dk/)**

## III.1.3. The Baltic Sea Level

The Baltic Sea region (Germany, Sweden, Denmark, Finland, Poland, Estonia, Latvia, Lithuania, and Russia) is undertaking significant progress towards an economic and trade integration, thanks mainly to the German unification in 1989, the extension of the single European market to the EFTA countries in 1993, the entrance of Sweden and Finland to the EU, and the negotiations on further enlargement of the EU with the East European countries in 1998. The trade regime related to international, regional, and bilateral agreement favours and enhances further such integration.

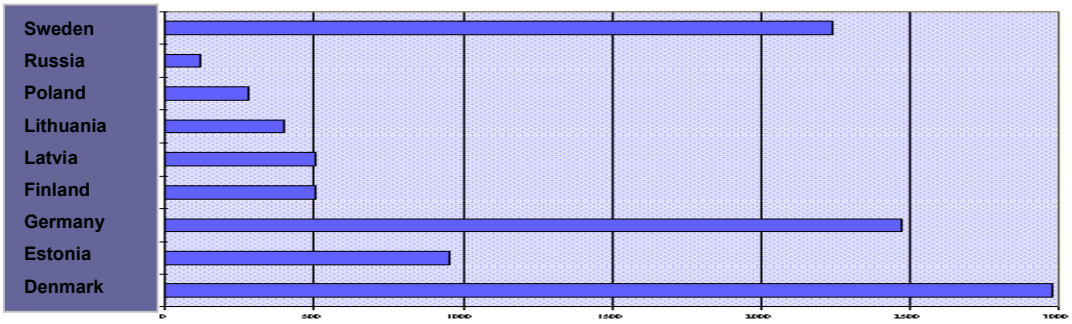
### The trade regime of the Baltic States

| *Country* | *Europe status/agreement* | *Date* | *WTO status* | *Date* |
|---|---|---|---|---|
| ***Estonia*** | Association agreement providing for free trade and a forerunner to possible accession | 12/06/95 | * Free trade agreement notified in 1995 * Observers of the committee on government procurement | 1995 |
| ***Latvia*** | | 12/06/95 | | |
| ***Lithuania*** | | 12/06/95 | | |
| ***Poland*** | | 01/02/94 | Interim agreement notified April 1992, GATT accession | 18/10/67 |
| ***Russia*** | —— | —— | —— | —— |
| ***Denmark*** | Full members of the European Union | 01/01/73 | GATT signatories, Accession to the committee on government procurement | 28/05/50 |
| ***Finland*** | | 01/01/95 | | 01/01/ 48 |
| ***Sweden*** | | 01/01/95 | | 30/04/50 |

**Source: European Economy, 1997 a**

With regard to the economic situation, the region does not constitute a homogenous group. Huge differences still remain between the German /Nordic countries, and the rest of the states. For obvious reasons, Germany is by large leading and dominating the trade in the region followed by Sweden and Finland. **(Annex 7)**

Exports to other countries in the Baltic region **(USD per Capita. 1996)**

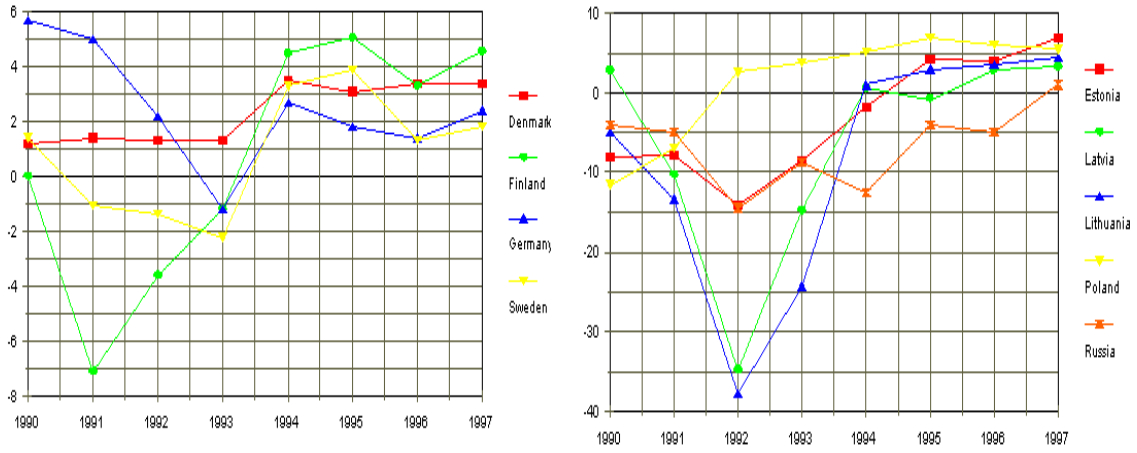



**Source: World Bank and IMF Reports, 1997.**

Closed distance and adjacency seem to favour strong mutual relationships among the Baltic countries thanks to their geographical position and comparatively cheap sea transport. However, one must also take market size and purchasing power into consideration since substantial differences exist around the region. Poland, with 38,6 million inhabitants, is after Germany (82 million) the biggest country by population size, followed by Sweden with 8,8 million.

Additionally, in Germany and Poland the big industrialised regions are not located at the Baltic Sea. That leads to negative impacts on transport and trade expansion, and thus port's development possibilities. **(Annex 8)**

Economic growth of the market economies of the Baltic states




**Source: OECD 1998**

Comparing intra-trade in the Baltic region, Estonia seem to be the most integrated with respectively 61% exports and 77% imports to and from the Baltic states. The Swedish share counts for 50% exports and 54% imports. **(1996 figure) (Cornett, Iverson, 1998)** However, analysing only in terms of export/import share may misjudge the importance of trade links. Germany, for instance, trades more with Sweden than with Estonia simply due to the obvious difference in market size, economic structure, and purchasing power between the two countries. **(Annex 9)**

Annual growth of trade in the Baltic rim region 1993-1996 (%)

| Export from | Denmark | Estonia | Finland | Germany | Latvia | Lithuania | Poland | Russia | Sweden | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | | 57.6 | 22.4 | 10.5 | 64.7 | 68.4 | 21.2 | 31.7 | 17.1 | **14.8** |
| Estonia | 34.5 | | 38.9 | 27.7 | 48 | 43.2 | 40.1 | 52.7 | 54.7 | **42.7** |
| Finland | 10.9 | 55.2 | | 6.9 | 69.3 | 60.1 | 16.8 | 31.6 | 12.7 | **15** |
| Germany | 9.8 | 49.2 | 3.7 | | 45.9 | 27.5 | 20.1 | -0.1 | 18.1 | **12.4** |
| Latvia | -7.1 | 45.8 | 16.7 | 22.2 | | 44.9 | -5.3 | 44.4 | 54.8 | **31.8** |
| Lithuania | 33.3 | 18.6 | 34.4 | 36.5 | 13.5 | | 6.9 | 106.2 | 22.2 | **37.8** |
| Poland | 15.4 | 106.1 | -2.8 | 16 | 81.7 | 64.9 | | 10 | 22.9 | **15.9** |
| Russia | 2.8 | 40.9 | 15.8 | 16.4 | 16.4 | 51.5 | 25.7 | | 1.8 | **18.5** |
| Sweden | 16 | 48.3 | 23.1 | 6.7 | 49.2 | 52.4 | 33.2 | 20.8 | | **13.4** |
| **Total** | **11.8** | **49.2** | **12.6** | **11.9** | **33.9** | **45.1** | **21.6** | **9.7** | **17.4** | **14.9** |

**Source: IMF (1997): Direction of trade statistics yearbook.**

## III.2: Market Outlook and Port Traffic Forecasting

Market development prognosis and port traffic forecasting are prerequisite key tools for port's future strategic and long-term planning. In a sector characterised by its heavy and long term investments, it is necessary to understand market forces and foresee its future trends in order to develop the appropriate response strategies. The port must follow market developments and response to the changes and mutations affecting the shipping and transport sectors. Hence the necessity of an efficient statistic and information system, and flexible operational/ management procedures.

### III.2.1. Market Outlook and Future Perspectives

Various are the specialised institutions and organisations providing market forecasts and future projections. In this section, the author tries to come up with a comprehensive synthesis of different market outlooks and future prognoses related to the port's activity and business:

1. At the Öresund level, market growth potential is expected to be more than any time before. This is mainly due to synergetic benefits driven by the region's spatial integration, and the considerable engaged amount of public and private investments (Malmö university, Scandinavian tower, settlement of enterprises headquarters in the region: Danone, Mercedes-Benz, Dell Computers, etc).

2. At the national levels, one may observe the predicted slowdown of the two economies below 2,5 % GDP growth in the three coming years. This is mainly because of the sustained trend of a weak EU market, principal trade partner of both Denmark and Sweden **(OECD, 1998)**. The foreign trade is however expected to continue its strong growth not only because of a booming trade in Asia in terms of more import flows, but also thanks to a continuously strong growth in exports to Eastern Europe except Russia. This latter will continue to suffer from negative impacts of the economic crisis at the short and medium run, which influences deeply the economic and trade activity in the region since 20% of the region's exports went to that market. Generally, the external trade of the two countries with the other East-European countries has been growing faster than the trade with any other group of countries, and it is expected to last for the medium and long period. This explains largely the growth of the demand for ferry and Ro-Ro transport in the Baltic Sea, and may favour Malmö port position in the maritime and transport share within the region. **(ISA, 1999)**

3. At the Baltic level, recent perspectives suggest a reorientation and growth of trade in the region as a result of economic and political transition and liberalisation of trade. Cornett and Iversen (1998) present two trade future scenarios (short and long terms) for the Baltic region on a basis of statistical extrapolation -gravity model scenario-, and economic growth perspectives. Their work has been confirmed by a series of studies prevailing a considerable potential growth in the region. **(EBRD, 1997), (Denize, 1997), (Fisher, Sahay, & Végh, 1998).**

This is explained by the high skill and education levels and the technological & productivity gaps between the countries in the region in favour of economic specialisation and intra-trade growth.

Long term growth prospects in the non-OECD Eastern States

| | EBRD 1997 | Fisher, Sahay, and Végh 1998 (current investments rate) | Denizer 1997 (Investment 30% of GDP) |
|---|---|---|---|
| Estonia | 5.20 | 3.98 | 5.18 |
| Latvia | 5.00 | 4.27 | 3.63 |
| Lithunia | 4.70 | ------ | 3.55 |
| Poland | 3.90 | 4.59 | 2.59 |
| Russia | 3.60 | 5.32 | 4.83 |

Source: (EBRD, 1997), (Denize,1997), (Fisher, Sahay, & Végh, 1998)

According to the same model, significant trade growth prospects are expected for Sweden and Denmark with the Eastern Baltic States, both in terms of imports (East-West bound) and exports (West-East bound). **(See also Annex 10).**

Distribution of trade in the Baltic region: actual and potential percentage

| Export from | Export to | 1993 | 1995 | Short term potential | Long term potential | Change percentage points | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 1993-1996 | 1996-2001 | 1996-2011 |
| East | East | **3.9** | **5.9** | **7.6** | **10.8** | **1.9** | **1.8** | **4.9** |
| East | West | **19.9** | **20.9** | **25.7** | **27.7** | **1** | **4.8** | **6.8** |
| West | East | **17.4** | **18.7** | **24.7** | **26.9** | **1.3** | **6** | **6.1** |
| West | West | **58.8** | **54.5** | **42** | **34.7** | **-4.3** | **-12.6** | **-19.9** |
| Total | | **100** | **100** | **100** | **100** | | | |

Source: Andreas P. Cornett and Søren Peter Iversen (1998)

4. Further analysis may concern a broader level by looking at trade flows between the Baltic region and other international regions. However, such an analysis reveals useless due to the size and spatially limited hinterland of Malmö port. (Annexes 11 & 12)

## III.2.2. Mutations of the Transport Sector and Spatial Model Perspectives

Port traffic forecasting should not only be restricted to economic outlooks and trade prospects, but must extended other aspects such as technological mutations, hinterland changes and subsequent transport and trade patterns. While the technological changes do not require a pre-port's action (the port's response is following the changes in ship design, cargo handling, packaging, etc), the changes in logistics and transport patterns must be deeply analysed in relation with the evolution of spatial models in the region and the competition between different modes of transport.

