AN ANALYSIS OF EASTERN EUROPEAN LINER SHIPPING DURING THE PERIOD OF TRANSITION

by

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ABSTRACT

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Transition in Europe is one of the most important transformations in modern history. This research investigates the impact of economic and political transition on the liner sector of post-Soviet Europe. Former socialist shipping corporations have begun to offer services under market conditions and left behind the rigid leeway of central planning (Cottam and Roe 2007). Extensive adjustments in ownership, organisation, fleets and markets have transpired.

Successful transformation of the maritime industries has a major influence upon the speed and route of economic development in transition countries (Von Brabant 2011). Despite this, liner shipping has received very little attention from academia. There have been no profound investigations, nor a recognised transition model concerning the Eastern European liner sector. However, developments within this field and its importance for liner shipping internationally make transition shipping a topic worthy of rigorous analysis.

A review of Eastern European liner shipping during the period of transition was undertaken in order to assess the level of adaptation to the demands of the free market placed upon the Eastern European liner shipping corporations by the post-1989 transformations. Eastern European maritime literature supported the application of the concept from a transition context and assisted in the development of a conceptual model. The role of the model is to provide a visual representation of the most important elements of restructuring processes used in the facilitation of liner shipping in the European free market.

Analysis of the research synthesis resulted in the identification of key dimensions crucial to successful transition. A three-tiered Delphi survey classified major areas of change and the relationship of changes to the liner industries. From a systemic point of view, research findings indicate the existence of a number of transitional processes utilised in the restructuring of liner shipping fleets. These are: liberalisation, deregulation, commercialisation, privatisation and European Union accession. Such processes are intricately linked and deeply dependent upon evolutionary timing and sequencing.

A discussion of the results provides serious implications for world practitioners. Based on the findings of this study, European Union competitors may take advantage of the fact that transitional liner shipping has largely lost touch with market decisive players, although it has undergone broad privatisation and restructuring. Conversely, Eastern European liner corporations can analyse the effect of transition upon shipping, and draw comparisons between the varying techniques applied and the results achieved by national fleets in order to identify the most advantageous commercialisation strategies. Government initiative will now be required to overcome the conflict between the interest of the liner industry and that of the national citizen, such that there will be public acceptance of free competition, privatisation and foreign investment.

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LIST OF TERMS AND ABBREVIATIONS

Bilateralism: Trade between two countries.

BIMCO: Baltic and International Maritime Council.

Break-bulk cargo: Goods shipped loose in the vessel's hold.

BSEC: Black Sea Economic Cooperation.

Bulk carrier: Single-deck ship which carries dry cargoes such as ore and coal.

Bunkers: Fuel oil burned in ship's main engine.

CEE: Central and Eastern European countries.

Charterer: Person or company who hires a ship from a shipowner for a period of time, or who reserves the entire cargo space for a single voyage.

CIF: Cost, Insurance and Freight. Incoterm for sea or inland waterway transport.

CMEA: Council for Mutual Economic Assistance.

Comecon: Council for Mutual Economic Assistance.

Conference: Organisation whereby a number of shipowners offer their services on a given sea route on conditions agreed by members.

CT: Combined Transport. Carriage by more than one mode of transport against one contract of carriage.

CTL: Constructive Total Loss.

Dead freight: Space booked by shipper or charter on a vessel but not used.

DWT: Dead-weight tonnage. The weight a ship can carry when loaded to its marks, including cargo, fuel, fresh water, stores and crew.

EBRD: European Bank for Reconstruction and Development.

ECB: European Central Bank.

EEC: European Economic Community (before 1993).

EDI: Electronic Date Interchange.

EFTA: European Free Trade Area.

ESCO: Estonian Shipping Company.

EU: European Union.

Feeder vessel: A short sea vessel used to fetch and carry goods and containers to and from deep-sea vessels operating on basis of hub and spoke concept.

FDI: Foreign Direct Investment.

FOB: Free On Board. Incoterm applying to sea and inland water transport.

Freight: Amount payable for the carriage of goods or a description of the goods conveyed.

Freight rate: Amount of money paid to a shipowner or shipping line for the carriage of each unit of cargo between named ports.

FSU: Former Soviet Union.

GDP: Gross Domestic Product.

GNP: Gross National Product.

GT: Gross Tonnage.

IBRD: International Bank for Reconstruction and Development.

Incoterms 2000: International rules for the interpretation of trade terms.

Indemnity: Compensation for loss/damage or injury.

IMF: International Monetary Fund.

IMO: International Maritime Organisation.

ISO: International Standards Organisation.

Laytime: The period of time allowed for loading/unloading operations in port agreed between the shipowner and charterer.

Lay-up: A ship that has been taken out of service because freight rates are too low to cover its operating and maintenance costs.

Liner: Vessel plying a regular trade route against a published sailing schedule.

LISCO: Lithuanian Shipping Company.

LNG: Liquefied Natural Gas.

Lo-Lo: Lift-on, Lift-off.

LPG: Liquid Petroleum Gas.

LRS: Lloyd's Register of Shipping.

LSC: Latvian Shipping Company.

NMB: Navigation Maritime Bulgare (Bulgarian Shipping Company).

MARPOL: International Convention for the Prevention of Pollution from Ships.

MSA: Merchant Shipping Act.

OBO: Oil Bulk Ore carriers - multi-purpose bulk carriers.

OECD: Organisation for Economic Co-operation and Development.

Panamax: Bulk carrier, which can transit Panama Canal.

PHARE: Poland and Hungary Assistance for the Restructuring of the Economy.

POL: Polish Ocean Lines.

Reefer: Insulated cargo ship for carrying refrigerated food.

Ro/Ro: Roll-on Roll-off - a vehicular ferry service.

SETM: Single European Transport Market.

SOLAS: Safety of Life at Sea.

SU: Soviet Union.

TEN: Trans European Network.

TEU: Twenty-foot equivalent unit container measurement.

Tramp: Vessel engaged in bulk cargo or time chartering business.

UN: United Nations.

UNCTAD: United Nations Conference on Trade and Development.

UNDP: United Nations Development Programme.

VLCC: Very Large Crude Carrier.

WTO: World Trade Organisation.

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At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without the prior agreement of the Graduate Committee.

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Relevant scientific and commercial conferences were regularly attended at which work was presented and contacts with experts from Eastern Europe were established; external institutions and individuals were either visited or contacted for consultation purposes and several papers were prepared and published.

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Cottam, H., and Roe, M. 2007. An analysis of macroeconomic privatisation of Eastern European maritime transport during the period of transition. In: *The reality and dilemmas of globalisation*, University of Gdansk, Sopot Publishing. ISBN 978 83 7531 040 5.

Cottam, H. 2012. Sequential modelling of the process of transitional restructuring in Central and Eastern European maritime transport. *Transport Reviews*. Pending.

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Cottam, H. 2012. Adaptation of the Eastern European liner shipping sector to the Single European Transport Market (SETM) as a component of transition. *Maritime Economics and Logistics.* Pending.

Presentation at conferences

Cottam, H., and Roe, M. and Heijveld, H. 2003. The maritime sector in Central and Eastern European countries during transition. Paper presented at the 'Tourism around the Baltic Sea' Conference, May 21-23, 2003: University of Rostock, Hansestadt Stralsund, Germany.

Cottam, H., and Roe, M. 2004. Sequential modelling of post-1989 transition processes in Eastern European shipping industries. Paper presented at the 'Tourism around the Baltic Sea' Conference, May 26-28, 2004: University of Rostock, Hansestadt Stralsund, Germany.

Cottam, H., and Roe, M. 2005. Privatisation and structural reforms of Eastern European maritime passenger transport during the period of transition. Paper presented at the 'Tourism around the Baltic Sea' Conference, May 18-20, 2005: University of Rostock, Hansestadt Stralsund, Germany.

Cottam, H., Roe., and Challacombe, J. 2006. Transitional changes of maritime passenger transport upon Croatian tourism development. 'Croatian Association of Maritime Science and Transport' Annual Conference: University of Rijeka, Croatia.

Cottam, H., and Roe, M. 2006. Restructuring of maritime transport and the development of tourism in the Black Sea region. Paper presented at 'Tourism and Hospitality Industry 2006: New Trends in Tourism and Hospitality Management Conference'. Opatia, Croatia.

Cottam, H., Roe, M. and Challacombe, J. 2007. Transitional models of strategic restructuring in Central and Eastern European maritime transport. Paper presented at the 'International Association of Maritime Economists (IAME) Annual Conference', July 4-6. 2007, Athens, Greece.

Cottam, H., and Roe, M. 2008. Adaptation of the Eastern European shipping fleets to the Single European Transport Market (SETM). Paper presented at the 'Tourism around the Baltic Sea' Conference, May 21-23, 2008: University of Rostock, Hansestadt Stralsund, Germany.

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CHAPTER ONE

Introduction

The opening chapter of this thesis provides a background to the empirical research enquiry. The subject area studied is that of Eastern European liner shipping during the period of economic, political and social transition and reasons justifying this choice are given in section 1.1. Based on this discussion the aims of the study are specified in section 1.2. Next, a brief description of the research methodology is presented in section 1.3. The chapter concludes with an account of the structure of the thesis (section 1.4).

1.1 Subject of the study

This research is concerned with the impact of Eastern European change upon Eastern European liner shipping. This section provides the explanation for researching Eastern European liner shipping during the period of transition.

The economic transition from the command to the market economy in Eastern Europe began in earnest in the late 1980s with the demise of the Council for Mutual Economic Assistance (Lavigne 2007), the launch of the Balcerowicz reforms in Poland (Gros and Steinherr 2009), and the gradual market reforms in Romania. The events of these extraordinary years embodied four fundamental and interrelated elements: the arrival of political democracy, the disintegration of an empire, the collapse of an economic bloc and the launch of the transition (Aligica and Evans 2009). It is the transitional process of economic, political and social restructuring which acts as the ever changing context for this study.

As part of the transformation to a market economy there was a fundamental

change in the underlying macroeconomics and transport policy approach (Polak and Heertje 1999). Market transition affected the activities, organisation and objectives of almost every maritime related industry (Roe 2001). Specifically, Eastern European liner shipping has borne such changes as a consequence of public ownership, direct international relations, and close involvement with state political and economic affairs. Beginning in 1989, the outset for transition was marked by state interest over private ownership, heavy centralisation and mass concentration (Zurek 2001). Shipping entities maintained governance of large, vertically integrated liner combines, which showed signs of poor strategy and insufficient investment (Lloyds List 06.11.08), and led to a sector which lacked the skills to compete or the organisation to provide a competitive framework.

Eastern European liner corporations have not been able to rely on an established transition model in the process of their conversion into profitable companies in market economies (Cottam and Roe 2004). Strategies have rather been dictated by specific national framing conditions, variations in supply and demand, private interests, and the influx of foreign competition (Von Brabant 2011). Although liberalisation and deregulation led to sudden and strong competition and to the abolition of state protection, the installation of adequate shipping political frameworks remained pending. Transition shipping, thus had to endure essential changes under conditions of widely absent state support otherwise common in the shipping sector in market economies.

From a methodical point of view, restructuring and privatisation appears to be one of the most decisive factors for successful transition. Newly structured ownership and possession rights can lead to commercialisation, company

reorganisation and increased profitability (Salvatore and Montrony 2012). With European Union membership providing an added incentive to continue structural reforms, transition liner shipping went hand in hand with fleet and tonnage renewal programmes, market and service reorientation, and company reorganisation and restructuring (Cottam and Roe 2007). Inefficient, technically outdated and internationally incompatible solutions have progressively been replaced with the creation of modern shipping arrangements sustained by more adaptive liner corporations (Lloyds Shipping Economist 02.02.09).

The implications of Eastern European transition are of utmost importance for world liner shipping (Aslund 2009). European Union competitors can recognise and take advantage of the fact that transitional liner shipping in the Eastern European countries has largely lost touch with global activity and market decisive players, although it has undergone broad privatisation and restructuring. Conversely, Eastern European liner corporations can analyse the effect of transition on liner shipping, and draw comparisons between the varying techniques applied and the results achieved by other Eastern European countries to identify the most advantageous commercialisation strategies.

Observing the growth of literature covering transition economies (Lavigne 2011; Myant and Drahokoupil 2010; Estrin *et al* 2007; McDonald and Dearden 2005), the very aim of finding theoretically comprehensive generalisations has not been achieved so far. Moreover, despite its great importance there are no profound investigations published yet concerning the Eastern European liner sector, the specific field of investigation worked on here. Attempts to research aspects of maritime transport post-communism have been relatively sparse and

fragmented. Notable contributions have been made by Breitzmann and Von Seck (2002), Roe (2001), Zurek (1999), and Dobrowolski (1994). However, developments within this field and its importance for liner shipping internationally make transition shipping a topic worthy of rigorous analysis.

There are a number of limitations which one could expect to encounter within this ambitious yet unquestionably unique research area. Appreciably, the thesis margins encompass an extensive range of disciplines dominated by the fields of economic, politics, sociology and management, but having to incorporate far more (Cottrell 2009). This originates from its attempt to embrace the broader impacts of systematic transition upon the Eastern European liner shipping industries and subsequently those of the European Union (Artis *et al* 2010).

Furthermore, there is a formidable shortage of reliable information concerning the salient features and implications of transition in the service sector. Much of the information produced under the former Soviet Union is exceedingly unreliable (Gros and Steinherr 2009), whilst the amounts produced both today and in the past are comparatively inadequate (Kavaliauskas 2012). Accordingly, the study will not only be challenged by the deficit of previous literature (Pasukeviciute 2005), but also as a consequence of the amplified time required for correspondence to emerge from a weak communications infrastructure (Zentai and Kovacs 2012), plagued by a multitude of language barriers (Turley and Luke 2010), and a culture unaccustomed to collaboration with the West.

1.2 Aims of this study

The broad objective of this thesis is to provide an analysis of the level of

adaptation to the demands of the free market placed upon the Eastern European formerly state-run liner shipping corporations by the post-1989 economic, political and social transformations. The study is of particular interest as it is the first attempt to develop a transition model to identify the process of Eastern European liner shipping from command to market economy, and of topical significance as the precedence of liner shipping reflects the growth of lighter (more modern) industrial sectors in the region (Cottam and Roe 2006).

Specifically, the research is confined to include the following aims:

(i) To analyse the condition of Eastern European liner shipping before and after the changes which have taken place between 1989 and 2012.
(ii) To assess the impact of Eastern European transition upon Eastern European liner shipping and to develop transition models to distinguish the key areas of change and the relationship of changes to the liner industries.
(iii) To evaluate through model maturity the significance of change in Eastern European liner shipping when related to competitors operational in the European Union.
(iv) To assess the adaptation of Eastern European liner shipping industries to the European Union system as an element of transition.

The research comprises of a number of different periods. To begin with Eastern European liner shipping under communism is examined in the period 1959-1989. Next, Eastern European liner shipping during economic, political and social transition is investigated between 1989-2012. Finally, Eastern European liner shipping and its adaptation to the single European transport market is studied between 1995-2012. However, all primary data was gathered in 2010.

To achieve the above aims, the following objectives have been set to guide the methodological development:

(i) To identify the situation of Eastern European liner shipping under communism, specifically in terms of: ownership structures; operational functions; fleets and markets; productivity; and shipping political frameworks.

(ii) To characterise the situation of Eastern European liner shipping during the period of systematic transition, specifically in terms of: transition theory models; shipping political frameworks; and state aid and support.

(iii) To identify the formation of evolutionary restructuring in Eastern European liner shipping, specifically in terms of: diminishing, permanent and incipient components; macroeconomic changes; and sector specific changes.

(iv) To identify the utilisation of privatisation as a mechanism of restructuring in Eastern European liner shipping, specifically in terms of: the advantages of newly structured ownership rights; and current barriers to privatisation.

(v) To characterise the adaptation of Eastern European liner shipping to the European transport system, specifically in terms of: the utility of European Union accession as an element of economic transition; adaptation theory models; shipping political frameworks and supranational support.

This study examines the transition experience of six Eastern European countries: Estonia, Latvia, Lithuania, Poland, Romania and Bulgaria. These are relatively small countries whose transition experience stands in contrast to other successor states of the former Soviet Union, both in terms of the economic policies pursued over the past two decades and in the results of those policies (Von Brabant 2011). As of January 1st 2007 all of these states have been granted membership to the European Union, which has enormous political and

economic implications (Favero 2012). Naturally there are large differences also among these countries, however their common history (Merriman 2009), small size, geographical location, and relative maritime interests still allow us to consider them a reasonably well-identified group (Beachain *et al* 2012).

The research describes the choices of the following national liner corporations made during the period of transition with respect to liberalisation, privatisation and restructuring programmes: Estonian Shipping Company (ESCO), Latvian Shipping Company (LSC), Lithuanian Shipping Company (LISCO), Polish Ocean Lines (POL), Navrom Shipping Company (post-1991 formally known as Romline Shipping Company), and Navigation Maritime Bulgare (NMB). Such enterprises represent the largest, and in most cases, the only national container line which continued to operate for an extended period of time during transition.

This study has been geographically confined to exclude states that continue close relationships with the Soviet Union. The rationale for this is coupled to the uncertain future condition of the Soviet Union, the enormity of country size, the restricted association with the European Union, and the mass of data already available upon the Soviet shipping industry, for example Blyton (1999), Lloyds Ship Manager (1991), Bergstrand and Doganis (1987) and Greenway (1980). Hungary has also been excluded due to its relative maritime insignificance, a lack of available data, and a failure of cooperation by local shipping interests.

1.3 Research methodology and procedures

To justify the rationale for the relationship between Eastern European transition and Eastern European liner shipping change, a research literature review is

carried out. The literature review aims to identify the major relationship transition constructs that maybe utilised within the Eastern European liner shipping context of the study. The literature review affords a synthesis of the results of the secondary data pertinent for the assessment of the impact of Eastern European economic transition upon Eastern European liner shipping. The literature review is executed within strict methodological guidelines to improve the overall accuracy of findings. Following the literature review, content analysis is utilised as a research technique for the objective, systematic and quantitative description of constructs from transition literature that maybe hypothesised as influential in the processes of Eastern European liner change. Utilising the identified constructs a conceptual model is developed to provide a typology of the relationship between transition and Eastern European shipping. The model is a representation of the most important elements of transition processes used to facilitate liner shipping in the European free market.

To assess the model empirically, the transition constructs identified in the literature review help form a set of conceptual assumptions created to test the original research hypothesis. The conceptual assumptions aid the development of twenty-five hypotheses, which are unproven statements of a relationship between two or more variables that carry clear implications for testing. The empirical work is to be investigated with the utility of the hypotheses, in order to support or reject them, and ultimately answer the objective of the enquiry.

The study has selected Delphi methodology to gather the primary data required to address the original hypothesis. The technique is applied to discover a casual relationship (the influence of Eastern European transition upon Eastern

European liner shipping industries) in complex social, political and economic phenomena. The Delphi survey comprises of three rounds in which participants from industry, government and academia are invited to comment on the main conceptual categories and hypotheses relating to Eastern European transition and Eastern European liner shipping. Once the panels responses to the first round are analysed, any comments provided are to be refined and used to amend statements which do not reach consensus (stability), thus forming the next round of statements. Finally, the results from the third round are to be collected and analysed. Statements with a majority opinion are held as true, and therefore in support of the original research hypothesis, while statements without a majority opinion go on to require individual stability testing, which occurs when group consensus cannot be reached. Chi-squared theory and non-parametric testing for paired sample statements bring the survey to conclusion.

1.4 Thesis structure

The structure developed for the analysis reflects the profound complexity of the research approach. After constituting the aims for market economic transition and surveying the situation at the time of the disintegration of the Soviet Union, central aspects of restructuring and privatisation are portrayed before the background of changed policy frameworks for liner shipping. General findings are supported by detailing the research results for the policies selected, the factors that enabled Eastern European liner corporations to pursue structural reforms and strategic restructuring, and the economic, political and social implications of Soviet disintegration and European Union enlargement.

This thesis is divided into ten chapters to give the text structure and to guide the

reader to understand and interpret the transitional changes that continue to affect the Eastern European liner industries. The early chapters provide a literature review of the situation of Eastern European liner industries before and after the changes which have taken place in the last two decades. Chapter two depicts the character and process of the research literature review methodology selected to classify the relationship between Eastern European transition and Eastern European liner shipping. Chapter three describes the context within which the Eastern European enterprises had to operate under the Communist regime. The bases of the socialist economic system are explored and the implications of this framework are analysed from a liner corporation perspective. Chapter four defines the concept of systematic transition as the departure from a socialist centrally planned economy towards a free market economy. The macroeconomic effects of privatisation and restructuring of Eastern European liner shipping are then reviewed. Given that liner shipping corporations are to compete in a free market, chapter five describes the framework of liner shipping in the European Union, and evaluates the integration of Eastern European shipping policy with that of the single European transport market.

Chapter six describes the application of content analysis as a research technique for the objective, descriptive and quantitative identification of constructs from transition literature that may be hypothesised as influential in the processes of Eastern European liner change. Utilising the identified constructs, a conceptual model is developed in chapter seven to provide a typology of the relationship between transition and Eastern European liner shipping. To assess the model empirically, a number of hypotheses are formulated to represent the five conceptual categories that structure the study

and characterise the main stages in transitional liner shipping. Following this, twenty-five conceptual statements are developed in order to support or reject them and to analyse the original research objectives.

The process of selecting the methodology to operationalise the conceptual model is provided in chapter eight. This includes choice of method, specification of required data, selection of participants from industry, design of the research instrument, and collection of the required data. Emphasis is given to the validity of the research techniques and the reliability of the data collected. Chapter nine describes the empirical enquiry used for the investigation of the relationships between the conceptualised transition constructs and Eastern European liner shipping corporations. The results of the three rounds of Delphi survey are presented, the criterion of stability is considered, and the findings analysed.

A discussion on the value of the study for Eastern European liner corporations is provided in chapter ten. The resulting implications for transition theory development and research in Eastern European liner shipping and its adaptation to the European transport market are also evaluated. Based on the results, inferences are made to represent the current situation and the future direction of Eastern European liner shipping. To conclude, a discussion of the limitations of the study and recommendations for further research are made.

CHAPTER TWO

Synthesising Research: Literature Review Methodology

To justify the rationale for the relationship between Eastern European transition and Eastern European liner shipping change, it is essential to carry out a research literature review. The literature review aims to identify the major relationship transition constructs that may be utilised within the Eastern European liner shipping context of the study. The literature review affords a synthesis of the results of the secondary data pertinent for the assessment of the impact of systematic transition on Eastern European liner shipping, and thus facilities the development of a sequential transition model to distinguish key areas of change and the relationship of changes to the liner shipping industries.

This chapter presents the character and process of the research literature review methodology selected to classify the relationship between economic, political and social transition and Eastern European liner shipping change. The chapter defines the role of the literature review and describes the six-stage process utilised for synthesising research. Beginning with the conceptualisation of the hypothesis, the chapter outlines the procedures used to statistically combine the results of secondary studies, to manage validity issues in regard to hypothesis formulation, and to retrieve and evaluate secondary data.

2.1 Definition of research synthesis

Ridley (2008) characterises a research literature review as the selection of available documents on the subject matter which contain information, data and evidence written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated in

relation to the research processed. A more methodical definition is applied by Fink (2009, p3) whereby the author typifies a research literature review as:

> "A *systematic, explicit and reproducible method for identifying, evaluating and synthesising an existing body of completed and recorded work produced by researchers, scholars and practitioners.*"

Literature reviews combining two specific sets of focuses and goals are commonly called a research synthesis (Wolcott 2009). Research synthesis focuses on empirical studies and seeks to summarise past research by drawing conclusions from many separate investigations that address related or identical hypotheses. The research synthesist hopes to present the state of knowledge concerning the relations of interest and to highlight important issues left unresolved (Ackerson 2007). This study utilises research synthesis methodology to address multiple hypotheses and the relation between several independent or predictor variables, and a single or criterion variable.

The research synthesis aspires to be explicit about the research questions, inclusion and exclusion criteria, data extraction methods, standards for evaluating quality, techniques for synthesising and analysing findings to enable third-party reproducibility (Junker and Pennink 2009). To enhance the authenticity of the results the research synthesis bases its conclusions on original research, rather than the interpretations of findings (Dawidowicz 2011).

2.2 Role of research synthesis

The research synthesis embodies the design features of the study and serves the following purposes: to discover important variables relevant to the research topic (Jesson *et al* 2011); to identify relationships between ideas and practice;

to rationalise the significance of the problem (Dochartaigh 2007); to enhance and acquire the subject vocabulary; to understand the structure of the research focus; to relate ideas and theory to applications (Saini and Shlonsky 2012); to identify the main methodologies and research techniques that have been utilised (Marshall and Rossman 2006); and to place the research in a social context to show familiarity with current affairs development (Oliver 2012).

The research synthesis seeks to distinguish the key constructs of transition that may be utilised within the Eastern European liner context of the study. Neuman (2009) indicates that the major characteristics of a research synthesis include focus, objective, coverage and organisation. The review of Eastern European transition literature focuses on original research outcomes and theories rather than the methodology of findings (Woods 2006). The objective is to integrate findings but not necessarily to criticise them (Von Brabant 2011). The coverage is representative of the major studies in Eastern European liner shipping before and during transition. The review is organised in a contextual perspective to allow the placement of shipping specific developments in the entirety of national transition processes (Cottam and Roe 2007). It also enables the reader to draw analytical comparisons of each pre-transition state to the political and economic changes of the twenty-first century. The research synthesis is divided into three sections: liner shipping under communism; liner shipping and systematic transition; and adaptation of liner shipping to the European Union system.

2.3 Methodology of research synthesis

The process of the research synthesis is conceptualised as containing six stages: (1) hypothesis formulation; (2) practical screening; (3) methodological

screening; (4) secondary data collection; (5) analysis and interpretation; and (6) presentation of findings. Figure 2.1 illustrates the six stages utilised to conduct the research synthesis of the secondary data. Each stage is discussed herein.

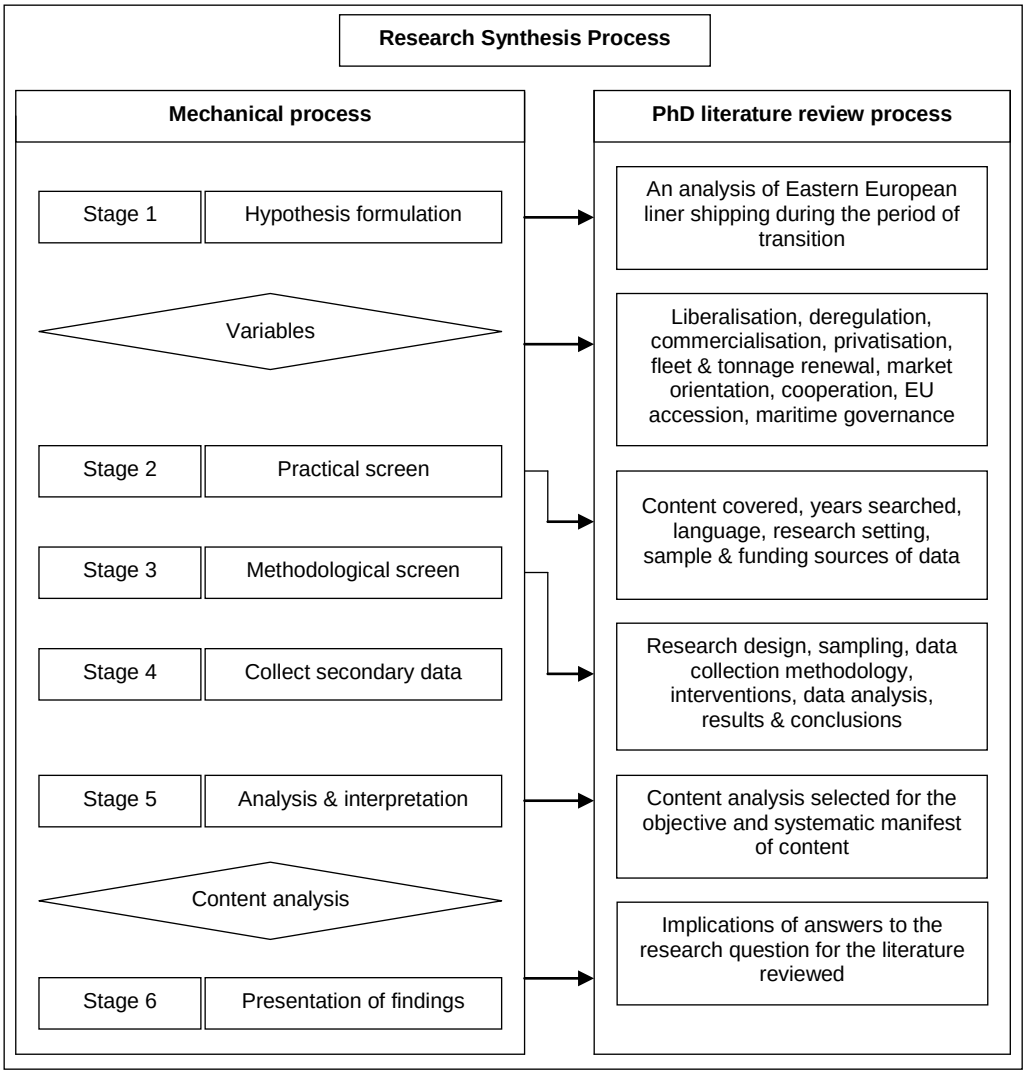

Figure 2.1 Conceptualisation of research synthesis (*Source*: Author 2010)

2.3.1 Hypothesis formulation

The first stage of the research synthesis formulates the hypothesis for guiding the study. In its most basic form, the research hypothesis includes the definition of variables and the rationale for relating the variables to one another (Dawidowicz 2011). The hypothesis of this study endeavours to direct the research to critically analyse the impact of Eastern European transition upon

liner shipping, and evaluate the significance of change in Eastern European liner shipping when related to competitors operational in the European Union.

Creswell (2008) stipulates that all variables employed in a research synthesis must be given conceptual definitions which describe qualities of the variable that are independent of time and space but can be used to distinguish events that are and are not relevant to the concept. Boeije (2009) states that to relate concepts to concrete events, a variable must also be operationally defined. An operational definition is a description of the observable events that determine if a concept is present in a particular situation. Thus, a concept is operationally defined when the conditions that produce the concept are carefully specified.

The variables identified in this study are heavily influenced by the most important elements of transition. Ten variables have been selected to categorise the main constructs of the study. Referred to as assumed constructs, these are: (1) liberalisation, to include the opening up of shipping markets and the introduction of competition; (2) deregulation, to involve the reduction or elimination of government power over shipping activity; (3) commercialisation, to embrace the inception of new customer-orientated business methods, with an aim to increase profitability; (4) privatisation, to include the denationalisation of shipping through the transfer of ownership to the private sector; (5) modernisation, to involve the introduction of advanced technologies and new operating methods to increase productivity; (6) fleet and tonnage renewal, to embrace an improvement in vessel performance and the redirection of fleet strategies; (7) market and service orientation, to include the exploitation of geographical service patterns via niche markets and the cross-trades; (8)

cooperation and organisation, to involve the joining together of carriers through mergers, acquisitions and joint ventures; (9) European Union accession, to entail the adaptation of Eastern European shipping to the European transport market; and (10) maritime governance, to involve the incorporation of multilevel governance and Europeanisation in national shipping policy framework.

2.3.2 Practical screening

Practical screening is used to identify a broad range of potentially valuable studies. The literature is screened to obtain relevant articles by setting criteria for inclusion and exclusion from the research synthesis (Cameron and Price 2009). Typical practical screening criteria includes: a study's content, publication language, research setting and methods (Oliver 2012), years searched and date of data collection, funding source (Creswell and Plano-Clark 2010), sample inventions and outcomes studied, as well as the publication type.

This study applies the following practical screening: to include all studies that take place in an Eastern European transition setting, with high importance given to those studies that have a direct relationship with Eastern European liner shipping; to consider only studies with English as the publication language; to incorporate studies produced between 1959-1989 in relation to shipping under communism, while predominately embodying studies between 1989-2012 in association with Eastern European transitional liner shipping; to include studies where a high degree of reproducibility is plausible; and to consider the validity and reliability of sponsored studies, particularly those with Soviet leverage.

2.3.3 Methodological screening

The second screen is for methodological quality, and is utilised to identify the best available studies in terms of their adherence to methods that scholars rely on to gather sound evidence (Buchanan and Bryman 2009). Methodological quality refers to how well a study has been designed and implemented to achieve its objectives (Lapan and Quartaroli 2009). This research focuses only on studies that have high quality to guarantee that the results of the review will be accurate. The highest quality studies come closest to adhering to their objectives and thus are deemed more reliable (Cooper and Schindler 2010).

The research standards utilised for this study comprise of: research design and sampling (Blakie 2000); data collection (Kumar 2010); analysis (Dawidowicz 2011), interpretation (Fine 2009) and reporting (Wolcott 2009). Specifically, the study aims to select high quality literature by assessing: whether the study's research design is internally and externally valid; whether the data sources used in the study are reliable and valid; whether the analytic methods are appropriate given the characteristics of the study's data (Saini and Shlonsky 2012) and; whether the results are meaningful in practical and statistical terms.

2.3.4 Secondary data collection

The research synthesist now collects the secondary data pertinent to the study. Secondary data collection involves the selection of the population of elements that will be the target of the study (Blumberg *et al* 2008). Target populations in research synthesis are comprised of two inferences, firstly the cumulative result to reflect the results of all previous research on the original hypothesis, and secondly studies which allow generalisations to the groups/individuals that are

the focus of the topic area (Cooper *et al* 2008). The target population data for this study may be characterised as texts embracing all elements of systematic transitional processes in Eastern European liner shipping, with particular emphasis on texts inclusive of the operationally assumed constructs.

The sample frame of the investigation for the research synthesis includes those individuals or groups the researcher is reasonably able to obtain (Treiman 2009). This research considers three main groups when acquiring secondary data, categorised as: (1) industry users, specifically encompassing the opinions and industry experience of Eastern European liner shipping operators and other non-Eastern European liner competitors operational in the European Union; (2) policy makers, embracing the positions and experience of major organisations involved in the regulation and governance of Eastern European liner shipping; and (3) academics, encompassing the opinions of scholars researching Eastern European liner shipping, and/or the single European transport market.

2.3.5 Analysis and Interpretation

After the data is collected, the next stage of the research synthesis comprises making critical judgements with regard to the quality of data. Each data point is examined in light of surrounding evidence to determine its relevance and validity. The research synthesist also evaluates the methodology of studies to determine if they were carried out properly. During the analysis the separate data points collected by the researcher are synthesised into a unified statement about the problem. Interpretation demands that the researcher distinguishes systematic data patterns from chance fluctuation. In research synthesis this process involves the application of statistical procedures. Content analysis is

applied in this study as a method for combining the results of separate studies. The choice of content analysis has been guided by the objectives of the research and the ease with which the required data may be retrieved through the method (Franzosi 2008). Given that an objective of the research is to facilitate the use of conceptual modelling to provide a typology of the relationship between Eastern European transition and Eastern European liner shipping change, a combination of qualitative and quantitative content analysis is utilised to validate the assumed constructs of transitional liner shipping. Once verified, the assumed constructs are accepted as representative of the major processes of restructuring in Eastern European liner shipping during transition.

Krippendorff and Bock (2009, p18) define content analysis methodology as:

> "*A research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use.*"

The methodology involves the identification of selected textual kind to yield quantitative measures, which facilitates the testing of hypotheses and the making of inferences from an existing body of content (McMahan *et al* 2010). The analysis is carried out in line with specific rules, each stage of which is designed to conform to the scientific prerequisite of accurate replication.

The conceptual framework of the content analysis employed to identify the key constructs of transitional liner shipping is summarised in Figure 2.2. Firstly, the analyst forms a research question to represent the target of the inferences to be drawn from the texts. The target of this study is to identify influential constructs of Eastern European transition in relation to Eastern European liner shipping change. Following the selection of applicable texts, data becomes separated

from their real context and are communicated to the analyst (shown by stage 1).