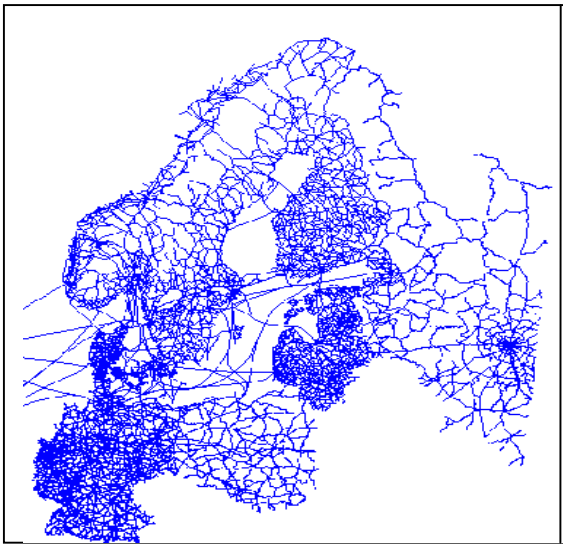
1. Concerning spatial transport models in the Baltic rim, major recent works have been realised by Persson, Lundqvist & Baradaran (1996-1999) and focused on accessibility, mobility, and dynamics of trade and integration in the region.

Lastly Lundqvist & Baradaran (1998) have provided a spatial transport pattern of the region by emphasising the impacts of economic & political changes in the region on transport flows of goods and persons. The model has been drawn on a basis of Origin-Destination (OD) matrices for goods and people, and a collection of the region's trade data in the beginning of the 1990's. Two conclusions have been drawn:

- The ongoing integration and rapid growth of trade within the region. Particularly the Baltic republics and Poland have more than doubled their volume of exports to the region in last three years.

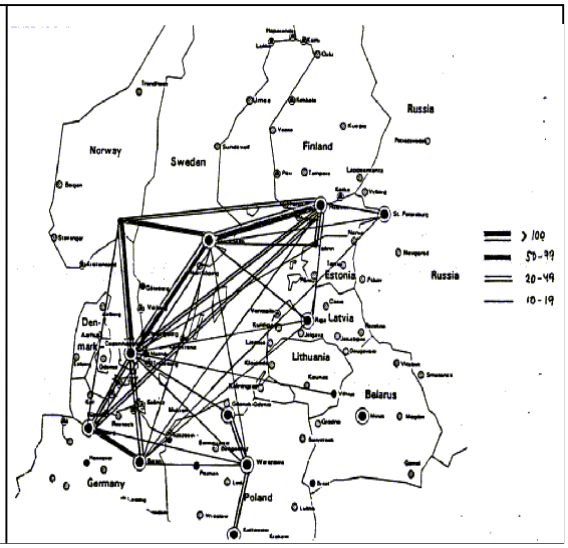
➢ The future mutations in spatial transport patterns within the region, with a highly and more developed road and rail network.

Figure 1: The Baltic Region road network



**Source: Lundqvist & Baradaran (1998)**

Figure 2: Major trade flows in the Baltic region (in mill. USD)




**Source: IMF Direction of Statistics (1996)**

2. Concerning the changes in the logistics pattern, one must focus on the concept of multimodal transport and its implementation in the region. Some reflections can be presented at that level:

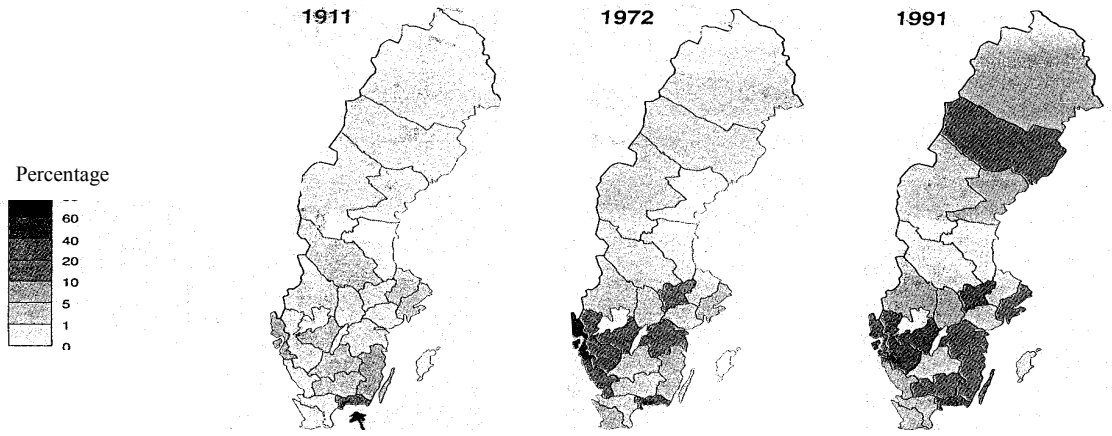
➢ Being a highly developed area with major infrastructure connections, the sea transport –and then the port sector- may loose its comparative advantage as a principal link between the centres of production and consumption. As a matter of fact, the sea transport has almost lost its share in the short distance transport in favour of road and railway transport modes.

➢ It is interesting to know the different logistics scenarios to transport a given commodity from point A to point B within the port's hinterland. Logically, this depends on the kind of the commodity, its value/volume, the distance, and the cost of transport. One can think, however, that it is more depending on the interactions between the demand and supply of transport on one hand, and the producers/consumers requirements and utility(ies) on the other hand. In other words, choosing between a transport scenario and another is not only a matter of the commodity's characteristics in terms of price, volume, etc; but it is more and mainly a response to customer utility and value perception of that commodity.

➢ Another reflection concerns the regional distribution of the transport industry in Sweden, and its evolution during the last decades **(Annex 13)**.

The reason behind the multiplication and dispersion of transport major centres all along the coast of the country is not only explained by the market size and/or production centres, but also driven by the public policy related to regional development aspects, and availability of transport network. The typical example with that respect is the port of Luleå situated in the North of the country and ranked nº4 in terms of cargo throughput.

Evolution of the spatial transport concentration in Sweden (**Source: Transportmedelsindustrin-1995)**




## III.3: Assessment of External Threats and Opportunities

It refers to the evaluation of the changes taking place in the port's external environment. Nowadays, the port is more and more exposed to those changes due to the ongoing integration of the port sector in the whole transport and economic activity, and to the withdrawal of the governmental commitments in the port & maritime sector through privatisation processes and cessation of public subventions.

That makes the port's future not only dependent on economic and trade eventual changes, but also on other various changes in technological, environmental, regulatory and social aspects. Referring to the previous sections discussing about market outlook & port market share, and to recent information related to technological, legal, and social aspects, Malmö port's external threats and opportunities can be presented as follows:

Assessment of threats and opportunities for the port of Malmö

| | Threats | Opportunities |
|---|---|---|
| **Fixed link** | Tremendous negative impacts on the ferry business<br>New competition from road and rail transport systems, particularly on the high value cargo. (Containerised cargo) | Larger economic and physical integrated hinterland.<br>Faster economic growth and bigger market transport demand.<br>New opportunities for the port as a logistic regional centre.<br>New opportunities in the cruise market. |
| **National & regional market perspectives** | Increase of the Foreign Direct Investments (FDI) in the Baltic rim (see table)<br>Expected sustained economic slowdown in the EU, principal trade partners of both Sweden and Denmark | Economic growth in the non-OECD Baltic states reflected in terms of increase of trade and transport flows.<br>Expected sustained growth in the Danish and Swedish economy |
| **Environmental aspects** | Environmental pressures from NGO on Sea ports in the region: (e.g. investments in reception facilities) | Policies to reduce CO2 emission in the region in favour of environmental friendly means of transport |
| **Legal, regulatory, and public policy aspects** | Negative impacts on ferries and Ro-Ro vessels from the decision to stop the duty free sales on board ferries within the EU.<br>Public subsidies to the railway transport system.<br>The interests of Malmö municipality in changing port's land into residence and recreation areas. | Consequential opportunities from the Swedish government's decision to close the nuclear power plants, on the imports of coal and oil energetic products through the port's terminals.<br>Application of the same bridge tow on each individual passenger as in the catamaran link.<br>EU ongoing discussions about fair competition between different modes of transport, and abolition of public subsidies in favour of the port business |
| **Changes of trade patterns** | Less industrial production and more share for the tertiary sector in the Swedish and Danish economies.<br>Multilateral plan for the development of railway network in the Baltic sea region. | Possibilities for Short Sea Shipping due to congestion problems in the main traffic roads in Europe, and to the diversity of legislation regulating different railway systems in the EU. |

## III.4: Port Response to New Market Changes

In a dynamic environment, the port management should always be aware of the mutations and changes affecting the port market, and develop the appropriate responses and strategies in line with its current and future objectives and missions. With regards to new market changes, none can deny the preponderance of Öresund fixed link as the main event with serious impacts on trade flows and transport pattern in the region. In this section, one will focus on port's vision and strategy and tries to foresee their compatibility and appropriateness vis-à-vis new changes.

The starting point about every port's strategy refers to the nature and identity of its makers, i.e. port management and authority. That may lead to a sort of conflict of interests between different owners, partners, and users of the port organisation.

In the case of the port of Malmö, one can foresee such a conflict between different possible actors in the port business. That becomes particularly more confusing when the city interests intersect with those of the port. The municipality being the major shareholder of the port company, it is difficult to imagine a prevalence of ports' interests on the municipality's ones. Other forms of conflicts may rise between the port and other entities. Shipping lines, freight forwarders, logistic companies, and environmental groups; among others, may not approve the port strategy and future policy. It is therefore necessary to involve all concerned parties during the planning and formulation of the port strategy.

By looking at its future perception of the changes in trade and transport patterns, the port of Malmö has adopted three main responsive strategies with a real mutation in economic, financial, institutional, and organisational aspects of the port company.