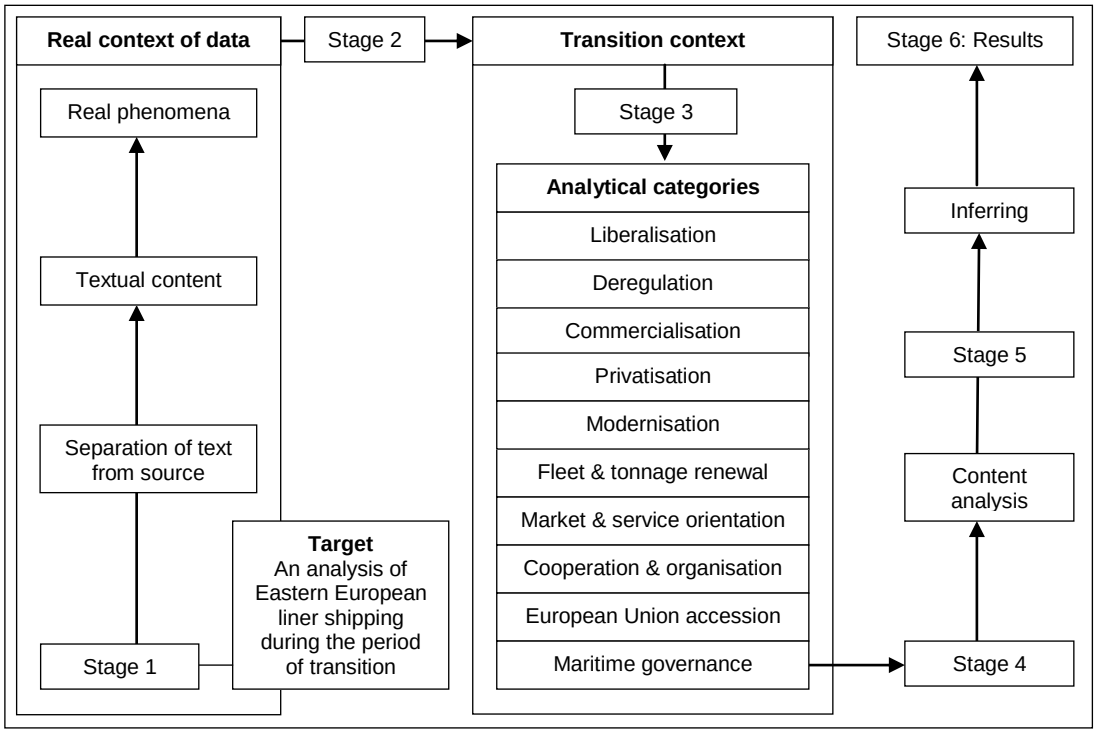

Figure 2.2 Content analysis for research synthesis (*Source*: Author 2010)

The analyst places the isolated data into the context of the research enquiry, which specifies the world in which texts can be related to the question. The context of this study is the conceptual environment of Eastern European transition (shown by stage 2). Next, the analyst forms the analytical categories which operationalise what the analyst knows about the context and the network of correlations that are assumed to explain how available texts are connected to the possible answers to the research question (shown by stage 3). Finally, content analysis is employed to distinguish between textual content whose nature is variable and content whose nature is dependable (shown by stages 4-6). It is by this process that the analyst is able to make inferences from data to certain aspects of their context and justify these inferences in terms of the knowledge about the stable factors in the system of interest (Veloso 2011).

This content analysis comprises six components which the analyst must process (see Figure 2.3). Component: (1) research question, comprised of the formation of the target of inferences to highlight key aspects of Eastern European shipping and transitional change; (2) sampling, encompasses the selection of valid and reliable texts for analysis; and (3) category construction, consists of the identification and justification of generic constructs deemed influential to the research. Stages 1-3 are relevant to the development of assumed constructs representative of the restructuring process in liner shipping.

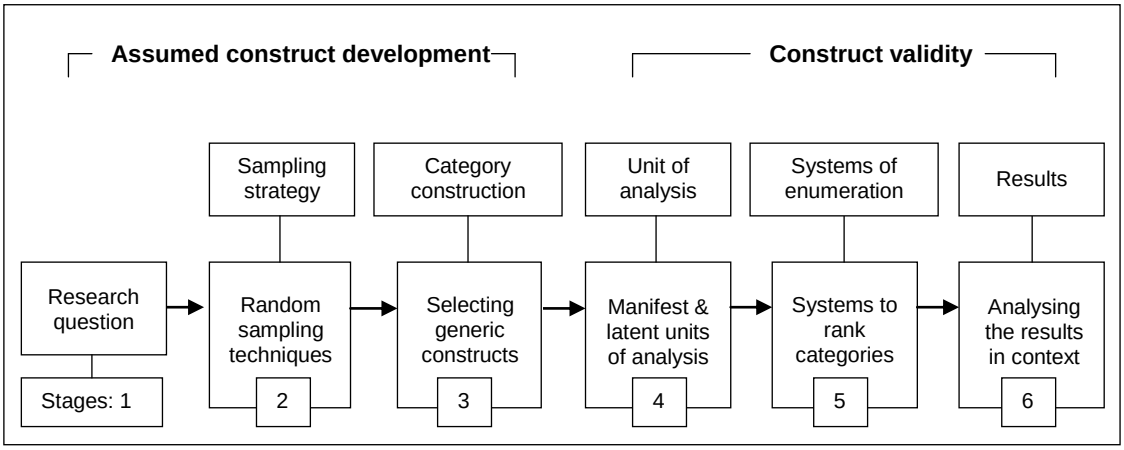

Figure 2.3 Components of content analysis (*Source*: Author 2010)

Components: (4) units of analysis; (5) systems of enumeration; and (6) results, are applied in the final stages of the research synthesis to validate the assumed constructs for the conceptual model. A description of these components and the study's application of content analysis may be found in chapter six.

2.3.6 Presentation of findings

The final stage of the research review is a synthesis of the contents of the literature and an evaluation of its quality. Descriptive syntheses rely on the reviewer's knowledge and experience in identifying and interpreting similarities

and differences in the literature's purposes, methods and findings (Anders 2009). For the research synthesis to be meaningful, an acceptable level of reliability, validity and reproducibility must be established. Reliability refers to the degree of consistency and stability in an instrument (Franzosi 2008). Validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration (Saini and Shlonsky 2012). Reproducibility refers to the ability of a dataset to be accurately replicated by someone else working independently. Furthermore, given that content analysis has been utilised for the combination of results, one must also take into consideration acceptable levels of stability and accuracy when providing assurance that results are obtained independent of the measuring tool.

In the following three chapters the research synthesis aims to achieve the following purposes: to describe current knowledge of Eastern European transitional liner shipping and the impact of accessional changes to the liner shipping fleets; to support the need for, and significance of, new research exemplified in the empirical study; and to describe the quality of the body of research utilised to define the main constructs for the conceptual model.

CHAPTER THREE

Eastern European Liner Shipping under Communism

Any assessment of the developments in the Eastern European liner industry should begin with an interpretation of the broad economic, political and social structures that dominated before the changes of the late 1980s. This chapter provides a brief overview of the background to the economy and the political framework in which the Eastern European liner sector had to operate. The basis of the socialist economic system is explored with particular emphasis upon the Communist Party control of the economy (Harris 2012), collective ownership of the means of production (Svasek 2008), and central planning procedures (Myant and Drahokoupil 2010). The Soviet dominated institutional infrastructure in which Eastern European liner shipping operated is analysed (Bergstrand and Doganis 1987). This is followed by the implications of Soviet economic management from an Eastern European liner corporation perspective in regard to ownership, fleet configuration, market orientation and company organisation (Cottam and Roe 2004), before reaching a number of tangible conclusions at the end of the chapter.

3.1 The bases of the socialist economic system

Predominantly as a result of its spatial location bordering the former Soviet Union (see Figure 3.1), Eastern Europe's post-war history and development has been greatly influenced by the rise and fall of communism in the region (Roe 2001). Up to mid-1989 the majority of Eastern European states had been pursuing inflexible economic policies over several decades of relative inactivity (Bosteels 2011). Institutional design followed from the priorities of the socialist '*Realpolitik*', characterised by regional self-sufficiency and state control over both the economy and its growth (Swain 2009). The principles defined the foundations of the system, not its real operation. They are closely linked with an ideology, Marxism-Leninism,

which was revised and adapted in each state by the determination of the regime to stay in power and the influence of the Soviet Union (Vattimo and Zabala 2011).

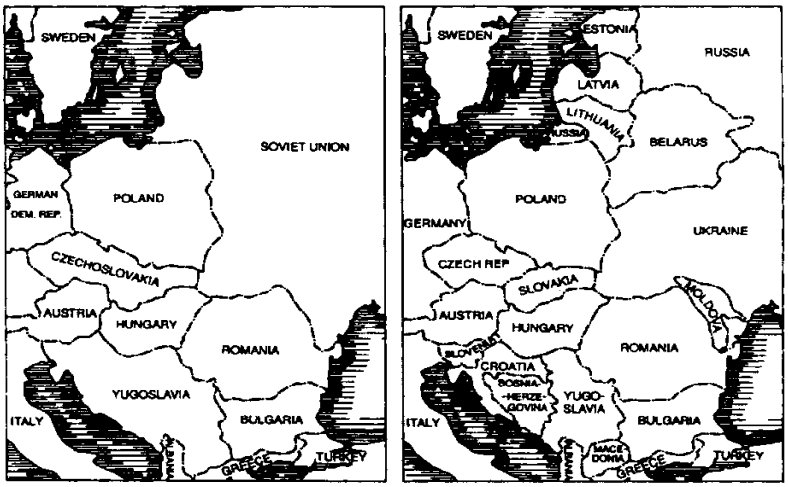

Figure 3.1 Eastern Europe 1989 and 1992 (*Source:* Lijewski 1996)

Following the work of Lavigne (2007) and Gros and Steinherr (2004) the economic and political framework which controlled the nature and development of Eastern European liner shipping under communism is presented herein (see Figure 3.2).

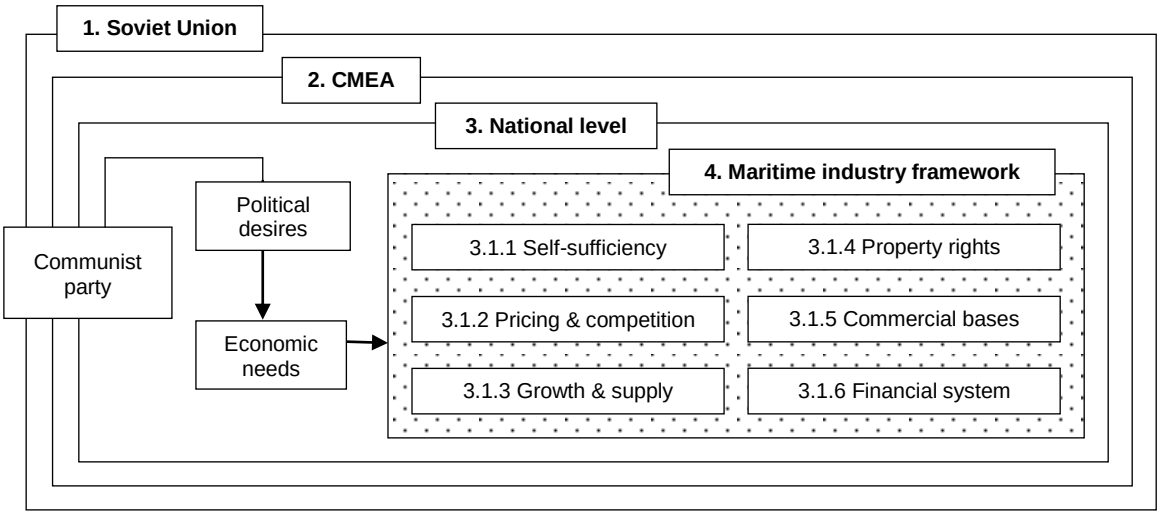

Figure 3.2 Economic and political framework of liner shipping under communism (*Source:* Author 2012)

3.1.1 Self-sufficiency and the CMEA

Self-sufficiency was the favoured national policy of the socialist bloc and was reinforced customarily by the Council for Mutual Economic Assistance (CMEA) in

its control over the economic relations of the region (Sandle 2011). The official, tasks of the CMEA were: to exchange information on trade; to coordinate trade between member states and with the outside world; and to provide the mechanism for the exchange of goods within the CMEA without monetary movements of hard currency (Kaufmann 2009). Unofficially, but in reality, the CMEA was a deliberate outcome of the Soviet dominated trade policies aimed at linking the states of the CMEA into its own economy for political and economic purposes. This practice resulted in a predominance of soft currency trade (i.e. unconvertible rouble based) and inevitably a desperate need to acquire hard currency through other means such as tourism, international trucking, and shipping (Walenciak *et al* 2001).

Although the policy of self-sufficiency was defensible to a reasonable extent by the geographical size of the Soviet Union and its vast resource base (Kotkin and Gross 2009), it was considerably less suitable as an economic policy in the smaller CMEA countries which endured a serious lack of commodities, an inadequate range of goods, and the restriction of intellectual property development. Running up to the start of transition in the period 1949 to 1989 the CMEA comprised of: Bulgaria, Czechoslovakia, Hungary, Poland, Romania, Soviet Union, Albania, East Germany, Mongolia, Cuba, and Vietnam (Lavigne 2007).

The CMEA's role in maritime development in Eastern Europe was all pervasive and affected the structure of shipping organisation and operation throughout the period (Ernst and Young 1990). Self-sufficiency contributed to a sector that was characterised by state dictated cargoes traded between CMEA members, on directed sea-lanes by substandard tonnage (Huntus and Roe 2003). As Table 3.1 illustrates, priority in Soviet fleet composition was given to those activities that were related to military or heavy industries needs, or were hard currency earners

such as the cross-trades (Bergstrand and Doganis 1987). Other, more modern sectors such as containerisation and the ferry trades were habitually neglected. The maritime transport system as a whole became acutely distorted, with over-activity in selected ports and the carriage of a narrow range of commodities on state-owned fleets via state-directed trading routes, facilities and organisations.

Composition of Soviet, UK and world fleets 1985			
Vessel type	**Percentage of fleet tonnage**		
	Soviet Union	**UK**	**World**
Oil tankers	19	40	32
Ore & bulk carriers	9	15	27
General cargo	31	17	18
Container ships	2	11	4
Fish factories & fishing vessels	27	3	3
Other non-trading vessels	12	14	16
Total	100	100	100
Total trading vessels	**65**	**88**	**89**
Total non-trading vessels	**35**	**12**	**11**

Table 3.1 Composition of Soviet, UK and world fleets, 1985

(*Source*: Lloyds Register of Shipping, Statistical Tables 1985)

3.1.2 Pricing policy and competition strategy

State authorities in all the CMEA countries implemented an administered price system to allocate resources according to principles other than supply and demand (Mickiewicz 2010). Industrial prices were formally fixed by the state on the basis of planned branch average cost of production and a small profit mark-up on costs (Grant and Rawcliffe 2009). Average cost was utilised to ensure overall branch profitability, while providing an incentive to lower costs (Dale 2011).

The maritime industry, as a submissive sector to heavy industry capacity, was financed almost entirely from the state budget and followed the traditional system of price determination by the state (Breitzmann and Von Seck 2002). The cost of labour (seafarers, brokers, agency, port workers etc.), products (ship supplies, vessels, bunkers etc.) property (offices, warehouses, storage facilities etc.) and services (accountants, communications, training etc.) (Roe 2001) were based on

average rather than marginal cost and were fixed for long periods of time, partly for administrative reasons and partly to assess enterprise performance over time (Harris 2012). Maritime prices were therefore, not efficiency prices (Lloyds Ship Manager 1991); instead in line with the essential passivity of money they served as a means of control and evaluation over the sector (Linden and Marcel 2009).

State subsidy provided the maritime sector with the finance required to operate virtually independent of global transport markets. Only when operating in direct competition with the West were administrators forced into adopting world market prices. However, even then, free market activities such as cross-trading, undercut others to obtain market share (Balcerowicz 1995). The absence of a market-based pricing mechanism also meant that vessels manufactured in local yards were provided free of charge, and bunkers and repairs were similarly available at no cost. The maritime sector thus had no rational principles upon which to base commercial decisions. As Figure 3.3 illustrates, Soviet trade created a demand for transport links, the nature of which was expected to be a function of the form of trade in terms of commodity types. The Soviet fleet grew on the back of its artificial ability to earn hard currency (Zurek 2001), and as a consequence competitive transport qualities became deficient with regard to frequency and punctuality.

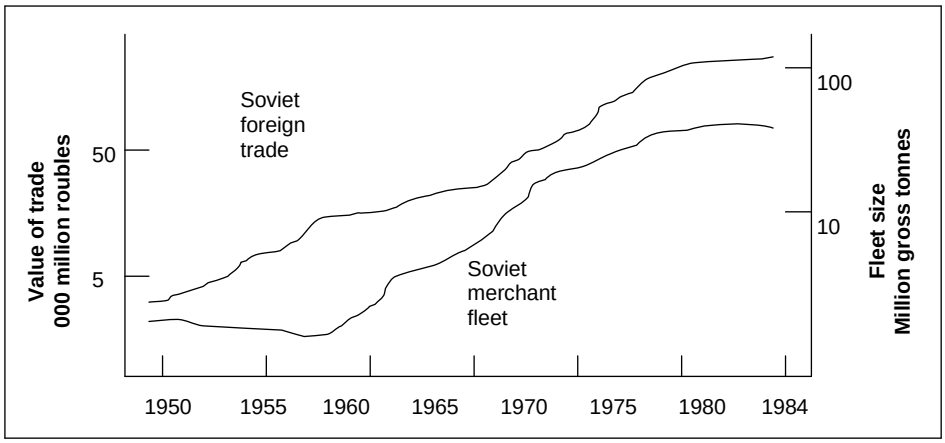

Figure 3.3 Growth of Soviet trade and of the Soviet fleet 1950-1984

(*Source*: Bergstrand and Doganis 1987)

3.1.3 Growth and supply of national shipping fleets

The Soviet Union being a 'minority socialist' country in what was perceived to be a hostile global capitalist environment (Molloy 2009) sought to catch up with the economic advance and military strength of the West (Vari and Tamas 2010). These goals were to be achieved through the implementation of a strategy based on socialist industrialisation. All the CMEA states utilised their allocative powers to devote a high figure of national output to investment (Lovell 2009). Sectoral priority was awarded to those associated with military and heavy industry. The leading links were iron and steel, heavy engineering, mining, electric power generation, and armaments (Peeters 2012). Foreign trade did not play a large strategic role, as exports were viewed only as a means of paying for the import of goods either totally unavailable or in short supply at home (Vattimo and Zabala 2011).

It was not until the establishment of the Permanent Transport Commission in 1958 that maritime transport was viewed as a strategic instrument for the obtainment of economic and political goals and therefore accommodated within the CMEA planning process (Lloyds List 11.10.1991). State property and state activity in shipping was regarded as necessary, as was state protection (Sawiczewska 2001). Table 3.2 depicts three phases of Soviet fleet development: gradual growth in the 1950s, in which the Soviet fleet exhibited little more than a 50% increase in tonnage from two to three million gross tonnes; rapid growth from 1960 to 1970, whereby Soviet tonnage grew almost fivefold reaching close to 15 million gross tonnes, and; dramatic decline from mid-1970s onwards, whereby new vessels were either to replace vessels being scrapped or to meet the expansion of specialist needs, resulting in a slower growth trend (Lloyds Register of Shipping Statistical Tables 1950-1985). The policy of increased growth and strength led to priority given only to those maritime activities that were specifically related to

military or heavy industry, such as bulk shipping and hard currency earners. This may explain why Soviet fleets fell behind global trends of more modern (lighter) tonnage, such as the adaptation for the carriage of unitised traffic in liner shipping.

Growth and rank of Soviet merchant fleet				
Year	**Number of vessels**	**Gross tonnage (000s)**	**Annual % of change**	**World tonnage ranking**
1950	967	2,125	-	8
1955	1,158	2,506	-	11
1960	1,138	3,429	-	13
1965	1,845	8,238	18.4	6
1970	5,924	14,832	8.2	6
1975	7,652	19,236	5.8	6
1980	8,279	23,444	2.4	6
1985	7,154	24,745	0.1	5

Table 3.2 Growth and ranking of the Soviet merchant fleet

(*Source*: Lloyds Register of Shipping, Statistical Tables 1950-1985)

3.1.4 Property rights and administrative control

Following the waves of nationalisation, in all the socialist economies large-scale productive assets became state property, encompassing industry, domestic trade, and services (transport, banks, insurance corporations etc.) (Marelli and Signorell 2010). As part of the service sector, the great majority of maritime activities and property fell under state ownership (Liagras and Roe 2003). Shipping corporations, brokers, transport operators, freight forwarders, agents, and ship-builders were entirely managed, financed and operated by government ministries.

Shipping companies were entrusted with national and regional monopolies. In Poland for example, there was a single liner operator (Polish Ocean Lines), bulk operator (Polish Baltic Shipping Company), ferry operator (Polish Steamship Company), maritime insurer (Warta), and ship supplier (Baltona) (Zurek 1997). Maritime activities followed state planned geographical criteria defined by sea basins, homeports and cargo specialisation. In general, shipping corporations exhibited deep organisational and production structures. They were part of

vertically integrated maritime conglomerates, which combined a variety of services and activities, thus benefiting from the effects of centralisation of resources.

International trade went through the Foreign Trade Organisation (FTO), which was responsible for all imports and exports in a particular industry (Berkovich 2009). The FTO was a state controlled monopoly that dictated contract details including: transport mode, operator and route for imports and exports (Beachain *et al* 2012); sources of imports and exports (Von Brabant 2012); and trading terms for example CIF (carriage, insurance, freight) exports and FOB (free on board) imports to control expenditure and earn hard currency (Pons and Service 2012).

As Table 3.3 shows, three-quarters of Soviet trade was with Europe. By contrast, Europe accounts for a little over half of UK trade. This suggests that Soviet policy held high priority in securing regional self-sufficiency through shipping (Bergstrand and Doganis 1987). Moreover, certain cargo allocation measures within these regions led to guarantees that fleets, port facilities and ancillary services would be utilised regardless of their efficiency (Walenciak *et al* 2001). Hence, shipping companies had little incentive to become competitive and rapidly became oversized with respect to their true commercial competence (Cottam *et al* 2005).

Soviet foreign trade by trading bloc 1984 (million US$ FOB)				
Bloc	**Imports**	**Exports**	**Total trade**	**% of trade**
Developed market economies				
European Economic Community (EEC)	10,295	18,837	29,132	18
European Free Trade Association (EFTA)	5,050	5,576	10,626	6
Other Europe	3,795	4,190	7,985	5
Other developed	8,412	1,472	9,884	6
Developed economies				
Africa	2,405	1,763	4,168	2
America	6,248	5,023	11,271	7
Middle East	1,943	1,430	3,373	2
Asia	2,842	3,024	5,866	4
Centrally planned economies				
Asia	1,877	3,491	5,368	3
Europe	37,615	39,913	77,528	47
Total	**80,482**	**84,719**	**165,201**	**100**

Table 3.3 Soviet foreign trade by trading bloc, 1984 (million US$ FOB)

(*Source*: Bergstrand and Doganis 1987)

3.1.5 The commercial bases of Soviet shipping

Following the Soviet dominated CMEA policies, authorities in all the Eastern European states organised their economies by a series of economic plans for differing time periods (Sandle 2011). Every industrial sector had a series of plans that were commonly between one and five years (Vattimo and Zabala 2012). Each enterprise received its instructions through these compulsory plans, consequently and ultimately controlling the production levels of each commercial business.

Transport in general, and shipping in particular, was subservient to the needs of other producing industries. The central focus remained on production targets to which shipping was later planned to match and forced to accept as priority over commodity movements (Fairplay 01.06.1995). The basic functions were to supply the services needed economically (e.g. run ports, ships and maritime-related agencies etc.), to provide state security in association with military activity (Von Seck 1997), and to earn hard currency or restrict its expenditure where possible.

With government officials setting political and macroeconomic shipping goals, only limited possibilities for strategic decision-making existed at enterprise level. Given that all factors of production were centrally allocated, investment and decisions concerning the fields of operational activity were set administratively and thus severely restricted company autonomy (Cottam and Roe 2007). Political bureaucracy influenced all working matters so that shipping corporations were effectively operational units, interpreting strategic targets into specific structures.

Perhaps the most controversial aspect of Soviet shipping is that of membership of liner conferences (highlighted in Table 3.4). Evidence suggests that in many cases Soviet liner firms consistently and systematically undercut conference freight rates

(Lloyds List 10.07.2008), thereby undermining the commercial viability of all liner operators in those markets. However, in reality Soviet firms provided a relatively small share of the total capacity available and thus were not overly intrusive.

In practice the planned economy was subject to a number of criticisms, not least being: the dominance of an economic decision hierarchy, which failed to consider the individual sector's needs; the existence of a target reward system which encouraged statistical forgery; and the collapse of coordination between CMEA policy, state activity, sector productions and enterprise plans (Broadman *et al* 2010). Although planning to this extent should have harmonised industrial production and liner shipping services, in reality it failed to do so and there were numerous examples of substandard shipping fleets and poor quality infrastructure.

Soviet freight conference membership 1985	
Shipping corporation	**Conference**
Baltic Shipping Company	Brazil/Europe/Brazil Freight Conference
	Europe Argentina Freight Conference
	Argentina Europe Freight Conference
	New Zealand European Shipping Association
	Australia to Europe Shipping Conference
	Continent to Australia Conference
Estonia Shipping Company	Continent West Africa Conference
Black Sea Shipping Company	Member of 18 different conferences under the umbrella of India-Pakistan-Bangladesh
Latvian Shipping Company	The Levant Conference

Table 3.4 Soviet freight conference membership, 1985

(*Source*: Croner's World Directory of Freight Conferences 1985)

3.1.6 The integrated financial system

The financial system in the Soviet region was entirely state owned, comprising a central bank coupled to an assortment of individual sector banks (Peeters 2012). Each financial institution was under the control of the state authority and was subordinate to the policies of the regime. The main functions of the bank were to

issue money and credit state owned firms. Each industrial enterprise held their account at the central bank and had to use it for all payments (Verdan 2010).

Major maritime financial decisions were taken by the state on behalf of the corporation. Investment for expenditure connected with heavy industry and military was given priority and segregated within the central bank. Accounts were divided into sub-accounts (e.g. materials, services and wages) between which there was no flow of money. Major investment decisions such as a new ship or port facilities were the responsibility of the industrial sector bank. However, when the state did approve a new build, the operator was not required to repay the loan, which led to an undercutting of prices on the international markets (Kapsa and Roe 2006).

All financial relations with the outside world were controlled through the foreign trade bank. The absence of clearly defined ownership structures in all the socialist states caused extensive monetary problems for maritime companies (Berkovich 2009). Moreover, creditors on payments for loans for ships were prioritised so that the state came first, which meant that on default any bank would lose its investment, and thus few banks would provide finance. As illustrated by Table 3.5, compared with other fleets, Soviet shipping lacked sufficient investment, leading to high average vessel age, subsequently contributing to a sector plagued by poor technical standards and outdated technologies (Lloyds List 11.10.1991).

Age profiles of Soviet, UK and world fleets 1985			
Age group (years)	**Percentage of gross tonnage**		
	Soviet Union	**UK**	**World**
0-4	15	14	19
5-9	20	27	26
10-15	19	40	31
15-19	23	12	14
20 and over	23	7	10
Total fleet	**100**	**100**	**100**

Table 3.5 Age profiles of Soviet, UK and world fleets, 1985

(*Source*: Lloyds Register of Shipping, Statistical Tables 1985)

3.2 Framework of liner shipping under communism

Eastern European pre-transition liner shipping represents a paradox. It was often portrayed as a grave competitive threat to West European and North American shipowners. Yet, at the same time Eastern European liner shipping was derided for its inefficiency, weak management and lack of technical advancement (Bergstrand and Doganis 1987). As with all maritime activities, Eastern European liner shipping was characterised by state ownership, heavy centralisation and mass concentration. Liner fleets operated extensively in the free markets of the western world. Thus representing one of the most westernised branches of the economy, as it had to compete with shipping interests worldwide (Von Seck 2000).

Since the Eastern European liner sector operated some of the world's largest fleets, it became the object of widespread criticism from western shipowners and governments. Such criticism was aimed at: the increasing size of fleets; the effect of Eastern European competition in the maritime markets, particularly by undercutting rates and its over-capacity on certain routes (Dobrowolski 2003); and the commercial bases on which the Eastern European liner fleets operated, where political, foreign exchange or strategic considerations outweighed commercial criteria in the decision-making process (Cottam and Roe 2007). Yet little truly was known about Eastern European liner shipping and its effect on global markets.

This study has been geographically confined to include Eastern European liner shipping states operating pre-1989 which: embraced membership of the CMEA; were heavily influenced by Soviet activities; modelled their liner activities on the broader maritime policies of the Soviet Union; and post-1989, fulfilled all accession requirements to the European Union. The study excludes Eastern European states that, present day, continue to harbour close relationships with the former Soviet

Union and have not entered membership of the European Union. Thus, for the purpose of this research, the term ‘Eastern European states’ is used to identify the spatial area of liner shipping, and more specifically to represent the liner shipping interests of: Estonia, Latvia, Lithuania, Poland, Romania and Bulgaria.

As illustrated in Figure 3.4, is it important to understand the geographical and operational framework of Eastern European liner shipping, both in terms of Soviet Bloc liner shipping, and post-1989 non-European Union liner shipping. This is depicted in the conceptual model by areas (1) and (2). The following text includes a variety of other liner corporations operational in the Soviet region pre-1989, and consequently under the CMEA economic framework. Such liner corporations are not grouped in the Eastern European states of this study, but nonetheless still provide valuable insight of the nature of liner shipping under communism.

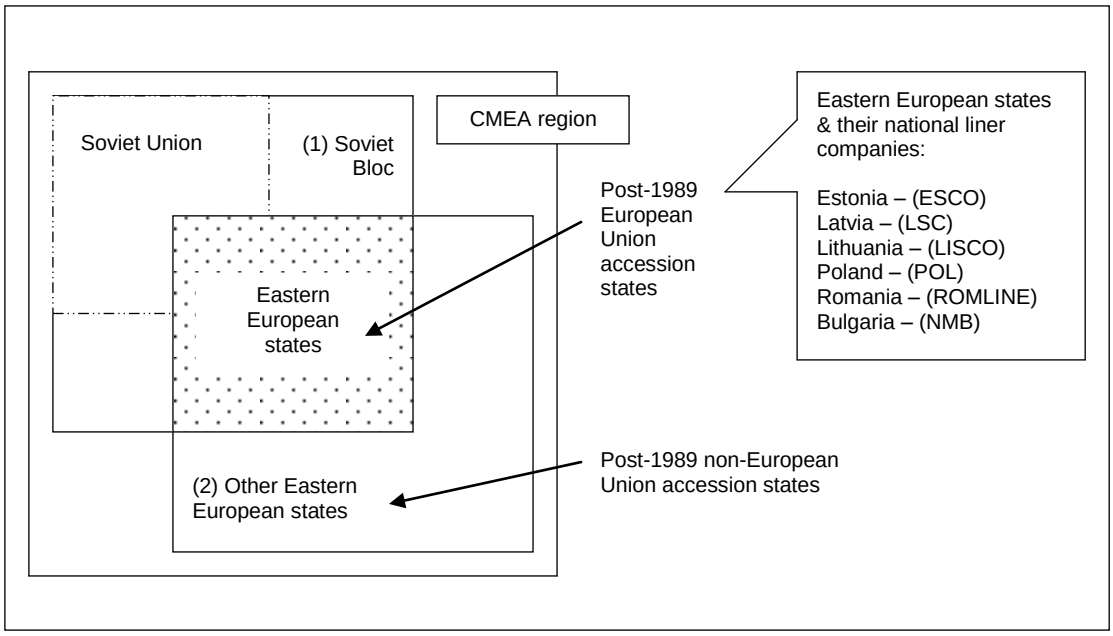

Figure 3.4 Integrated spatial framework of Eastern European liner states, and other regional CMEA liner shipping states (*Source*: Author 2012)

Having carefully analysed the operational framework which controlled the growth and development of liner shipping under communism, the following aspects can be

distinguished, representing the core attributes of Eastern European liner shipping: (3.2.1) ownership and governance; (3.2.2) organisation and cooperation; (3.2.3) fleets and tonnage; and (3.2.4) market and service offering. Such divisons allow one to explore the nature, organisation and characteristics of liner companies.

The operational framework is vital for the overall operations strategy. The model is used as a framework for formulating explicit choices about the best deployment of a shipping company's resources to achieve derived business goals. Under the socialist regime business goals in Eastern European liner shipping were not generally motivated by returns on dividends, but rather through political aims and objectives. This is in contrast to capitalism, whereby business goals in liner shipping are predominately motivated by efficiency gains and profitability.

Ownership and governance may be recognised as a key element in the Eastern European liner framework. Through dominating property structures and possession rights one is able to direct the plans and actions of Eastern European liner shipping fleets, regardless of market influences. Essentially, public ownership ensures state involvement in a sector, and thus the ability to utilise shipping as a political aid. Organisation and cooperation may be seen as another crucial aspect in the Eastern European liner framework. By controlling how a company is organised and with whom it collaborates, one is able to dictate management, decision-making, investment, and manpower. Eastern European liner shipping companies may form alliances or make further competitors through such structures. Fleets and tonnage may be harnessed as further key factor in the Eastern European liner framework. In general, the larger the number of vessels working for a company, the greater the opportunity for capital gains. Moreover, the younger the fleet, the more likely the greater the quality of sailing services in terms

of punctuality, frequency, and speed. While, market and service offering may be recognised as the final element in the Eastern European liner framework, providing the channel through which fleets and tonnage venture to achieve profitability. By selecting appropriate markets and geographical niches, Eastern European liner companies may explore long-term commercial viability strategies.

3.2.1 Ownership and governance

Following directives of nationalisation in the wake of the revolutions that had established the socialist regimes, all large-scale productive assets were state property (Harris 2012). Maritime transport was no exception to this, and Eastern European governments were highly involved in all aspects of shipping by providing or regulating the provision of infrastructure and services (Misztal 2003). As a result liner shipping companies, port authorities, terminal operators, freight forwarders, stacking/warehousing, insurers, ship builders, and inland distribution systems were owned, managed and financed by the regime in power (Lloyds List 27.11.2009).

Activities of liner corporations were constrained by the organisational framework of Soviet shipping. The most characteristic feature of which was its attempt to maintain a high degree of centralised control (Breitzmann 1996). This was done through direct ownership of the fleet by central government and through centralised planning. Figure 3.5 illustrates the four key elements that contributed to the organisation of Soviet liner fleets: (1) the Ministry of Merchant Marine, known as Morflot, which effectively owned and controlled the entire fleet; (2) under the ministry, three regionally based holding corporations operated, known as Sevzapflot, Yuzhflot and Dalflot*;* (3) each of these holding corporations oversaw a number of separate shipping companies within their region; (4) and finally there were a number of semi-autonomous corporations/agencies linked to the ministry.

All of the organisations had a state approved and enforced monopoly (Gdula 1998). Shipping structures followed geographical criteria defined by sea basins, homeports and cargo specialisation (Salomon 2003). Eastern European liner fleets were commonly distinguished by mode of service, for example container/general cargo/passenger, or a combination of these (Zurek 1997). Policies were derived to spatial scales, which themselves reflected hierarchies of governmental institutions, and were often categorised by domestic and international liner sub-divisions.