### III.4.1. Horizontal Integration in the Transport and Logistics Sector

The port has started to perform forwarding, storage, and logistics activities in order to offer to its clients a complete set of transport and logistics services. The port has then opted for a diversification strategy rather than a specialisation one. This is a general trend in the port and shipping industry. Ports in particular try to compensate the low profit margin in their own core business by expanding their activities towards more integration in the multimodal transport system. However, this strategy might not always serve the port's interests since the position of freight forwarders and logistics providers vis-à-vis the port may shift from partners/customers to potential competitors. The strategy should then be formulated and carried out carefully.

### III.4.2. Long-term Vision with New Investments and Market Reposition

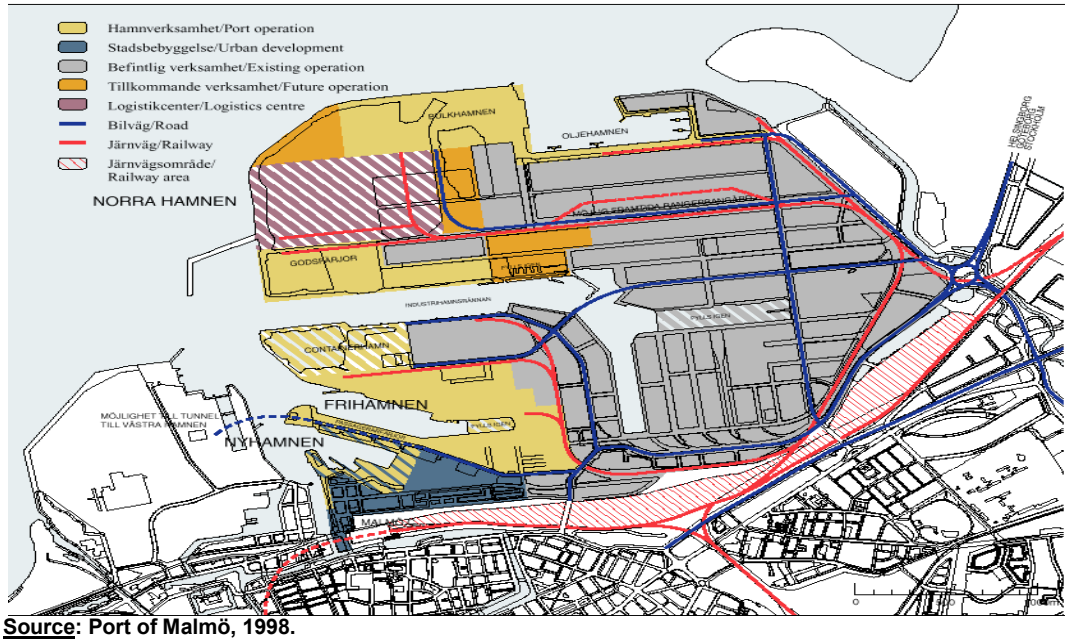
The port considers the permanent Öresund link as an evolving sound region and creating potential development opportunities for Malmö. This will be reflected in terms of a complete change of the current transport pattern in favour of more environmental friendly means of transport. Furthermore, the demise of tax free system -applied from the 1st July 1999- is to increase the competitiveness between the ferry lines on an efficiency basis, which may benefit to the Swedish ferry services. Finally, the considerable land reserves still available at competitive prices create favourable conditions for establishing modern logistics centres and distribution installations.

On the other hand, the future link will have an inevitable negative impact on the Ferry business between the two big cities in the region, and will replace, in many commodities, the short sea transport to Denmark and Germany.

As a response to all those foreseen changes, the port has developed a strategic vision for the year 2010 in terms of new investments both in infrastructures' and superstructures' aspects. The interesting element in this vision is the full involvement, and hence the approval, of the municipality in all strategic aspects: **(Malmö Hamn, 1998)**

*"Vision 2010 shows how the city and the port can develop hand in hand, and how we can make best use of the new opportunities within the new region for the good of the city and the port of Malmö"*

Malmö port planned layout for 2010




**Source: Port of Malmö, 1998.**

The main components of this strategic vision are the following:

- A new tunnel between the west harbour and free port in order to reduce the traffic between the east and west sides of the city.
- A road link over the industrial zone for improving access to motorway network for heavy lorries.
- A railway's network extension for direct connections to the main lines.
- A new terminal for ferry services. The " Norra Hamnen" will receive the freight ferries linking Malmö to Germany and Poland. The current Nyhamnen (new harbour) will be developed for offices, residences, and other activities (eventual marina) that require a central location.

- A new container quay with more houses in the North part of the free port. That will reserve the south part to new installations for passenger terminals. Considerable investments are engaged for the construction of new quays at the free port in order to serve the expected cruise traffic once the permanent Öresund link is finished.

### III.4.3. Joint Venture Co-operation with the Port of Copenhagen

The joint venture between the two ports has just started lastly by establishing the new CMP: Copenhagen Malmö port company. The form and different aspects related to the joint venture and new company will be discussed largely in the next chapter. The interesting point at that level is the co-operation concept as such reflecting a new perception of port's strategy and competition. This is really a crucial deviation in port economics and management concepts usually sceptics to any form of co-operation, in contrary with a long tradition in the shipping business (alliances, consortia, etc).

## Conclusion

The diagnosis of port market features and changes shows number of threats and opportunities the port has to face in the near and long-term future with appropriate strategic and integral responses.

With that respect, the plurality certainly agrees about the advent of Öresund link as the major event challenging the port and shipping sectors in the region. Accordingly, one may qualify by unique and revolutionary the joint venture established between the port of Malmö and Copenhagen port as a direct response to expected market changes.

The next chapter proposes a prognostic analysis and extended reflection through these two aspects.

# Chapter III:

# The Future Öresund Link and the Port's Response to New Market Changes

## I: Analysis of Market Changes Under the Future Öresund Link

### I.1. The Bridge and Expected Traffic Changes

#### I.1.1. The Toll Fee Framework
#### I.1.2. The Traffic Forecasts across the Öresund's Link

### I.2. The Bridge Impact on Malmö Port's Traffic: A Case Study of the Ferry Market

#### I.2.1. Impact on the Ferry/Passenger Market
#### I.2.2. Impact on the Ferry Operators

## II: The Joint Venture with Copenhagen Port: New Concept in Port Co-operation and Market Competition.

### II.1. Overview of Joint Ventures Principles and Practices

#### II.1.1. The Concept of Joint Venture
#### II.1.2. Forms of Joint Venture
#### II.1.3. Joint Ventures in the Maritime Sector

### II.2. Features of Copenhagen & Malmö Ports' Joint Venture

#### II.2.1. Legal Aspects
#### II.2.2. Organisational Aspects
#### II.2.3. Financial Aspects
#### II.2.4. Commercial Aspects

## III: Copenhagen Malmö Port (CMP): Common Policy and Market Strategy Under a New Organisational Structure

### III.1. CMP Vision and Market Strategy

### III.2. The Joint Venture's Risk Element

In this chapter, I will discuss briefly the impacts of the fixed link on the port of Malmö both in terms of expected threats and opportunities, before analysing largely different aspects of the future joint venture to be established in the next year between Malmö and Copenhagen ports.

On one hand, the fixed link is expected to expand port's hinterland with increasing trade and economic activities, but it will also provide direct new competition from other transport modes mainly for short sea trade at the ports in the region. Indirect competition from new ports in the Baltic Sea may threaten the port activity in the near future. Port of Hamburg, for instance, has already declared its involvement by considering the Öresund region as a potential new hinterland in the Baltic region.

On the other hand, the joint venture between the two ports reveal to be a direct response to new market changes and regional integration, and a reposition of port's role and market share within the seaport and transport sector. It constitutes a new revolutionary form of co-operation in the port sector, and may serve as a typical example for future ports' alliance and integration, which may extend to the whole maritime transport and logistics sector.

## I: Analysis of Market Changes Under the Future Öresund Link

The future Öresund link consists of a fixed bridge and a railway city tunnel projected to operate respectively in the years 2000 and 2005. The two projects are contracted by international consortia with companies mainly from both Sweden and Denmark, as well as other European countries.

| Facts | Length |
|---|---|
| Total length of the link | 15648 metres |
| Total length of the bridge | 7845 metres |
| Total length of the island | 3753 metres |
| Total length of the tunnel | 4050 metres |

**Source: Malmö City planning office (**http://www.malmo.se/eng**)**

The decision of building such a link has been driven by political issues encouraging more spatial integration both at Scandinavian and European levels. Economic and commercial considerations have always been dependent on a strong political decision.

A survey on inhabitants' support in both sides to the coming link proves again the weigh of top political decisions in deriving the project rather than purely economic and social considerations.

The high percentage of the "don't care, don't know" category -respectively 32% in Sweden and 26% in Denmark-, shows the extent of the population's concern about the project. However, this trend has started to change in favour of a positive support to the fixed link thanks to the massive information and marketing sensitisation.

Evolution of Population's support to the Öresund project *

| | | Positive (%) | Negative(%) | Neutral/ Do not know (%) |
|---|---|---|---|---|
| **Denmark** | May 98 | 56 | 17 | 27 |
| | December 98 | 58 | 16 | 26 |
| **Sweden** | May 98 | 50 | 16 | 43 |
| | December 98 | 52 | 16 | 32 |

**Source: Öresund News. (June 1999)**

***:** The survey was carried out by Sonar in Denmark among a population of 1125 Danes above the age of 18, and TEMO in Sweden among 657 Swedish respondents.

With more interests and supports, it reveals essential to highlight the future link impacts on the sea trade in the region, and assess the extent and degree of competition together with the new market opportunities it will bring to the port sector. The predictions of future figures reveal particularly difficult in such a situation since it encompass various aspects and different partners directly or indirectly involved in the transport and logistics pattern in the region. The author will therefore focus only on the expected competition the bridge may bring to the port of Malmö with special emphasis on the ferry and passenger business.

## I.1. The Bridge and Expected Traffic Changes

Diverse studies have been conducted in order to foresee the future transport and trade pattern in the region with the coming bridge between Copenhagen and Malmö.

The most important aspect one should look at is the traffic on the bridge by category of users compared with the port's traffic in terms of different competitive sets (price, duration, journey's objective, etc). Hence, two observations can be drawn:

### I.1.1. The Toll Fee Framework

The framework to be applied was set out in the construction agreement between Denmark and Sweden in 1991, which stipulated that the fees should be based on the fares for the ferry route between Helsingborg and Elsinore. In 1990, the fares

averaged DKK 160 for private cars and DKK 810 for HGVs. Today's prices largely correspond to those of 1990. **(Sund & Bro news letter, Dec 1998)**

Nevertheless, this trend may change even dramatically taking into account the profitability the Öresund's consortia (ÖresundsKonsortiet) has to make in order to be financially viable and meet its objective. A particular concern of the consortia is the decision taken by both Danish and Swedish authorities making the toll fee liable to VAT (Value Added Tax), which can not be transferred easily to the link's users since the fares on ferry routes are not VAT imposed. (http://www.oresundskonsortiet.com/)

This has already lead to a revision of the financial objectives of the consortia: a real profitability interest of 4% in 2001 instead of the present 2%, and an extension of the payment period of the consortia's debts to 30 years instead of the envisaged 27 years.