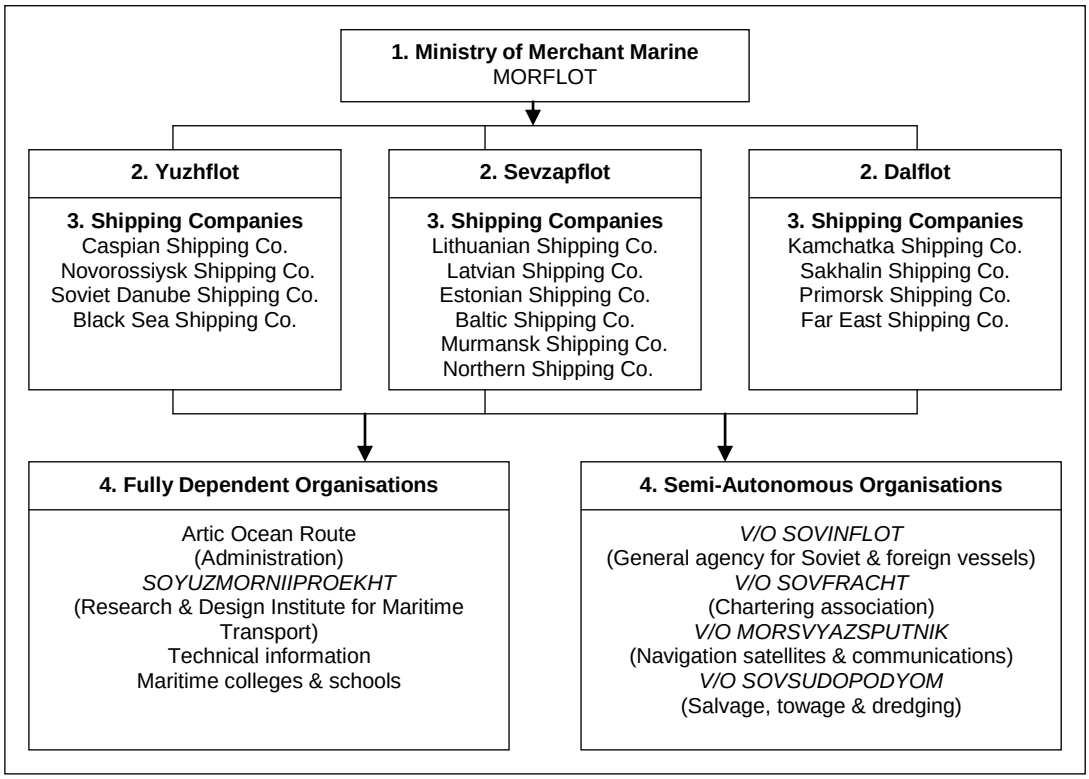

Figure 3.5 Organisational structure of Soviet shipping under communism
(*Source*: Adapted by Author 2012, from Bergstrand and Doganis 1987)

The operational framework of Soviet shipping was employed in its broader sense throughout all the Eastern European liner fleets (Dobrowolski 2003). Although, individual states did enjoy a degree of independence in their regional liner activities (Cottam and Roe 2007). Figure 3.6 portrays the common pervasive characteristics of Eastern European liner structures, whilst attempting to highlight intricacies of correlation with the operationalisation of Soviet liner shipping.

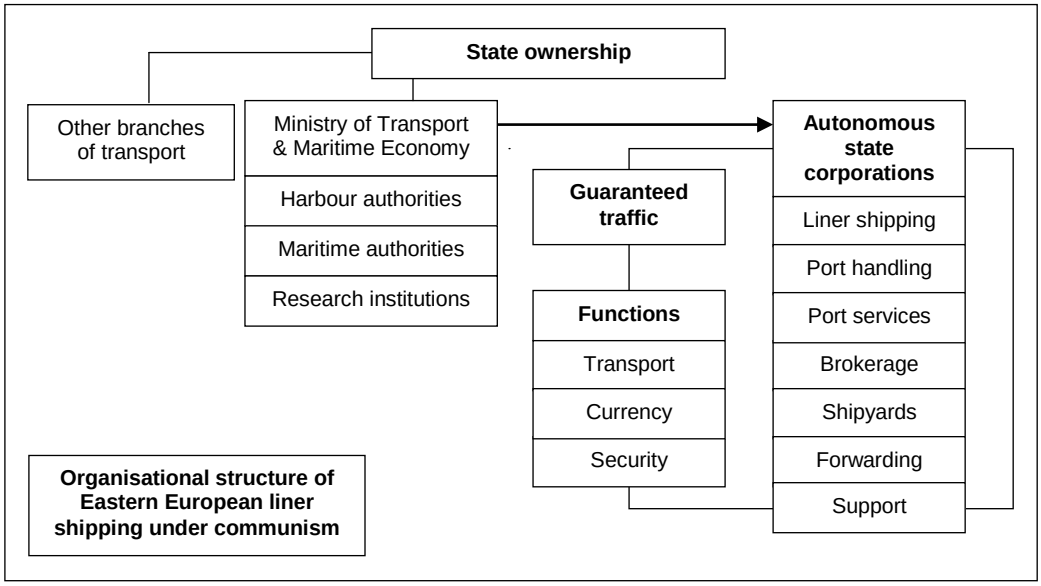

Figure 3.6 Organisation of Eastern European liner shipping under communism (*Source*: Author 2012)

Essentially, the state was involved in the regulation, management and organisation of liner activity as a means to promote political objectives, and not for traditional commerce and profitability obligations (Ernst and Young 1990). There was scarcely any concern as to whether state ownership led to a shrinking of total costs in liner shipping. Eastern European governments viewed state ownership as a sufficient method for gaining improvements in efficiency, recognising the possibility of achieving efficiency potentials already within the context of commercialisation under state ownership and governance (Lloyds list 27.11.2009).

State ownership in liner shipping, was accompanied by poor financial capabilities, insufficient technical investment and lack of management know-how. Ultimately, state dominance over production assets may be summarised as guaranteed traffic to liner operators regardless of their efficiency (Von Seck 1999) and little incentive for corporations to become efficient (Bafoil and Turner 2009), resulting in oversized liner fleets, operating in many cases beyond their true commercial competence (Roe 2001). As shown in Figure 3.7, this lack of clearly defined and

privately based ownership structures had an enormous effect on the administration and regulation of other major areas of liner shipping, and is discussed herein.

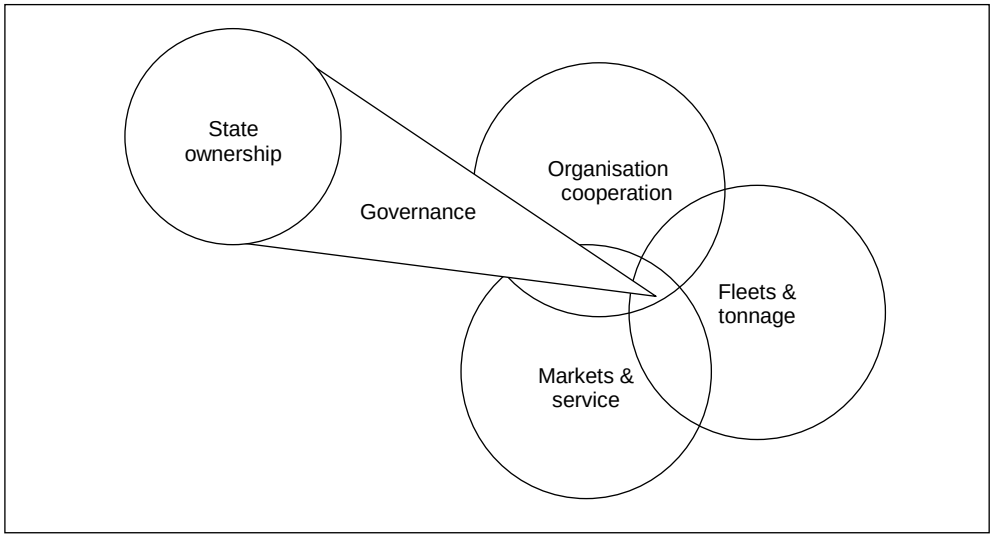

Figure 3.7 Affiliation of state ownership and Eastern European liner fleet operation (*Source*: Author 2012)

3.2.2 Organisation and cooperation

Under Soviet leadership, Eastern European states exhibited rigid economic conditions, with the centralisation of organisation and cooperative structures mirroring state ownership (Vattimo and Zabala 2011). Factors of production were allocated from within (Lijewski 1996), and consequently investment, manpower and decision-making concerning Eastern European liner activity were set administratively, thus severely restricting company autonomy (Roe 1998).

Individual liner companies were influenced by a number of organisations. The highest of these was the Ministry of Merchant Marine, whose main duties ranged from the transforming of general input and output plans set out by the State Planning Committee, to sector specific plans for water transport (Bergstrand and Doganis 1987). In response to the expressed requirements for liner shipping by other producing industries, the Ministry of Merchant Marine determined the routing

of future commodity and trade flows, and the infrastructure to be used. It made its own plans and investment decisions on the basis of these future trade flows. In particular, it made decisions on the type of vessel needed and allocated existing/new builds to the company geographically located to best carry that trade.

At corporation level, the manager of the liner shipping company was primarily the executor of the plans produced by ministry. Each company was given a number of tasks and the resources with which to achieve them. There was little room for manoeuvre, and little managerial freedom (Liagras and Roe 2003). Managers of liner firms engaged in bilateral or cross-trades did enjoy greater freedom by operating outside the constraints of the internal Soviet system but were not independent of it. In terms of management skills, training was provided by marine academies, but was not matched with the commercial competencies of the West.

The planning process was two-way. While the ministry took the long-term strategic decisions, the individual companies fed the long-term decisions (Lloyds List 28.01.2003). Liner companies advised the ministry of their plans and needs in terms of: scrapping of tonnage, vessels acquisition and modernisation, handling equipments or other problems (Cottam and Roe 2004). The ministry considered each proposal and the appropriate course of action (Kreft 2003). Figure 3.8 illustrates the decision-making framework under which liner shipping operated.

Eastern European liner companies were also characterised by their deep organisation and production structures (Mistzal 1999). They were part of vertically integrated maritime conglomerates, which amalgamated a huge variety of services and support activities (Von Seck and Breitzmann 2002). In some cases, these highly integrated structures created opportunities to transform economies-of-scale

into competitive advantages (Szwankowski 2003). However, in the vast majority of cases socialist particularities eased pressures of international competition and service delivery increasingly lost pace with that of the western world.

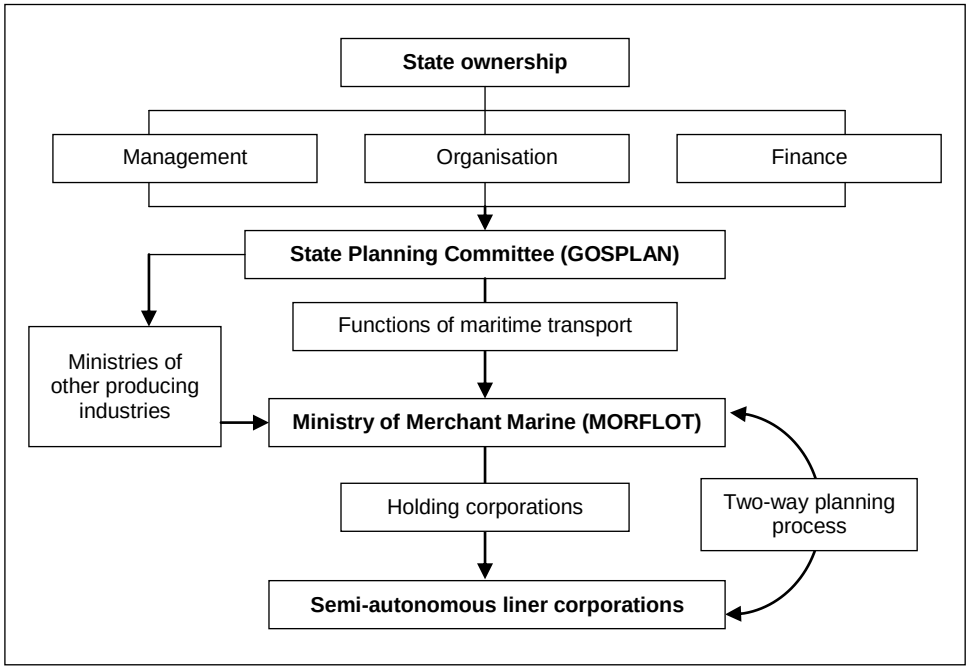

Figure 3.8 Decision-making framework of Eastern European liner shipping industries under communism (*Source*: Author 2012)

Overall, state organisation and central planning led to a top down approach that failed to accommodate the needs of the market (Peeters 2012), and the relegation of liner shipping to a secondary role whereby investment only followed the needs of industrial production (Polak and Heertje 1999). In addition to realising political objectives, liner corporations had a variety of social obligations, such as housing, education and medical provision (Bergstrand and Doganis 1987). However, in general these were non-profitable and vastly overstaffed (Ledger and Roe 1996). From the 1980s onwards, inadequate supply chains and insufficient technical infrastructure forced liner operators to increasingly seek self-sufficiency to secure their inputs (Krzyzanowski 2001). The joining together with other state owned carriers became commonplace, as did regional cooperative decision-making.

3.2.3 Fleets and tonnage

All liner shipping corporations maintained ownership of large fleets and their enormous sizes often made them the biggest in Europe (Von Seck 2000). Eastern European conventional liner shipping improved competitive positioning by applying a variation of international standards. Worldwide networks were installed, and a process of international cooperation was characteristic of this time, although to a different extent in each national and regional case (Lloyds List 11.10.1991).

All liner corporations experienced rapid growth beginning in the 1950s and continuing until the mid-1970s (Breitzmann 2001). In the ten years from 1960 to 1970 Soviet tonnage grew almost fivefold, reaching close to 15 million gross tonnes by 1970 (Lloyds Register Shipping 1960-1970). Rapid growth continued until the mid-1970s, whereby the Soviet fleet was characterised by a dramatic drop in growth rates (Ambler *et al* 1985). Post-1980, the aim of Soviet fleet development was to improve the efficiency of the fleet by replacement of obsolete tonnage (Lloyds List 08.05.2007). In particular, new vessels were commissioned to replace vessels being scrapped or to meet specialist needs, and not solely to fulfil the state's political fixation with heavy industry (Czermanska *et al* 2001).

Socialist fleets made particularly strong defence efforts, orientating their liner fleet towards roll-on roll-off (Ro-Ro) tonnage for flexibility, instead of the container technology applied worldwide (Ernst and young 1990). Moreover, up until the late 1980s, currency rather than shipping functions dominated Soviet liner policy. Yet, it was not only the aims but also the structures of Soviet liner fleets that sought to implement national shipping policy of the states concerned (Zurek 1999). As Table 3.6 illustrates, the specific structures of Soviet liner shipping fleets showed a distinct complexity from other European market operators during the period.

Fleets of Eastern European liner shipping companies 1985						
Vessel type	**BCS**		**LSC**		**POL**	
	Number	**DWT**	**Number**	**DWT**	**Number**	**DWT**
General cargo	67	838	8	22	46	357
Container	17	262	4	33	36	482
Ro-Ro	36	455	7	38	9	54
Ferry	0	0	0	0	3	10
Reefer	0	0	27	177	3	11
Wood transporter	41	182	0	0	0	0
Bulk	0	0	0	0	0	0
Tanker	0	0	51	1,122	0	0
Gas tanker	0	0	7	41	0	0
Short-sea	n.d	n.d	n.d	n.d	0	0
Passenger	3	n.d	0	0	0	0
Total	**164**	**1,737**	**104**	**1,433**	**97**	**914**

Table 3.6 Fleets of Eastern European liner shipping companies, 1985

(*Source*: Lloyds Register of Shipping, Statistical Tables 1985)

The unusual profile of the Soviet liner shipping fleets in terms of vessel acquisition and disposition is apparent when comparisons with the total world fleet are made. In 1985, the average vessel size for the Soviet liner fleets lay at 3,500 gross tonnes, which was much smaller than the world average at 5,400 gross tonnes (Lloyds Register of Shipping, Statistical Tables 1985). Moreover, the liner fleet comprised of a disproportionately large number of general cargo vessels. These accounted for half of the trading fleet, whereas worldwide less than a fifth of the trading fleet composed of general cargo vessels (Taylor 1998). As a result, Soviet liner fleets were conspicuously low on other types of tonnage. In particular, container vessels made up only 4% of the fleet compared with 17% worldwide.

Whist during the 1980s many western shipowners ordered specialist tonnage with container capacity of 3,000 to 4,000 Twenty-Foot Equivalent Units (TEUs) to reduce the unit cost of transportation, an analysis of Soviet container vessels show that they were relatively small by these standards. As Table 3.7 demonstrates, the maximum capacity of Soviet cellular ships was kept below 1,000 TEUs and that of Ro-Ro ships to 1,400 TEUs (Lloyds Register of Shipping, Statistical Tables 1985). Ship managers deemed that vessels of this size better matched the requirements of Soviet administered economic policies and the cross-trades (Roe 2001).

Average size of Soviet fully cellular vessels 1985			
Class	**No. of vessels**	**DWT**	**TEU capacity**
Medium-sized fully cellular			
Kapitan	4	15,950	932
Mercur/Khudozhnik	10	14,490	824
Pula conversions	4	14,170	700
Small-sized fully cellular			
Aleksandr Fadeyev	5	6,494	358
Sestroretsk	6	6,270	218
Total	**29**	**57,374**	**3,032**

Table 3.7 Average size of Soviet fully cellular vessels, 1985

(*Source*: Lloyds Register of Shipping, Statistical Tables 1985)

Eastern European liner fleets exhibited an unusual age profile. As rapid fleet growth took place in the 1960s (Greenway 1980), by the late 1980s the vessels launched during this period were between 15 to 25 years old, and therefore beyond their normal commercial life span (Stopford 2008). As of 1989, 46% of the Eastern European liner fleet averaged 15 years old, compared with just 24% of the worldwide fleet (Lloyds Register of Shipping, Statistical Tables 1989). Inevitably, such a significant lack of investment led to a maritime sector that was characterised by archaic technologies and competitive transport qualities that became deficient as regards frequency, transit time and punctuality. Compared with other major fleets, Eastern European liner fleets were older and composed of smaller vessels (Dobrowolski 2003). Liner fleets lacked modern tonnage such as fully cellular vessels, and although new-builds were on order, it was an insufficient number to allow for the scrapping of a high enough proportion of old vessels.

3.2.4 Markets and service offering

Post-war trends emphasised foreign trade with the satellite countries of the Soviet Union (Lowe 2009). Initially this created a requirement for short-sea shipping to supplement land links, but with the accession of Cuba (1972) and Vietnam (1983) there became a greater requirement for deep-sea intra-CMEA trade (Ambler *et al* 1985). By 1985, half of all Eastern European foreign trade was through localised

centrally planned economies, contributing to a dominance of short-sea export links. Conversely, imports tended to comprise Trans-Atlantic trade. Eastern European trade was divided into three groups: centrally planned economies (Baltic Sea, Black Sea and Asia); developed market economies (EEC, EFTA and other Europe); and developing economies (Africa, America, Middle East and Asia).

In each of the trading blocs, Soviet liner shipping corporations suffered from the handicap of prevailing regional orientation of service networks with point-to-point routings instead of global service activity, ensuing for example hub-port concepts (Breitzmann 2001). Eastern European states guaranteed their liner capacity would be utilised by introducing certain cargo allocation measures. For the most part, this was achieved by ensuring there was a common contractual arrangement for both exports and imports. There was also governmental price regulation for liner services, although to a differing extent in each state (Krzyzanowski 2001).

Contrary to popular belief there was no planned division of labour between the Soviet shipping groups. Instead, Eastern European shipping was entrusted with national or regional monopolies. Structures followed geographical criteria defined by homeports. For example, liner companies in the Baltic Sea base included: Estonian Shipping Company operating from Tallinn; Latvian Shipping Company operating from Riga; and Lithuanian Shipping Company operating from Klaipeda. Foreign carriers were restricted from local markets and cabotage was common.

Liner activities were frequent in cross-trade and transit markets. A vessel was assumed to be cross-trading if it sailed from one non-Soviet range to another without calling at a Soviet port. Alternatively, a vessel calling at foreign ports in different ranges between Soviet calls was considered to be combining direct

Soviet trade with cross-trade cargoes (Levinson 2008). In the mid-1980s, half of the Eastern European general cargo fleet and a third of the container and Ro-Ro fleet were engaged in direct-trade between the Soviet bloc and other countries (see Table 3.8). Only a small number of the fleet were engaged solely in the cross-trades, while a third of the fleet combined direct-trading and cross-trading.

Deployment of Soviet general cargo and unitised vessels 1985				
Trade type	**General cargo**		**Container & Roll-on Roll-off**	
	No.	**%**	**No.**	**%**
Direct trade	478	47	30	28
Combined direct and cross-trade	269	27	37	35
Cross-trades	14	1	13	12
Insufficient data	252	25	26	25
Total	**1,013**	**100**	**106**	**100**

Table 3.8 Deployment of Soviet general cargo and unitised vessels, 1985
(*Source*: Lloyds Register of Shipping, Statistical Tables 1985)

Although few in numbers, the activities of the largest Eastern European unitised and cellular ships are of significance, as these were the most efficient vessels in the fleet and therefore deployed on important routes (Cudahy 2008). Such vessels were in operation on combined-direct and cross-trade services, and utilised to trade with CMEA partners or within a major freight conference. The greater majority of the fleet was made up of much smaller vessels, which characteristically switched between local trading routes as part of an enormous resource pool.

Controversially, Eastern European liner corporations were operational within international conferences. Where they were members their loading rights were restricted to Soviet ports (Marlow and Nair 2005). Despite widespread criticism of Soviet lines for undercutting rates, evidence suggests that where liner services operated as non-conference competition they were typically slow, infrequent and unreliable. Moreover, the amount Soviet capacity provided on trade routes tended to be small and thus relatively uncompetitive (Bergstrand and Doganis 1987).

3.3 Liner shipping under communism

Pre-perestroika Eastern European liner shipping was a significant commercial activity (Wrona and Roe 2002), comprising of importing and exporting goods and providing services for the cross-trades (Kowalczyk 2008). Controlled by the state and in an international framework of the Soviet dominated CMEA (Vari and Tamas 2010), Eastern European liner companies were fundamentally involved in the earning of convertible currency as a mechanism for international trade and the provision of logistical support as alternative defence function (Mistzal 2003).

By 1989, the six Eastern European liner shipping fleets under consideration of this study had grown to comprise of 735 vessels, with a total deadweight tonnage (DWT) of 9,442,544 (Lloyds Register of Shipping, Statistical Tables 1989). However, western intellectual property and resources were still inaccessible to Eastern European liner companies, and thus rarely employed to aid efficiency and service provision. Moreover, the lack of competition inside the economy and state protection from foreign trade further exasperated a sector already characterised by archaic technology and poor service delivery (Cottam and Roe 2007).

Having previously detailed the framework of Eastern European liner shipping under communism, we can now turn our attention to their respective liner shipping industries which have continued to develop throughout the period of political, economic and social chaos. A brief overview of the competitive position Eastern European liner corporations occupied in the late 1980s is provided, with particular attention to the organisation and management, tonnage and fleet capacity, and market and service offering. As with most of the service sector, it is important to bear in mind that though viewed as autonomous entities, a high level of co-dependency existed between socialist shipping companies and the CMEA.

3.3.1 Estonian Shipping Company (ESCO)

Although the smallest of the Baltic countries, Estonia has always made its presence felt in the regions maritime markets (Liliopoulou 2003). Estonian Shipping Company (ESCO), with the registered name in Estonian '*AS Eesti Merelavandus'*, is the oldest ship-owning company in Estonia. ESCO's roots date back from the middle of the 20th century whereby the company was part of the Soviet Union merchant fleet (Lloyds List 20.08.1993). Nationalised in 1991, the company has continued to operate until the present day with a focus on ship-owning and management of container/multipurpose and roll-on roll-off vessels.

A remarkable illustration of the shipping activities of ESCO has been its ownership and management of ferries and bulk carriers, as well as the company's liner activities. At its peak in the 1970s, state owned ESCO operated some 96 dry cargo vessels, with a total DWT of 1,074,946 (Lloyds Register of Shipping, Statistical Tables 1976). Vessels were engaged in deep-sea liner and chartering operations, short feeder services, tramp services and ferry services. Alongside the fleet, ESCO also incorporated a number of ancillary services, all of which were embedded in the integrated structure of the company (Lloyds List 02.06.1997).

ESCO operated from a single location in Tallinn (see Figure 3.9), the largest cargo and passenger port in Estonia. Here, ESCO held a leading position in the handling of container flows between Russia and Western Europe. Finnbest and Swebest formed the major container services linking Helsinki/Tallinn and Stockholm/Tallinn respectively with the Baltic States and the north continent ports (Lloyds List 18.06.1998). Yet, container and Ro-Ro services tended to be imbalanced with vessels coming in full and going out empty, leading to an operational strategy characterised by stable rates for incoming goods and insufficient rates for exports.

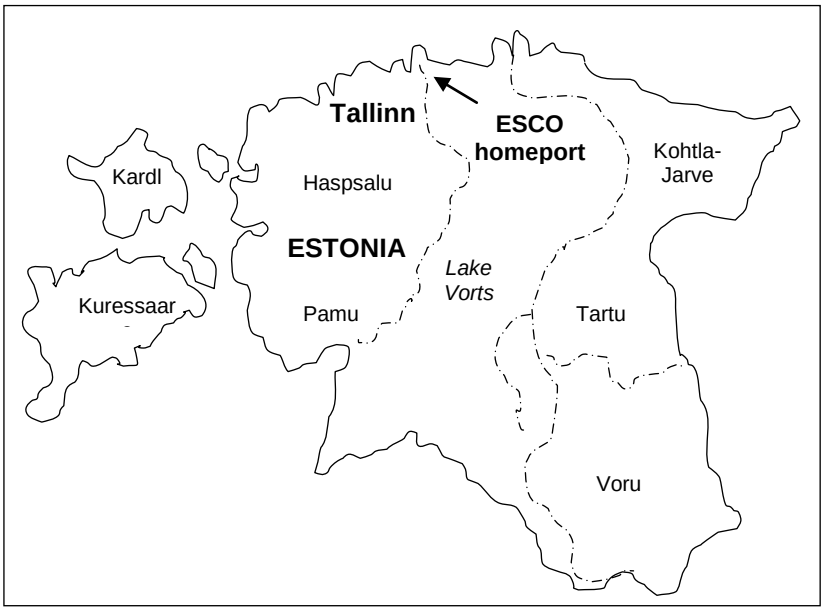

Figure 3.9 ESCO geographical location

(*Source*: Adapted by Author from The Times Reference Atlas of the World 2010)

Stemming from socio-political directives, ESCO had few provisions in reefer and tanker markets. Instead, its main task was to carry dry cargo, which is reflected in the composition of the fleet. ESCO operated a variety of ship types, to include the following: Gustav Sule bulkers with 24,105 DWT capacity; general purpose tweendeckers of the Antsla type with 7,400 DWT capacity; Naissaar dry cargo ships of 6,070 DWT; Kapten Konga carriers of 2,600 DWT specialising in unitised and dry bulk; and a number of Ro-Ro carriers between 1,500 and 5,500 DWT.

Near the end of 1989, ESCO's fleet comprised of 85 vessels in total operation (see Table 3.9). The majority of the fleet consisted of multipurpose and general dry cargo vessels (37.6% and 30.5% retrospectively). Notably, only 3.5% of the fleet was comprised of modern cellular vessels and/or containerised tonnage, which was significantly smaller than period world shipping standards (Fairplay World Shipping Directory 1989). In terms of market provision, of the 4.2 million tonnes of freight carried by ESCO in 1989, 37% was attributed to the cross-trades and 15%

to transit trade (Breitzmann 2001). Average ship age stabilised around 14.5 years, though there were continuous attempts for fleet modernisation during the period.

Estonian Shipping Company fleet 1988-1990						
Type of vessel	**1988**		**1989**		**1990**	
	No.	**DWT**	**No.**	**DWT**	**No.**	**DWT**
Multipurpose	33	410,097	32	401,412	30	365,797
Dry cargo	27	242,391	26	243,291	25	230, 686
Roll-on roll-off	11	155,766	10	109,606	8	72,145
Part refrigerated	5	32,015	5	30,393	4	24,555
Reefer	3	18,085	3	16,971	3	16,971
Timber carrier	2	14,676	1	7,338	1	7,338
Passenger/train/vehicle vessel	1	3,343	1	3,343	2	6,686
Training vessel	1	5,466	2	10,932	2	10,932
Container liner	2	45,600	3	68,400	3	68,400
Tankers	3	57,929	2	38,619	1	19,309
Cruise liner	0	0	0	0	1	7,170
Roll-on roll-off/cellular	0	0	0	0	2	45,242
Total	**88**	**985,368**	**85**	**930,305**	**82**	**875,231**
Average age	13.6 Years		14.5 Years		14.9 Years	

Table 3.9 Estonian Shipping Company (ESCO) fleet 1988, 1989 and 1990
(*Source*: Fairplay Shipping Directories 1988,1989 and 1990)

Organisation of the Estonian shipping sector evolved during the post-war period, and the traditional hierarchical structure of the command type economy began to be abandoned by the 1980s (Sandle 2011). From 1989 onwards, ESCO consolidated services and reduced the corporation size in terms of vessels in operation and shore-based activities. Many of the vessels were scrapped and the fleet rejuvenated, whilst ESCO also worked towards lessening some of the 3,500 strong staff pool through a natural wastage strategy (Lloyds List 28.06.2000).

3.3.2 Latvian Shipping Company (LSC)

Latvian seafaring history has undeniably been determined by the country's geographical location and long sea borders (Beachain *et al* 2012). In 1940 the joint stock company Latvian Shipping Company (LSC) was established under the state. This company, which engaged in general liner trade and passenger shipping, reefer trades, tanker markets and dry cargo (Lloyds List 01.09.1997), has operated until the present day under the registered Latvian name of '*Latvijas Kugnieciba'*.

Nationalised in 1991, LSC has continued to develop its interests in ownership and management of container/multipurpose vessels throughout the period of transition.

LSC has always been accredited as a large state owned shipping company even by world standards, with some 127 vessels in operation in 1985 (Lloyds Register of Shipping, Statistical Tables 1985). The trading tonnage was made up of 71 dry cargo ships and 56 tankers. LSC operated from a number of ports including Liepaja, Ventspils and Sventoja, however its liner operations were predominately linked to Riga (see Figure 3.10). Alongside its shipping interests LSC also managed a number of ancillary support services, as well as local shipyards.

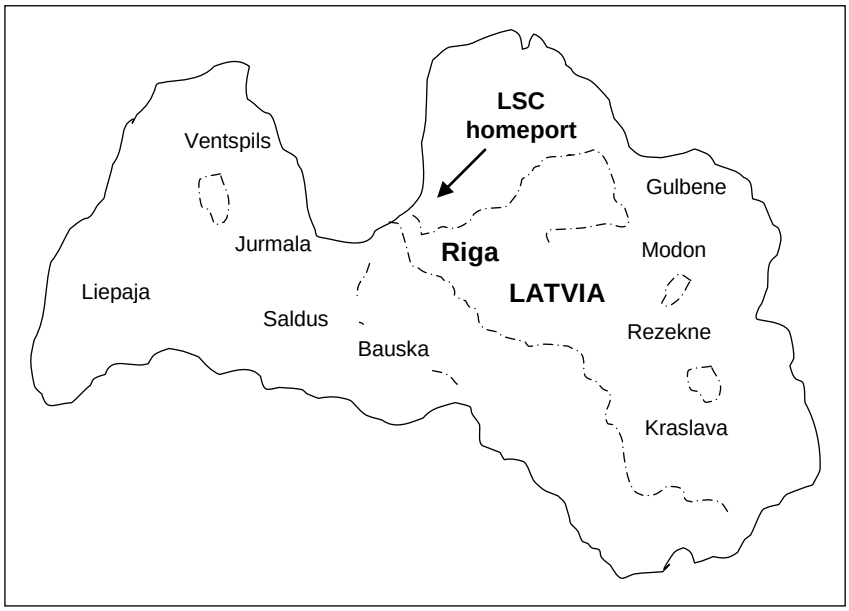

Figure 3.10 LSC geographical location

(*Source*: Adapted by Author from The Times Reference Atlas of the World 2010)

LSC's merchant fleet was one of the few Soviet industries which regularly and successfully competed with its western counterparts. Accordingly, the fleet was regarded as an important asset and hence retained substantial state interest. LSC operated more than ten liner services, including to Scandinavia, United Kingdom, Spain, Portugal, Rotterdam and Antwerp. Notably, LSC did not send vessels to St.

Petersburg, honouring a gentleman's agreement with the Russian owned Baltic Shipping Company (BSC) in exchange for BSC staying out of Riga. Just over 40% of LSC liner cargoes were from feeder arrangements with deep-sea container carriers (Lloyds List 07.04.1995). While, transit cargoes comprised of approximately 60% of trade, with the volume of exports vastly outstripping imports.

An overall impression of LSC prior to transition may be gained from Table 3.10. By 1989, a considerable part of the fleet was comprised of general dry cargo and multipurpose vessels (11.8% and 16.1% retrospectively). Only 2.1% of the fleet consisted of containerised tonnage (Fairplay World Shipping Directory 1989). Tankers made up 46.2% of fleet capacity, before the company's division of service post-1989. The table also highlights the rise in average ship age from 9.4 years in 1988 to 13.4 years in 1990, arguably placing LSC's fleet outside the well-paying markets (Lloyds List 18.06.1998). In terms of market service offering, only 10% of the 1980s Latvian fleet's business was in international transport via the cross-trades, compared with over 90% after 1990 (Lloyds List. 13.03.1998).

Latvian Shipping Company fleet 1988-1990						
Type of vessel	**1988**		**1989**		**1990**	
	No.	**DWT**	**No.**	**DWT**	**No.**	**DWT**
Multipurpose	16	200,700	15	188,157	13	163,069
Dry cargo	14	125,684	11	102,931	8	73,819
Roll-on roll-off	3	42,481	3	42,481	2	28,320
Part refrigerated	7	44,822	9	49,111	9	55,249
Reefer	4	24,114	6	28,285	7	39,599
Passenger/train/vehicle vessel	4	26,708	2	13,354	2	13,354
Training vessel	3	16,399	2	10,933	2	10,933
Container liner	2	45,600	2	45,600	3	68,400
Cruise liner	0	0	0	0	1	7,170
Tankers	44	849,626	43	830,317	43	830,317
Total	**97**	**1,376,134**	**93**	**1,311,169**	**90**	**1,290,230**
Average age	9.4 Years		11.9 Years		13.4 Years	

Table 3.10 LSC fleet 1988, 1989 and 1990

(*Source*: Fairplay Shipping Directories 1988, 1989 and 1990)

By 1989, the number of LSC vessels in operation had reduced by 56.2% from peak capacity in the early 1980s (Fairplay Shipping Directory 1989). Since the

company's ship operating activities remained with the state, the treasury continuously struggled to fund its asset base (Lloyds List 12.08.1991). Subsequently, poor investment and a dissipated managerial framework left the core of LSC both limited and detached (Schiff and Hafen 2003). In time, LSC's service delivery did not match that of the West (Cottam and Roe 2004), with archaic technology and poor availability of resources leading to a decrease in service productivity and an urgent need for regeneration and modernisation.

3.3.3 Lithuanian Shipping Company (LISCO)

The maritime transport sector is an industry of great importance in Lithuania, and one that also been considerably affected by the regional political situation (Bruszt and Holzhacker 2009). In 1969, the state owned Lithuanian Shipping Company (LISCO), with the Lithuanian registered name of '*Lietuvous Juru Laivininkyste'*, was established and rapidly emerged as one of the leading ship operators in Lithuania (Lloyds List 18.07.2002). The company specialised in a range of activities including general cargo, liner, bulk, tramp and the ferry trades (Lloyds List 02.06.1997). Since 1991, LISCO has continued to operate under a variety of ownership and management structures (Lithuanian Shipping Company 2012).

As with all Eastern European service providers, the infrastructural development and company service provision of LISCO was inevitably directed by specific Soviet import and export needs (Bergstand and Doganis 1987). With the main fleet based in Klaipeda, central regulators nominated cargoes and foreign ports for trade (see Figure 3.11). In the period between 1970-1990, LISCO's major business was in the tramp/bulk shipping market, with additional interests in liner services on the Baltic Sea, including traditional rail ferries between a number of ports in Germany and Klaipeda (Von Seck and Breitzmann 2002). At the same time, LISCO

maintained daily connections to a number of key ports in Denmark and Sweden, subsequently retaining a high regional presence (Lloyds List 02.12.1993).