### I.1.2. The Traffic Forecasts across the Öresund's Link

One may observe that traffic projections have been set up with more or less "random" assumptions, particularly for potential travellers across the bridge. That makes the whole forecasted traffic pattern quite confusing and subject to change at any time in favour of one or other mode of transport. Such a problem might be of any direct concern, but the fixed tunnel most probably will become subsidised by the state Railway Company. If so, it would seriously affect the bridge operators who based their future revenue projections on an annually increased traffic forecast.

**Traffic forecasts and projections for the Öresund bridge**

**In the year 2000:**
* The 01/01/99 Forecast: Daily average: 8500 automobiles, and 1500 lorries and busses.
*01/06/99 Adjusted Forecast: Daily average: 9000 automobiles, and 2000 lorries and busses.

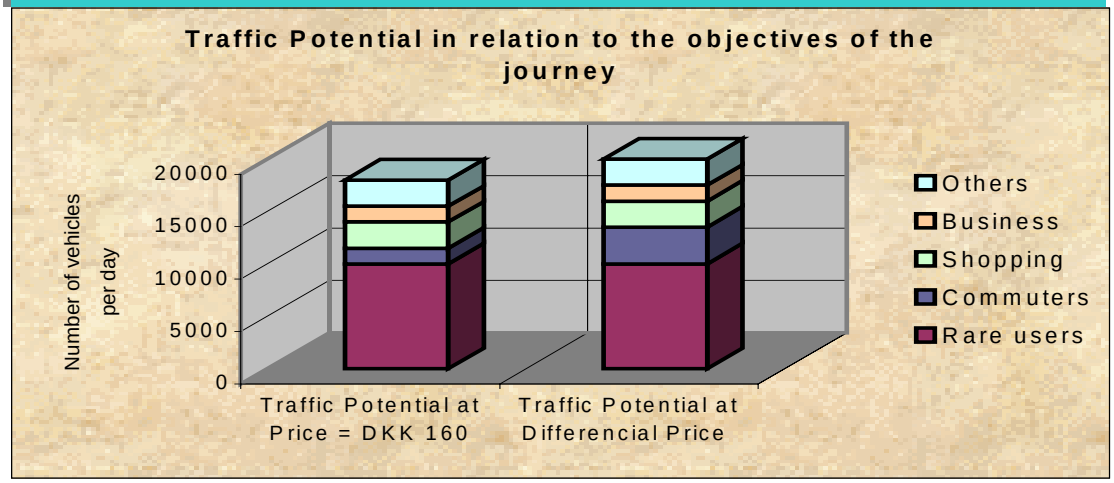
**From 2000 and onward:**
An average annual increase of 1,7%

**Source: ÖresundsKonsortiet (1999)**

The situation becomes more complicated once the passengers are broken down according to the frequency of use and objective of the journey using the bridge. The consortia had already set up price levels for each category. However, this may change flexibly following market development and traffic increase, as well as price attraction from other competitors (e.g. ferry services). The next figure predicts traffic potentials by category of bridge user at a fixed and differentiated price scenarios:

Prices to be applied on each category of travellers

| Category | Impact of price | Price value (DKK) |
|---|---|---|
| Frequent travellers -Commuters- | 50% of the expected medium price | **80** |
| Regular travellers -Local business users- | Expected medium price | **160** |
| Rare users | 50% more than the expected medium price | **240** |

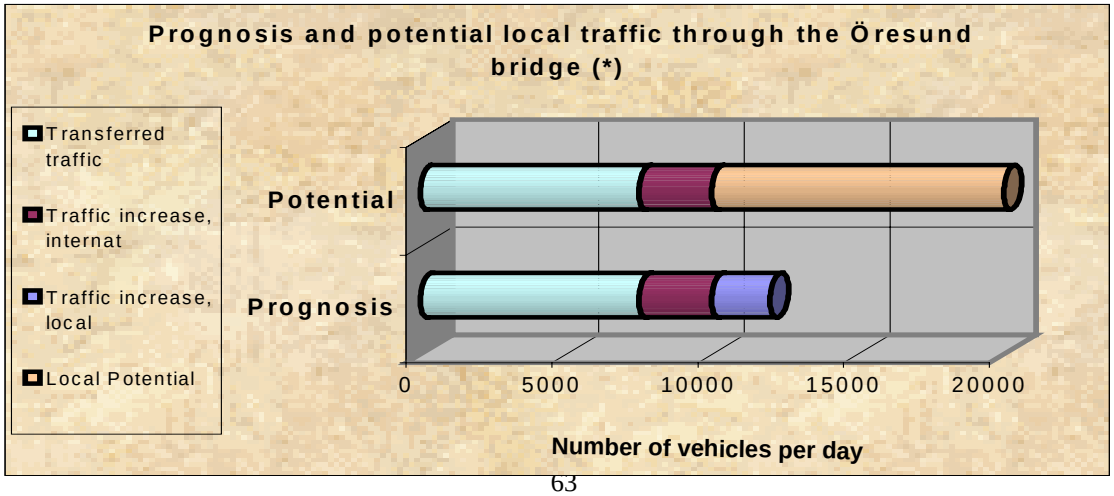



**Source: Compiled information.**

**Source: ÖresundsKonsortiet (1999)**

Everything will then depend on the behavioural demand of the rare users who will remain the largest proportion (50% of total users) whatever potential price scenario is used. As far as Malmö port is concerned, this category of users will be the most determinant in shaping the future transport pattern in the region. The port should target these users' category by means of appropriate market strategy and customers' satisfaction.

On the other hand and as far as the expected integrated Öresund region becomes a reality, one can compute roughly the local potential market in the long run, and consequently adopt the respective market strategies. The following table gives an idea about market prognosis (up to 3 years) and the long term potential (10 to 15 years).



**Source: Personal Scenario compiled from ÖresundsKonsortiet traffic forecasts, the Population's increase rate, and the average economic development in the Öresund region.**

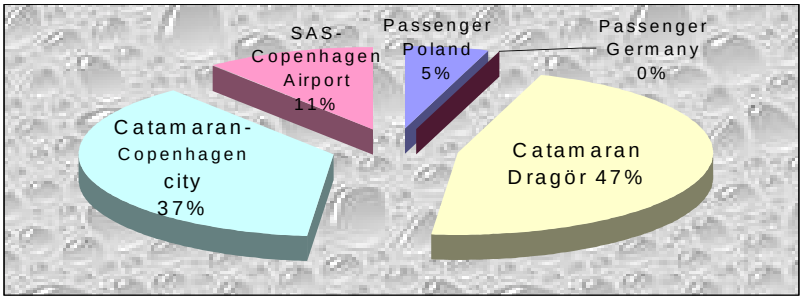
**(*): The potential volume of traffic Through the Öresund bridge may rise from 11.300 vehicles in ÖresundsKonsortiet's forecasts up to 20.600 vehicles per day in the 10 or 15 coming years. This is predicted with an assumption of 5 million inhabitants in the region in 15 years time, and a sustained economic growth of 2% per year.**

## I.2. The Bridge Impact on Malmö Port's Traffic: A Case Study of the Ferry Market

None can doubt about the importance of the ferry market in the Baltic Sea in general and in the Öresund region in particular. The ferry/passenger market will be the first business directly affected by the coming Öresund's bridge. The ports involved heavily in this traffic in the region will be more threatened than the ferry operators will, since the port's berths and terminals are not moveable and hardly convertible to other types of operations. The ferry/passenger vessels, by contrast, are moveable assets and can be moved to other markets or redeployed in other spheres of operations. This section proposes a forecast analysis of the impacts of the coming Öresund's bridge on the port of Malmö as well as the involved ferry operators.

### I.2.1. Impact on the Ferry/Passenger Market

The ferry and passenger business represented 40% of the business profile of the port of Malmö in 1998. Its breakdown by port of destination shows a total predominance of the Öresund's Danish side with more than 95% of the total ferry traffic.




**Source: Port of Malmö**

With the commencement of road traffic via the Öresund's bridge, the volume of ferry traffic through the port is expected to decline dramatically threatening the whole port's throughput and financial outcome. The next table shows the impacts of ferry traffic reduction on port's financial situation, according to two presumed scenarios:

| **Budget in Million SEK** [1] | Budget 1988 = Basis 100 | Cease of traffic to Dragör and Kastrup Airport, and reduction in 50% of the traffic to Copenhagen city | Cease of all ferry traffic to Denmark |
|---|---|---|---|
| Revenues | ***209*** | ***189*** | ***182*** |
| Rent payment to Malmö city [2] | ***-44*** | ***-44*** | ***-44*** |
| Operating costs | ***-144*** | ***-136*** | ***-133*** |
| Depreciation | ***-9*** | ***-9*** | ***-8*** |
| Financial interest | ***-1*** | ***-1*** | ***-1*** |
| Financial result | ***11*** | ***-1*** | ***-4*** |

**Source: Compiled information from the traffic data given by port of Malmö.**
**(1): In fixed inflation rate.**
**(2): In the two scenarios, the ferry terminals are supposed to remain under the port's rental property.**

In the two scenarios, the port's financial situation shows a negative result. This is mainly explained by the characteristics of the port's ferry business with low operating costs and high respective revenues. In the worst scenario, the reduction in operating costs amounts only SEK 11 Million against SEK 27 million in port's revenue. The port should either re-deploy the ferry terminals with new activities or give them back to the Municipality landowner.

Nevertheless, one should point out that market predictions of the expected transport pattern with the coming bridge still remain unclear and less reliable. Most of transport operators and partners abstain to pronounce about the distribution of market share between different means of transport once the bridge starts to operate. **(Horck, 1999).**

That may lessen the pessimistic fears declared by involved shipping and port operators particularly with the coming competition between different transport partners.

### I.2.2. Impact on the Ferry Operators

The impact on the ferry lines operating between the two sides of the Öresund region will be less dramatic than on the port sector as it may occur. The ferries being moveable assets, they can serve other potential markets. It is also technically possible to divert the ferry line to other vessel type (Ro-Ro, cruise, etc).

The experience of the ferries operating in the English Channel may serve as typical case since they have been facing the same type of competition from the Euro-tunnel starting to operate since 1994. The response of the ferry operators in attempt to retain or improve market share with the occurrence of the Euro-tunnel can be summarised as follows: **(The Lloyd's Business Intelligence Centre, 1994)**

The improvement of their own operating efficiency in comparison with the frequency and speed the tunnel was offering,

The achievement of a pool service between P&O and Stena Lines in order to rationalise the existing services and bring down the operating costs,

The offer of new and extra services to attract more travellers,

The partnership with the hotel sector and other tourism associates by offering new travel and entertainment services, and

The establishment of alternative services away from the tunnel in a potentially growing market. (e.g. P&O Spanish link).

With the Öresund's bridge, the ferry lines did not yet adopt real response strategies, though some events had already taken place:

- The Baltic ferry joint venture (JV) between the Deutshe Bahn and the Danish Ministry of Transport cleared by the EU commission in 1998. The JV, called Scandlines, took over the Deutshe Bahn's unit Deutsche Faehregesellscharft Ostsee unit and the Danish Scandlines.
- The partnership between Scandlines, Tivoli Entertainment Park, Skåne train operator in offering a weekend-package tour with attracting prices.
- The ferrylines Scandlines and HH-Ferries have already started a marketing campaign for the ferry route Helsingborg-Elsinore initiated together with the port of Helsingborg and the cities of Helsingborg and Elsinore. (**Edström, 1999)**

## II: The Joint Venture with Copenhagen Port: New Concept in Port Co-operation and Market Competition.

The joint venture concept implies different forms of bilateral and multilateral agreements within a co-operative and partnership framework. Accordingly, the JV between the port of Malmö and Copenhagen port constitutes an unusual and inventive achievement within the port sector. It revolutionises the whole port's competition concept still ruled by public protectionism and conservationist market traditions. With that respect, this chapter deals with the joint venture concepts particularly in the maritime industry, as well as the features of Malmö/Copenhagen joint venture in the light with market changes and future constraints.

## II.1. Overview of Joint Venture Principles and Practices

Different reasons are behind the decision for engagement in JV, but the most important reason consists of the need of complementarily. None of the JV parties dispose alone of all elements necessary to realise the objective of the JV, and therefore each party relies on the other to supply the missing elements. Broadly, the main reasons of entering into a JV fall under the six following categories: the managerial, the political, the financial, the market, the cost, and the technical/operational reasons. **(Jebsen, 1994)**

At a national level, the JV between two or more domestic parties tends to gain more from the realisation of economics of scale through synergetic effects and gains in efficiency. It may also aim more gains in market share or more expanding of its range of activities through vertical and/or vertical integration.

At the international level, the motives for JV may go beyond the reasons mentioned above and take other forms through mergers or acquisitions. Abhyankar (1994) lists broad reasons for which a company may engage in JV with foreign parties:

- Taking advantage of growth where activities are developing and expanding,
- Acquisition of long-term benefit derived from a simple management contract,
- Entry to a protected market,
- Access to other potential markets and activities through the foreign party, and
- Compliance with local laws and regulations.

One should bear in mind, however, the specificity of each sector and country's situation when discussing JV purposes. The JV concept in itself being sufficiently broad to provide a unified framework analysis, it will be judicious to examine each case separately and carefully.

In this section, one will refer to the joint ventures' principles and institutional/ organisational aspects before reviewing their implementations in the maritime sector.

### II.1.1. The Concept of Joint Venture

Various definitions of JV are given by number of scholars and institutions:

- The American law, recognising the separate existence of the JV as a sort of co-operation rather than corporation partnerships, defines it as: **(Cooke & Yates, 1994)**

*"…An association of persons with intent, by way of contract express or implied, to engage in and carry out a single business venture for joint profit for which purpose*

*they combine their efforts, property, money, skill and knowledge, without creating a partnership or a corporation pursuant to an agreement that there shall be a community of interest among them as the purpose of the relation of principal, as well as agent, as to each of the other co-ventures, with an equal right of control of the means employed to carry out the common purpose of the joint venture."*

- The European Commission provides less wider definition of JV by excluding any agreement which does not have as its primary effect an on-ongoing pooling or exchange of resources-for example, agency, distribution, franchising, patent and know-how licensing agreement. **(19th Report on Competition Policy, 1990), (Kling & Burley, 1991)**
- The English Law does provide less comprehensive definition and enables English lawyers to rely upon past jurisprudence cases, and untechnical definitions. **(Cooke & Yates, 1994).** Young & Bradford (1994) provide one of such typical definitions:

*"An enterprise, corporation or partnership formed by two or more companies, individuals or organisations at least of which is an operating entity which wishes to broaden its activities for the purposes of conducting a new profit motivated business of permanent duration. In general, the ownership is shared by the participants with more or less equal distribution and without absolute dominance by one party".*

- Finally, the French law does not give legal definition of a JV, although some articles refer to agreement or corporation ventures between independent parties. There are 3 types of JV in the French law: a simple contractual relationship, a partnership agreement, and a joint corporation. **(Thierry G & J, 1991)**

Another distinction within French JV demarcates the contractual JV which does not give rise to a common entity from the one which does give rise to common entity either in form of a partnership (société de personnes) or in form of a corporation (société de capitaux). **(Bernoussi, 1993)**

Hence, it reveals that the concept of the JV may differ from one country to another and according to each entity's economic and social institutionalisation. However, one may conceive the JV as a sort of commercial agreement between two or more parties in order to benefit from market integration and internal exchange of resources. As this definition is certainly wider and confusing, it would be judicious to refer to different forms of JV as practically run and carried out.

### II.1.2. Forms of Joint Ventures

Setting pre-established universal forms of JVs would be rather impossible due to the confusion surrounding their practical implementation and development. Moreover, a JV may concern only one or more aspects of firms' co-operation (financial,

commercial, legal, etc), instead of a total agreement of full partnership. Accordingly, divers authors have tried to provide agreed framework of different forms of JV without achieving any success yet. From various literature available, one can select the two following comprehensive assortments:

1. Gould (1994) enumerates three currently forms of JV:
   - A contractual agreement often drawn up specifically for one particular project, or
   - A legal partnership (which is a particular form of contractual agreement), or
   - A private limited liability company (société anonyme),
2. Cooke (1994) identifies three basic common JV's structures:

- *The incorporated JV*, which may be the most familiar thanks to the advantage of the limited liability for the JV company, and to the familiarity of the parties engaged to the structures and practices within the corporate laws governing the JV structure.
- *The Contractual JV*, whereby the parties agree to carry on business in "Joint Venture" but without any joint vehicle being established, nor pre established legal background to govern the relationship (such a partnership or a company law).

This option is mainly used to retain autonomy and independence from the JV. The liabilities of the JV will be limited *"only to the extent of any limitation at the level of each JV itself"*. (Cooke, 1994)

- *The partnership JV*, in which the partnership agreement may differ from a country to another mainly in terms of liability, disclosure, and financial aspects.

Again, one should remember the variety of different types of JV and avoid pronouncing on a universal framework at that stage. It should be, however, interesting to intersect the JV experience and practices in the maritime industry.

### II.2.3. Joint Ventures in the Maritime Industry

In a diversified maritime industry, JV practices have been oppositely conceived by the shipping and the port sectors. While the maritime carriers have already benefited from an extensive JV's experience thanks mainly to a perfect open market, ports still remain reticent to co-operation agreements due to the strong resistance from local and national public interests and the relatively close competitive market.

#### *A- Joint Ventures in the Shipping Industry*

The maritime transport has always benefited from its international status thanks to an open market whereby shipowners may operate, buy, repair, insure, and even man their

ships wherever they seek or want to. Within such an international environment, shipping companies often recognise the interests of co-operation with each other. Ma (1998) summarised the motives of a maritime JV in the three following considerations:

- Economic arrangements: Due to rising financial difficulties in terms of ship purchase and operating costs.
- Commercial arrangements: To achieve market coverage, service frequency, marketing capability, freight stabilisation, and cost control.
- Operational and technical arrangements: In order to gain from scale economies in vessel space utilisation, container deployment, and operational know-how.

Different forms of maritime transport JV have been developed particularly over the past thirty- (30) years. One may identify four main forms of a maritime JV:

- *Pools*: They refer to JVs in the tramp shipping market and regroup different type of arrangements between involved shipowners. Fairplay proposes three distinct types of tramp shipping pools: the consortium pool, the member-controlled pool, and the administration controlled pool.
- *Liner Conferences*: Those are liner-shipping co-operations and constitute the most leading form of shipping JVs. The main reasons behind the liner shipping JV are explained by the highly capital-intensive liner market requiring inevitable risk share and better efficiency and cost reduction. **(Dipner, 1994).**

In the containerised liner shipping market, liner conferences are widely omnipresent and encompass continual stronger importance. In a recent survey of several large container-shipping companies, it was indicated that only 30% of their investments and even less of their assets are in ships. Most containerised liner shipping is involved in different forms of JVs through the ownership and lease of containers, chassis, feeder vessels, trucks and railcars, port and inland terminals, and telecommunication and computer networks. **(Frankel, 1994)**

- *Consortia*: Starting in the seventies, they have been developed from just limited vessel/space sharing agreements to real integrated organisations involving different aspects of maritime co-operations. The EU defines the consortium as:

> *"An agreement between two or more vessel-operating carriers which provide international liner shipping services exclusively for the carriage of cargo, chiefly by container, relating to a particular trade and the object of which is to bring about co-operation in the joint operation of a maritime transport service in order to rationalise their operations by means of technical, operational and/or commercial arrangements with the exception of price fixing".* ***(Quoted from* Ma, 1999)**

Dipner (1994) listed seven features of consortia JVs including fleet operation, marketing, terminal operations, inland operations, cargo pooling, pricing, and conference rights.

- *Freight Stabilisation Agreements*: Those are big alliances trying to achieve market freight harmonisation. By contrast to liner conferences, the freight stabilisation agreements acquired more market share by involving major conference lines and trade partners.

### *B- Joint Ventures in the Port Sector*

There is a long tradition of JV within the port business as an interface for international transport chain. This can be explained by the diversity of operators and partners within the port territory which renders port's operations particularly difficult in terms of cargo handling and movement through the port area without real co-operation between different actors within the port (Stevedoring, warehousing, forwarding, etc).

Cross JVs combining shipping and port activities have gained recently more importance thanks to the involvement of shipping lines in terminal ownership and operations. The opposite scenario is rather seldom, if not non-actually factual. Ports' vertical JVs tend to integrate down stream via extended interests in forwarding and logistics activities, instead of up stream involvement in the shipping business.

However, direct involvement between ports in forms of JVs is not that familiar and constitutes rather an exception. In that sense, one can identify two opposite situations:

- Ports involved in the same trade but situated at different ends of routes tend to co-operate (Rotterdam/Singapore, New York/Hamburg, etc);
- Ports located in the same range and competing with each other usually do not tend to co-operate, and move instead toward more fierce competition.

Basically, one may summarise current ports' JVs as follows: **(Beth, 1994)**

- JV terminals within a port (service promotion and marketing),
- Integrated terminal operation and stevedoring,
- Harmonisation of one trade as its ends under non-competitive conditions,
- Organising intermodal trade with ports penetrating hinterland functions, e.g. establishing inland depots;
- Joint hinterland activities between different port operators in one port,
- Joint organisation of international transit between ports at both ends of a trade, with possible co-operation with third parties in the logistics chain; and

- Establishment of EDI-data bridges between ports at both ends of trade.

## II.2. Features of Copenhagen & Malmö Ports' Joint Venture

The future JV between the ports of Copenhagen and Malmö founds new co-operation concept in the port sector since it engages for the first time two neighbour competing ports in a corporate agreement and further integration. The JV is practically realised through the establishment of a parent company: Copenhagen Malmö Port (CMP) -Scheduled to start operating from the 1ST January 2000 -, in which the two ports are equal shareholders with 50% of shares each.

Thus, integrating two close ports from different countries with relatively dissimilar political, legal, economic, and social patterns; the CMP sets up a new framework of international ports' co-operation. Hence, the interest of an attentive study and analysis of different aspects and features related to the new company.