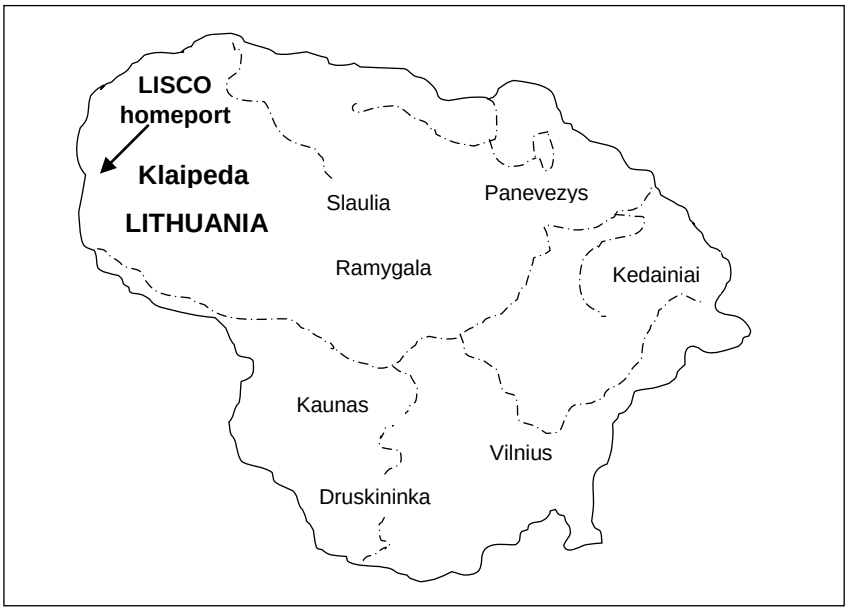

Figure 3.11 LISCO geographical location

(*Source*: Adapted by Author from The Times Reference Atlas of the World 2010)

Towards the end of 1989, LISCO had 38 liner/tramp vessels in global operation, with a total deadweight tonnage of 413,504. The greater part of the fleet consisted of dry cargo and multipurpose vessels (26.3% and 28.9% retrospectively) (Lloyds Register of Shipping, Statistical Tables 1989). Notably, containerised and/or cellular tonnage began to see a gradual increase, comprising 7.8% of the fleet, which represented the highest amount of modern renewal in the Baltic region (Fairplay World Shipping Directory 1989). In addition, Ro-Ro traffic experienced a steady increase, whilst the number of heavy industry vessels saw a decline.

An overall impression of LISCO prior to transition may be gained from Table 3.11. The figures highlight an average vessel age of 18.1 years in 1989, the highest average age of all the Eastern European fleets (Lloyds List 03.09.1991). In terms of market service provision, only 15% of the 1980s Lithuanian fleet's business was

in international transport via the cross-trades, compared to over 70% after 1990.

Lithuanian Shipping Company fleet 1988-1990						
Type of vessel	**1988**		**1989**		**1990**	
	No.	**DWT**	**No.**	**DWT**	**No.**	**DWT**
Multipurpose	12	149,126	11	137,985	10	125,440
Dry cargo	11	98,751	10	93,573	8	74,858
Roll-on roll-off	4	56,642	4	45,175	4	45,175
Part refrigerated	3	19,209	3	18,416	3	18,416
Reefer	2	12,057	2	11,314	2	11,314
Passenger/train/vehicle vessel	2	6,686	2	5,000	2	5,000
Training vessel	2	10,933	2	11,020	2	11,020
Container liner	2	45,600	3	68,400	3	68,400
Cruise liner	0	0	0	0	1	7,170
Roll-on roll-off/cellular	1	22,621	1	22,621	1	22,621
Total	**39**	**421,625**	**38**	**413,504**	**36**	**389,414**
Average age	17.6 Years		18.1 Years		18.4 Years	

Table 3.11 LISCO fleet 1988, 1989 and 1990

(*Source*: Fairplay Shipping Directories 1988, 1989 and 1990)

By the end of the period of communism, LISCO had accrued a somewhat archaic fleet, attributable to the Soviet era; mainly dry cargo vessels but including Ro-Ro ferries and associated terminal activities (Bergstand and Doganis 1987). From 1991 onwards LISCO suddenly found itself an independent entity (Lloyds List 29.06.2001). Since then, with the aid of new partnerships LISCO has managed to consolidate services and transfer its interests away from heavy industry towards lighter trades, such as containerised traffic and regional ferry activities.

3.3.4 Polish Ocean Lines (POL)

The history of the modern day Polish maritime sector dates back to 1918, following the regaining of the country's independence and with it access to regional maritime markets (Kemp-Welch 2008). In 1930, the joint stock state owned company Polish Transatlantic Ship Company was established. This company, which engaged in liner trade and passenger shipping, was nationalised in 1951. It has operated until present day under the Polish name of '*Polskie Linie Oceanizne'*, otherwise known as Polish Ocean Lines (POL) (Bergstand and Doganis 1987).

POL has always been recognised as one of the most extensive shipping companies in the Baltic (Polish Ocean Lines 2012). In the 1950-1990 period, POL provided extensive liner, general cargo and passenger services in imports and exports, and activity in the cross-trades (Schiff and Hafen 2003). Alongside the fleet, POL incorporated a number of ancillary and support services, all of which were deeply embedded in the structure of the company. At its peak in the 1970s, POL reached the size of 11,000 employees, servicing a fleet of over 250 vessels, and thus fulfilling an essential role in terms of Polish socio-political economics.

In 1986, POL was reconsolidated into a single organisation located at Gdynia, some twenty kilometres from Gdansk (see Figure 3.12). The effect of this was the series of economic disasters that have subsequently hit POL up until the present time (Lloyds List 27.11.2009). The vast majority of failures appear to have stemmed from inadequate management structures and from a succession of questionable internal transfers of hard currency between different departments of the newly structured company in an attempt to keep it afloat (Roe 2001).

Figure 3.12 POL geographical location

(*Source*: Adapted by Author from The Times Reference Atlas of the World 2010)

By 1989, POL's liner fleet comprised of 107 vessels in total operation (see Table 3.12). The majority of the fleet consisted of multipurpose and general dry cargo vessels (37.3% and 34.5% retrospectively). Notably, only 2.8% of the fleet was comprised of modern cellular vessels and/or containerised tonnage, which was significantly smaller than period shipping standards (Fairplay World Shipping Directory 1989). In terms of market provision, of the 5.1 million tonnes of freight carried by POL in 1989, 43% was attributed to the cross-trades and 17% to transit trade (Lloyds List 03.09.1990). Average ship age stabilised around 13.2 years, though there were continuous attempts at fleet modernisation during the period.

Polish Ocean Lines fleet 1988-1990						
Type of vessel	**1988**		**1989**		**1990**	
	No.	**DWT**	**No.**	**DWT**	**No.**	**DWT**
Multipurpose	43	534,370	40	501,766	40	487,730
Dry cargo	42	377,053	37	346,223	33	304,506
Roll-on roll-off	16	226,569	15	164,409	11	99,200
Part refrigerated	11	70,435	4	24,555	0	0
Reefer	4	24,114	2	11,314	3	17,701
Passenger/train/vehicle vessel	3	10,030	2	5,000	3	20,031
Training vessel	2	10,933	1	5,510	0	0
Container liner	3	68,400	3	68,400	2	45,600
Cruise liner	0	0	1	7,170	0	0
Roll-on roll-off/cellular	0	0	2	45,242	2	45,242
Total	**124**	**1,321,904**	**107**	**1,179,589**	**94**	**1,020,010**
Average age	12.1 Years		13.2 Years		14.3 Years	

Table 3.12 POL fleet 1988, 1989 and 1990

(*Source*: Fairplay Shipping Directories 1988, 1989 and 1990)

Organisation of the Polish liner sector evolved during the post-war period in line with the general direction of the evolution of the economic and political system in Poland (Lukowski and Zawadzki 2006). The traditional hierarchical structure of the command type economy began to be abandoned in liner shipping by the 1980s (Misztal 2003). Herein, POL has held a privileged position with respect to the degree of autonomy granted by the government administration, particularly in terms of operational decisions, such as freight rates, vessel acquisition (Lloyds List 02.09.2004), and market and service orientation (Polish Ocean Lines 2012).

At the end of 1989, the number of POL vessels in operation had reduced by 41.5% from peak capacity in the 1970s. Since the company's ship operating activities remained with the state, the treasury struggled to subsidise its asset base. Furthermore, as with most Polish companies, POL was restricted in terms of seeking overseas finance to compensate for new builds (Lloyds List 11.02.1994). Thus, although the company's functional structure had begun to exhibit a more contemporary character, poor decision-making and a weak managerial framework left POL limited in its regeneration and commercialisation programme (Roe 2001).

3.3.3 Navrom Shipping Company (Romline Shipping Company)

In the days prior to Ceausescu's overthrow, the entire Romanian fleet operated under a single state owned conglomerate commonly known as Navrom (Lloyds List 13.05.2000). This vertically integrated company engaged in a multitude of service provisions, whilst endeavouring to carry the vast majority of Romanian domestic trade (Lloyds List 27.10.1993). Navrom was active in the general cargo trade, tanker and dry cargo markets, and liner and passenger shipping industry. The company operated this diverse collective of maritime services until 1991, whereby Navrom was broken up and transformed into three independent concerns namely: Navrom, Petromin and Romline (specifically catering for liner shipping).

In 1989, the liner shipping division of Navrom accounted for 29.4% of the total number of company vessels. The liner segment comprised of 90 vessels of various types, ranging from 1,950 to 16,486 DWT. These included: 72 general cargo vessels; 14 Ro-Ros; 2 passenger/vehicle carriers; and 2 containerships (Lloyds List 14.05.1997). Individual containerships had a deadweight tonnage of 8,794 and a 420 TEU capacity. The annual volume carried was in the region of 20,000 TEUs. Navrom's liner operations were linked to the port of Constantza,

here the company had access to the Danube, thus bestowing an important gateway from the Black Sea to Eastern and Northern European states (see Figure 3.13). Furthermore, Constantza also provided a range of ancillary services specifically designed to support the growing trend in unitised (more modern) trade.

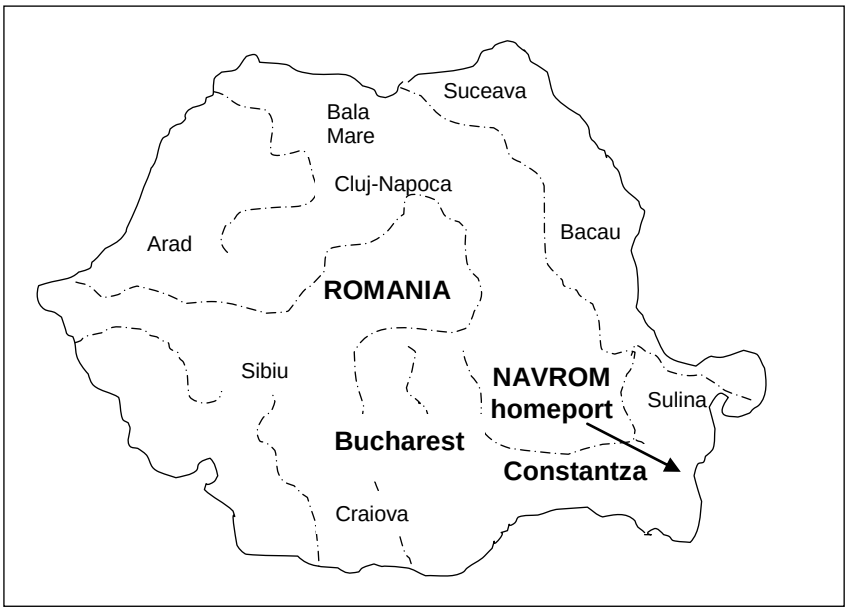

Figure 3.13 Navrom geographical location

(*Source*: Adapted by Author from The Times Reference Atlas of the World 2010)

Under public ownership Navrom grew to become one of the largest fleets in Europe, with over 300 merchant vessels in operation during the 1970s and early 1980s (Lloyds List 13.05.1998). At its peak, Navrom reached the size of 4,000 employees, servicing an enormous fleet of some 316 vessels, and thus fulfilling its indispensable socio-political role to support heavy industry as set out by the regime in power (Cottam and Roe 2004). A direct result of this policy was that over 70% of Navrom's fleet were involved in the bulk trades (Lloyds List 27.10.1993).

An overall impression of Navrom prior to transition may be gained from Table 3.13. By 1989, the greater part of the fleet comprised of general dry cargo and

multipurpose vessels (36.6% and 23.5% retrospectively). Tanker tonnage consisted of 3.5% of the fleet, whereas Ro-Ro tonnage made up 4.5% of the total fleet. Only 0.7% of the fleet comprised of modern cellular tonnage (Fairplay World Shipping Directory 1989). The table also highlights the distinguishable rise in average ship age from 9.4 years in 1988 to 12.8 years in 1990. In terms of market service provision, only 6% of the 1980s Romanian fleet business was in international transport via the cross-trades, in comparison to over 63% after 1990.

Navrom fleet 1988-1990						
Type of vessel	**1988**		**1989**		**1990**	
	No.	**DWT**	**No.**	**DWT**	**No.**	**DWT**
Dry cargo	114	769,210	112	687,880	105	676,542
Multipurpose	73	723,645	72	697,120	72	714,818
Bulk carrier - ore	49	289,119	46	231,668	45	238,437
Tanker	10	473,332	11	644,232	6	342,450
Crude oil carrier	8	917,021	8	917,021	8	916,553
Bulker	21	358,402	19	299,110	18	272,610
Roll-on roll-off	16	91,264	14	78,365	11	63,365
Ore carrier	5	268,076	5	268,076	6	446,826
Passenger/train/vehicle vessel	1	12,000	2	24,000	1	12,000
Container ship	2	16,500	2	16,710	2	16,710
Training ship	1	6,000	1	6,000	1	6,000
Livestock carrier	3	10,109	4	10,291	1	6,777
Refrigerated fish carrier	10	73,380	10	73,030	10	72,977
Total	**313**	**4,008,058**	**306**	**3,953,503**	**287**	**3,786,065**
Average age	9.4 Years		11.4 Years		12.8 Years	

Table 3.13 Navrom fleet 1988, 1989 and 1990

(*Source*: Fairplay World Shipping Directories, 1988, 1989 and 1990)

Towards the end of 1989, almost of a quarter of the Romanian fleet, comprising of just under a million DWT, was laid up because the finance required to bring them up to class was not available (Lloyds List 18.09.1998). The state prerequisite that its fleet had to serve the domestic economy alone meant deploying vessels on long ballast voyages, resulting in a huge drain on resources. At the same time, all shipping income was seized by the government and returned in limited and inconsistent sums. This precarious situation resulted in poor profitability and little accountability. In 1990 Romania's Privatisation Agency no longer saw Navrom as a viable single concern and the decision was taken to divide the company.

3.3.6 Navigation Maritime Bulgare (NMB)

Bulgaria has a long association with the global maritime markets due to its geographical location, nestled on the edge of the Black Sea (Katsikas 2011). Shipping parallel with foreign trade has always been of instrumental character to the Bulgarian economy. Navigation Maritime Bulgare (NMB), commonly known as '*Navibulga*r', is the successor of Bulgaria's liner heritage, which enjoys more than a century old tradition (Marinov 2001). The company was set up in 1892 by traders at the Black Sea port of Varna to counter the dominance of the British shipping interests in the local coastal trade (Lloyds List 27.11.2009). The state rapidly brought into the venture, and under communist rule NMB came to head an integrated nationalised maritime concern, including ships, shipyards and ports.

Based in Varna (see Figure 3.14), NMB became the main tramp and tanker operator in Bulgaria. During the mid-1980s, NMB had a relatively large fleet of some 122 vessels operational in all main short-sea and deep-sea ventures, supported by 6,700 employees (Fairplay Shipping Directory 1985). Just over 40% of the fleet (46 vessels) was dedicated to the bulk trade in the Black Sea and eastern Mediterranean. Vessels ranged in size from 9,000 to 58,000 DWT (Lloyds List 23.02.1996). The company had a variety of tankers (12 vessels), contrasting in size from 5,800 to 96,800 DWT, which carried crude oil between Odessa and Bourgas. NMB also managed 45 tweendeckers, including 10 vessels of 1,500 DWT and 12 multipurpose vessels of 13,200 DWT (Lloyds List 23.02.1997).

NMB's liner division operated two services, under the umbrella of Bulcan it covered the major European-Mediterranean destinations, calling at ports in northwestern Europe, west and east Mediterranean, and the Black Sea. Under the trade name of Navibulgar Continent Line (NCL) NMB operated a weekly

conventional line calling at Haifa, Ashdut, Izmir, Piraeus, Istanbul and Bourgas (Lloyds List 13.08.2004). The capacity of containerships on these trading routes varied in size from 400 to 1,000 TEUs. NMB supported its liner services through the internal ownership of unitised handling equipment, forwarding and ship repair.

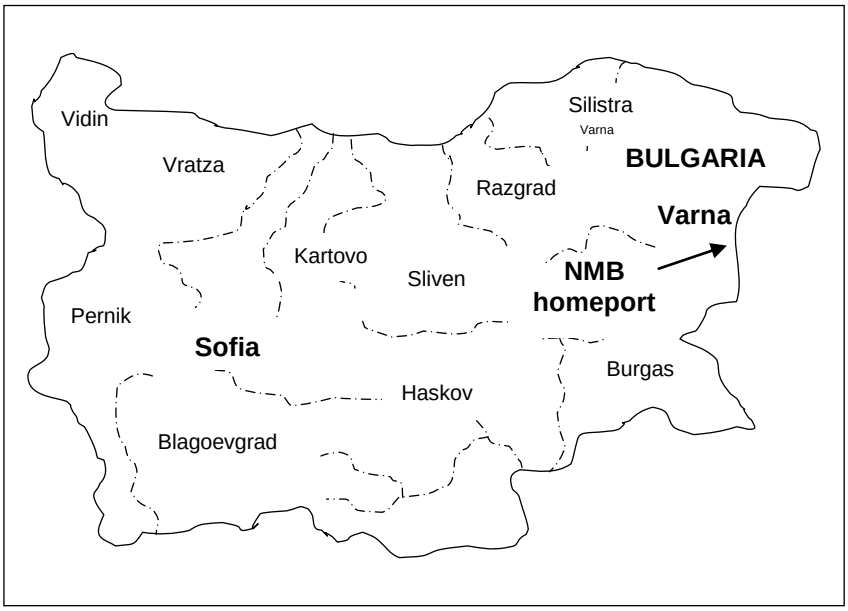

Figure 3.14 NMB geographical location

(*Source*: Adapted by Author from The Times Reference Atlas of the World 2010)

An overall impression of the Bulgarian fleet can be gained from Table 3.14. The figures show a relatively stable fleet size with NMB operating 106 vessels in 1989, comprising a total deadweight tonnage of 1,654,474 (Fairplay Shipping Directory 1989). The majority of the fleet consisted of dry cargo vessels and bulk carriers (36.7% and 19.8% retrospectively). Multipurpose tonnage made up 10.3% of the fleet, whilst the tanker trade took up 8.4% of the total tonnage. Only 1.8% of the fleet comprised of modern containerised/part-cellular tonnage. By 1989, the average vessel age of the fleet was 16.4 years, though most conventional tankers were well over 20 years, and liner ships much younger (Lloyds List 27.11.2009). In terms of market provision, of the 12.1 million tonnes of freight carried by NMB in 1989, 49% was attributed to the cross-trades and 23% to the transit trades.

Navigation Maritime Bulgare fleet 1988-1990						
Type of vessel	**1988**		**1989**		**1990**	
	No.	**DWT**	**No.**	**DWT**	**No.**	**DWT**
Dry cargo ship	45	338,680	39	292,499	37	275,426
Bulk carrier ore strengthened	21	684,434	21	684,434	21	684,434
Tanker	10	193,097	9	117,822	7	98,711
Roll-on roll-off	3	31,300	1	6,235	3	19,200
Products tanker	6	142,244	6	142,244	4	84,244
Multipurpose	8	98,378	11	119,224	9	102,628
Bulker	13	218,741	12	222,429	14	290,789
Passenger/car ferry	2	15,431	1	4,931	1	4,931
Container ship	2	18,918	2	18,918	2	18,690
Roll on load-off	0	0	2	20,868	2	20,868
Passenger/train/vehicle vessel	0	0	2	24,870	2	24,870
Total	**110**	**1,741,223**	**106**	**1,654,474**	**102**	**1,624,791**
Average age	15.1 Years		16.4 Years		17.2 Years	

Table 3.14 NMB fleet 1988, 1989 and 1990

(*Source*: Fairplay World Shipping Directories 1988, 1989 and 1990)

By the end of the 1980s, the majority of NMB's fleet was pushed towards higher levels of cross-trading as the domestic trade began to fall away, and the need to earn hard currency increased (Cottam and Roe 2007). During the period there was also a gradual increase in the variety of ship types, a change most likely linked to market demand, and particularly noticeable in the introduction of lighter tonnage such as Ro-Ros and part-cellular vessels (Fairplay Shipping Directory 1990). However, as with many of the Eastern European fleets, NMB has struggled to secure significant levels of investment for the replenishment of existing tonnage (Lloyds List 13.08.2004). Hence, at the end of the period of communism, without direct access to the profits generated by the company and the inability to tap into international project finance to implement a retonnage programme (Kovacs and Tardos 2007), NMB remained unable to fully regain its independence and thereby extend the range of market opportunities or improve the quality of services offered.

3.4 Conclusion

At the start of the period of transition, the entire maritime transport system was owned, managed and organised by the state. Governments set political and macroeconomic shipping plans, leaving only limited possibilities for decision-

making at enterprise level. Political bureaucracy influenced all working matters so that shipping corporations were effectively operational units, interpreting strategic targets into specific structures. Main functions were to transport goods for national foreign trade, to provide some sort of covert state security, and to earn hard currency. Yet, it was not only the objectives but also the structures of socialist liner fleets that sought to implement shipping policies. Self-sufficiency ensured all maritime apparatus was designed and constructed in the CMEA region at the cost of utilising shipyards that lacked any incentive to develop new products or the ability to import them from the outside. Guaranteed traffic to liner operators regardless of their efficiency, together with governmental price regulation resulted in oversized fleets with respect to their true commercial competence. Liner companies were entrusted with monopolistic positions dictated by geographical regions and cargo specialisation. Moreover, subsidised shipping entities were part of highly integrated maritime combines characterised by immense organisational structure. Each sizeable firm tended to encompass all the activities that had any sort of relationship to the core of the industry. Yet, none of the socialist states were in a position to render this into sustainable competitiveness. The Eastern European liner sector thus entered the transition phase after-1989 lacking the skills to compete, the infrastructure to survive, an organisation to supply a competitive framework, nor any consciousness of the need for these things.

The following chapter discusses the concept of systematic transition as the departure from a centrally planned economy towards a free market economy. Following a brief examination of the failures of the old system, the chapter focuses on transition through privatisation and structural change. Newly structured ownership rights have provided a substantial contribution to liner shipping restructuring, commercialisation, efficiency and ultimately profitability.

CHAPTER FOUR

Liner Shipping during the Period of Transition

The economic, political and social collapse of the former Soviet Union marked the beginning of the transition process towards market economies (Beachain *et al* 2012). Eastern Europeean states had to succeed in moving from a Soviet-style economic mechanism, based on central planning and public ownership, to a capitalist economy dominated by private property and a market-based allocation of resources (Von Brabant 2011). As socialist liner shipping fleets were very often publicly owned with enormous employee and resource pools (Von Seck 1999), they necessitated the need for inclusion in strategies of economic transition.

Eastern European liner corporations have not been able to rely on an established transition model in their process of conversion into commercial companies in market economies (Cottam and Roe 2004). Changes in the political framework of liner shipping and the market transition of the shipping companies concerned did not match each other nor did they run synchronously. Although liberalisation and deregulation led to strong competition and to the abolition of state protection, the installation of new shipping political frameworks remained pending. Transition shipping thus had to undergo essential changes under circumstances of widely absent state support otherwise common in shipping sectors in market economies.

This chapter addresses the issue of transitional change in Eastern European liner shipping as a mechanism for macroeconomic regional development. Following a brief examination of the failures of the old system, the chapter focuses on systematic transition through privatisation and structural change. Newly structured ownership and possession rights provide substantial contribution to company restructuring, commercialisation, increased efficiency and profitability (Johannsen

2009). Eastern European liner companies began offering services under market conditions, and left behind the rigid leeway of central planning and regulation (Lloyds List 27.11.2009). Extensive adjustments in management and organisation have transpired, and services and markets, as well as the operations within have changed significantly. Noting that the restructuring of maritime transport then has an influence upon the speed and route of economic development in transition countries, the chapter closes with a discussion on the evolutionary components of system changes for successful transformation of Eastern European liner shipping.

4.1 The end of the system

Academics have put forward a host of theories and rationale to explain the sudden collapse of communism in Eastern Europe (Peeters 2012; Lavigne 2007; McDonald and Dearden 2005). Understanding the root causes of the collapse may help to discern the directions of the transition process and its difficulties. In terms of Eastern European liner shipping, analysis of the failings attributed to the old system and its impact on liner activity aid understanding of the nature of subsequent reforms and the multitude of difficulties faced by liner corporations.

Up to mid-1989, Eastern European countries had been pursing inflexible economic and political policies over several decades of relative inactivity (Gros and Steinherr 2004). The disintegration of an empire (Harris 2012), the collapse of an economic bloc (Verdan 2010), the arrival of political democracy (Sandle 2011) and the launch of the transition (Cottam and Roe 2007) is thought to stem from a combination of accident and necessity; of domestic and external causes (White 2007); of economic and political determinants (Dale 2011); as influenced by the West or as due to developments within the socialist system (Cook 2007); as attributable to Soviet policies or as a consequence of individual state actions.

Visible features of the crisis were: declining rates of economic growth (Pons and Service 2012); low productivity of labour and capital (Cohen 2009); insufficient technological development compared to that of the West (Bosteels 2011); persistent shortages of commodities (Cox 2008); serious financial imbalances; little competition between national enterprises (Molloy 2009); administratively determined costs and revenues (Neal 2007); a decline in effectiveness of investment (Pickles 2007); limitations upon the development of intellectual property; a restricted range of goods and services (Dale 2011); military build-up with unjustifiable absorption of gross national product; poor standards of living and consumption (Lane 2007); and increasingly distrust of society in the regime.

These inherent problems were exacerbated by the closed nature of socialist economies. Producers were isolated from external competition and could not fully participate in the international division of labour (Von Brabant 2011). Nor could they benefit from direct foreign investments, joint ventures and technology transfer (Harris 2012). Trade and other economic transactions with the West were also stalled by the inconvertibility of currencies. Most exchange rates had little relationship to the true value of the currency. Eastern European countries found difficulties in exporting to the West because of the trade restrictions imposed and the problems associated with penetrating markets with poor quality goods.

The sector specific problems inherited from the communist period by the Eastern European liner industries may be summarised as: poor infrastructure maintenance of liner shipping ports and little or no inter-modal links (Von Seck 1999); inferior technology, ranging from old ship design, poor telecommunications systems, to archaic handling equipment (Breitzmann 1994); organisational and structural obstacles and bottlenecks, with little or no integration of the transport chain (Zurek

2003); tensions between government departments involved in transport and economic development (Bak and Burnewicz 1999); inadequate legislative and regulatory framework for privatisation and joint venture development (Vattimo and Zabala 2011); mobility impediments in terms of formalities at borders and ports; fiscal problems, with the continuing inconvertibility of the regions currencies (Beachain *et al* 2012); high number of empty vessel runs, particularly in the cross-trades; poorly trained and managed staff in all maritime domains; neglect of environmental considerations, such as congestion, poor engine technology, low grade fuel, and lack of safety for life at sea (Cottam and Roe 2008); and imbalanced investments, dominated by centralised plans with an emphasis on quantitative output rather than on improving quality and infrastructure support.

4.2 The concept of transition

Transition is habitually described as a process of profound system changes on all the planes of state functioning. One witnesses the introduction or further spread of market mechanisms via internalised trade and foreign policies (Peeters 2012), privatisation of government owned enterprises and resources (Berkovich 2009), a market based economic order characterised by horizontal relations between equal partners of supply and demand (Broadman *et al* 2010), political pluralism (Grant and Rawcliffe 2010), and the creation of a financial sector to facilitate macroeconomic stabilisation and the movement of private capital (Lavigne 2011).

Gros and Steinherr (2004, p127) provide an alternative definition of transition as:

> "*A change from one type of market economy where patrimonial or discretionary relationships are widespread to a rules-based system of market relationships".*

Here, the market is placed as the most basic force of structural change and

privatisation, stimulating the establishment of new institutions and strengthening the core of weaker institutions (Curry 2007). Hence, the transition and restructuring process may also be identified by the changing and creating of institutions, particularly private enterprises (Svasek 2008), changes in the role of the state, thereby, the creation of fundamentally different governmental institutions (McDonald and Dearden 2005), and the promotion of private owned enterprises, free markets and independent financial institutions (Myant and Drahokoupil 2010).

In essence, one transition mode is the functional restructuring of state institutions from being a provider of growth to a facilitator of privatisation and economic development (Schroder and Vonderau 2009). Another transition mode is to change the way that the economy grows in terms of its established practice mode (Marelli and Signorell 2010). The relationships between these two transition modes are micro and macro, partial and whole. True transition economies usually include both micro and macro processes of restructuring (Beachain *et al* 2011).

All countries are carrying out economic, social and political changes, yet the concept of transformation commonly is not applied to all of them. Due to the different initial conditions during the emerging process of transition from planned to market economy, countries use a variety of restructuring models in which transformations are being carried out (Sergi and Bagatelas 2009). Transition countries fall into three main categories. The first group comprises of centrally planned economies in which reform processes began most recently and their present scope and rate are the least far-reaching (Molloy 2009). These countries are expected to gain substantially from reorientating their trade to neighbouring states. Countries following this model include Albania, North Korea and Cuba (Shields 2012). A second group consists of countries in which some changes took

place in an earlier period. These changes did not however upset the fundamental ideology of a centrally planned economy. Modern-day changes are carried out with little haste; for example China's drifting away from a centralised command economy (Gros and Steinherr 2004). The third group is made up of the countries whereby changes are of a fundamental nature. Initially they had to cope with the political job of creating a state and an administration, followed by the formation of a free market to trade economically within (World Bank 2010). To this group belong the Eastern European countries. Some of them, particularly the former Soviet Union republics, fall between the second and third groups. The division into explicit groups is not absolute. Taking into account real processes of system changes, most Eastern European countries join the transformation process.

4.3 Characteristics of transformation in Eastern European countries

This thesis explores systematic transition, this is, the departure from a socialist centrally planned economy towards a free market economy. Eastern European countries have been passing through different stages of that process. A number of countries have carried out significant reforms, while others are trying to counteract a growing crisis. Despite very different starting points, the main elements of a transition programme are common to all countries. However, the problems that arise in the implementation of restructuring processes vary from country to country. They depend on the strength of the administrative machinery inherited by the reformers, the overall political situation, and citizen support for the reforms.

A number of characteristic features of the transformation processes in Eastern Europe can be identified, these may be summarised as: a transition from an authoritarian system to a multiparty system of parliamentary democracy (White 2007); a transition from a system of planned economy based on state-owned

domination to a market economy based on private ownership, free competition, a universal financial economy and direct ties with the world markets (Myant and Drahokoupil 2010); a transition from the segregation of the population into social groups (farmers, manual and office workers) to the segregation of the population relating to ownership (owners of means of production and employees) (Shields 2012); and a change of the system of values towards personal benefits and tolerance for privatisation, commercialisation and foreign investment.

Restructuring of the economy is considered a key element of the comprehensive systemic changes. Developments seek the formation of an optimal structure encompassing ownership, branch and organisational make up of the economy (Lavigne 2011). The major components of Eastern European economic restructuring are illustrated in Figure 4.1, and may be summarised as: (a) democratic political reform, as opposed to command of a ruling communist party as a monopolistic political power (Marelli, and Signorell 2010); (b) liberalisation of trade, production and price (Cook 2007), and macroeconomic stabilisation, as opposed to domination of real socialism and its apparatus over all forms of economic activity (Peeters 2012); (c) privatisation and structural reforms of enterprises, as opposed to domination of state owned markets in a socialist economy (Bideleux and Jefferies 1998); (d) institutional reorganisation to provide a legal framework for the good functioning of markets (World Bank 2010); and (e) branch and sector transformation and company modernisation (Schroder and Vonderau 2009). As Figure 4.1 illustrates, real world difficulties in implementation are also the reason that some sequencing of reforms in Eastern Europe are unavoidable. Some steps take more time to implement than others (Beachain *et al* 2012). Prices and external trade can be liberalised quickly, but privatisation and the creation of a fiscal administration system may take more time (Dale 2011).

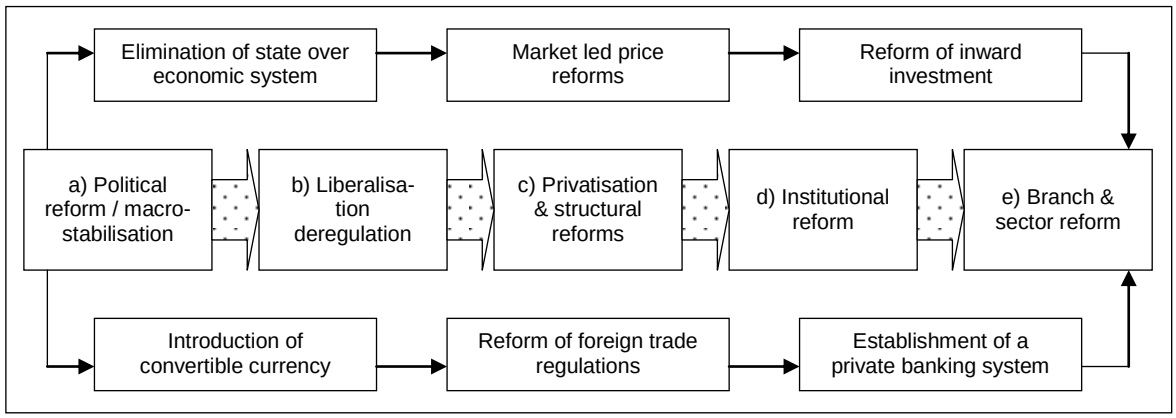

Figure 4.1 Major components of restructuring programmes in Eastern Europe (*Source*: Author 2012)

In the course of restructuring, transition processes necessarily comprise both negative and positive steps. Measures are taken to dismantle old structures and introduce new ones to support the free market (Estrin 2007). Destroying first and creating afterwards produces chaos in the interim (Cohen 2009). The elimination of existing economic arrangements will invariably result in a temporary decrease in production and in exports, and a growth of unemployment (Berkovich 2009). New developments of an economic system must be created rapidly to avoid a worsening economic crisis. It is essential to take steps to complete market reforms, stabilise budgets and credit, and open the economy to competition, both domestically and internationally (Gros and Steinherr 2004). The extent of the economic crisis will depend on the initial situation in the economy and the individual approach to transformation (McDonald and Dearden 2005).

It is challenging to identify when an economy is exiting the transition period. Some economists stipulate it is when basic macroeconomic rates begin to improve (Von Brabant 2011; Cook 2007; Balcerowicz 1995); others suggest it is when progress in the long-term process of restructuring is made (Broadman *et al* 2010; Bandelj 2008; Pickles 2007). In truth, the transformation process in Eastern Europe has

been more difficult and far longer than was expected. Extensive disruption of industrial production, loss of national income, and an increase in unemployment and inflation have all added further complexities to the situation (Shields 2012). Though, initially it was thought that the transition process would be completed after about five years, today it is established that a period of 35 years is more realistic.

4.4 Changed policy framework for Eastern European liner shipping

The inadequacies of socialist shipping, described in Chapter Three, warranted the need for fundamental amendments during the transition process. Accordingly, all economic systems based on the principles of the centrally planned economy initiated swift restructuring programmes (Von Brabant 2011). The transformation of Eastern European shipping industries was necessarily comprised of four interrelated strands: liberalisation, deregulation, commercialisation and privatisation (McDonald and Dearden 2005), each of these is discussed herein.