### II.2.1. Legal Aspects

The new port company will start with an annual turnover of DKK 380 million. The head office will be placed in Copenhagen, whereas the company itself will be registered in Sweden as a Swedish limited company with a share capital of approximately DKK 100 million. Accordingly, the ports of Malmö and Copenhagen will be registered in their countries as daughter companies and remain governed by their respective domestic national laws and regulations. Most of the two ports' workers and staff will still depend on the employment conditions and regulations in their own countries, except permanent representatives from the two ports in the CMP's board of directors (approximately 15 to 20 persons) whose status will fall under the Danish law. (www.cmport.com)

The chairman and managing director (vice-chairman) of the CMP, who should represent separately the two ports, will be elected every two years with a switching position for each port's representative. In the first period, the chairman of the board of directors will be from Copenhagen port, whereas a representative from the port of Malmö will carry out the duty of the Managing director. The union representatives will be elected separately in the two countries accordingly with their respective national laws and legislation. **(Olsson, 1999)**

Concerning land property's and rental's, some problems may rise in the future with regards to the status of the new company. This is particularly the cases of the free port

concession right held by Copenhagen port and expected to expire in the year 2017, and the possible new land rental from the city of Malmö.

With regards to competition aspects, the CMP will incorporate both the competition laws in the two countries, as well as the EU competition regulations. However, due to the scope and framework of the JV, there is no need to report to the establishment of the new company the EU commission.

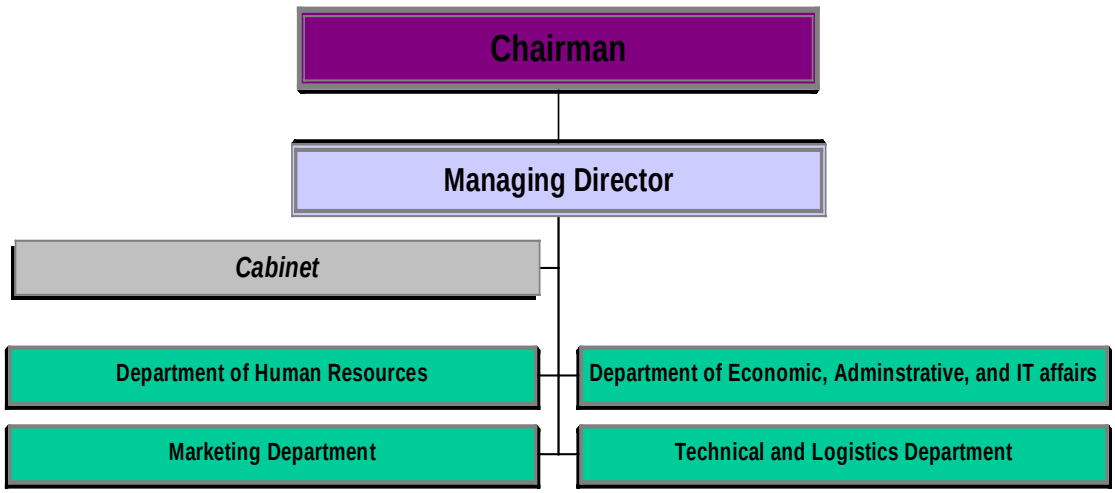
### II.2.2. Organisational Aspects

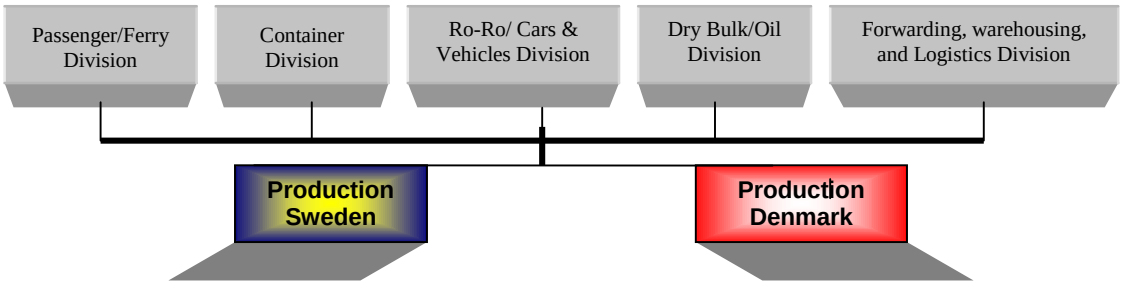
In the original situation, the two ports' status differ categorically:

- Port of Malmö performs exclusively as a port operator with a rented infrastructure from Malmö City. The other half of the shares is owned by different private shareholders.
- The port of Copenhagen is a self-governing institution, charged by the Danish parliament (law 504, which came in force in 1992) to operate the port and develop areas not required for operational purposes. **(Cargo system, April 1998)**

With the new company, the shares of different owners will be transferred to the new CMP's capital, and the dividends will be distributed accordingly. The most important innovation with the new organisation is the possibility of the increase and sale of the shares between current owners, and to the public. Indeed, the company intends, in the medium run, to capitalise in the stock market. It is also possible to expand the activities in both sides, mainly in terms of port operations, storage, cargo administration, and forwarding activities.

The organisational chart of the CMP will embrace a divisional structure shared by the two ports' sides:






**Source: CMP, 1999.**

In the top line, the four departments will supervise and manage common assets of the CMP in the two sides. In the bottom line, the operational divisions are responsible of each side separately, and should report continuously their productions to the port management.

## II.2.3. Financial Aspects

The capital equity of the CMP's company will be approximately DKK 100 million with an expected turnover of more than DKK 380 million (SEK 465 million):

Breakdown of the expected CMP's turnover in the year 2000, by type of operational activity

| Operational Divisions | Number of Employees | Expected Turnover in year 2000 (SEK million) |
|---|---|---|
| Passenger/Ferry | 54 | 45 |
| Ro-Ro/ Cars & Vehicles | 60 | 80 |
| Container | 125 | 100 |
| Dry Bulk/Oil | 23 | 100 |
| Forwarding, Warehousing, and Logistics | 70 | 140 |
| **Total** | **332** | **465** |

**Source: CMP (www.cmport.com)**

With regards to fiscal and taxation aspects, two scenarios may occur:

- If the CMP is registered in Sweden, the tax rates will be calculated equally, after revenue distribution, between the two sides: 28% on the Swedish income and 32% on the Danish.
- If the company is registered in Denmark, both sides will be applied a tax rate of 32%. Hence the registration of the CMP as a Swedish limited company.

The balance sheet of the CMP port in 2000, as well as the expected profit/loss account of CMP port in the five coming years are presented as follows:

Expected Balance Sheet of CMP in 2000

| Assets | Malmö | Copenhagen | CMP | Liabilities | Malmö | Copenhagen | CMP |
|---|---|---|---|---|---|---|---|
| Fixed Assets | 16 | 46 | 62 | Equity | 63 | 63 | 126 |
| Current Receivables | 20 | 25 | 45 | Long-term Liabilities | 25 | 25 | 50 |
| Cash Flow | 74 | 16 | 90 | Current Liabilities | 22 | 0 | 22 |
| Total Balance | 110 | 88 | 198 | Total Balance | 110 | 88 | 198 |

**Source: Draft report on CMP's expected financial results (28/01/1999) -Ports of Malmö and Copenhagen-**

Expected Profit and Loss Account of CMP from 2000 to 2004

| Million SEK | 1999 | | | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|
| | Copenhagen | Malmö | Total | CMP | | | | |
| **Total Income** | **258,4** | **217,8** | **476,2** | **460,5** | **447,4** | **454,9** | **462,4** | **469,9** |
| Port operation | 223,1 | 194,1 | 417,2 | | | | | |
| Real estate | 35,5 | 23,7 | 59,0 | | | | | |
| **Total Costs** | **238,1** | **204,4** | **442,5** | **454,3** | **435,5** | **430,5** | **425,5** | **413,6** |
| Administration costs | 39,1 | 18,2 | 57,2 | 53,6 | 51,3 | 48,6 | 46,3 | 46,3 |
| Production costs | 131,4 | 117,6 | 249,0 | 245,3 | 242,5 | 241,5 | 241,3 | 238,2 |
| Personnel costs | 18,8 | 19,5 | 38,3 | 38,3 | 38,3 | 38,3 | 38,3 | 38,3 |
| Initial capital costs for CMP | 0,0 | 0,0 | 0,0 | 21,3 | 8,8 | 8,8 | 8,8 | 2,5 |
| Land rental costs | 40,0 | 40,0 | 80,0 | 80,0 | 78,8 | 77,5 | 75,0 | 72,5 |
| **Depreciation** | **8,8** | **9,1** | **17,9** | **15,8** | **15,8** | **24,4** | **15,8** | **15,8** |
| **Result** | **20,3** | **13,4** | **33,7** | **6,2** | **11,9** | **15,8** | **36,9** | **56,3** |
| **Financial Income** | | | | **2,1** | **2,5** | **3,0** | **4,0** | **5,3** |
| ***Result after financial interest*** | | | | ***8,4*** | ***14,4*** | ***27,4*** | ***40,9*** | ***61,6*** |

**Source: Draft report on CMP's expected financial results (28/01/1999) -Ports of Malmö and Copenhagen-**

## II.2.4. Commercial Aspects

None can predict accurately the impacts of the two ports' JV together with the Öresund's fixed link on the ports' traffic turnover, nor on the prospective trade pattern in the region. However, one may already assume a dramatic decrease in the ferry traffic between Malmö and Copenhagen, and a redeployment of the ports' assets for synergetic and efficiency purposes. Notwithstanding what every port may propose, market forces as well as individual facilities and compulsions could intimately decide who keeps what. Neutral observers suggest that the "dirty cargo" will drift eastward into the less congested Malmö port, while Copenhagen, with the benefit of the home city's cultural and nightlife attractions, could establish itself as the port of "cleaner cargo" mainly in terms of tourist and cruise-ship destination. **(Lloyd's of London Press, 1999)**

Indeed, Copenhagen consolidates its position as the first north European cruise port with respectively 205 and 204 cruise calls in 1997 and 1998. **(Port of Copenhagen)**

One should retain with these regards that the proposal of JV agreement came from the port of Copenhagen who has been noticing in the recent years a considerable reduction of its market share particularly in the container business. **(Olson, 1999)**

A marketing study of potential redeployment of the two ports' assets within the new CMP shows the synergetic gains in each activity that will benefit to the two ports **(in Mill DKK)**:

| | 1999 | | 2004 | | | |
|---|---|---|---|---|---|---|
| | **Copenhagen** | **Malmö** | **Total** | **Negative** | **Positive** | **Synergy** |
| Cruise ships | 10 | 0 | 10 | | +1 | 1 |
| Rail ferries | 11 | 0 | 11 | -11 | | |
| Ferries | 20 | 16 | 36 | -11 | +1 | |
| Passenger | 3 | 11 | 14 | -8 | | |
| Oil | 28 | 24 | 52 | | +1 | 3 |
| Dry bulk | 11 | 14 | 25 | | +1 | |
| Ro-Ro | 8 | 38 | 46 | | +1 | 2 |
| General Cargo | 21 | 15 | 36 | | +1 | 2 |
| Container | 48 | 11 | 59 | | +2 | 4 |
| Real estate | 28 | 19 | 47 | | +1 | 3 |
| Others | 18 | 26 | 44 | | +1 | |
| **Total** | **206** | **174** | **380** | **-30** | **+10** | **15** |

**Source: CMP, 1999.**

# III: Copenhagen/Malmö Port (CMP): Common Policy and Market Strategy

Under the new structure, the CMP acquires dominant market share and benefits largely from synergetic effects and scales economies. However, as a JV between two different entities, it might evolve a considerable risk of mismanagement and disorganisation.