The first, liberalisation, involves the exposure of the Eastern European liner shipping market to *laissez-faire*, or free market, achieved through the removal of most regulatory controls over pricing, while permitting carriers to enter and leave the market at will (Schroder and Vonderau 2009). Hence, in addition to fiscal liberalisation through the dismantling of administrative price controls and a transition towards convertible currency, the abolition of the state's monopoly on foreign trade went hand in hand with the end of the transport monopoly (Cottam and Roe 2008). Shippers were at liberty to select their choice of carriers and foreign fleets gained access to formerly restricted Eastern European shipping markets (Bak and Burnewicz 1999). Market-based principles were adopted to eliminate discriminatory shipping practices or preferential treatment for home fleets concerning access to markets, ports and infrastructure, and compliance with

applicable European and international legislation for fair competition, maritime safety and environment protection became necessary (Cottam *et al* 2007). Only cabotage markets remained partly protected. The Organisation for Economic Cooperation and Development (OECD) led the way in formulating multilateral shipping principles with Eastern European transition countries (Brooks 2009).

The second, deregulation, comprises a reduction or elimination of government control of a particular industry in order to create and foster a more efficient market place (Broadman *et al* 2010). In Eastern European liner shipping, deregulation resolved to weaken government influence and forge greater competition in transport markets. Deregulation created an economic environment favourable to start-up shipping companies, which were unable to enter the industry prior to the passing of deregulation (Von Seck 1999). Deregulation served as a catalyst for increased innovation, greater advancement in technology, and freedom of intellectual property (Thorstenboeck 2010). Furthermore, deregulation enlarged the scope for economic decision-making at company level in liner shipping. Central management and controlling functions were replaced by allocation through markets and prices (Dobrowolski 2003). Large state corporations were broken into smaller enterprises to exploit efficient and flexible arrangements, and vertically integrated maritime structures were progressively replaced by horizontal links involving contractual cooperation with business cohorts (Cottam and Roe 2008).

The third challenge facing the maritime sector in transition is a changed policy framework for shipping functioning on the basis of commercialisation. Seeking international competitiveness, budget limits for shipping companies were promptly hardened and state subsides annulled (Misztal 2001). Generally, profit aims replaced earlier product maximisation behaviour (Button 2010). Eastern European

liner companies gained economic autonomy as well as strategic and operative responsibility. The vast majority of companies demonstrate movement towards the characteristics of private shipping firms, that includes everything from modern financial practice (Salvatore 2010), tonnage renewal (Alderton 2011), foreign flagging (Branch 2007), implementation of an active manning policy (Stopford 2008), improvements of managerial techniques (Lorange 2005), and most importantly, attitude to clients and potential markets (Cottam and Roe 2004).

The above three elements of transition lessened the states' interventionist power, however, from a systemic point of view it is the fourth strand which has the largest influence on change, that is privatisation (Beachain *et al* 2012; Ahemti 2010; Kovacs and Tardos 2007). Privatisation is widely recognised as the core of the transition processes in Eastern European shipping companies (Breitzmann and Von Seck 2002). Here, newly structured ownership and possession rights, and the incentives arising from that, can lead to company restructuring, increased efficiency and profitability (Dale 2011). Section 4.5 provides a detailed discussion on the role and mechanisms of privatisation in Eastern European liner shipping.

The abolition of former far-reaching state protection and the introduction of strong competition in the marketplace was not accompanied by the installation of new adequate shipping political frameworks. Transition shipping thus underwent essential changes under circumstances of widely absent state support otherwise common in the shipping sector in market economies (Cottam and Roe 2007). Indirect positive and negative links between the governments and national shipping as well as the structures to balance interests were urgently needed. Yet new targets and policy tools were not readily available. The process of taking a position as regards the function and extent of national fleets remains ambiguous.

4.5 Privatisation of Eastern European liner shipping

Privatisation was suggested to diminish government invention by relocating some or all economic activities to the private sector, combined with substituting the central planning model with a market orientated model, which would result in increasing efficiency of the whole economy (Peeters 2012). Privatisation within the context of Eastern Europe transition differs from other worldwide privatisation programmes, whereby transformation of ownership structures and efficiency criteria of the entire model are archetypal, instead of distinct microeconomic changes within existing structures (Berend 2009). The central difference between privatisation in market economy countries and privatisation in non-market economies, or economies in transition, is that the latter privatisation has two dimensions, quantitative and qualitative as illustrated in Figure 4.2. The quantitative dimension implies a decrease in the magnitude of state domination as a monopolistic power. The qualitative dimension implies applying the market economy model, thus a transition from a system established by a planned economy to a market economy system based on private ownership, free competition, integration with world markets, and a universal financial economy.

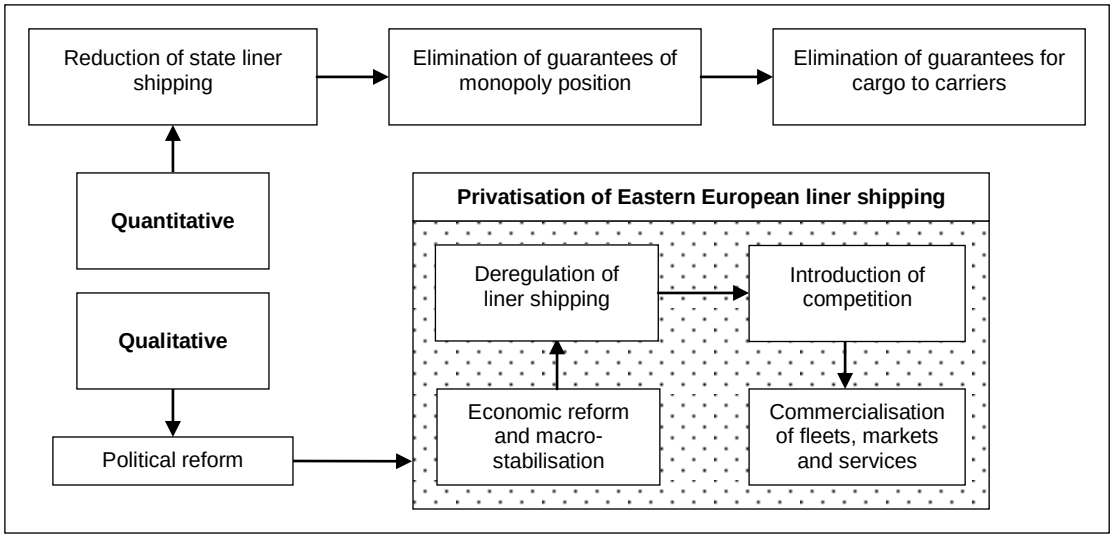

Figure 4.2 Quantitative and qualitative aspects of privatisation in Eastern European liner shipping (*Source*: Author 2012)

Privatisation of Eastern European liner shipping industries has the same basis as in the market economy countries. The function of privatisation has been to reduce the state involvement in the sector, improve efficiency, reduce budget deficit, raise funds from selling state assets and create popular capitalism (Gros and Steinherr 2004). The difference comes in terms of the nature of privatisation, where in non-market economies privatisation includes reversing the economic model. This operation is known as the restructuring reform, which aims to stabilise the economy as a necessary step to achieve privatisation (Berkovich 2009). It includes the liberalisation of tariffs, the removal of controls on imports, elimination of the ban on access of foreign capital to fleets and infrastructure, the reduction of subsides to unprofitable services, freeing the exchange rates and reducing the budget deficit (Zurek 2001). Today, some countries such as Bulgaria and Romania, which joined the European Union early in 2008, are still in the process of setting up privatisation schemes, while others, notably Poland, already have their basic system which reflects the acceptance of privatisation as a decisive factor for successful transition, albeit yet to be applied to the entirety of the shipping sector.

4.5.1 Objectives of privatisation during transition

The rationale behind privatisation under transition circumstances was three fold. Firstly, privatisation to focus on systemic change by establishing private property as the basis of a market economy (Salvatore *at al* 2012). Secondly, privatisation to make existing state shipping companies either earmarked or remaining in state property, work as market-orientated firms with increased efficiency, productivity and profitability (McDonald and Dearden 2005). Thirdly, privatisation to assist with the integration of Eastern Europe with the economy of Western Europe by ensuring the operation of the same market-based mechanisms utilised in corresponding liner shipping industries (Bjrnskov and Potrafke 2011).

Transformations of ownership are particularly important in the group of enterprises that operate on the line of contact with the international market (Svasek 2008). Eastern European shipping and port enterprises, as well as the smaller ancillary units connected with port-sea turnover, fall within this category. Furthermore, since the majority of Eastern European fleets represented strong capital bases with considerable contribution to gross national product they were generally given high priority in restructuring programmes. In Lithuania, for example, the contribution of the state carrier Lithuanian Shipping Company (LISCO) to gross national product amounted to 7.9% in 1986, whereas in the same year in Latvia the contribution of the state carrier Latvian Shipping Company (LSC) amounted to 8.7% (Bergstrand and Doganis 1987). The sizeable scale of employment that the maritime industries provided accelerated the process. Privatisation in the Eastern European shipping sector was expected to lead to lower employment growth compared to shipping firms that did not undergo an ownership change. However, in the long-term, once shipping companies have adapted to market conditions advantages for those employed are likely to include better pay and opportunities (Beachain *et al* 2012).

Privatisation is expected to have a positive effect on the operational efficiency of former socialist shipping companies (Dobrowolski 2003). Previous inefficiencies in state-owned liner companies may be associated with the division between ownership and management and the conflicts of interest arising from these. The splicing together of both functions within the context of privatisation and restructuring may cause strategic changes that can favourably influence functions at company and macro level (Cottam and Roe 2004). At company level, the immediate effect of privatisation is a reduction of the state's influence on economic decision-making, for example shipping corporations are free to invest in new tonnage, handling equipment and port infrastructure as directed by the market

(Lorange 2005). Moreover, considering the generally poor financial capabilities of former socialist shipping companies, privatisation may also be utilised as a way of securing capital investment, technological development, managerial know-how, and integration into international economic networks (Breitzmann and Von Seck 2002). At macro level, privatisation and restructuring of Eastern European shipping aims at aggregate benefits for domestic welfare. The exceedingly high socio-economic importance of former socialist shipping corporations in the national and regional context led privatisation in shipping to have a significant influence on macro level economic developments (Roe 1998). For example, any fiscal advantages from integrating the Eastern European states with the international division of labour and the European Union, can only be realised if the extra financial gains are not offset by additional freight costs in the shipping industry.

There are a number of other incentives for the privatisation of Eastern European shipping, which may be summarised as: the opportunity to specialise all relevant human and financial resources onto modern shipping services as directed by the market and customer (Alderton 2011); the maintenance, development and modernisation of fleets and transport infrastructure (Button 2010); the introduction of accountability to owners, shareholders and consumers, as well as a reduction of corporate corruption (Schroder and Vonderau 2009); the amplification of private investment in regional shipping with more easily available capital from foreign and local investors (Misztal 2003); the ability to adjust freight rates on the market basis of supply and demand (Stopford 2008); and the acceptance of the laws and principles of operation characteristic of the international transport market.

In order to utilise these advantages, from 1989 onwards all transition countries considered in this thesis established extensive sector participation in their national

economy, with both the speed and scope of privatisation being unique to each. Table 4.1 highlights the Eastern European private sector's share of gross domestic product output during the period of 1989-2011. From these figures it is possible to ascertain that all Eastern European countries have seen dramatic growth in the private sector, with Latvia leading the turnover in 2011 at 90.1%, in contrast with Poland, which operated the lowest proportion of private enterprise, at 76.8%.

	Private sector: Share of GDP (output)			
Country	**1989**	**1996**	**2003**	**2011**
Poland	28.6%	37.4%	49.1%	76.8%
Latvia	38.1%	52.7%	81.6%	90.1%
Lithuania	35.4%	49.4%	75.8%	89.3%
Estonia	30.9%	46.1%	69.2%	87.2%
Romania	13.0%	26.7%	53.9%	79.4%
Bulgaria	7.2%	19.6%	51.8%	77.1%

Table 4.1 Growth in the Eastern European private sector 1989-2009

(*Source*: The World Bank 1989, 1996, 2003 and 2011)

4.5.2 Mechanisms of privatisation during transition

Privatisation concerns the transfer of government ownership and possession of productive property to the private sector. In its narrow sense, privatisation of the Eastern European maritime industries includes the transfer of existing shipping corporations, port operations, cargo handling and ancillary services, in total, or in part (company assets or shares) to private enterprise. In its broader sense, it also includes the associated growth of the private sector, i.e. the start-up of new market-orientated maritime corporations. Figure 4.3 conceptualises the main components of maritime privatisation during Eastern European transition. As time passes through the transition period one witnesses a move from entirely state-ownership (demonstrated by position 1), to a combination of public and private ownership (demonstrated by position 2). Later, as further restructuring and macro-stabilisation processes take place, maritime companies and their ancillary services are converted predominately to private entities (demonstrated by position 3).

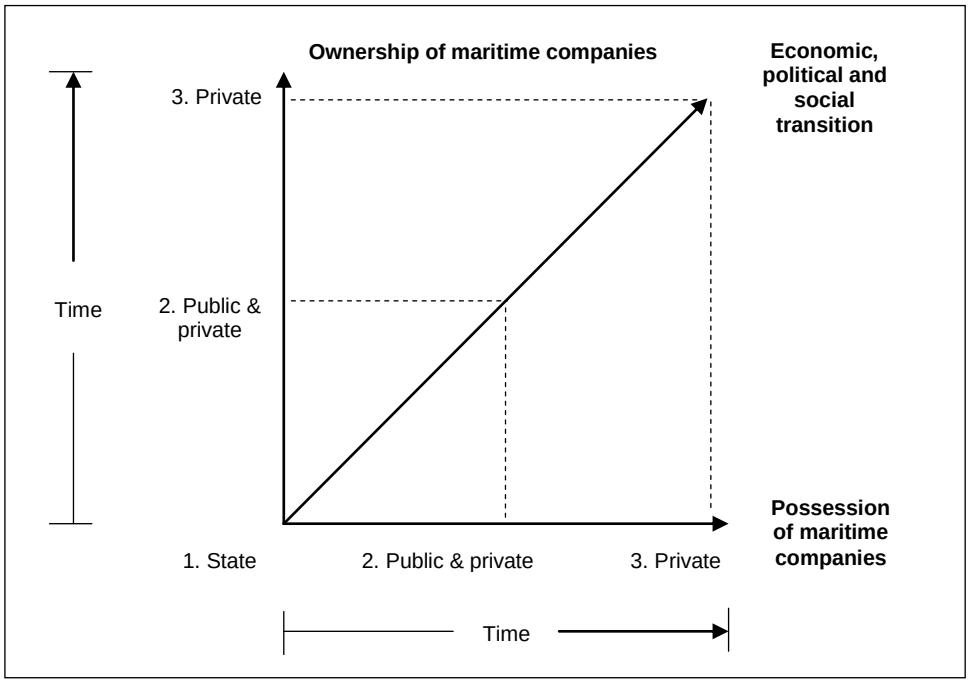

Figure 4.3 Process of privatisation in Eastern European shipping
(*Source*: Adapted by author from Breitzmann and Von Seck 2002)

While privatisation of small business took the lead, the liner sector followed the rules of large-scale privatisation, referring to the large industrial nature of the industry (Cottam and Roe 2006). The process began with extensive disintegration of vertical integrated conglomerates, restating balance sheets and writing off enterprise debt. The next step involved the classification, structure and valuation of assets in order to create a clear basis for re-allocating possession rights (Myant and Drahokoupil 2010). In most cases, socialist shipping companies were transformed into joint stock companies, a process called ‘commercialisation’, with the state remaining the sole shareholder under various schemes depending on the agencies which exercised the ownership rights. The formation of legally independent units by capitalising subsidiary companies backed the structural determination and demarcation of property for privatisation (Shields 2012). Since the Eastern European economies in transition have limited domestic savings, weak capital market institutions and powerful stakeholders in state-owned firms,

traditional models of privatisation by the state divesting its assets through capital markets to private owners may not be followed (Gros and Steinherr 2004). Instead, transition economies look to conditional mechanisms based on either financial exchange or free distribution of shares. Figure 4.4 illustrates the basic methods applied for the privatisation of Eastern European liner shipping industries.

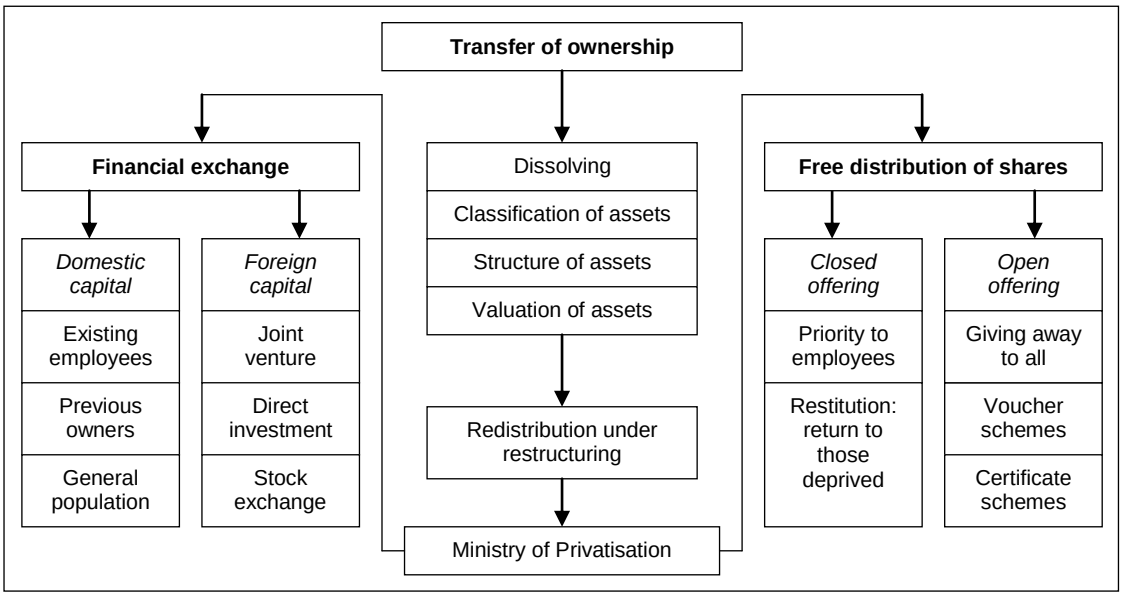

Figure 4.4 Mechanisms of privatisation in Eastern Europe (*Source*: Author 2012)

There are two central issues for Eastern European economies when selecting a privatisation mechanism. The first is whether to attempt to sell state owned firms for something approaching their market price or instead to distribute the ownership rights in the enterprises for free or nominal sums (Svasek 2008). The second is whether to seek owners from the general population or from existing (or previous) stakeholders (Berkovich 2009). Most Eastern European countries have in fact followed several mechanisms at once in the course of maritime restructuring.

The most popular apparatus of privatisation used in the Eastern European shipping sector comes from the premise of financial exchange of public ownership

to private interest, either partly or as an entity, with employee-participation or without (Cottam and Roe 2004). New shipping owners will be established through a process of financial exchanges, whereby the people who obtain control are those who are willing to bid the most by a sole imbursement (Schroder and Vonderau 2009). This method allows for specific participation of foreign capital via joint ventures and foreign direct investment, or sale of assets to domestic capital via existing employees and management, previous owners or the general population (Cook 2007). Some privatisation institutions may place restrictions upon prospective buyers by defining certain contractual arrangements for example, open or closed tenders. Whereas others may approach a moderately larger group of interested parties in an unrestricted way, e.g. through floatation of maritime companies on the stock exchange markets (Von Brabant 2011).

Arguments in favour of financial exchange for ownership centre on the efficiency of distributing ownership rights to the highest bidder (Aslund 2007), increased revenue to the government, and the possible reduction in inflationary pressures after price liberalisation (Baldwin and Wyplosz 2012). However, it should be noted that selling has three main disadvantages. Firstly, the slowness of setting up institutions of privatisation, findings buyers for state owned assets, and selecting maritime enterprises that would not be privatised (Von Seck 2000). Secondly, the difficulty in valuing maritime assets, as there is no simple way to estimate valuations for reservation prices in tenders or auctions (Dale 2011). Thirdly, the fairness of the system, as sales favour those who wish to acquire an even larger stake in national assets which tend to belong to the wealthy already (Bafoil 2009).

The idea of free distribution of the state's maritime assets provides a seemingly appealing solution to these problems. To distribute state assets freely means to

relinquish the income from privatisation. Since financial capital in the transition countries had principally been nullified by inflation and re-evaluation. What existed was a relatively low level income from employment only. As foreign interests were normally not included in primary allocation, the solution lay in a gift-based approach to privatisation (McDonald and Dearden 2005). Thus, there would be no need to find domestic buyers or to develop capital market institutions prior to privatisation (Gros and Steinherr 1995). The free transfer of shares involved three main variants: spontaneous privatisation involving employee and management takeover of maritime-related assets (Cohen 2009), voucher or certificate schemes representing company shares, freely distributed to all national citizens (Harris 2012), or restitution to those originally deprived of the property (Estrin *et al* 2007).

Although free distribution schemes have been promoted on the grounds of achieving distributive equity through the distribution of shares to the public (Swain 2009), swift privatisation processes, and the continued exploitation of existing managerial experience (Bandelj 2008), they have been criticised. Free distribution requires regulation of who is eligible to receive shares, how shares are issued and whether shares should be assigned a monetary value (Schroder and Vonderau 2009). The system may fail to ensure the emergence of adequate forms of corporate governance (Breiztmann and Von Seck 2002). Furthermore, authorities will need to assess whether outside capital holders or existing stakeholders will make better owners of maritime-related companies and assets (Zurek 2001).

4.5.3 The Eastern European liner sector under privatisation

Privatisation in transitional liner shipping focuses on the establishment of private property as the basis of a market economy and the introduction of productive efficiency to maritime entities (Cottam and Roe 2007). Two different approaches to

privatisation are used in Eastern European shipping. A programme of sectoral privatisation with the shipping industry being dealt with separately, as seen with the Baltic States, and in particular Latvia and Estonia where there are even separate Ministries of Maritime Affairs (Cottam and Roe 2008), or a more general privatisation programme in which shipping follows the central fold of industrial privatisation, as can be seen in countries such as Romania and Bulgaria.

The privatisation of liner shipping essentially relied upon the reallocation of existing state property, either in exchange for financial return or via free distribution to national citizens. Lack of available capital and expertise in shipping, alongside fierce global competition meant that the establishment of new shipping companies was addressed only secondly, partly in Latvia and even less in Poland (Dobrowolski 1994). Before Eastern European shipping companies began the process of privatisation they often underwent conversion into a capital company. Enterprises were obliged to prepare an open balance sheet, where the fixed and financial assets had to be addressed at current value based on western commercial criteria, taking into account debts and liabilities (Myant and Drahokoupil 2010). The state then formerly transferred the shipping company to be managed in a profit-orientated and financially self-sufficient way, with accountability to the state or some holding single shareholder (Misztal 2003). However, liquidation of state owned enterprises and the management of maritime companies through either sale or renting was also used regularly in the region.

In 1990, the former Soviet Union began maritime privatisation by initiating property transfer for Latvian Shipping Company. Here the preparative stage for selling finished only in 1997. The intended spread of shares through voucher schemes was reworked and the company made arrangements to be for sold for cash with at

least 35% of its shares to go to a strategic investor (Breitzmann 1999). Polish shipping initiated partial privatisation of subsidiary companies in 1991, however in the case of Polish Ocean Lines (POL), management approved privatisation only in 1994 (Lloyds List 24.09.1997). Subsidiary units were independently capitalised and part of their shares sold according to individual privatisation schemes. It was not until 1999, that POL was formally announced as a joint-stock company.

The share of private ownership and capital are often seen as the most decisive indicators for successful privatisation (Von Brabant 2011). By employing these measures it is possible to suggest that in many cases of Eastern European shipping the process of privatisation has been highly successful, since only minority shares of shipping companies remained in the hands of the state. Table 4.2 provides a visual illustration of the various routes of privatisation Eastern European liner corporations followed during the period of economic transition.

Year	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10
LSC	First arrangements				Nationalisation				Tenders begin: stock exchange, vouchers & state									Fully privatised			
LISCO	First arrange.				Joint-stock company				Tenders begin				Privatised: DFDS Lisco - DFDS Seaways in 2010								
ESCO	First arrangements				Joint-stock co.				Tenders begin				Privatised: Tschudi & Eitzen, Union Bank, Baltic Cresco								
POL	First arrange.				Privatised state-subsidiaries								POL Levant privatised: Gydnia shipward, WARTA, Kredyt Bank								
NMB	First arrange.				Joint-stock co.				Tenders begin				Privatised: KG Maritime Shipping (majority shareholder)								
ROM	First arrange.				Privatised: Romline, Petromin, Navrom								Bankruptcy proceedings					Trading ceased 2009			

Table 4.2 Route of privatisation for Eastern European liner companies

(Source: Author 2012)

For example, in 2007 the Latvian government ceased involvement with the Latvian Shipping Company (LSC), allowing the company to be fully privatised. The share of capital of the company was divided as follows: 51% to be sold at the Riga Stock Exchange, 32% through public share offerings for privatisation vouchers, 6% to be sold to employees and pensioners, 10% to be transferred to the State Special

Pension Budget, and 1% to make up the privatisation reserve (International Law Office 2002). In 2001, the Lithuanian Shipping Company (LISCO) was formally reconstituted as a joint-stock company, whereby the state retained 25% of the company's shares, whilst the Danish United Steamship Company (DFDS) acquired 75%. Following DFDS's majority acquisition of LISCO, Norfolkline and DFDS Tor Line, the three companies were rebranded as DFDS Seaways in 2010 (Lithuanian Shipping Company 05.01.2012). In 1997, the Estonian government initiated the privatisation of Estonian Shipping Company (ESCO). To begin with the state retained 30% of the company's capital shares, whilst 70% was occupied by ESCO's holding, in which Estonian investors maintain management. Of this, Union Bank and Baltic Cresco held a 20% stake, whilst Norwegian Tschudi and Eitzen controlled the remaining 80% (Lloyds List 13.06.1997). To date, Tschudi and Eitzen continue to be the dominant shareholders of ESCO, which is now fully privatised. In 1993, Polish Ocean Lines (POL) Levant was formed predominately for the purpose of liner shipping. Initially, POL remained majority state owned via a series of share transfers to other state owned companies such as EuroAfrica Shipping Lines and Polcontainer. However during the Polish mass privatisation programme, POL was converted into a capital company, with 75% of the carrier's share capital acquired by a consortium of Gdynia Shipyard, WARTA Insurance Company, Kredyt Bank and the Agency for Industrial Development (Lloyds List 11.04.2000). The final 25% of shares formed a majority fund, which acted as a holding for the company. To date, the Polish government continues to influence POL shipping policy via a small number of shares from other state owned subsidiaries. In 1992, the Bulgarian government reconstituted Navigation Maritime Bulgare (NMB) as a joint-stock company, with the state remaining the sole shareholder (Lloyds List 27.11.2009). Following a period in which company structures were modified and privatisation tenders sought, in 2008, German led

KG Maritime Shipping was granted a 70% stake of the company's worth (an estimated $338m). The remaining 30% of capital shares continued to stay in government control (Sofia News Agency 14.08.2008). Lastly, in 1991, Romania's Privatisation Agency separated Navrom Shipping Company into three parts: Romline Shipping Company, Petromin Shipping Company and Navrom Shipping Company. Romline Shipping Company was intended for specialised vessels in the liner industry. Company shares were divided so that the government retained 20%, whilst Romanian investors and company employees accounted for 80%. However, accumulation of debt, a lack of available investors and serious operational inefficiencies led the Constanta Commercial Court to declare the company insolvent in 2009, and hereafter trading ceased (Sea News 2011).

In addition to the share of private ownership and capital, the structure of ownership rights also influentced the success of privatisation (Beachain *et al* 2011). Eastern European liner corporations must decide on the extent of ownership rights to be distributed between shareholders (i.e. general public, company employees and management). In the past, broad distribution amongst shareholders was thought to overcome possible opposition to manager or state commercial decisions (Gros and Steinherr 2004). However, the division of ownership between individuals, such as employees, resulted in conflicts of interest and very often hindered privatisation processes (Von Brabant 2011). Consequently, Eastern European liner companies applied a variety of share distribution methods. For example in Latvia, the government opted for limited employee ownership, with only 5% of Latvian Shipping Company's share capital available to employees and managers (International Law Office 2002). Whereas, in Poland, the primary distribution of Polish Ocean Line's interests settled with an allotment of one third of the total company's shares available to employees and managers (Lloyds List 11.04.2000).

4.5.4 The relationship between restructuring and privatisation

The results of privatisation in liner shipping invite reflection on the criteria that must be fulfilled for approving the success of transition. Within the context of economic transition, Eastern European liner companies must be measured against the market competitiveness of the maritime components privatised. It is for this reason that the role of restructuring and its relationship to privatisation is now examined.

During the period of Eastern European economic, political and social transition, privatisation could not be removed from a succession of basic restructuring needs (Cottam and Roe 2007). The elimination of former far-reaching state protection and the introduction of sudden and strong competition as part of extensive liberalisation and deregulation programmes had led to a drastically altered situation in regional shipping markets. Fundamental changes in Eastern European liner fleets, ancillary services and infrastructure became essential for survival in a competitive market (Breitzmann 2001). However, the speed and sequencing of these changes was, and still is, important to the privatisation and restructuring policies of individual liner shipping companies (Myant and Drahokoupil 2010).

Eastern European maritime authorities had to decide whether to privatise national shipping corporations before or after strategic restructuring, or whether both should proceed simultaneously (Beachain *et al* 2012). Privatisation before restructuring includes the introduction of systemic foundations for further economic reforms. This method empowers future owners to decide on the type of strategic restructuring suitable for individual shipping companies, with minimal state intervention and no definite sequencing (Harris 2012). Privatisation post-restructuring focuses on the establishment of defensive and protective changes to shipping companies (Zurek 2001). This gradual method is often used to prevent

the breakdown of companies before the transfer of ownership. Finally, restructuring by privatisation comprise using the process of restructuring as a way of privatising the shipping company itself (Clifton *et al* 2010). In this method privatisation is the actual aim of restructuring, rather than a speculative outcome.

There has been a substantial difference of opinion about the sequencing of privatisation and restructuring of liner shipping in the Eastern European countries. For example, the Polish shipping industry preferred a gradual approach by setting a long phase of restructuring before privatisation (Roe 2001). Similar incremental policies were also applied in Lithuania and Estonia. Meanwhile, in Latvia, the state never disputed the need to privatise Latvian Shipping Company, but rather upgraded its commercial activities and strengthened the company's capital base as a prerequisite for eventual privatisation. Romanian shipping companies however, implemented privatisation largely before the necessary restructuring processes took place (Sea News 2011). As a consequence, many large-scale businesses, such as Romline Shipping Company, went on to declare insolvency.

History denotes that a mere change in ownership does not automatically improve the competitive ability of a company (Gros and Steinherr 2004). Ultimately, the success of Eastern European liner shipping companies is dependent on the following areas of strategic restructuring: fleet and tonnage renewal (Dobrowolski 2003), market orientation and service changes (Breitzmann and Von Seck 2002), and company organisation and cooperation (Bak and Burnewicz 1999). Each of these is discussed in more detail in section 4.6. The majority of Eastern European liner shipping companies have begun to undertake such broad restructuring, though they are pursing these goals at differing speeds, from varied points of departure, with contrasting degrees of success (Cottam and Roe 2007).

4.5.5 Barriers to privatisation and structural reforms

There are a number of obstacles to overcome before the process of privatisation and restructuring of Eastern European shipping companies may be considered complete. The main barrier is the serious lack of necessary capital to finance privatisation (Smith 2012). Numerous factors contribute to this in liner shipping. Firstly, the continuous recession on the world shipping market, primarily due to the extensive over supply of tonnage, which is being exacerbated by modern techniques and technologies as well as efficient organisation (Button 2010). Secondly, the relatively small increase in world seaborne turnovers, which are out of proportion to the carriage capacity offered (Lorange 2005). Thirdly, the rising costs associated with operating, which are largely the effect of inflation, resulting in fierce competition in local and international shipping markets (Alderton 2011).

The relatively slow rate of increase in production, which is to an extent the legacy of the organisational and technical conditions of the former economic system (Von Brabant 2011), presents another barrier to the privatisation process of Eastern European liner shipping. In consequence, there took place a substantial decrease in seaborne foreign trade turnovers, as well as a reduction in the carriage of transit cargoes (Lloyds List 27.11.2009). This situation forced domestic owners to seek cargoes on the world shipping market, which in view of the non-competitive quality of service offered by former socialist liner fleets, means that cargoes gained for transportation are not those highest paid. Other conditions that have a negative influence on liner companies include the persistently high level of inflation, which amplifies costs that shipping companies are unable to shift onto freight rates.

The vast amount of capital located in Eastern European liner shipping companies and their size, constitutes a further impediment to the process of privatisation and

restructuring (Breitzmann and Von Seck 2002). Large vertically integrated conglomerates are difficult to manage and slower to react to changes in the market mechanisms (Myant and Drahokoupil 2010). Since socialist shipping corporations tended to combine every activity that had any sort of semblance to the core industry (i.e. ship building, cargo handling and port infrastructure) a vast amount of investment was needed for their continued operation (Dobrowolski 2003). Furthermore, due to the highly specialised nature of the industry, once the decision had been made to separate ancillary services, a long period of time was needed for the establishment of sustainable ownership and investment structures.

The present difficulties associated with the privatisation of Eastern European liner shipping are also the consequence of certain activities inherent in the companies themselves (Zurek 2003). There is a lack of continuity in the investment policies conducted during the period, as well as a degree of incompetency in the decision-making process associated with tonnage renewal. Poor operating decisions create substantial increases in costs, which are unjustified. The maintenance of non-profitable geographical service patterns also gives rise to unnecessary increases in costs. Such a situation, in time, may cost the company more than the closure of a particular service line. Also of significance, is the preservation of large standby pools of crews, which constitute a further financial burden. Instead, crews should be taken from the international labour pool as and when required (Stopford 2008).

Further factors hindering privatisation and restructuring include the lack of suitable organisational structures to guarantee efficient operation, poor company elasticity, and limited flows of information. Moreover, the continuing attitude of employees concerning their place of work as not being their own, in respect of previous state-ownership, remains a worrying social obstacle for commercialisation policies.

4.6 Formation of transition in Eastern European liner shipping

The economic and political transitional changes in Eastern European liner shipping have been carried out within the framework of building blocks derived from the stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, spatial, organisational and social changes (Salvatore and Montrony 2012). Some forms of restructuring in liner shipping displayed similar characteristics to those on a macroeconomic scale, whereas others are deeply customised for the unique function and technical operation of shipping fleets, ports and their ancillary services. The unique formations may be attributed to the correlation between the shipping industry and its international characteristics, which are different from domestic orientated activity, and thus command alternative provisions (Verdon 2010). General changes of economic policies have also had an impact on the function and operational aspects of Eastern European liner shipping fleets. Of particular influence are those relating to the market conditions such as competition regulation, the financial system, the energy industry, control of inflation, and employment (Aligica and Evans 2009). Politically, the domains of maritime related activities that were formerly reserved to the state sector for communist ideological reasons are beginning to disappear, and the principle of democratic election of executives and managers continues to replace the *nomenklatura system* (Zentai and Kovac 2012). In addition, those areas in Eastern European liner shipping that enjoy the right of budget subsidies for unprofitable services, guarantees for monopoly position, or the legal commitment of exporters and importers to use specific carriers, also continue to be abolished.

Since the economy in transition tends to be ephemeral, whereby its rules are neither defined nor put into effect according to a standard scenario, liner shipping corporations in the region have not been able to rely on an established transition

theory (Von Seck 1999). Decisions have rather been dictated by national framing conditions, momentary responses to fiscal changes (Harris 2012), or largely influenced by sudden developments in supply and demand (Sergi and Bagatelas 2009). Quite frequently, the decline of state intervention in Eastern European shipping has been met with unexpected negative side effects as port infrastructure and hinterland support services have not continued to be maintained. Instead maritime authorities have focused their efforts on the creation of new shipping companies to supply services, with little concern for the overall transport system.