## III.1. CMP Vision and Market Strategy

Copenhagen/Malmö port company as an aggregation of two ports' activities should look for new position in the port and transport markets through clear mission and market strategy. On one hand, it should maintain and improve different operations performed by the two ports by gaining from interchange of expertise and scale economies. On the other hand, it should seek and expand new businesses and activities in line with future market size and opportunities. The declared mission statement of the CMP reflects such a market vision by enlarging its role in the

transport and logistics sector, enhancing its market integration and responding to diverse customer's requirement:

*"Copenhagen Malmö port provides total range of services within the port and transport sector through high efficiency and service level and better focus on customer's competitive power and value share increase within the transport chain."*

In the CMP vision, one can also highlight its determination for a leading market position in the region with more focus on port partnership and co-operation:

*"The CMP shall be, with the development of Öresund's region, a base of a leading port operator in North Europe. It shall be considered as a young existing company where new thinking, partnership, and co-operation are the prevailing future aspects."*

**Source: Arthur Andersson (1999)**

## III.2. The Joint Venture's Risk Element

As involving two or multiple partners, the JV usually entails a possible risk in terms of disagreement or control undertakings. Particularly in a 50/50 JV, powers' domination and conflicts are likely to happen which may either reach to bad compromise or no decision at all once a conflictual issue is to be discussed.

D' Orsay's (1994) appraisal of the risk element in JV may serve as typical example for CMP's case and informs about the type of difficulties it might face at any moment:

- The risk of activity's concentration towards a dominant business target in favour of one or other partner.
- The risk of over commitment derived by the fear from a business reduction towards less than the equal 50% share. The partners are tempted to go ahead and to accept more "risky" deals.
- By contrast to the previous element, there is also a psychological risk from the potential partners' empowerment. Each of the partners depends on the other's wiliness, and this may lead to a situation in which each one's decision relies on the other's.
- The risk's increase from local market attractiveness and incentives. As in our case, one country/market may provide more attraction and therefore favours one partner's position.

# Conclusion

In this chapter, a prognostic and retrospective approach has been applied in order to assess the impacts of the Öresund bridge on ports and ferry operators in the region, by

referring to the anticipated traffic scenarios across the bridge and the recent case experience of the Euro-tunnel.

With regard to the joint venture between Malmö and Copenhagen ports, comprehensive overview has crossed the extensive literature analysing various forms and practices of co-operations and partnerships mainly in the shipping and port markets. More emphasis has pointed out the proper JV between the two ports from different aspects, and the strategy and vision of the new CMP as a major actor in the port sector in the region.

One should underline again the authenticity and revolutionary characteristics of this ports' JV in a sector marked by a considerable public involvement and substantial resistance to changes and integration.

# General Conclusion and Summary

When I intended initially to direct the port of Malmö for dissertation purposes, I was only thinking about a classic general diagnosis of port's operation and competitiveness, taking benefit from the proximity of the port in terms of information availability and obvious contact with the port's staff and management. In fact, I was addressing initially the ports of Montreal and Boston, which accepted kindly the founding of the dissertation project, but manifested their concern on various obstacles and difficulties that may rise from the far distance to Malmö in terms of market proximity and information accessibility.

Being therefore more pragmatic, I decided to write about the port of Malmö as one of the major ports acting in the Southern region of Sweden. The project of the dissertation, as formerly submitted to the management of Malmö port, entailed only a proposition of either a general diagnosis of port operations, or a specific diagnosis of one particular aspect of port's activity. However, once I met the port representatives, I realise how far I was unaware of the changes taking place in the whole port and transport sector in the region.

With the coming link connecting the two Öresund sides and the future joint venture between the ports of Malmö and Copenhagen, the port and transport sectors in the region have been, and still they are and will be, crossing two major events that not only change the whole logistics and transport pattern in the region, but also revolutionise the founding inceptions and practices of ports' co-operation and partnership.

On one hand, the bridge and tunnel connections over the Öresund will remodel the trade pattern in the region by providing new modes of transport (namely the road and railway systems) offering real possibility for intermodal logistics and interactions. Furthermore, the connections will extend the port's hinterland toward a larger spatial Baltic market.

On the other hand, the projected joint venture with Copenhagen will expand the port's activity toward additional business areas, and provide new opportunities in terms of market integration and expansion. Indeed, the joint venture in itself constitutes a new perception in ports' co-operation, and its implementation revolutionises the traditional concept of competition and integration in the port sector.

Taking into consideration the complexity of the port's organisation, I was trying to approach those two aspects within the appropriate and relevant research framework. The extent and scope of a typical MSc's dissertation being already outlined by the university, a real concern of project's completion has been rising in parallel with the progression in the research process. This has been particularly implied by the difficulty to balance between an explicit large/global diagnosis and a limited time/scale dissertation. The ultimate solution was to adopt a research methodology providing global market approach of the port's activity without falling into detailed specific aspects of port operations.

Therefore, the dissertation's topic has been analysed from different perspectives prevailing economic, political, legal, and organisational aspects on technical elements of port operations. In addition, the port activity has been conceived and analysed as a part of the whole transport and logistics system, rather than a simple interface in service of shipping business and cargo handling. The horizontal and vertical integration of the port sector in a constantly changing market and economic situation, as well as the spatial and regional dimensions of the port sector, have been the key elements shaping the dissertation's framework and its research scope and methodology.

As far as I was progressing in the research process, I was surprised by the increasing weight and importance of the external actors in shaping and directing the port sector. Accordingly, the more the port's activity integrates the transport and logistics chain, the more complex and heterogeneous, but also exciting, becomes the structure of port entity. That confirms the trend towards better organisation and performance of the port sector with the rise in ports' privatisation and deregulation.

As a matter of fact, the port sector has been, and still is in large extent, behind the changes affecting the organisational and strategic management both at the macro and micro levels.

These aspects constitute the key element I was trying to stress in the present dissertation. The joint venture between Malmö and Copenhagen constitute a new inaugural conception in the port sector driven by fierce and intense competition both within the sector itself and/or with other modes of transport. The new CMP (Copenhagen Malmö Port) management is even designing additional partnership

forms with the ports in the larger Baltic region, and planning a capitalisation in the stock market through direct public involvement.

My modest prediction is that the world ports in general and those facing comprehensive and growing competition in particular, will change, under such pressures, their whole managerial concepts toward more market integration and less, if not insignificant, public involvement.

With that respect, it will be interesting to follow the experience of Malmö port (or more currently CMP port) mainly in terms of implementation of new management conceptions, and better market integration and re-position.

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## ANNEX 1: Main Cities of Sweden

| Cities | Population Dec.31, 1995 |
|---|---|
| Stockholm | 711,119 |
| Göteborg | 449,189 |
| Malmö | 245,699 |
| Uppsala | 183,472 |
| Linköping | 131,370 |
| Norrköping | 123,795 |
| Västerås | 123,728 |
| Örebro | 119,635 |
| Jönköping | 115,429 |
| Helsingborg | 114,339 |

**Source: Statistics Sweden**

## Annex 2: Cargo Throughput at Swedish Ports in 1997 (In 1.000 tons)

| Port/Traffic | Foreign Arrivals | Departures | Domestic Arrivals | Departures | Total |
|---|---|---|---|---|---|
| Göteborg | 15127 | 11211 | 675 | 3329 | 30342 |
| Helsingborg | 4317 | 4774 | 320 | 52 | 9463 |
| Trelleborg | 3648 | 5052 | 0 | 25 | 8725 |
| Luleå | 1919 | 3408 | 568 | 1581 | 7476 |
| Stockholm | 2573 | 1871 | 1232 | 30 | 5706 |
| Malmö | 2754 | 1901 | 835 | 42 | 5532 |
| Karlshamn | 919 | 2606 | 389 | 18 | 3932 |
| Norrköping | 1547 | 1417 | 688 | 17 | 3669 |
| Oxelösund | 1630 | 330 | 1413 | 100 | 3473 |
| Gävle | 1738 | 771 | 489 | 8 | 3006 |
| Vänerhamn | 568 | 852 | 946 | 5 | 2371 |
| Halmstad | 793 | 987 | 320 | 11 | 2111 |
| Västerås | 1362 | 355 | 303 | 77 | 2097 |
| Umeå | 682 | 952 | 269 | 86 | 1989 |
| Sundsvall | 561 | 726 | 349 | 4 | 1640 |
| Köping | 849 | 235 | 358 | 116 | 1558 |
| Ystad | 638 | 765 | 43 | 23 | 1469 |
| Uddevalla | 495 | 804 | 55 | 29 | 1383 |
| Varberg | 460 | 701 | 40 | 14 | 1215 |
| Kappellskär | 563 | 591 | 0 | 0 | 1154 |
| Skellefteå | 365 | 539 | 103 | 132 | 1139 |
| Smålandshamnar | 197 | 342 | 330 | 148 | 1017 |
| Skärnäs Terminal | 508 | 432 | 29 | 2 | 971 |
| Piteå | 344 | 559 | 21 | 19 | 943 |
| Gotlands Hamnar | 118 | 41 | 383 | 358 | 900 |
| Wallhamn | 313 | 507 | 0 | 0 | 820 |
| Åhus | 476 | 302 | 5 | 2 | 785 |
| Söderhamn | 200 | 310 | 126 | 79 | 715 |
| Kalmar | 334 | 164 | 129 | 9 | 636 |
| **Total** | **45998** | **43505** | **10418** | **6316** | **106237** |

**Source:** Swedish Ports' and Stevedores' Association

# Annex 3

BICHOU Khalid
World Maritime University
Port Management, 99.

## Questionnaire

As a part of a dissertation paper on the diagnosis of Malmö port competitiveness and future strategies, and for the purpose of an empirical study of strengths and weaknesses of the four competing ports: Malmö, Copenhagen, Helsingborg, and Trelleborg; a questionnaire is submitted to independent professionals and ports' users in order to assess the adaptability and resourcefulness aspects related to the four mentioned ports.

In order to respect the principle of confidentiality, this questionnaire is anonymous and submitted separately to different professionals and ports' customers.

Different items related to the adaptability and resourcefulness have been identified and concern mainly:

- Quality: quality of services and port quality management.
- Handling Special Cargo: dangerous cargo refrigerated containers, etc.
- Responding to Customers needs and requirements: special customers needs (special storage, cargo consolidation,…), and new service requirements (door to door transport, information system, etc)
- Flexibility: in scheduling facilities, handling equipment, and labour management.
- Contact and communication: Information system and marketing contacts with various customers and users.
- Documentation: Simplified procedures (B/L, cargo manifest, customers, etc)
- Tariff and price system: Simplified price list and building procedures.