The Eastern European transition countries examined display both differences and common characteristics in the restructuring processes of liner shipping. One may identify unique evolutionary patterns of diminishing, permanent and incipient components, functional within the fields of: ownership and management, fleet and tonnage renewal, market reorientation and service changes, and company reorganisation and cooperation. Components in the transformation process comprise of both tangible and intangible solutions. Tangible components incorporate shipping fleets, cargo handling amenities, port infrastructure, storage facilities, and other technical equipment for modern production and new services. Intangible components encompass regulations stimulating free competition, administration and ownership, environmental and sustainable development standards, technical solutions inducing further progress, and strategies for finance and profitability. All transition components have been greatly influenced by the integration of Eastern Europe to the single European transport market.

4.6.1 Diminishing components in economies in transition

Along with the collapse of the former political system in the years 1989-1990, it was necessary to abandon certain components in Eastern European liner

shipping. These were either incompatible with the market economic system, aggravating efficiency and performance levels, technically outdated, or incompatible with international standards of practice (Von Seck 1999). Figure 4.5 provides a conceptualisation of diminishing components in Eastern European liner shipping. As time passes the number of components removed from the old system are slowly reduced, representing the acceptance of new operating methods.

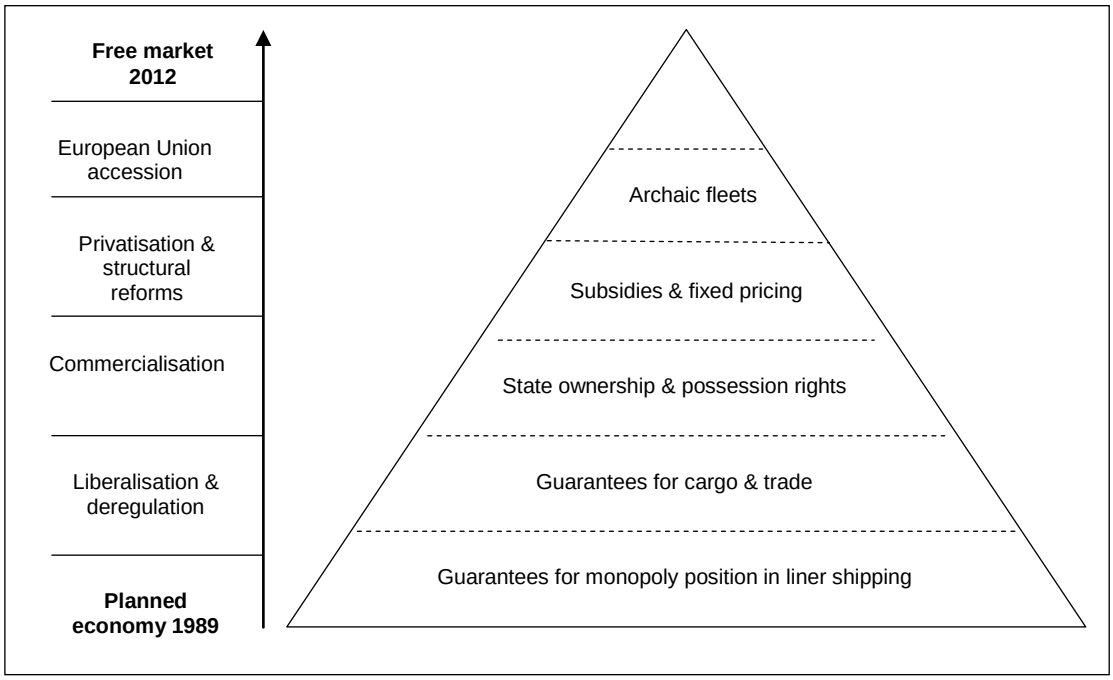

Figure 4.5 Diminishing components in Eastern European liner shipping

(*Source*: Author 2012)

From the inception of transition, a number of intangible solutions originating in the system of central planning could be abolished. These were predominately in the fields of legislation and financial regulation. Typical examples of components that were incompatible with the market economic system include favouritism for state ownership (Molloy 2009), guarantees for monopoly position (Dale 2011), the use of fixed prices (Svasek 2008), a ban on foreign investments (Harris 2012), state expenditure for fixed maritime assets (Bak and Burnewicz 1999), and a legal obligation of exporters and importers to use the services of the national carrier

(Lloyds List 27.11.2009). Conversely, other solutions could not be disposed of immediately, as these required evolutionary changes for public acceptance and initiation of privatisation and legal representation. Examples include ownership transfer and strategic restructuring of liner shipping companies (Dobrowolski 2003), central investment in port infrastructure and intermodal links (Zurek 2001), and a reduction in the exploitation of state subsidies (Cottam and Roe 2006).

Subsequent to the elimination of the planning apparatus and institutions administering a centralised economic system, organisational restructuring began. The central objective was to suspend state ownership and introduce new entities compatible with market conditions (Gros and Steinherr 2004). The process began with extensive disintegration and abolition of supplementary business fields. Large-scale maritime conglomerates were separated, whereby port handling, brokerage and clearing, ship repair yards, freight forwarding and other supporting services gained their economic and financial autonomy from liner shipping corporations. Outsourcing and closing down of activities were common. In Poland, maritime authorities started preparatory changes in the eighties by locating specialised tonnage in independent subsidiaries (Roe 1998). In Romania, an early breakaway of port companies paved the way for later privatisation of the fleet (Sea News 2011). Whereas in Latvia, shipping companies remained largely unchanged whilst notably widening their shareholder base (International Law Office 2002).

Among the tangible components of the Eastern European liner industries inherited from the past, those that had resulted from investment blunder, a limited accessibility to advanced materials or contemporary intellectual property were disposed of (Von Brabant 2011). Fleet and tonnage renewal programmes featured heavily here. Former socialist liner fleets were largely characterised by archaic

technologies that had not kept pace with western standards (Breitzmann 2001). Domestically built vessels with a high need for repair and maintenance led to considerable costs, particularly in the areas of bulk carriers and passenger vessels (Button 2010). However, the same tonnage also represented a readily available stable asset. Thus, in order to free urgently needed capital, Eastern European liner companies initiated extensive liquidation of vessel assets. All liner corporations in this analysis show a decrease of up to 66.1% of their original tonnage in the period between 1989 and 1999 (Lloyds Register Shipping 1989-1999) The greater part of the remaining fleet has generally been brought under foreign flag, due to the unstable economic environment in transition economies, whereby international banks commonly require the security of reputable foreign flags for granting loans.

Table 4.3 highlights the structural changes in fleet development of selected Eastern European liner companies during the period 1989-1999. This decade represents: the period of most transitional change in terms of overall fleet reduction (Cottam and Roe 2004); the time before any merges and acquisitions with other foreign companies (Zurek 2003); and the period in which all Eastern European liner companies were still trading prior to long-term company insolvency.

Structure of Eastern European liner fleets 1989-1999						
Company/ year	**1989**	**1991**	**1993**	**1995**	**1997**	**1999**
Number of vessels						
LSC	93	91	89	70	72	74
LISCO	38	37	34	31	32	34
ESCO	85	82	78	69	71	72
POL	107	94	54	43	47	47
NMB	306	287	277	251	254	251
ROM	112	108	104	97	98	94
1,000 deadweight tonnage (DWT)						
LSC	1,311	1,285	1,243	1,132	1,142	1,189
LISCO	413	389	378	362	369	379
ESCO	930	911	862	641	704	713
POL	1,199	1,020	481	349	451	406
NMB	5,815	5,618	5,413	5,231	5,314	5,231
ROM	1,940	1,889	1,826	1,798	1,812	1,724

Table 4.3 Structure of Eastern European liner fleets 1989-1999

(*Source*: Lloyds Register Shipping, Statistical Tables 1989-1999)

During the period 1989-1999, Latvian Shipping Company sold 20.4% of its total fleet, equating a 9.4% loss of capacity. Lithuanian Shipping Company shrank its deadweight tonnage by 8.2% through the selling and liquidation of 10.5% of its fleet. Estonian Shipping Company sold 15.2% of its operational fleet, which equated to a 23.3% reduction in fleet capacity. Polish Ocean Lines lost the greatest amount of its original fleet, with 56% of vessels either sold or liquidated, equating a 66.1% loss of capacity. Navigation Maritime Bulgare shrank its fleet by 17.9%, with a loss of 10% of its tonnage. Whilst, Romline Shipping Company sold 16.1% of its fleet, equating to an 11.1% reduction in its total deadweight tonnage.

Eastern European liner corporations also had to review their market orientation and company structures. The reduction in demand for shipping, exacerbated by intensified competition from other modes and changes in cargo flows, led to specific market decisions and cutbacks in the liner sector (Lloyds List 28.06.2000). This process was combined with revisions in geographical routes and adjustments in service policy (Zurek 2003). The distribution of particular cargoes was discontinued, as was the servicing of some Baltic ports (Salmon 2003). Deep-sea lines were discarded and redundant tonnage was placed on charter markets before usually being flagged out (Lorange 2005). Traditional partnerships between former socialist shipping corporations broke up, joint services ended and only in some cases continued by individual partners. After largely losing fleet ownership and market shares, chances for amalgamation into strong alliances lessened.

4.6.2 Permanent components in economies in transition

Although Eastern European liner shipping displayed many antiquated characteristics associated with the old Soviet system, because of its international nature it also held some westernised characteristics (Lijewski 1996). Liner

shipping under communism became customised for survival in international markets since it had to compete directly with shipping interests worldwide. To achieve this, the industry managed and operated a number of competitive and flexible components. Although no arrangement is perpetually indispensable, these components are preserved as permanent solutions at least in some fragmentary form in the market economy system. Figure 4.6 provides a conceptualisation of the long-term cycle of permanent components in Eastern European liner shipping. As decades pass a number of components are removed from the old system and modernised with comparable arrangements. Replacement components, such as maritime superstructure, will be utilised for an extended period of between 15-35 years, and then partially or wholly substituted with a more contemporary solution.

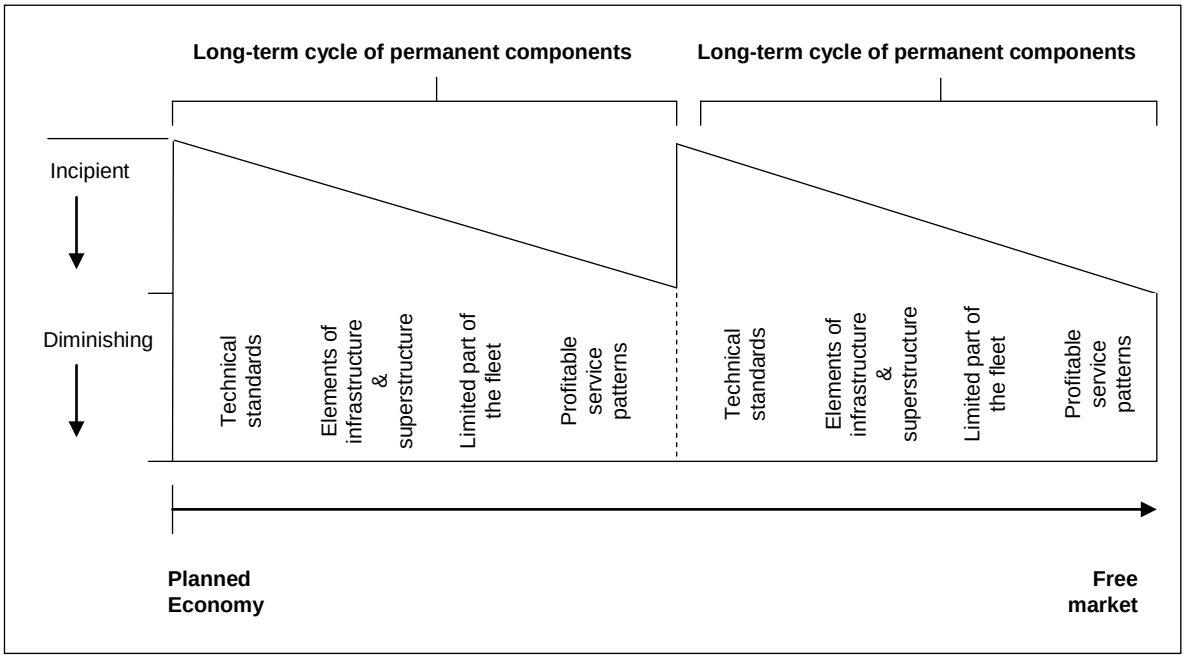

Figure 4.6 Permanent components in Eastern European liner shipping

(*Source*: Author 2012)

For ports and infrastructure, a valuable inheritance from the past are the modernised container and multipurpose cargo terminals, the widely developed

railway networks for unitised intermodal cargo, and in certain cases the shipyard industry. For instance, the Polish ship building trade in Gdynia has been maintained to a relatively good level (Lloyds List 20.07.2011). However, the driving force for modifications in port infrastructure, superstructure and operations continues to be the change in certain aspects of ship technology and ship management expectations (Button 2010). As ship draft increases, depth of berth becomes a problem, and as ship beam increases cranes must increase in size too (Levinson 2008). From this it follows that the port and terminal vicinity will need to be developed further, and the inland distribution facilities gradually improved. In a similar way, a limited part of the fleet will be preserved as a permanent component for the foreseeable future. Former socialist liner shipping companies had maintained a restricted ownership of specialised tonnage suitable for further service under market conditions and increased international competition. For example, although the Eastern European withdrawal of the fleet was particularly severe in reefer tonnage, wood transporters and small tankers, in contrast container and roll-on roll-off tonnage was retained for further exploitation, especially as it was strongly represented in terms of capacity, structure and age.

Although not as numerous as the tangible components, a number of intangible solutions also form permanent components. The majority of these incorporate technical standards for maritime transport based on the regulations of the Economic Commission for Europe of the United Nations or on conventions of the International Maritime Organisation (IMO), such as Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL) (Bak and Burnewicz 1999). In addition, a fundamental framework for a system for financing maritime infrastructure based on state and local budgets survives, as does a similar situation in the matter of maritime companies resources

and bank credits. However, there is almost a total lack of permanent system solutions in such areas as the formation of companies, the regulation of supply of maritime services on the markets (Dobrowolski 2003), competition control (Aslund 2007) and price fixing (Beachain *et al* 2012). Such legislation will need to be addressed with the introduction of incipient components in the shipping industry.

While deep transition crisis had instigated much change within the domains of market orientation and service offerings, the majority of former profitable geographical service patterns and transit markets remained operative under the new market system (Cottam and Roe 2006). The transportation of certain cargoes was kept, as was the servicing of particular areas, especially where the port or region had a competitive advantage (Salomon 2003). For example, Polish Ocean Lines, based in Gdynia has been operating since 1951, and is involved in containerised multimodal transport at present, although to a much reduced market. The biggest task the company must now tackle is that of catching up tonnage modernisation, especially in the introduction of specialised container ships.

A number of arrangements in the fields of management and cooperation will also become permanent components. Commercial management, which was principally based on the operating side of the shipping business in marketing and chartering, still exists, as do the activities in technical management such as ship management and crew management (Lloyds List 27.11.2009). Moreover, in the past, Eastern European liner companies operated in various shipping ranges, utilising different forms of state protection, such as cabotage and varying amounts of cooperation with foreign companies, for example liner conferences (Zurek 2001). Despite the introduction of the market economy, companies continued to follow these until the European Commission outlawed liner conferences in 2008, under Regulation

4056/86 for fair competition in the market. Today, former socialist liner shipping companies continue to collaborate via liner consortiums, covered by Regulation 823/2000, provided members have a combined market share below 30% and effective price competition (Lloyds Shipping Economist 01.08.2009).

Besides the permanent components from market orientation, some aspects of former company ownership and organisation will also be integrated into the market economy. Although the majority of transition liner shipping companies have seen a dramatic reduction in state ownership, in some cases it is likely that state possession rights will remain in the future largely due to the lack of foreign and national interest (Gros and Steinherr 2004). Furthermore, as privatisation programmes began, in many cases current employees retained their connection to the industry by becoming shareholders of the company. Such an ownership structure may be seen in Polish Ocean Lines, whereby employees and managers currently occupy a third of the total company shares (Lloyds List 27.11.2009).

4.6.3 Incipient components in economies in transition

Possibly the most distinctive feature of Eastern European liner shipping during the period of transition, is the growth of incipient components which stimulate the development of the whole industry. The necessity for incipient components within the liner sector initially arose in the intangible domain of legislation and regulation. The introduction of market-based economic regulations became indispensable to stimulate the establishment of new enterprise (Harris 2012), accelerate the liquidation or restructuring of unprofitable firms (Estrin *et al* 2007), encourage competition on the markets (Peeters 2012), and attract private and foreign investments (Bandelj 2008). These foundations provided the means to achieve: further development in Eastern European liner shipping as an intermodal link, the

restoration of financial norms, an increase in competitiveness in international markets, and improvements in safety standards and environmental credentials. Figure 4.7 provides a conceptualisation of incipient components in Eastern European liner shipping. As time passes more components are introduced into the system, representing the continued commercialisation of liner shipping companies.

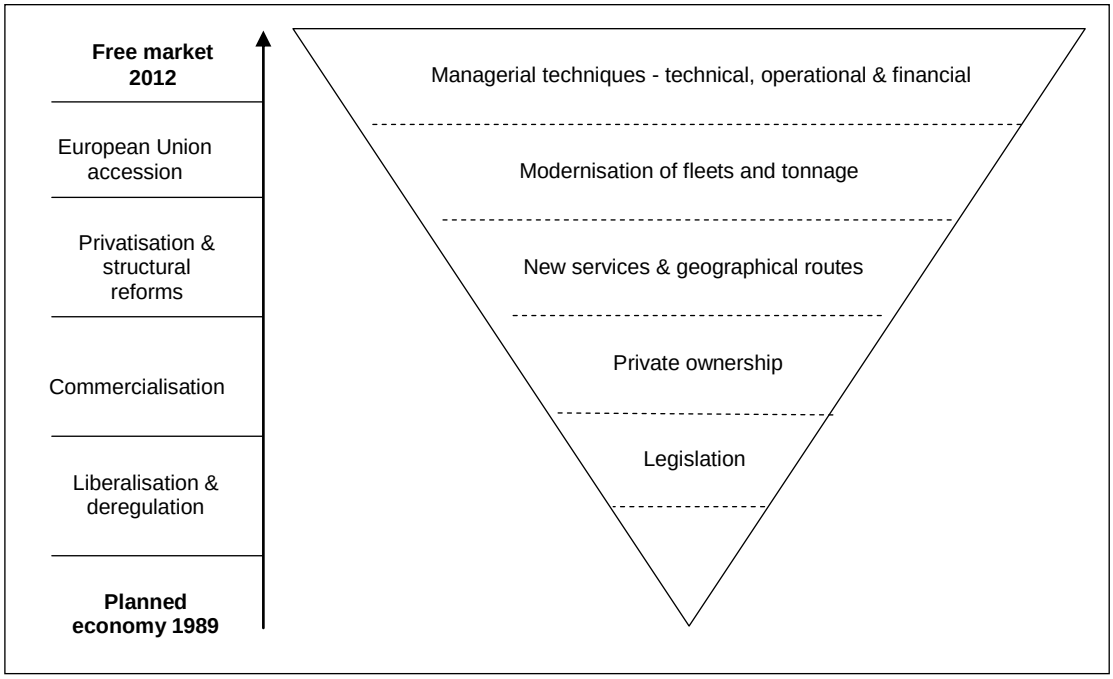

Figure 4.7 Incipient components in Eastern Europe liner shipping

(*Source*: Author 2012)

Former fleet strategies and functions have begun to be replaced with principles of self-dependence, self-governance and self-financing (Cottam and Roe 2007); vessel class and tonnage capacity are being modernised according to the growing demands of shippers (Branch 2009); domestic and foreign infrastructure continue to expand in line with multimodal transport (Button 2010); active manning policies are being implemented (Lorange 2005); communication systems advanced (Levinson 2008); and managerial techniques improved. All of these have been introduced for the further development of Eastern European liner shipping.

Containerisation and other specialist shipping modes are gradually replacing the general bulk carriers associated with heavy industry. In addition, port and infrastructure design are changing as the tonnage and trade passing through them varies in classification and quantity. Nevertheless, the technical position remains marked by a lack of capital as shown in Latvian shipping, where only limited tonnage investment has been made, primarily through second-hand purchases.

The transition crisis required liner shipping companies to change their traditional market orientation strategy. Former necessary participation of the home-based fleet in transporting domestic sea-borne trade has been mostly replaced by the activities of liner shipping expanding into international cross-trade and transit markets (Liagras and Roe 2003). Many shipping services have left their national ports for West European bases, securing home and transit cargoes by feeder-service systems. For instance, Poland showed an increase in cross-trade from 18% of total sea transport in 1980 to 67% in 2005 (Cottam and Roe 2006). Nonetheless, the long-term competitiveness of transition shipping in the cross-trade segment continues to be restricted by inadequate network organisation, a lack of regional presence, and limited finance (Lloyds Shipping Economist 01.11.2007). In view of this, transition shipping has also moved towards geographical and product niches that are largely determined by major carriers. Their hub port concepts open the regional market to opportunities in short-sea trades and lines on the outer edges of global service networks (Alderton 2011).

Despite original steps to reduce the depth of production, restructuring has also led to the inclusion of certain shore-based activities and transport chain elements into company structures (Dobrowolski 2003). Motivation for in-house investment included structural deficits in upstream industries, as well as the lack of inputs

needed for offering high standard services (Peeters 2012). All transition liner companies showed broad diversification in the areas of port privatisation, technical management, agency, finance and insurance markets, and multimodal transport. For example, the Latvian Shipping Company continues to operate its own logistical support through a fleet of company trucks, which service Riga's hinterland links.

In the final instance, it was soon recognised that it is company organisation and cooperation, which will ensure the survival of Eastern European shipping. Transitional liner shipping companies show serious financial and competitive weaknesses facing increased international competition (Cottam and Roe 2007). There appears to be little alternative to cooperative decisions and joining together with other carriers. Generally, Eastern European liner companies have focused on partners from developed countries, though there are differing efforts to assimilate cooperative structures (Bak and Burnewick 1999). For example, Polish shipping utilised cooperation with state-owned subsidiary companies on a need-only basis (Roe 1999), whereas Lithuanian Shipping Company and Estonian Shipping Company maintained international partnerships with United Steamship Company (DFDS) (Lithuanian Shipping Company 05.01.2012) and Tschudi and Eitzen (Lloyds List 13.06.1997) respectively, ultimately leading to complete absorption.

4.7 Conclusion

The last two decades of transition in Eastern Europe have not been easy. Old trading patterns disintegrated overnight and heavily subsidised state owned enterprises collapsed. As with all large-scale industry, Eastern European liner corporations were generally given high priority in restructuring programmes. Nevertheless, liner shipping has not been able to rely on an established transition model in their process of conversion into competitive companies. Instead,

structural changes have developed under circumstances of widely absent state support, otherwise commonly applied in shipping sectors in market economies.

Privatisation is one of the most decisive factors for successful transition in Eastern European liner shipping. Here, newly structured ownership rights can lead to commercialisation, increased efficiency and profitability. However it is the restructuring programmes of former socialist shipping companies, which arguably decide their fate. Analysis of restructuring in Eastern European liner shipping highlights unique evolutionary patterns of diminishing, permanent and incipient components functional within the fields of fleet and tonnage renewal, market orientation and service changes, and company organisation and cooperation. Evolutionary components are gradually replacing technically outdated and internationally incompatible solutions with the formation of new companies and the restructuring of old companies. Today, many of the former socialist liner shipping companies continue to operate, albeit degenerated to mere niche carriers, often giving up their own operational activity, being liquidated, or in the process of bankruptcy. Present impediments to change in Eastern European liner shipping include not only the shortage of financial and material resources, but also the transformation of public attitude, such as acceptance of free competition, foreign investment, commercialisation and privatisation in national shipping activities.

The next chapter discusses the amalgamation of Eastern European liner shipping to the European transport system. Following a brief examination of the adaptation to the European Union as an element of economic transition, the chapter focuses on the objectives of Eastern European shipping policy alongside the European Union guidelines for maritime transport. The dilemmas and expected effects of European integration are then analysed from a liner shipping point of view.

CHAPTER FIVE

Adaptation of Liner shipping to the European Union system

The transformation of Eastern European liner shipping has been fundamentally influenced by integration with the European Union. Eastern European countries have begun to harmonise existing maritime frameworks and shipping infrastructure with that of the single European transport market. Adaptation to European maritime transport policy has resulted in an increase in the efficiency of transport systems, a quality improvement in services, and a reduction in the cost of carriage. In terms of Eastern European liner shipping, the effect of this integration is expressed in the rapid enactment of new legislation to promote competition, increase protection of seafarers, and reduce environmental emissions. It is also expressed in the technical transformation of shipping fleets and infrastructure.

Just as no model of economic transformation exists, so also no pattern has been established for the adaptation of Eastern European liner shipping to the single European transport market. Eastern European liner companies have had to undergo essential changes of restructuring and commercialisation in the process of integration largely alone, since the mechanisms accepted did not match each other, nor did they run synchronously. However, recent spatial enlargement and the subsequent growth in transit traffic, make the adaptation of Eastern European liner shipping to the European maritime transport system in the interest of all western economies, resulting in bilateral cooperation and financial support.

This chapter addresses the issue of adaptation to the European Union as an element of economic transformation for Eastern European liner shipping. Following a brief examination of the relationship between transition and European Union enlargement, the chapter focuses on European integration via strategic

restructuring of Eastern European liner shipping fleets. The objectives of Eastern European shipping policy are analysed alongside the European Union guidelines for maritime transport. Aware that successful integration is likely to affect the rate and scope of restructuring processes in other sectors, the chapter closes with a discussion on the dilemmas and expected effects of adaptation by Eastern European liner shipping companies to the common European transport policy.

5.1 European Union accession and enlargement

The collapse of communism in the late 1980s presented an opportunity to create a united Europe, spreading from the Atlantic Ocean to Russian borders (Leonard 2010). Formed in 1993 by the Treaty of Maastricht (and based on the European Economic Community), the European Union provides an economic association for countries that seek to create a single developed market with a common trade policy (Roland 2011; Bomberg *et al* 2008; Nugent 2006). Through a standardised system of laws, European directives aim to ensure the free movement of people, goods, services and capital (Pinder and Usherwood 2007), and the maintenance of common policies on trade and regional development (Topidi and Morawa 2010).

The European Union operates within a hybrid system of intergovernmentalism and supranationalism (Gustavsson *et al* 2009). These opposing poles relate to the relative sovereignty, autonomy and independence of member states and the European Union. Intergovernmentalism tends to incorporate the role of domestic interests in helping define national state preferences, while retaining sovereignty over the process of integration (McDonald and Dearden 2005). Whereas, supranationalism tends to transcend national boundaries or governmental interests, with formally delegated authority to vote on issues pertaining to the wider grouping (Leonard 2010). The relationship between these levels of jurisdiction and

the policy process that characterises them is commonly known as multi-level governance. Such a system of continuous negotiation among governments at several territorial tiers - supranational, national, regional and local is distinctive of European Union structural decision-making, and of vital importance to member states as it drives coordination and cooperation in sectorial policy-making.

Throughout its history, the European Union has been gradually expanding. Enlargement serves the European Union's strategic interests in stability, security and conflict prevention (Nello 2011). It also helps to increase prosperity and economic growth (Artis and Nixson 2007), improve links with vital transport and energy routes (Dinan 2010), and strengthen the European Union's presence on the world market (Neal 2007). The most recent expansion to Central and Eastern Europe was the greatest enlargement to date, and a historical step towards unifying Europe after decades of Cold War division. All of the former communist countries analysed in this study became member states during two waves of accession. The first in 2004, in which Latvia, Lithuania, Estonia and Poland joined, and the second in 2007, wherein Bulgaria and Romania followed suit, raising the total number of European Union member states to 27 (Wallace *et al* 2010).

As with all accession states, the Eastern European countries identified had to meet the Copenhagen criteria for joining the European Union. In particular, governments were required to demonstrate the fulfilment of three interrelated economic and political conditions, namely: the stability of institutions guaranteeing democracy (Winiecki 2010); the existence of a functioning market economy, as well as the capacity to cope with competitive pressure within the European Union (McCormick 2011); and the ability to take on the obligations of membership including adherence to the aims of political, economic and monetary union.

Accession to the European Union has helped Eastern European countries move from post-communist upheaval to market economics and pluralist democracies (Hix and Hoyland 2011). It has also resulted in providing a climate that is more conducive to trade and investment, as well as political and environmental cooperation (Von Brabant 2011). Eastern European member states have had to comply with the European Union acquis, subject only to a limited number of transition arrangements. Compliance with European Union directives has contributed to the modernisation of economies (Mole 2012), removal of barriers to trade (Neal 2007), harmonisation of technical standards (Hartley 2010), greater investment opportunities (Smith 2008), and more competition on the markets.

5.1.1 Maritime transport in an integrated Europe

The process of European integration, and particularly the Eastern enlargement of the European Union, has substantial consequences for transport (Dean 2011). As a geo-political entity, the European Union comprises a large number of countries with a diverse range of languages, histories and political systems (Leonard 2010). Transport is seen as one of the unifying influences that permit national and regional differences to be overcome (Sargent 2010). Consequently, the development of a single European transport market to ensure the efficient movement of goods and persons for cross-border, interregional and transnational activities has been instrumental in the integration of Europe (Larsen *et al* 2006).

The current shape of the European transport system owes much to the creation of the Single European Act (SEA) in 1992. This juncture stimulated a concerted effort to remove institutional barriers to the free trade of transport services and led to the development of a number of new initiatives to provide a unified transport infrastructure for Europe. The European transport framework now offers an

integrated approach to: extend transport networks throughout Europe (Button 2010); increase the efficiency and interconnectivity of transport modes (Givoni and Banister 2010); accelerate the modernisation of transport infrastructure (Lepori 2010); improve the quality of services (Saxena 2005); reduce the cost of carriage (Hutton 2012); and ensure a fairer operating environment (Alderton 2011).

The creation of a single transport market poses a number of problems for European Union member states (McDonald *et al* 2005). Since transport is a major sector in its own right, governments and service operators have interests in protecting their own transport industries, as well as using transport policy as an instrument to stimulate their respective import and export trade (Schiefelbusch and Dienel 2009). Moreover, as transport provision facilitates economic growth, development and investment for other industries, reconciling this with the wider needs of the community may also cause difficulties (Charemza and Strzala 2002).

Transport policy has always held a central place in the European Union. Constructs and propositions are established to achieve particular objectives relating to social, economic and environmental development, and the functioning and performance of the transport system (Focas 2004). There are two main reasons why transport policy is considered of great importance: firstly, transport accounts for around 7% of the European Union's gross domestic product and 19% of its budget (The European Commission 2012); and secondly, transport provides a key mechanism for achieving economic unification to foster trade and allow regions to exploit their comparative advantages (Nijkamp and Giaoutzi 2008).

The integration of Eastern European shipping into the single European transport market comprises of the adaptation of existing maritime fleets and infrastructure to

European transport policy. Today, 90% of the European Union's external trade and more than 40% of its internal trade travel by sea. Among member states, maritime transport provides a key element in orchestrating bilateral trade (Stopford 2008), ensuring economic and territorial cohesion (El-Agraa 2011), reducing congestion (Button 2010) and promoting sustainable development (Orbie 2009). In terms of trade value, liner shipping carries the majority of European ocean-borne trade and facilitates a significant portion of the merchandise trade of Europe.

Prior to accession, alongside the liberalisation of maritime transport and the decentralisation of decision-making, Eastern European countries were required to accept the principles and main axes of the common European Union transport policy as set out in the White Paper (2001). In keeping with the European Union's transport acquis, Eastern European maritime transport was expected to implement a variety of policies, such as: the modernisation of fleets and infrastructure (Misztal 2003); the facilitation of transport without borders (Breitzmann 2001); the standardisation of transport operations (Dean 2011); and the harmonisation of internal market conditions in the maritime transport sector (Cottam and Roe 2006).

European Union transport policy post Eastern European accession has been extended by the following key strategies: (2006) Keep Europe Moving; (2007) Keeping Freight Moving; (2008) Greening Transport Package; (2009) Maritime Transport Strategy 2018; (2009) Future of Transport; and the new White Paper (2011) (The European Commission 2012). Such communications identify areas where actions by the European Union will strengthen the competitiveness of the maritime sector, while enhancing its environmental performance. The challenge for Eastern European maritime transport is to now become at least as efficient, reliable and sustainable as those of other European Union member states.

5.2 Adaptation as an element of economic transformation

Much of the economic and political transformation of the countries identified was embedded in the process of leaving the Eastern alliance and joining the Western part of Europe (Hix and Hoyland 2011). This co-evolution of transition and approaching the West, showed certain patterns, which as the European Union accession process accelerated was necessary to renounce. Unlike transition from communism to capitalism, European Union accession transformations are likely to be less autonomous (McCormick 2011), require governmental control (Winiecki 2008), centre on regional integration (Turnock 2009), meet additional resistance by other countries (Mole 2012), and need more cooperation (Bomberg *et al* 2008).

The accession of former communist states to the European Union can be viewed to a large extent as a continuation of the transition process in Eastern Europe, since membership is only possible if a country is regarded as having a functioning market economy, and is able to open up its markets to foreign competition by adopting the European Union's laws concerning the single internal market (Vanke 2009). In general, Eastern European transition processes, such as liberalisation, deregulation and commercialisation have been enhanced by western ideology, technology, and intellectual property (Topidi and Morawa 2010), and by the specific targeting of European Union membership (Nijkamp and Giaoutzi 2008).

The transformation of Eastern European shipping by means of privatisation and restructuring is carried out in an international context that influences its development (Von Brabant 2011). This is evident in the adoption by Eastern European countries to some of the existing solutions utilised in the maritime transport systems of West European countries. Specifically, Eastern European liner shipping companies have found it advantageous to reposition towards

shipping systems that have already adapted to the single European transport market. Consequently, after the fall of communism, it was only natural for Eastern European countries to embrace the transport framework of West European states.

The adaptation of Eastern European liner shipping companies to the single European Union transport system may be viewed as part of the overall macro-cum-stabilisation process of economic transformation. Here, newly structured political frameworks towards European Union membership, can lead to: the introduction of uniform systems for shipping internationally (Kirchbaum 2007); the tightening of technical standards to improve performance (Engel 2012); the organisational integration of the entire transport chain to enhance efficiency (Alderton 2011); and an acceleration of modernisation to increase profitability.

Eastern European liner corporations have not been able to rely on an established adaptation model in the process of integration to the European Union transport system. Changes in the framework of liner shipping and the market transition of the shipping companies concerned varied depending on the level of state governance and the particular economic situation of the country (Cottam and Roe 2007). The installation of new political frameworks to support the adaptation of Eastern European liner shipping to the single European transport market remained pending (The European Commission 2011). Transition shipping thus had to undergo obligatory changes under circumstances of widely absent state support otherwise common in shipping sectors in market-orientated accession countries.

It is hard to create an adaptation model to shape the new market relations gained from membership to the European Union, as the experiences of individual Eastern European liner shipping sectors differ, and the process itself has not yet completed

(Mole 2012). Looking for patterns of market relations in the integration of Eastern European maritime transport to the single European transport system has also often resulted in disappointment for supporters of liberalised markets, as individual shipping sectors were not usually aware of the real state of European integration, or of the existence of significant differences in the regulation of shipping markets (Breitzmann and Von Seck 2002). In the future it is likely that analyses will be carried out which will provide a definition of which aspects of Eastern European liner shipping development are, and are not, the result of European integration.

5.2.1 Strategic priorities in Eastern European liner shipping policy

Eastern European countries face a number of similar problems in the restructuring of maritime transport due to their common histories. Moreover, the maritime transport industries of Eastern Europe are largely dependent on each other, and strong political connections exist between them (Nello 2011). Therefore it seems reasonable that the objectives of liner shipping policy in the Eastern European countries should in principle be the same. The activities of maritime authorities in Eastern Europe are directed towards overcoming similar difficulties, which are the result of a transport system formed under central administration. However, disparities can arise from the different priorities and strategies of shipping policies.

The objectives of liner shipping policy in Eastern European countries exhibited certain characteristics, which may be divided into the following categories: (1) market operations, comprising of the introduction of market regulation and fair competition; (2) market organisation, involving the change of organisational structures and encouragement of privatisation; (3) fleet and infrastructure, concerning the modernisation of transport infrastructure and the renewal of fleets; (4) company organisation and management, comprising the suspension of state

ownership and the introduction of new entities compatible with market conditions; (5) integration to the European Union, involving the adaptation of liner shipping to the single European transport market and the necessary international conventions; and (6) social implications of liner shipping, concerning an increase in the quality of service and a decrease in the harmful influence of shipping on the environment.

The strategic aims of liner shipping policies in Eastern European countries can be identified in cases where government documents exist which contain the entire transport policy. For example, in Bulgaria the Ministry of Transport, Information Technology and Communications issued the Operational Programme of Transport 2007-2013 (European Commission; Country Report Bulgaria 2006); in Estonia the Ministry of Economic Affairs and Communications issued the Transport Development Plan 2006-2013 (European Commission; Country Report Estonia 2006); in Latvia the Ministry of Transport issued the National Programme for Transport Development 1996-2010, followed by the Strategy of the Ministry of Transport 2006-2013 (European Commission; Country Report Latvia 2006); in Lithuania the Ministry of Transport and Communications issued the National Transport Development Programme 2004-2010, followed by the Long-term Strategy of Lithuanian Transport Development (European Commission; Country Report Lithuania 2006); in Poland the Ministry of Transport, Construction and Maritime Economy issued the National Transport Policy 2006-2025, followed by the Transport Development Strategy 2007-2013 (European Commission; Country Report Poland 2006); and in Romania the Ministry of Transport and Infrastructure issued the Sectoral Operational Programme for Transport 2007-2013.

Prior to accession, of all the transport policies that did exist in the Eastern European countries, a substantial proportion did not detail the specific long-term

strategy of the liner sector, preferring instead to focus on more traditional modes of transport, such as road and rail. Furthermore, in some Eastern European countries no national transport policy existed in any form prior to European Union accession. As was the case in Romania, where an integrated transport strategy was not developed until 2007, which meant that Romanian shipping companies had to undergo the initial processes of European integration largely alone (Fistung 2011).

Nevertheless, in the majority of Eastern European countries, the basis for the activity of authorities in the maritime transport sector had been worked out by the early 1990s (Misztal 1999). The difference came in the level of development for liner shipping distinctively, as well as the priorities of development plans (Cottam and Roe 2004). For example, in Bulgaria the strategic priorities of liner shipping policy included: maintenance and modernisation of fleets and infrastructure; promotion of fair competition in transport markets; harmonisation of liner shipping with the European Union system; and support for environmental protection through a reduction in externalities (Savov 2011). In Estonia, selected priorities of liner policy included: promotion of integration with the European Union by development of infrastructure, fleet modernisation and harmonisation of the conditions of competition; demonopolisation and privatisation of liner shipping companies; and improvement of conditions for cooperation with neighbour countries (Breitzmann 2001). In Latvia, the strategic priorities of liner shipping policy included: maintenance and development of fleets and infrastructure; support and promotion of multimodal development in the transport system; improvement in safety of life at sea; and reduction in environmental emissions from liner shipping (Zurek 2003). In Lithuania, selected priorities of liner policy included: structural changes in the liner shipping sector, such as privatisation; an increase in efficiency through fleet modernisation; support for environmental protection; expansion of sustainable

regional development; and integration of liner shipping to the European transport market (Von Seck 2000). In Poland, the strategic priorities of liner shipping policy included: the acceleration of privatisation in liner shipping; restructuring of large maritime conglomerates and overcoming of monopoly; adjustment of transport systems to the European Union; and technological and organisational changes of liner corporations (Roe 2001). Whereas, in Romania, selected priorities of liner policy included: rehabilitation of liner shipping fleets and infrastructure; promotion of competition between transport modes; reorganisation of transport services; and the harmonisation of the quality of liner services with that of the European Union.

The priorities of liner policies in Eastern European countries have similarities with the hypothesised objectives of Eastern European shipping policy. The element of organisational changes has appeared in most countries, involving the privatisation, commercialisation and diversification of liner companies. Also, the modernisation of liner fleets and infrastructure proved to be a very important issue, as has the linking of partner countries with the Trans-European Network axes and integrating the Pan-European Corridors via liner shipping ports. Furthermore, in every official policy it is stated that gradual approximation to the European Union's legal framework and standards will be essential. Finally, social aspects of liner shipping appeared as a postulate for high quality service and environmental protection.

After analysing various Eastern European shipping policies, one can conclude that former communist countries have taken their time to tackle the needs of liner shipping in the common market. What has emerged, however, while open to a variety of technical criticisms, is something approaching a free market for liner shipping services. Nowadays, Eastern European liner companies have become an indispensable part of the integrated European multimodal transport system.

5.2.3 European Union priorities in the integration of liner shipping

During the 1990s, European Union policy was augmented to include the adaptation to spatial enlargement. In addition to the changes in its own integration strategy, the European Union enacted guidelines for countries competing for membership (Rodrigue *et al* 2009). A general direction for the adaptation of Eastern European transport to the European Union system was set out in the so called 'association agreements'. All of the Eastern European countries examined signed individually negotiated agreements establishing the creation of a free trade agreement and the setting up of consistent transport policies compatible with the transport policies applicable in the European Union (Holland and Doidge 2012).

The association agreements were followed by the White Paper (1995) on the preparation of associated countries of Central and Eastern Europe for integration into the internal market of the European Union (The European Commission 1995), and the 1997 communication on connecting the European Union's transport infrastructure network to its neighbours (The European Commission 1997). Such documents addressed the following liner shipping issues as part of the transport acquis: undiscriminatory access to liner services to and from European Union ports; prevention of sub-standard liner fleets; and minimisation of environmental impact from liner vessels (Lepori 2010). Notably, the White Paper does not contain any desiderata of the restructuring of maritime transport in accession countries.

The strategy of the Central and Eastern enlargement of the European Union is laid down in Agenda 2000 (The European Commission 1997). Highlighting the progress made in integrating the maritime transport markets of applicant countries, the document deals with the various subjects that affect liner shipping companies, starting with the European Union internal policy, through some organisational

aspects (for example, the formation of special intuitions), financial aspects (such as, the Poland and Hungary Assistance for the Restructuring of the Economy programme, Instrument for Structural Policy for Pre-Accession programme, and Community Assistance for Reconstruction, Development and Stability in the Balkans programme), legal aspects (for example, European agreements for the participation), and finally to the adaptation of specific countries to the Union.

More recently, the 2011 communication on the renewed approach to transport cooperation in the European Union and its neighbouring regions aims to reinforce maritime connections and market integration (Willusmsen 2011). The document builds on the 2007 publications entitled 'Extension of the major trans-European transport axes to the neighbouring countries' and 'Guidelines for transport in Europe and neighbouring regions', which focus on infrastructure (Latuszynska 2011). The document also refers to the latest transport White Paper entitled 'Roadmap to a single European transport area' (The European Commission 2011), which proposes: extending the European transport and infrastructure policy to its neighbours to make shipping services more efficient; improving flag state performance and complying with safety, security and social standards; and modernising fleets and infrastructure to improve European multimodal transport.

When introducing shipping policies to harmonise the integration of Eastern European maritime services to the European Union system, the European Commission has had to ensure that policies are flexible enough to enable individual development of relations with each of the countries concerned, without prejudicing the overall modus operandi (Humphreys 2011). However, the attention for liner shipping distinctively is, and will continue to be, dependent on the relative importance of the sector in relation to other areas of the economy (Button 2010).

5.3 Framework for Eastern European liner shipping in the European Union

The European Union's economic growth is strengthened by a competitive and progressive single maritime transport system (Lepori 2010). To achieve such a system, the countries of Eastern Europe had to coordinate and harmonise their individual liner shipping policies with the maritime policies of the European Union (Sargent 2010). This harmonisation supports not only the economy development and trade, but also avoids additional costs to the European transport system and improves the capital and labour productivity of the Union (McDonald *et al* 2010).

To accomplish successful adaptation of Eastern European liner shipping to the European Union maritime transport system, policy-making has an essential role (Focas 2004). The great majority of European Union policies for liner shipping are embed in the Common Maritime Transport Policy (CMTP). However, it is difficult to say whether there is a standard European Union framework for policy processes which integrate Eastern European shipping companies to the European transport system, and guarantees that policy development will occur. Since European Union policy processes are variable to such a level that the nature of the roles and responsibilities may differ considerably according to particular circumstances.

Furthermore, the European Union's responsibility for policy-making varies enormously across its range of policy interests (Wallace *et al* 2010). In some spheres, arrangements are well established and effective, and in other spheres, European Union involvement is marginal, whereby policy processes may be confined to little more than occasional exchanges of ideas and information (Nello 2011). In terms of maritime transport and the subsequent strategies for Eastern European liner shipping, European Union policy is a mixture of legal regulation and inter-state cooperation (El-Agraa 2004). It is based on the development of

policy documents such as the White Paper (2001), mid-term review of the White Paper (2005), Green Paper (2006), Blue Book (2007) and more recently, the White Paper (2011), as well as European action plans, directives and regulations.

Figure 5.1 illustrates the framework of policy for the adaptation of Eastern European liner shipping to European transport system. Here the objectives and themes of European Union policy for Eastern European liner shipping are input to the European Union policy actions for the former-communist liner industries. The policy actions comprise of action plans and programmes, consultations, regulations and others, for the greater functioning and integration of Eastern European liner shipping to the single European transport market. These actions are measurable and have a significant impact upon the entire European transport system. By reviewing the policy documents and objectives, one may define the strengths and weaknesses of the European transport policy and its effect on the respective liner sectors of Eastern Europe. The policy development is placed in the context of a long-standing aim to create the European integrated market.

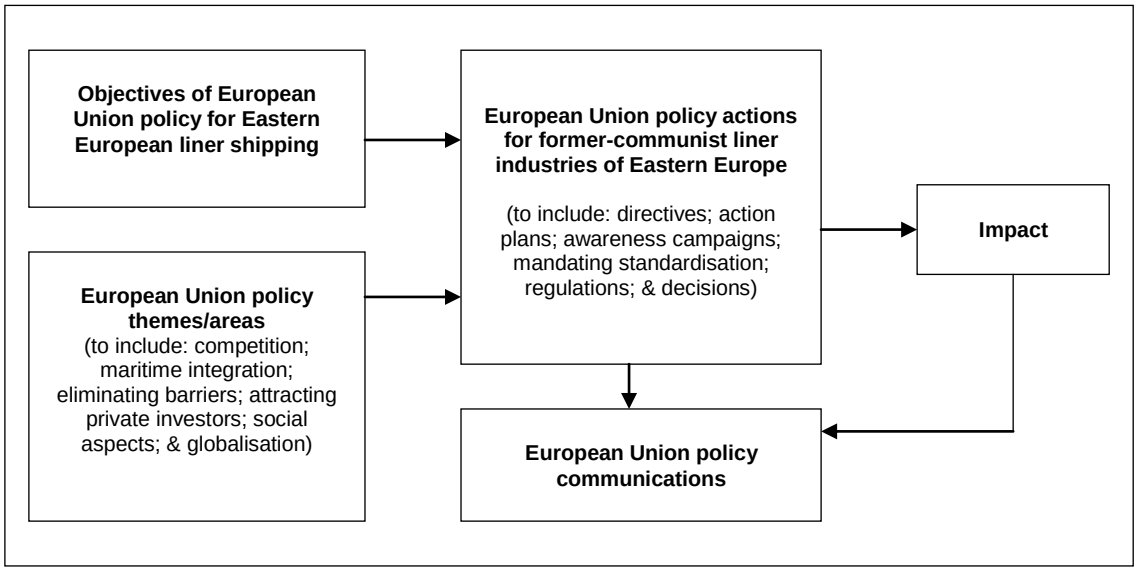

Figure 5.1 Framework of Eastern European liner shipping in the European Union

(*Source*: Author 2012)

5.4 Components of adaptation to the European Union system

A number of characteristic features can be identified in the adaptation process of Eastern European liner shipping to the European Union transport system. These may be summarised as: a transition from state ownership, to a liner sector based on private ownership and financial incentive (Zurek 2003); a transition from central administration, to a liner sector based on free trade and competition between member states (Lepori 2010); a transition from inefficient operations and service offerings, to a liner sector based on commercialisation and profitability (Breitzmann 2001); and a transition from intolerance for market-led operations, to a liner sector supported by wide-spread acceptance of privatisation and foreign investment.

Restructuring of liner shipping is considered a key element of the comprehensive systemic changes for European transport integration. Developments seek the formation of an optimal structure for Eastern European liner shipping companies encompassing ownership and management, fleet and tonnage renewal, market orientation and service changes, and company organisation and cooperation (Cottam and Roe 2004). The major components of Eastern European liner shipping during the adaptation process to the European transport market are illustrated in Figure 5.2, and may be summarised as: (a) liberalisation of liner markets and macroeconomic stabilisation, as opposed to domination of real socialism over shipping (Von Seck 1997); (b) privatisation and structural reforms of liner shipping companies, as opposed to domination of state owned markets in a socialist economy (Misztal 2003); (c) institutional reorganisation to provide a legal framework for the good functioning of liner shipping markets (Button 2010); and (d) branch and sector transformation to increase the quality of liner services via commercialisation strategies (Nijkamp and Giaoutzi 2008). As Figure 5.2 illustrates, the adaptation of Eastern European liner shipping companies to the

European Union transport system is a long-term process, carried out in a three-tiered context, comprising: (1) economic and political transition in Eastern European countries (McCormick 2011); (2) European Union membership criteria, to include the principles and policies of the single European transport market (Holland and Doidge 2011); and (3) adaptation of Eastern European liner shipping to the European transport system, which embraces both the first and second tiers of change (Cahill 2010). Hence, the integration of Eastern European liner shipping to the European Union is a dynamic process, consisting of putting regulations into practice and adaptation regarding organisation, management, function and space.

Economic and political difficulties in the implementation of European Union directives for maritime transport are the reason that some sequencing of adaptation processes in Eastern European liner shipping is unavoidable (Button 2010). For example, shipping tariffs and external trade contracts may be liberalised quickly, but the privatisation of liner companies and the creation of an independent financial administration system is likely to take additional time.

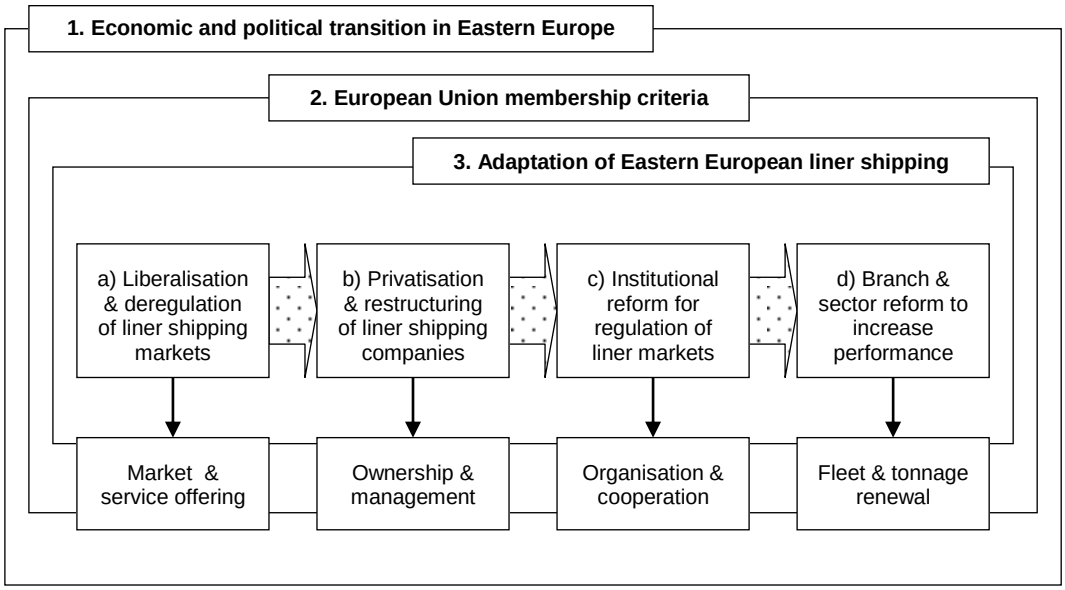

Figure 5.2 Components in the adaptation of liner shipping to the European system (*Source*: Author 2012)

The major components in the adjustment of Eastern European liner shipping to the European Union transport system have brought about a number of key developments for the sector, summarised as: an increase in the efficiency and interconnectivity of liner shipping with other service providers of multimodal transport (Givoni and Banister 2010); an acceleration in the modernisation of liner shipping fleets and infrastructure (Lepori 2010); an extension of transport networks throughout Europe (Dean 2011); an improvement in the quality and sustainability of liner services (Saxena 2005); a reduction in the cost of carriage (Button 2010); and an increase in environmental protection from negative emissions.

In the course of adaptation to European transport policy the restructuring processes of Eastern European liner shipping necessarily comprises both negative and positive steps. Measures are taken to break up large multipurpose maritime conglomerates and introduce new, highly specialised liner companies to support the growth of modern trade (Alderton 2011). The elimination of existing arrangements may invariably result in a temporary decrease in shipping services and a growth of unemployment in the maritime industries (Focas 2004). New developments must be created rapidly to avoid insolvency. The extent of the crisis will depend on the initial situation of the liner company prior to transition, the individual approach to transformation and adaptation to the European Union, and the macroeconomic situation of the country (Cottam and Roe 2007). In terms of the Eastern European liner companies examined, all of the shipping companies except Romline Shipping Company (formerly Navrom Shipping Company) have made substantial progress in their integration to the European transport market.

The process of Eastern European liner shipping adaptation to the European transport system has to take account of evaluations of the strategy of integration

and of changes in European maritime shipping policy. Every year new shipping legal documents are automatically included in the transport acquis communautaire, such as: the programme for the promotion of short sea shipping (COM(2003)155); the integrated maritime policy for the European Union, (COM(2007)575); the common maritime space without barriers (COM(2009)10); and the European Union maritime transport policy until 2018 (COM(2009)008). Therefore, they constitute an adaptation applicable to Eastern European countries.

The integration processes of the Eastern European countries in transition are being carried out at all levels of the economy (Sargent 2010). It is likely that the level of adjustment in liner shipping will actively affect the rate and the scope of adaptation processes in other sectors of the economy (Cottam and Roe 2007). Some analysts argue that delays in the integration of Eastern European transport to the European Union system has caused negative consequences for the macro-economic features of domestic shipping, as well as to other sectors (Givoni and Banister 2010; Sexena 2005). Therefore, the creation of a successful European transport system is of great importance, and in the interest of the whole of Europe.

5.5 Europeanisation of Eastern European liner shipping

Prior to transition, the government solely carried out the setting of the political agenda in the Eastern European liner sector. However, widespread globalisation led to significant changes regarding the formation of shipping policies. Eastern European liner shipping policy outcomes are required to be in compliance with international and European decisions and legislation (Kvist and Saari 2007). One witnesses a reallocation of state competence and power towards the European Union (Hix and Hoyland 2011). This tendency in Eastern European liner shipping may be analysed through theories of multi-level governance and Europeanisation.

Multi-level governance describes the distribution of the process of political decisions at supranational, national, regional and local levels of policy making (Milio 2010). In terms of Eastern European liner shipping, Figure 5.3 demonstrates how policies are shaped at international (International Maritime Organisation), European (European Union), national (Eastern European governments), and local level (local self-governments). For instance, Eastern European liner companies are required to comply with rules of environmental safety that the International Maritime Organisation introduces (Stopford 2008), Eastern European governments are obliged to adopt European regulations that require the liberalisation of the market (Button 2010), the Eastern European seafarers are protected by national regulations (Branch 2007), and the local self-government is the authority in charge of operating liner shipping ports and infrastructure (Alderton 2011). All of these rules constitute equivalent policies that liner companies have to adopt.

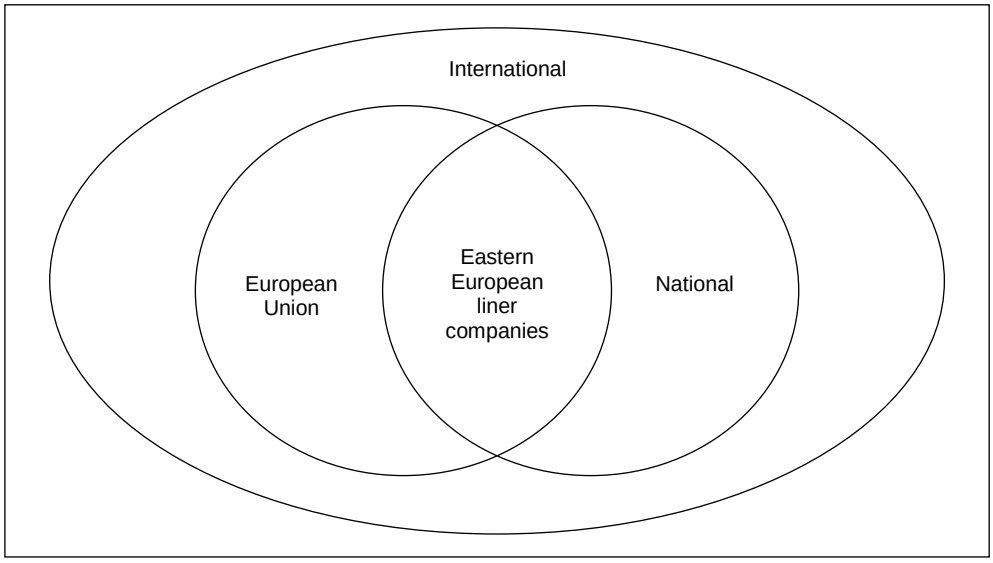

Figure 5.3 Multi-level governance and Eastern European liner shipping

(*Source*: Author 2012)

Europeanisation describes the renunciation of power to the European Union. According to Radaelli (2003, p30), the concept of Europeanisation consists of:

> "*processes of construction, diffusion and institutionalisation of formal and informal rules, procedures, policy paradigms and styles which are defined and consolidated in the making of the European Union decisions and then incorporated in domestic discourse, political structures and policies".*

In the context of Eastern European liner shipping, the definition of Europeanisation may be understood as the process of re-orientating the direction and shape of Eastern European transport policies to the degree that European political and economic dynamics become part of the organisational logic of policy making for liner shipping (Kulachi 2012). Thus, Europeanisation implies a shift towards the common transport policy of the European Union, and away from the traditionally diverse Eastern European national shipping policies (Cottam and Roe 2008).

The establishment of the single European transport market indicated a change in direction for Eastern European liner shipping, as it did in all the service sectors of European interest (Dale and Robertson 2009). The achievement of an internal market for transport imposed broad regulation on Eastern European liner shipping (Button 2010), including the removal of national quotas and restrictions for liner fleets (Branch 2007) and the introduction of strict rules in order to establish a liberalised shipping market (Lepori 2010). As a consequence, the European Union became the political agenda setter for Eastern European liner shipping industries.

The process of Europeanisation involves transformation as a response to European Union pressure (Trauner 2007). This twinning exercise has represented an instrument for Eastern European governments in the transfer of European acquis to their liner shipping fleets, in terms of standards, quality and safety (Wouters *et al* 2012). Accordingly, Eastern European liner shipping companies have linked their economic, social and political development with the European Union, and regard Europeanisation as a beneficial and modernising adaptation.

Europeanisation comprises of five conditionality instruments. The first instrument is gate keeping, which provides access to negotiations in the accession process (McCall and Wilson 2010). In the second place, benchmarking and monitoring, an instrument utilised for supervising the progress of the applicant states (Geyer *et al* 2010). In the third place, provision of legislative and institutional transformations, which refers to the legal transfer of the acquis communaitaire and the harmonisation with European regulations (Knill 2001). In the fourth place finance, which relates to the aid and technical assistance required in order to develop the institutional capacity of the candidate countries. And finally, twinning which involves support from European Union for the administrative institutions of the Eastern European countries to comply with the acquis (McCormick 2011).

These mechanisms provide the shape and direction of policy-making in Eastern European liner shipping (Pallis 2002). The European Union continues to make use of the asymmetry of power via the application of multi-level governance to fulfil the Europeanisation of various transport policies in the former communist countries of Eastern Europe. Moreover, this multi-level governance of power in the Eastern European liner shipping sector is enforced by conditionality and evidences the top down relationship between the European Union and Eastern European countries.

The internalisation of Europeanisation in Eastern European liner shipping proved to be heterogeneous from country to country. This aspect can be observed in the different socio-economic performance of liner shipping. For instance, in Romania liner companies were plagued by corrupt political elites, limited capital and weak administrations, whereas in Estonia liner companies benefited from a more stable environment. The non-uniform internalisation of Europeanisation in Eastern European liner shipping, demonstrates that although the process in different

countries may be based on identical principles, eventually Europeanisation proves to be a national exercise of reformation and adjustability (Wouters *et al* 2012).

In the short-term Europeanisation may be linked with oblations and complicated economic and political choices for the Eastern European countries involved. Whereas, in the long-term Europeanisation is synonymous with development, modernisation and cooperation. In other words, following accession Eastern European liner companies have become more engaged in internal processes and are now better placed to influence the agenda and course of Europeanisation.

5.6 Obstacles to European Union integration

Although the objective of European Union spatial enlargement is meeting political acceptance, nevertheless a number of obstacles remain in the adaptation process of Eastern European liner shipping to the European transport market. Many of the current obstacles are inherited and thus underpin Eastern European liner shipping developments and dilemmas in its integration to the European Union, such as: fiscal problems, poor infrastructural maintenance, limited administration, organisational and structural obstacles, and public intolerance towards change.

The adaptation of Eastern European liner shipping to the European Union system is extremely expensive. New technologies for unitised vessels, cargo handling equipment and port infrastructure are required to increase efficiency for multi-modal transport networks throughout Europe (Lambert *et al* 2011). In the short-term it is likely that costs will continue to be borne both by Eastern European countries and by the European Union member states (Lepori 2010). Owing to the capital-intensive nature of the industry the process cannot be carried out exclusively at the cost of the private sector (Button 2010). As an alternative,

Eastern European governments may seek financial assistance from the European Union through programmes such as the Poland and Hungary Assistance for the Restructuring of the Economy (PHARE) and the Instrument for Structural Policy for Pre-Accession (ISPA). In the long-term it is likely that the costs for maintenance and modernisation will be covered by benefits arising from the integration process.

Poor infrastructural maintenance remains to be an obstacle for Eastern European liner shipping (Humphreys 2010). This has been experienced in all transport sectors following years of inadequate finance under the old communist regimes, but it is most notably evident in multi-modal networks, of which liner companies are highly prevalent (Saxena 2005). Congestion, inefficient handling operations, inadequate berth size, and fragmented port and road systems are major problems for liner services calling at Eastern European ports. Hence, there is an immediate need to invest in infrastructure to support the operation of liner shipping fleets.

The adaptation of Eastern European liner shipping to the European Union system continues to be plagued by inferior technology, ranging from Soviet built multi-purpose vessels utilised for liner trade, with their high levels of fuel consumption, inability to carry large numbers of unitised cargoes, excessive maintenance requirements, and inferior environmental standards, to out-dated ship navigation and telecommunication systems. Substantial upgrading and replacement of former communist fleets is now a crucial task for survival in competitive shipping markets.

Organisational and structural obstacles and bottlenecks also express themselves in some areas of Eastern European liner shipping, in tensions between government departments involved in shipping and economic development, between the public and emerging private sectors, and between old and new public

sector organisations (Rodrigue *et al* 2009). Shortcomings in legislative and regulatory provision for privatisation and joint venture development continues to inhibit western investment, providing a further complication in the integration of Eastern European liner shipping to the European Union (Cottam and Roe 2007).

Lastly, public resistance towards the restructuring of formerly state-owned companies in their adaptation to the European Union system bestows an ongoing obstacle for Eastern European liner companies. Economic adaptation processes such as privatisation and foreign investment remain widely unpopular, largely because of the perception that it is fundamentally unfair, both in conception and execution. Government initiative will now be required to overcome the conflict between the interest of the liner industry and that of the national citizen, such that there will be public acceptance of integration measures to the European Union.

5.7 Expected effects of European integration

During the last decade, Eastern European liner shipping has gradually been included as an important asset in the economic policy and law making of the European Union and member states. This was overdue since liner shipping is a key factor in modern economic life and a fundamental element in international trade relations. Notwithstanding this, it is not a foregone conclusion that the economic and social effects of the integration of Eastern European liner shipping to the European Union transport system will continue to have a positive effect.

It is not known when the cost-benefit balance will be advantageous for Eastern European liner shipping companies. The initial pre-accession period cost of adaptation in liner shipping was substantially higher than additional micro and macroeconomic effects. In the long run, it is likely that integration of Eastern

European liner shipping to the European Union will have a positive effect on economic, social and political developments. However, it is optimistic to expect that through the whole period of accession the effect of integration for Eastern European liner shipping will be equally positive for all countries. The existing differences in the level of economic development and political stability in Eastern European countries determine the level of growth and success for liner shipping.

The integration of Eastern European countries to the European Union involves both quantitative and qualitative changes for the whole of the economy. As far as Eastern European liner shipping is concerned the integration of shipping fleets to the European Union has contributed to an oversupply of maritime transport potential, and the subsequent introduction of sudden and strong competition (Cottam and Roe 2008). Differences in shipping costs between Western and Eastern Europe continue to make liner shipping companies from the Eastern European countries fear open competition in the European transport markets.

The adaptation of Eastern European liner shipping companies to the European transport market also carries with it certain threats. For liner companies from countries with a longer period of European Union membership it will mean submitting their firms to stricter competition (Hutton 2012), strengthening the market control of the shipping sector in respect of norms and standards (Lepori 2010), employing a greater number of foreign seafarers (Branch 2007), and accepting a larger flow of trade and competition from new member states (Focas 2004). For Eastern European liner shipping, the threats are connected with the possibility of a collapse of technically outdated liner companies, a temporary increase in unemployment, the necessity of concentrated expenditures for modernisation (Button 2010), and an increase in competition in the markets.

When analysing the integration of Eastern European liner companies to the European Union, it is possible to distinguish areas of shared interest with liner companies from countries whose membership has been long-standing. These may be summarised as: an increase in the efficiency of liner shipping in Europe, as a result of the creation of a European maritime transport space without barriers; an acceleration in the modernisation of liner shipping infrastructure, as a result of an enlargement in the range of joint planning and financing (Hensher *et al* 2004); a reduction in empty vessel runs, as a result of free access to forwarding orders (Nijkamp and Giaoutzi 2008); a more flexible use of resources and of qualifications of the shipping staff, due to the free flow of labour (Larsen *et al* 2006); and a quality improvement in liner shipping services, as a result of deeper organisational integration of the multi-modal transport network throughout Europe (Lepori 2010).

Conversely, in the Eastern European liner sector it is also possible to distinguish areas of contradictions of national interest, which may be summarised as: adjustments in market share between domestic and foreign liner shipping companies, as a result of the liberalisation of shipping markets (Bendul 2012); constraints on existing subsidies and protective measures given to liner shipping companies by Eastern European governments (Cottam and Roe 2007); standardisation of the system of prices and tariffs for liner shipping services (Focas 2004); creation of a uniform system of concession and licence granting as regards activities in relation to the provision of liner services and shipping infrastructure exploitation (Button 2010); the establishment of conditions of employment for seafarers and shore-based staff who work in the liner industry (Alderton 2011); tightening up of norms and technical standards for environmental protection (Rodrigue *et al* 2009); and the introduction of procedures for awarding European Union budgets for the modernisation of fleets and infrastructure.

The adaptation of Eastern European countries to the European Union system could result in differing scenarios for economic, political and social cohesion. In terms of Eastern European liner companies, to ensure growth, sustainability and future profitability, additional economic benefits of integration must be achieved at the earliest possible stage of European Union membership (Cottam and Roe 2008). Yet, this requirement is likely to be problematic, since the adaptation period comprises of the years when previous lack of investment in fleets and infrastructure will have to be made up for (Humphreys 2010), as well as the cost of terminating legislative regulation and of strategic modernisation of liner services.

5.8 Conclusion

The restructuring of Eastern European liner shipping has been fundamentally influenced by integration with the European Union. Maritime authorities have begun to make existing policy frameworks conform to that of the single European transport market. The effect of this integration is expressed in the swift enactment of new legislation to promote privatisation, increase competition, improve the protection of seafarers, and reduce environmental emissions. It is also expressed in the technical transformation of liner shipping fleets and infrastructure. The adaptation of Eastern European liner companies to the European transport system has been an extremely challenging process, fraught with financial, political and social difficulties. Just as no model of economic transformation exists, so also no pattern has been established for the adaptation of Eastern European liner companies to the European transport system. Changes in the framework of liner shipping and the market transition of the shipping companies varied depending on the level of state governance and the particular economic situation of the country. Transition shipping thus had to undergo obligatory changes of restructuring and commercialisation in the process of integration, under circumstances of widely

absent state support otherwise common in shipping sectors in market-orientated accession countries. In the majority of Eastern European countries, the activity of liner shipping exhibited certain characteristics. The element of organisational changes has appeared in most countries, involving the privatisation and diversification of liner companies. Also the modernisation of liner fleets and infrastructure proved to a very important issue, as has the linking of partner countries with the Trans-European Network axes. Furthermore, in every shipping policy, it is stated that the gradual approximation to the European Union's legal framework and standards will also be essential. In terms of integration strategies, European Union policy is a mixture of legal regulation and inter-state cooperation. A general direction for the adaptation of Eastern European liner shipping to the European Union is marked by such documents as association agreements and the White Paper on the preparation of Central and Eastern countries for integration with the European internal market. However, every year new legal documents are automatically included in the transport acquis and therefore merit inclusion in liner shipping policy. After analysing the process of adaptation by the Eastern European liner companies to the European transport market, one can conclude that former communist countries have taken their time to tackle the needs of liner shipping in the common market. What has emerged, however, while open to a variety of technical criticisms, is something approaching a free market for liner services.

The following chapter introduces content analysis as the research technique applied for the quantitative description of constructs from transition literature that may be hypothesised as influential in the process of strategic restructuring of Eastern European liner shipping. The identified constructs will be utilised for the development of a sequential conceptual model to provide a typology of the relationship between transition and Eastern European liner shipping change.

CHAPTER SIX

A Content Analysis of Eastern European Liner Shipping

To substantiate the application of the relationship between Eastern European transition and Eastern European liner shipping change, it is essential to carry out an analysis of the literature reviewed. One must identify the major transition constructs that may be utilised within the Eastern European liner shipping context of the study. Content analysis provides a synthesis of the secondary data relevant for the assessment of the impact of Eastern European transition upon Eastern European liner shipping, and thus facilitates the development of the conceptual model by ensuring transitional constructs are accurately identified and specified.

Frequently applied in other areas of social science research (Schreier 2012; Jordon *et al* 2008), content analysis involves the objective and systematic identification of specific textual characteristics, yielding quantitative measures that facilitate the testing of hypotheses and the drawing of inferences from an existing body of literature (Krippendorff 2012). As such, it provides a methodical means of specifying a hypothetical set of testable constructs for the analysis of Eastern European liner shipping during the period of economic and political transition.

This chapter explains and presents the application of content analysis methodology to the Eastern European transitional liner shipping literature, thereby providing a formal approach to the identification and justification of the constructs that are to be utilised in the development of the conceptual model. The implications for construct selection in empirical studies are discussed, with explicit reference to the Eastern European liner shipping framework. Following a brief overview of the research methodology of content analysis, the major approaches to content classification and enumeration are outlined and a particular system of

analysis is selected, justified and applied to Eastern European liner shipping literature. The results of this analysis are presented and the implications for construct selection in terms of conceptual model development are discussed.