The assessment methodology consists of four marking systems corresponding at the position of each port vis-à-vis other competing ones:

- **+: Very weak** (The port is the weakest among all other ports)
- **++: Weak** (The port is weak but not the weakest)
- **+++: Strong** (The port is strong but not the strongest)
- **++++: Very Strong** (The port is the strongest among all other ports)

*The proposed marking system shall not be exhaustive nor absolute, i.e. all ports can share the same position and may reveal all strong or weak in one or diverse aspects.*

Please fill in the following form with your personal assessment according to the marking system above indicated:

| | **Trelleborg** | **Malmö** | **Copenhagen** | **Helsingborg** |
|---|---|---|---|---|
| Quality | | | | |
| Handling special cargo | | | | |
| Meeting needs of individual customers | | | | |
| Accommodating new service requirements | | | | |
| Flexibility of labour | | | | |
| Ability to contact for services | | | | |
| Efficiency of procurement and contract procedures | | | | |
| Simplified documentation requirements | | | | |
| Simplified tariff and building procedures | | | | |

Any suggestion or recommendation is welcomed, and please feel free to comment any port proposed aspect or element in the space below:

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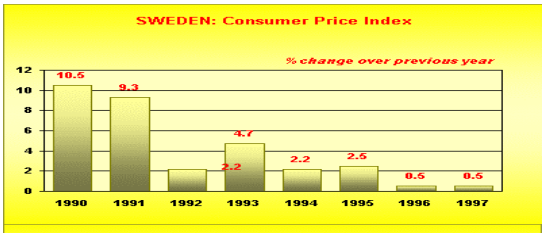
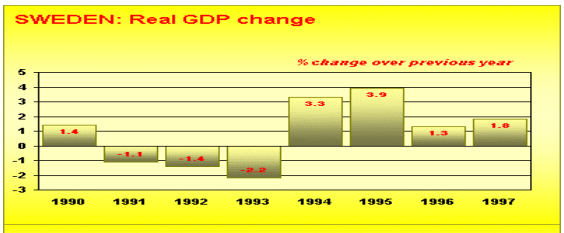
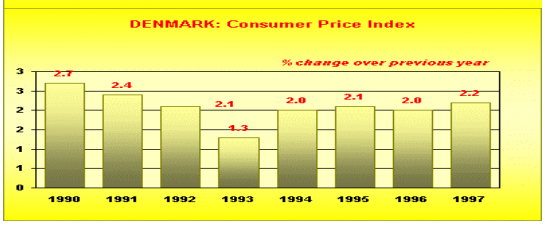
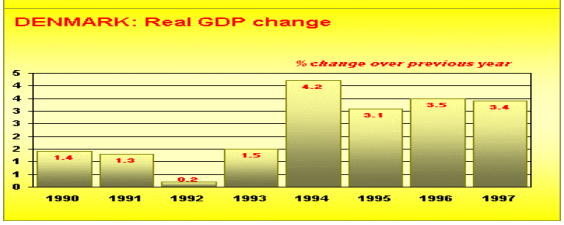
Malmö, June 1999

## Annex 4: GDP change and inflation indexes in Swedish and Danish Economy




## Annex 5: Major Swedish trade partners (Source: Statistics Sweden)

*Imports from the 15 largest countries of consignments (Billion SEK)*

| Rank | | Country | Value Jan-Oct | | % Share of trade 1998 | % change 98/97 |
|---|---|---|---|---|---|---|
| 1997 | 1998 | | 1997 | 1998 | | |
| 1 | 1 | Germany | 75230.5 | 79355.4 | 17.9 | 5 |
| 2 | 2 | UK | 40526.5 | 42554.6 | 9.6 | 5 |
| 4 | 3 | Netherlands | 31232.5 | 33460.1 | 7.5 | 7 |
| 3 | 4 | Norway | 31302.4 | 32628.2 | 7.3 | 4 |
| 5 | 5 | Denmark | 30143.3 | 27382.7 | 6.2 | -9 |
| 7 | 6 | France | 23657 | 26117.6 | 5.9 | 10 |
| 6 | 7 | USA | 24873 | 25987 | 5.8 | 4 |
| 8 | 8 | Finland | 21755.6 | 22329.2 | 5 | 3 |
| 9 | 9 | Belgium/ Luxembourg | 15144.6 | 16666.3 | 3.7 | 10 |
| 10 | 10 | Italy | 12373.8 | 13744.6 | 3.1 | 11 |
| 11 | 11 | Japan | 10768.5 | 10737.6 | 2.4 | 0 |
| 14 | 12 | Spain | 5289 | 7123.8 | 1.6 | 35 |
| 12 | 13 | Switzerland | 6613 | 6983.1 | 1.6 | 6 |
| 13 | 14 | Hong Kong | 6206.7 | 6447.1 | 1.5 | 4 |
| 16 | 15 | Ireland | 4670.3 | 6108.3 | 1.4 | 31 |
| Total | | | 339787 | 357625.6 | 80.5 | |

*Exports to the 15 largest countries of destinations (Billion SEK)*

| Rank | | Country | Value January-October | | % Share of trade 1998 | % change 98/97 |
|---|---|---|---|---|---|---|
| 1997 | 1998 | | 1997 | 1998 | | |
| 1 | 1 | Germany | 58091.8 | 61558.7 | 11.1 | 6 |
| 2 | 2 | UK | 47764.6 | 50016 | 9 | 5 |
| 4 | 3 | Norway | 43418.9 | 47681.9 | 8.6 | 10 |
| 3 | 4 | USA | 43454 | 46499.1 | 8.8 | 7 |
| 5 | 5 | Denmark | 32167 | 32859.6 | 5.9 | 2 |
| 6 | 6 | Netherlands | 29069.7 | 31751.9 | 5.7 | 9 |
| 7 | 7 | Finland | 27956.2 | 29470.2 | 5.3 | 5 |
| 8 | 8 | France | 24185.1 | 27887.5 | 5 | 15 |
| 9 | 9 | Belgium/ Luxembourg | 21074.3 | 24791.8 | 4.5 | 18 |
| 10 | 10 | Italy | 16466.7 | 19244.8 | 3.5 | 17 |
| 12 | 11 | Spain | 11285.5 | 13472.2 | 2.4 | 19 |
| 11 | 12 | Japan | 16075.5 | 11427.2 | 2.1 | -29 |
| 13 | 13 | Switzerland | 8507.8 | 9821.3 | 1.8 | 15 |
| 15 | 14 | China | 7013 | 9537.4 | 1.7 | 36 |
| 14 | 15 | Poland | 8191.5 | 8780.9 | 1.6 | 7 |
| **Total** | | | **394722** | **424800.5** | **77** | |

## Annex 6: Swedish foreign trade by commodity groups (Million SEK)

| Commodity Groups | Exports | | | Imports | | |
|---|---|---|---|---|---|---|
| | Jan-Oct 97 | Jan-Oct 98 | % share 98 | Jan-Oct 97 | Jan-Oct 98 | % share 98 |
| Wood and paper products | 76046 | 77595 | 14 | 12855 | 14934 | 3.4 |
| Minerals | 48503 | 48130 | 8.7 | 34990 | 37140 | 8.4 |
| Chemicals, rubber products | 51547 | 56738 | 10.2 | 49668 | 54476 | 12.2 |
| Mineral fuel, electric current | 13259 | 10573 | 2 | 31462 | 24209 | 5.6 |
| Machinery, transport equipment | 279301 | 304131 | 54.9 | 198381 | 223308 | 50.2 |
| Other products | 54075 | 56522 | 10.2 | 83269 | 90457 | 20.2 |
| **Total** | **522731** | **553689** | **100** | **410625** | **444524** | **100** |

**Source: Statistics Sweden**

## Annex 7: Economic growth in the Non-OECD Baltic states

| | GDP, real percentage change | | | | |
|---|---|---|---|---|---|
| | 1995 | 1996 | 1997 | 1998 | 1999* |
| Estonia | 2.9 | 4 | 9.7 | 6.8 | 7 |
| Latvia | 0.8 | 2.8 | 5.9 | 6.3 | 6.6 |
| Lithuania | 3 | 4.2 | 6 | 6.6 | 6.7 |
| Poland | 6.9 | 6.1 | 6.9 | 6.1 | 6 |
| Russia | 5.2 | 3.9 | 3.4 | 4.1 | 4.5 |

*: Forecast
Source: Andreas P. Cornett and Søren Peter Iversen (1998)

## Annex 8: Exports to Baltic region Countries in 1995 (Million USD)

| To: | DK | ES | SF | D | LA | LI | N | PL | R | S | Nor | Bal | Wor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| From: | | | | | | | | | | | | | |
| DK | - | 52 | 854 | 7403 | 45 | 109 | 2246 | 577 | 439 | 4852 | 7952 | 16577 | 39256 |
| ES | 78 | - | 320 | 161 | 83 | 111 | 39 | 15 | 250 | 219 | 656 | 1276 | 1934 |
| SF | 1274 | 943 | - | 5380 | 224 | 117 | 1198 | 516 | 1933 | 4052 | 6524 | 15637 | 39995 |
| D | 9606 | 259 | 4616 | - | 414 | 537 | 4281 | 8876 | 7217 | 12279 | 30782 | 48085 | 509277 |
| LA | 24 | 41 | 42 | 178 | - | 72 | 23 | 32 | 320 | 122 | 211 | 854 | 1284 |
| LI | 37 | 77 | 29 | 388 | 91 | - | 26 | 61 | 352 | 93 | 185 | 1154 | 2558 |
| N | 2074 | 28 | 1147 | 4993 | 29 | 31 | - | 359 | 181 | 4063 | 7284 | 12905 | 41067 |
| PL | 688 | 16 | 353 | 8778 | 61 | 189 | 147 | - | 1274 | 581 | 1769 | 12087 | 22892 |
| R | 455 | 408 | 2377 | 6079 | 788 | 1024 | 254 | 1605 | - | 646 | 3732 | 13636 | 77389 |
| S | 4946 | 295 | 3072 | 8186 | 133 | 108 | 4575 | 827 | 497 | - | 12593 | 22639 | 67794 |
| Nor | 8294 | 1318 | 5073 | 25962 | 431 | 365 | 8019 | 2279 | 3050 | 12967 | 34353 | 67758 | 188112 |
| Bal | 19182 | 2119 | 12810 | 41546 | 1868 | 2298 | 12789 | 12868 | 12463 | 26907 | 71688 | 144850 | 803446 |

**Source: IMF direction of trade statistics yearbook, 1996.**

## Annex 9: Gravity model trade scenario for the Baltic region

| Export from | Export to | 1996 Mill USD | Short term potential | Long term potential | Short term annual growth | Long term annual growth |
|---|---|---|---|---|---|---|
| East | East | **7142** | **17735** | **52895** | 20 | 14.3 |
| East | West | **25447** | **59762** | **135446** | 18.6 | 11.8 |
| West | East | **22856** | **57563** | **131701** | 20.3 | 12.4 |
| West | West | **66461** | **967614** | **169709** | 8 | 6.4 |
| Total | | **121906** | **232674** | **489751** | 13.8 | 9.7 |

Source: Andreas P. Cornett and Søren Peter Iversen (1998)

Annex 10 (Map 1) **Transport Network in the Baltic Sea and Regional Container Turnover**

**Annex11 -Map 6-** **Regional Freight & Passenger Turnover Deep Sea Traffic in the Baltic and Other European Regions**

**Annex 12 (Map 7):** **Cargo Flows between Different Maritime Regions in Europe in 1993**

## Annex 13: Distances in Km between Different Swedish Cities