6.1 Objectives of content analysis

As it is often recognised in the literature relating to research methodology, the purpose of building a conceptual model is to simplify the modelling problem and organise the associated data so that the system can be analysed (Bryman and Bell 2011). The purpose of the model in this study is to identify evolutionary changes present in Eastern European liner shipping during the period of transition. The secondary data relevant for the assessment of the relationship between Eastern European economic and political transition and Eastern European liner shipping restructuring is too complicated to simulate directly, therefore it must be simplified as much as possible, yet retain enough complexity to provide an authentic typology of the real system's behaviour. Accordingly, Edmonds and Kennedy (2012) propose an upper limit of six or seven constructs to categorise variables in the process of narrowing the concepts addressed by the model.

This study aims to employ content analysis as a systematic, objective but yet relatively simple methodology for establishing the most important factors identified in the choice literature relating to the impact of Eastern European transition upon Eastern European liner shipping. A combination of quantitative and qualitative analysis will be utilised to offset or counteract biases in research of the same phenomenon in order to increase the validity of construct and locate internal consistency (Riffe *et al* 2005). A quantitative instrument will be applied for the numerical classification of textual inferences regarding association of importance (Saini and Shlonsky 2012), whilst a qualitative instrument will be employed as a

means of drawing inferences on the basis of appearance and non-appearance of constructs from a particular source document (Kompatsiaris *et al* 2012).

The choice of content analysis methodology for the study has been guided by the objectives of the research, and the ease with which the required data may be retrieved through utilisation of the method (Saldana 2009). Given that an objective of the research is to facilitate the use of conceptual modelling to provide a typology of the relationship between Eastern European transition and Eastern European liner shipping change, a combination of quantitative and qualitative content analysis towards data capture and evaluation will be utilised to locate the major constructs of transition in relation to liner shipping (Neuendorf 2002). For the model to be operational a degree of simplification is required. The major constructs conceptualised to exert an influence on the relationship have to be selected, whereas other constructs incidental to the relationship must be eliminated (Veloso 2011). Content analysis will identify key constructs from the literature review of Eastern European transition and integrate those with theoretical constructs from the liner shipping literature. The technique will facilitate a quantitative restriction on the number of constructs selected in order that the number of combinations presented in the model is meaningful and manageable.

6.2 Content analysis defined

The vast majority of social science research depends on the careful interpretation of written materials (Saunders *et al* 2012). Given the ambiguity of this process, content analysis may be utilised to help make qualitative studies objective and scientific (Krippendorff and Bock 2008). Numerous definitions of content analysis have been provided by practitioners, largely due to developments in the technique, and with the application of the tool itself new problems and types of materials.

Berelson (1952, p18) initially defined content analysis as:

> "*a research technique for the objective, systematic and quantitative description of the manifest content of communication".*

However, communication has since come to be seen not as individual messages held stationary for analysis, but as a flow of interactions. Consequently, content analysis came to be seen by Budd, Thorpe and Donohew (1967, p2) as:

> "*a systematic technique for analysing message content and message handling…the analysis is concerned not with the message per se, but with the larger questions of the process and the effects of communication".*

This definition suggests that the main attribute of content analysis must be the drawing of inferences. Content analysis demands relating or comparing findings to a particular standard, norm or theory; it does so to discover latent content constructs or infer characteristics (Krippendorff 2012). Hence a definition provided by Adams and Schvaneveldt (1991, p299) comes to the fore: as:

> "*a research tool for the study of written communications with the objective of determining key ideas and themes contained within them. The analysis is carried out in accordance with specific rules, each stage of which should be well defined to conform to the prerequisite of accurate replications".*

Despite their diversity, this selective sample of definitions indicates an agreement on the requirements of objectivity, systematic presentation and generality. The first requirement, objectivity specifies that each stage of the methodology must be facilitated on the basis of explicitly formulated rules and procedures (Lichtman 2012). The criteria for selecting data must be specifically stated to allow other researchers to replicate the study and arrive at similar conclusions. The second requirement, systematic presentation denotes that the inclusion and exclusion of

constructs or content categories must be consistent with applied rules (Bryman and Bell 2011). This is to make sure that the researcher does not use only data consistent with the original hypothesis, but also data that is contradictory to the hypothesis (Kranzosi 2010). The final requirement, generality demands that the research findings have theoretical relevance. Hence, wholly descriptive literature regarding unrelated constructs or characteristics of the message is of little value, unless it is correlated with theoretical groundings (Krippendorff and Bock 2008).

6.2.1 Application of content analysis

Empirical inquiries into communications content date back to studies in theology in the late eighteenth century (Franzosi 2010). Content analysis has since mushroomed into numerous areas of social science where it is valued highly for the unobtrusive nature of its application (Avison and Fitzgerald 2006). The following represents a brief summary of recent trends in content analysis research. A full description of the historical development of the techniques involved and their application is provided in Krippendorff and Bock (2008) and Neuendorf (2002).

Walker (1975) utilised content analysis to identify differences and similarities in American black and white popular song lyrics with the objective of determining key ideas contained within them (Weber 1990). In 1981, Schramm and Atwood examined the content of Asian newspapers, with the intent of determining the percentage of news content devoted to Asian developing countries. Issacs (1984) applied content analysis in psychiatry to assess the relationship between words and phases used by schizophrenic and non-schizophrenic patients and their clinical diagnosis. In 2000, Culliniane and Toy employed content analysis for the identification of important attributes in freight route/mode choice decision-making. Further examples of content analysis may be found in communication research

(Budd 1967), journalism (Adams and Shriebamn 1978), advertising (Auter and Moore 1993), logistics (Liliopoulous 2003), transport economics (Pasukeviciute 2003), psychology (Smith 2008), and multi-media analysis (Kompatsiaris 2012).

Former application of content analysis reveals a series of interrelated and continuing trends towards: increased use of content analysis as scientific research tool (Edmonds and Kennedy 2012); greater concern for theoretical and methodological issues (Divakaran 2009); application to a broader range of problems with particular emphasis on the antecedents and effects of communication (Schreier 2012); increased use for the testing of hypotheses (Neuendorf 2002); and greater variation in the materials studied (Veloso 2011).

6.2.2 Framework of content analysis

The conceptual framework of content analysis employed to identify the major constructs in Eastern European liner shipping during the period of transition is presented in Figure 6.1. This framework is intended to guide the conceptualisation, implementation and evaluation of the content analytical study (Bryman and Bell 2011). The framework is simple and general, utilising the following conceptual components to shape the procedure of textual analysis: (1) a research question that the analyst seeks to answer by examining the body of text (Saldama 2009); (2) a body of text, to supply the data that an analyst requires to begin the research (Franzosi 201); (3) a context of the analyst's choice within which to make sense of the body of text (Leetaru 2012); (4) an analytical construct that operationalises what the analyst knows about the context (Saini and Shlonsky 2012); (5) inferences that are intended to answer the research question, which constitute the basic accomplishment of the content analysis (Avison and Fitzgerald 2006); and (6) validating evidence, which is the ultimate justification of the content analysis.

In practice, these conceptual components are operationalised by a number of interdependent, indivisible and interrelated stages. Firstly, the analyst forms a research question to represent the target of the inferences to be drawn from the available texts (Krippendorff and Bock 2012). The target of this study is to identify influential constructs of Eastern European transition in relation to Eastern European liner shipping change. Next, the analyst selects a body of text, which represents the applicable data that the analyst has available (Veloso 2011). Following the selection of applicable documents, data becomes separated from their real context and are communicated unobtrusively to the analyst (stage 1).

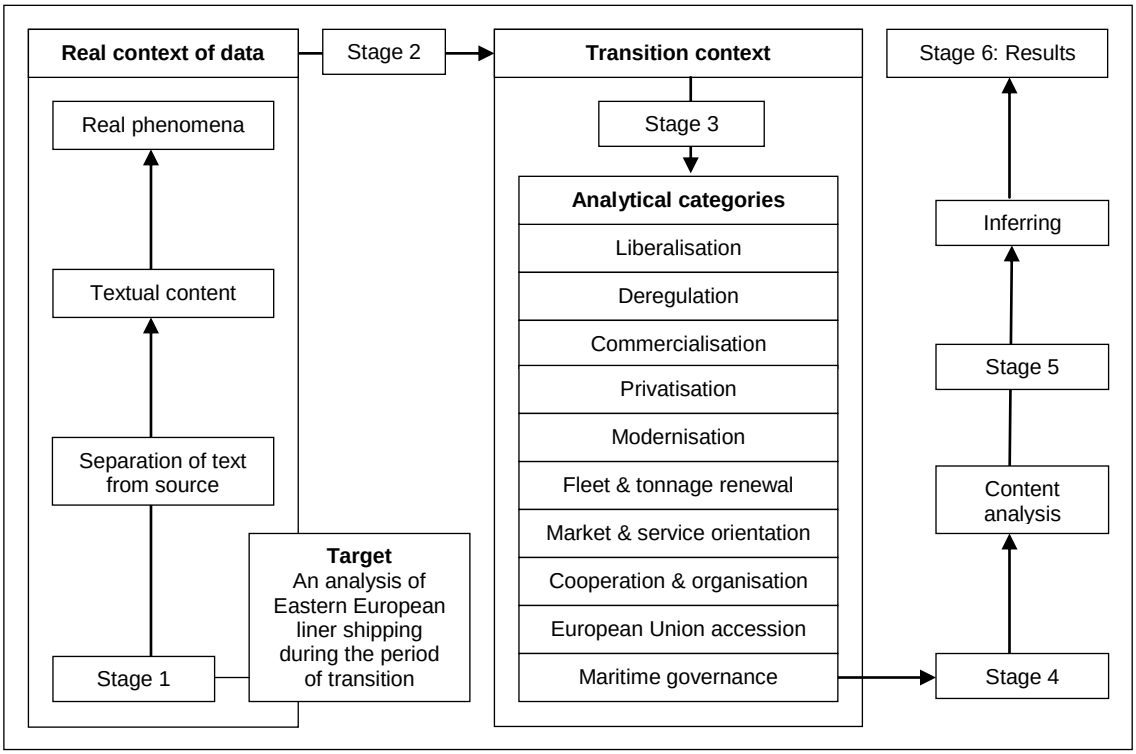

Figure 6.1 Framework of content analysis for research synthesis
(*Source*: Author 2010)

The analyst places the isolated data into the context of the research enquiry, which specifies the world in which texts can be related to the question. The context of this study is the conceptual environment of Eastern European transition (stage

2). Next, the analyst forms the analytical categories which operationalise what the analyst knows about the context and the network of correlations that are assumed to explain how available texts are connected to the possible answers to the research question (stage 3). Finally, content analysis is employed to distinguish between textual content whose nature is variable and content whose nature is dependable (stages 4-6). It is by this process that the analyst is able to make inferences from data to certain aspects of their context and justify these inferences in terms of the knowledge about the stable factors in the system of interest.

6.3 Advantages and disadvantages of content analysis

In comparison with other data-gathering and evaluation techniques, content analysis has several advantages. Firstly, the triangulated structure of content analysis facilities a blend of quantitative and qualitative analysis of texts (Schreier 2012; Franzosi 2009; Gottschalk and Bechtel 2008). This combination of methods strengthens the claim for the validity of the conclusions drawn where the mutual confirmation of results can be demonstrated (Lichtman 2012). The triangulated method also operates directly on texts and transcripts of communication, thereby allowing the central aspect of social interaction to be analysed (Leetaru 2012).

Secondly, content analysis can be used for the identification of dependable constructs and inferences since the process yields unobtrusive measures in which neither the sender nor the receiver of the message is aware that it is being analysed (Krippendorff 2012). Hence, there is little danger that the act of measurement will be a force of change that confounds the data (Gong and Xu 2010). Given that the procedure), as well as the great deal of progress that is being made in the development of computer software to allow large volumes of data to be processed at high speed.

Despite these advantages, a number of theoretical and procedural objections have been expressed about the methodology. Content analysis can be extremely costly and time consuming; specifically, analysts must consider the opportunity cost of the value of time required when coding substantial amounts of written materials (Avison and Fitzgerald 2006). Opponents to the method also advocate that the structure of content analysis is no more than an impressionistic study; yet unlike impressionist writing the analysis involves textual content and tests the analytical infrastructure to tender an independent inquiry (Saldana 2009). A further objection is that by focusing attention content analysis may become inherently reductive, however any form of inquiry restricts attention. The difference with content analysis is that one is conscious of the restrictions and therefore more aware of constraints (Jordon *et al* 2008). Critics stipulate that content analysis is devoid of theoretical base, or attempts too liberally to draw meaningful inferences about relationships and impacts implied in a study. However, during a content analysis inferences have to pass all relevant facts under review, and be crosschecked by the facts obtained from the inferences (Morturu 2010). Another objection is that content analysis often disregards the context that produced the text, as well as the state of things after the text is produced; yet through careful identification and justification of constructs, contextual factors may be forced to the foreground (Neuendorf 2002). Above all, content analysis is criticised for a lack of objectivity in relational analysis to gain a higher level of interpretation. However the method does not seek to ensure absolute objectivity, rather it aspires to implement a more objective technique than impressionistic approaches (Chang *et al* 2006).

6.4 Content classification and interpretation

For every study where content analysis is applied, determining the impact of the results is dependent upon two concepts: validity and reliability. The main criticism

of content analysis appears to derive from the data-reduction system by which many words of texts are classified into much fewer content categories (Gottschalk and Bechtel 2008). Opponents criticise the reliability of text classification and question the validity of variables based on content characterisation (Krippendorff and Bock 2008). Consequently, the following section discusses the problems of coding for content analysis from the perspective of reliability and validity.

6.4.1 Reliability assessment

For a content analysis to be meaningful, an acceptable level of reliability must be established (Schrerier 2012). The importance of reliability rests on the assurance it provides that data are obtained independent of the measuring tool and remain constant throughout variations in the measuring process. Three types of reliability are pertinent to content analysis: stability, reproducibility and accuracy.

Stability refers to the degree to which the results of content classification are invariant over time (Gottschalk and Bechtal 2008). It is calculated as the extent to which a measuring procedure yields the same results on replicated trials. Hence, under test-retest conditions ambiguities in the coding rules, uncertainties in the text, or errors in the recording process, constitute unreliability (Neuendorf 2002). Nevertheless, since the coding process is carried out by a single analyst, stability is often thought to be the weakest form of reliability (Kompatsiaris *et al* 2012).

Reproducibility refers to the extent to which content classification produces the same results when the same text is coded by more than one coder under various conditions, using different measuring tools (Krippendorff and Bock 2008). Conflicting coding usually results from cognitive differences among other coders, ambiguous coding instructions, or from casual recording errors (Edmonds and

Kennedy 2012). Although high reproducibility is desirable in content analysis, it may not always be feasible for single researchers (Saini and Shlonsky 2011).

Accuracy is described as the degree to which the classification of texts conforms to its specifications and yields to a standard or norm (Franzosi 2010). To establish accuracy, analysts must compare the performance of one or more data making procedures with the performance of a procedure that is taken to be correct (Bryman and Bell 2011). Hence, the analyst must ascertain the extent to which the classification of text corresponds to a standard (Chang *et al* 2006). While accuracy is the strongest form of reliability, it is rarely applied to reliability assessments as standard codings are established infrequently for texts (Veloso 2011).

To form a sufficient level of reliability for study, achieving stability was considered to be the most appropriate method. Although stability is often thought to be the weakest form of reliability, reproducibility and accuracy could not be established due to the nature of the research. Eastern European liner shipping literature is not only dominated by an extensive range of disciplines in the fields of economic, politics and sociology, but also by a multitude of language barriers. Hence, cooperation with other researchers was not possible due to the highly specialised nature of the enquiry. Therefore, test-retest data evaluation was applied to the study over the period of a year in order to achieve a sufficient level of stability.

6.4.2 Validity assessment

For a content analysis to be accepted as reliable the analyst must also establish the validity of the results attained. Validity may be defined as the extent to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure (Silverman and Waneen 2010). A content analysis is valid if

the inferences drawn from the texts withstand the test of independently available evidence, or of being able to inform successful actions (Jordon *et al* 2008).

The concept of validity has two distinctions. The first concerns validity as the correspondence between two sets of concepts or variables, and validity as the generalisability of results to a theory (Saldana 2009). The second concerns validity of the coding system of variables from it, and validity of the analysis relating variables to their causes or consequences (Divakaran 2009). Thus, to state that a category is valid is to affirm that there is a connection between the category and the concept that it represents (Saini and Shlonsky 2012), and to conclude that the results of a content analysis are valid is to assert that the findings are independent of specific data or particular methods utilised (Krippendorff and Bock 2008).

The weakest form of validity is face validity, which consists of the correspondence between investigators definitions of concepts and their definitions of the categories that measured them (Weber 2001). Hence, a category has face validity to the extent that it appears to measure the construct it is intended to measure (King 2009). While face validity embraces common sense in widely shared consensus, it is fundamentally a single analysts' belief and consequently rests on a singlet internal variable (Gottschalk and Bechtel 2008), which is less dependable than validity by comparing content analytical data with a number of variables.

A more authentic form of validity may be attained by comparing content analytic data with some external criterion. Four types of external validity are applicable to content analysis: construct, hypothesis, predictive and semantic. Neuendorf (2002) defines construct validity as the extent to which a measure correlates with some measure of the same construct. Thus construct validity entails the generalisability

of the construct across measures or methods (Veloso 2011). Hypothesis validity relies on the correspondence among variables and the correspondence between these relationships and theory (West 2001). A measure will have hypothesis validity if in relation to other variables it performs as it is expected to (Bryman and Bell 2011). Johnson and Turner (2010) define predictive validity as the degree to which predictions obtained by a method agree with directly observable facts. Predictions may forecast conditions external to the study concerning future or concurrent events (Creswell 2008). While semantic validity may be described as the degree to which a method is sensitive to relevant semantical distinctions in the data being analysed (Schreier 2012). Hence, semantic validity entails the correspondence of analytical categories of texts to the meanings these texts have for specific roles within a context. The principle is to ascertain that concepts and variables are adequate in relation to the intended purpose (Krippendorff 2012).

To achieve sufficient validity for the study of secondary data in relation to Eastern European liner shipping during the period of transition, a combination of hypothesis, semantic and face validity will be established, as other forms were either impractical regarding application or not applicable regarding the type of research. Hypothesis validity will be applied to analyse the correlation between categories, variables and concepts. Semantic validity will be utilised to establish similar meanings and connotations from records of words placed in the same categories and face validity, although considered to be the weakest form of validity, will be employed to examine measures as objectively as possible.

6.5 Methodology of content analysis

Proponents of content analysis present numerous alternative methodological pathways, since optimality in research design depends upon the particular

research context of the study. Nevertheless, the generic stages of the methodology tend to be largely fixed, usually comprising several components in which the analyst must process from texts to results (Saini and Shlonsky 2012).

Figure 6.2 illustrates the methodological design of the content analysis selected for the study of Eastern European liner shipping during the period of transition. The ultimate objective is to contribute to the development of the conceptual model by ranking the restructuring constructs of Eastern European liner shipping during the period of transition according to the cumulative/collective importance placed upon them within the literature. The methodology comprises six components which the analyst must process from texts to results. Separating these components is merely a convenient way to conceptualise and evaluate the design. Given that the components serve as directives for replicating results, each of the following components has a descriptive and operational state:

(1) Research question, forming the target of the inferences for the restructuring of Eastern European liner shipping during economic and political transition;
(2) Sampling strategy, employing a sampling strategy to the existing Eastern European transitional liner shipping literature;
(3) Category construction, to reflect generic collections of specific constructs that are considered influential in the restructuring processes of Eastern European liner shipping;
(4) Units of analysis, relying on manifest and latent recording units to collect data on Eastern European transitional liner shipping;
(5) Systems of enumeration, applying a frequency system to establish a ranking of constructs that are found in the restructuring processes of transitional liner shipping;

(6) Results, narrating the constructs of Eastern European liner shipping change to the Eastern European transition context of the study.

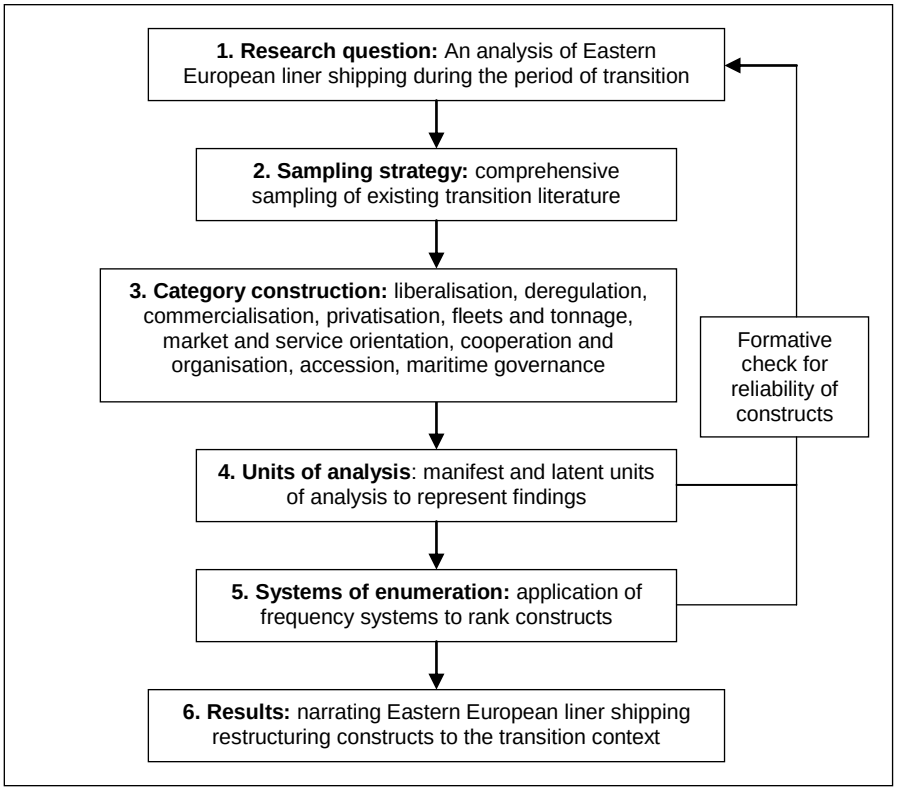

Figure 6.2 Process of content analysis for the study (*Source*: Author 2010)

6.5.1 Research question

As with most research methods, the starting point of a content analysis is the formulation of a research question. The research question is the target of the analysts' inferences drawn from available texts (Veloso 2011). Generally, research questions are believed to be abductively inferable by examination of a body of texts (Matthews and Ross 2010), relate to current inaccessible theory or data (Walliman 2011), delineate a number of possible and initially uncertain hypothetical answers (Saunders *et al* 2012), and allow for validation by acknowledging another way to observe or substantiate the occurrence of the inferred phenomena (Kumar 2010). The research question formed for this study is to objectively identify the most important variables in the assessment of the impact

of Eastern European transition upon Eastern European liner shipping change. These variables will reflect, and emerge from the dominant content categories identified through the content analysis of a sample database of literature.

6.5.2 Sampling strategy

Once the research question is formed, the analyst must select a sample of available data that will be used to code the texts into a number of manageable categories. Krippendorff and Bock (2008) define a sample as a representative of a population if studying it leads to conclusions that are approximately the same as those that one would research by studying the entire population. Hence, the sampling strategy should have the ability to generalise the properties found in a sample to the population from which the sample is drawn (Bryman and Bell 2011).

The sampling scheme employed is largely dependent on the population to be sampled and the kind of inferences to be made from the texts (Saini and Shlonsky 2012). The actual sampling techniques used in content analysis are similar to those utilised in other areas of social research, and include systematic sampling (Wilson 2010), stratified (Quinlan 2011), and random sampling (Neuendorf 2002). As the most widely applied technique, random sampling has been selected for the content analysis of this study. Random sampling is defined as a strategy in which every element in the population sampled has an equal probability of being selected (Dawson 2009). Thus, any document that has a principal theme in relation to the restructuring of Eastern European liner shipping during the period of transition may be considered for inclusion. However, in an attempt to improve validity, reliability and manageability, this study will limit the analysis to refereed academic output from journal papers, conference proceedings, textbooks etc.

The population under consideration for this research is the existing Eastern European transition literature, hence any specific Eastern European transition and or liner shipping related issue may form the main theme of a particular source document. The focus is on sections of the source texts that pertain explicitly to the research issues to allow for the segregation of texts that are central to the allocation of inferences (Kompatsiaris *et al* 2012). The actual size of the sample has been determined by certain practical limitations on the accessibility and/or availability of sources, as well as by the usual financial and time constraints (Johnson and Turner 2010). A total of 224 articles have been deemed appropriate for inclusion in this study. All articles are written in English and published in the period of 1989-2010 to increase the validity and focus of the study.

6.5.3 Category construction

Once the analyst has established the recording units to be applied to the texts, the next step is to record or code unstructured phenomena into the terms of a data language that can be analysed through the use of appropriate techniques (Klages 2012). The analyst must formulate coding instructions to reduce the number of alternatives that must be tabulated (Franzosi 2010). This can be accomplished by putting a variety of different word patterns into a single content category. Hence, categorisation may be defined as a technique for the classification of sign vehicles into which the recording units are counted (Krippendorff and Bock 2008).

In creating category definitions the analyst must make two basic decisions. The first is whether the categories are to be mutually exclusive (Gottschalk *et al* 2009). Given that most statistical procedures require variables that are not confounded, it is imperative that a recording unit cannot be classified simultaneously in two or more categories included in the same statistical analysis (Schreier 2012). The

second choice concerns how narrow or broad the categories are to be. A researcher must decide if they will code only from pre-defined categories or to add relevant categories as they emerge from the text (Edmonds and Kennedy 2012).

To identify the major constructs for Eastern European liner shipping during the period of transition, ten mutually exclusive categories were established. Some categories were pre-defined, allowing the analyst to examine the texts for specific variables, while new categories, which materialised from the texts were also included to enhance the research findings. Table 6.1 summarises the categories adopted within this research. The categories are deemed broad enough to enable: an analysis of the condition of Eastern European liner shipping before and after the changes which have taken place between 1989 and 2010; to assess the impact of Eastern European transition upon Eastern European liner shipping and to distinguish the key areas of change and the relationship of changes to the liner industries; and to evaluate the adaptation of Eastern European liner shipping industries to the European Union transport system as an element of transition.

Pre-defined categories and their relationship to attributes		
	Category name	**Variables/terms covered by category**
1	Liberalisation	Liberalisation, opening up market, removal of restrictions to trade, introduction of free competition, elimination of barriers to trade, demonopolisation
2	Deregulation	Deregulation, removal of governmental control, elimination of power
3	Commercialisation	Commercialisation, customer orientation, profitability, increase in productivity
4	Privatisation	Privatisation, private ownership, denationalisation, ownership transfer
5	Modernisation	Modernisation, diversification, technological advancement, innovation
6	Fleet and tonnage renewal	Tonnage renewal, fleet reorientation, refurbishment, upgrade, containerisation
7	Market and service orientation	Market reorientation, service changes, niche markets, geographical service patterns, cross-trades, transit markets, multi-modal regional networks
8	Cooperation and organisation	Cooperation, company organisation, mergers, acquisitions, joint ventures
9	European Union accession	accession, membership, enlargement, adaptation, integration, single European transport market, standardisation, European Union maritime policy
10	Maritime governance	Maritime governance, shipping policy, multi-level governance, liner shipping regulation, jurisdiction, Europeanisation, globalisation

Table 6.1 Pre-defined categories and their relationship to underlying attributes

(Source: Author 2010)

Next, the analyst must test the chosen coding scheme on a sample of text (Leetaru 2012). Testing not only reveals uncertainties in the rules, but also often leads to insights suggesting revisions of the classification scheme. Franzosi (2010) suggests that cooperation of at least one researcher is very important at this stage in order to eliminate any ambiguities in the process. This is because independent tests of coding a single sample of text are likely to reveal a certain level of ambiguity between researchers as to which concepts actually conform to a particular category construct (Riffe *et al* 2005). Hence, an ensuing revision of the category definitions is likely to eradicate any such ambiguities upon re-testing.

6.5.4 Units of analysis

After selecting the sample documents to be analysed the researcher must convert the text to a unitised format, which draws relevant distinctions with an observational field (Saini and Shlonsky 2012). Gottschalk and Bechtel (2008) define a recording unit as an identifiable message that is distinguished for separate description, transcription, recording or coding. Hence, the recording unit represents the smallest body of text in which an example of an analytical category appears and serves as the basis for reporting research analyses (Franzosi 2010).

The five types of coding unit most common in content analysis are summarised as: (1) words/terms, whereby the analyst codes each word/term with a single or multitude of meanings and records phrases that constitute a semantic unit (Krippendorff 2012); (2) themes, in which the analyst defines a theme as a unit of text. A theme may be a simple sentence or single idea (Edmonds and Kennedy 2012); (3) character, whereby the content is divided each time a person or object is mentioned (Franzosi 2010); (4) paragraphs, in which the analyst codes an entire paragraph to reduce the overall effort required (King 2009); and (5) items, whereby

the analyst records complete texts of editorials, communication transcripts and journal articles in order to gain an overall message of latent content (Veloso 2011).

In this study, data is collected through utilising a combination of recording units to represent the findings of the content analysis. These are single words (manifest content) and items (latent content). A focus on single words as the recording unit means that each occurrence of the word/term within the text was recorded (Weber 2001). This is the most commonly used system and is a sound approach as far as reliability and replication are concerned (Neuendorf 2002). However, there are certain disadvantages with this approach, for instance, if the context in which the recording units appear is not considered with due care, the inferences drawn from the data may prove to be misleading (Saini and Shlonsky 2012). Hence, a second recording unit was introduced, referred to as items. Items are used when the analyst needs to identify the overall message of the text (Saldana 2009). The reason for selecting two types of recording units in the case of the analysis of Eastern European liner shipping is to take advantage of the inherent strengths of each recording unit and to mitigate the effects of their respective limitations.

6.5.5 Systems of enumeration

Bailey (1994) suggests that there are four systems of enumeration commonly applied to content analysis: (1) time space, whereby the relative amount of column space given to each respective category is measured (Veloso 2011); (2) appearance, in which the system examines whether the categories established at an earlier stage appear in the context unit at all (Morturu 2010); (3) intensity, which is generally employed when dealing with attitudes by utilising value-scales (Jordon *et al* 2008); and (4) frequency, whereby the analyst can study the texts by examining the highest frequency words (Weber 2001). For this study a frequency

enumeration system was employed due to the intention of establishing a ranking of attributes influential in the restructuring processes of Eastern European liner shipping during the period of transition. Therefore, an assessment of the relative, rather than absolute, frequency of each category within the database of literature is more appropriate. Moreover, the process is simple and reliable, allowing each occurrence of word or category to be considered of equal importance or value.

Once the clarity of the category definitions has been confirmed, the coding rules can then be applied to all the text. This is done either by hand, in which case an analyst reads through the text and the coding is completed manually (see Pasukevicicute 2003; Cullinane and Toy 2000), or through the use of computer software such as AnnoTape, TEXTPACK, Textsmart, SWIFT and CATPAC (Leetaru 2012). In the last decade computerised content analysis has been widely used since it allows the analyst to quickly process large volumes of numerical and textual data (Schneider 2012), and virtually eliminates the problem of unreliable coding (Kompatsiaris *et al* 2012). However, one should bare in mind that a computer can only code based on the information that is given, therefore it cannot trace recording errors as easily as a human can when coding manually (Gottschalk and Bechtel 2008). In this particular study a computerised content analysis by means of CATPAC software is utilised to rank constructs that are hypothesised as influential in the restructuring processes of Eastern European liner shipping. CATPAC reads text files and produces a variety of outputs ranging from simple diagnostics (i.e. word and alphabetical frequencies) to a summary of the main ideas in the text. The software uncovers patterns of word usage and produces such outputs as simple word counts and more advanced cluster analysis. The choice of software has been guided by the objectives of the

research, the ease with which the required data may be retrieved, and the degree of reliability and consistency associated with the use of content analytical software.

To support the authenticity of the inferences drawn from the analytical categories, the analyst should assess the achieved level of reliability or accuracy (Brinberg and McGrath 1985). The reliability of manual coding should be considered after the text is classified (Kompatsiaris *et al* 2012). One should not assume that if samples of text were coded reliably then the entire body of text will also be coded reliably (Walliman 2011). Human coders are subject to tiredness and are likely to make more mistakes as the coding proceeds, or change their perception of the coding rules in subtle ways (Krippendorff and Bock 2008). Conversely, if the coding was performed by computer, the output should also be checked to ensure that the coding rules were applied correctly (Saini and Shlonsky 2012). Text not in the sample used for testing may present new combinations of words that were not anticipated or encountered earlier, and these may be misclassified (Divakian 2008). To achieve a high level of reliability and accuracy, the researcher checked the findings from the computer-based content analysis by means of a manual content analysis. The results indicated an 89% margin of variation between statistical findings of the two methods of content analysis. Therefore a high level of reliability was deemed to be reached at this stage of the empirical inquiry.

6.6 Analysing the results of content analysis

A summary of the statistical results derived from the manifest content analysis of the choice literature relating to Eastern European liner shipping during the period of transition is summarised in Table 6.2. The table highlights the number of times a specific word/term is mentioned in the total database of literature, as well as the percentage of total mentions overall. Every category is ranked according to the

number of mentions it received in the database. The greater the ranking, the greater the importance of the category. The five most important categories in the restructuring process of Eastern European liner shipping from the manifest content analysis of literature are: (1) privatisation, (2) commercialisation, (3) European Union accession, (4) maritime governance, and (5) fleet and tonnage renewal.

Results of manifest analysis using word/term enumeration measure			
Category	**Number of mentions**	**Percentage of total mentions**	**Rank**
Liberalisation	145	1.9	9
Deregulation	38	0.5	10
Commercialisation	1510	19.8	2
Privatisation	1991	26.1	1
Modernisation	503	6.6	6
Fleet and tonnage renewal	664	8.7	5
Market and service orientation	328	4.3	7
Cooperation and organisation	297	3.9	8
European Union accession	1335	17.5	3
Maritime governance	817	10.7	4
Total	**7628**	**100**	**N/A**

Table 6.2 Results of manifest analysis using word/term enumeration measure

(*Source*: Author 2010)

Privatisation was found to be the most important issue, with 26.1% of the total mentions of words/terms in the database. The results emphasise privatisation as the core of the transition processes in former socialist liner companies. Here, newly structured ownership and possession rights, and the incentives arising from that can lead to commercialisation, company restructuring, increased efficiency and profitability. All of the Eastern European liner companies examined in this study initiated swift programmes of privatisation and restructuring. However, there has been a substantial difference of opinion about the sequencing of privatisation and restructuring in the individual liner sectors of the countries in Eastern Europe.

Commercialisation is the second major issue, with 19.8% of the total mentions of words/terms in the database. As part of the restructuring processes during the period of transition, budget limits for liner shipping companies were promptly

hardened and state subsides annulled. Generally, profit aims replaced earlier product maximisation behaviour. Eastern European liner companies gained economic autonomy as well as strategic and operative responsibility. The vast majority of liner shipping companies demonstrate movement towards the characteristics of private firms, that includes everything from modern financial practice, tonnage renewal, foreign flagging, implementation of an active manning policy, and most importantly, attitude towards clients and potential markets.

European Union accession was found to be the third most important issue, with 17.5% of the total mentions of words/terms in the database. The transformation of Eastern European liner shipping has been fundamentally influenced by integration with the European Union. Eastern European countries have begun to harmonise existing maritime frameworks with that of the single European transport market. In terms of Eastern European liner shipping, the effect of this integration is expressed in the rapid enactment of new legislation to promote competition, increase protection of seafarers, and reduce environmental emissions. It is also expressed in the technical transformation of liner shipping fleets and supporting infrastructure.

Maritime governance is the fourth major issue, with 10.7% of the total mentions of words/terms in the database. Prior to accession, governments solely carried out the setting of the political agenda in the Eastern European liner sector. However, widespread globalisation led to significant changes regarding the formation and configuration of liner shipping policies. Eastern European liner policy outcomes are required to be in compliance with international and European decisions and legislation. One witnesses a reallocation of state competence and power towards the European Union. This tendency in Eastern European liner shipping may be analysed through theories of multi-level governance and Europeanisation.

Fleet and tonnage renewal was found to be the fifth most important issue, with 8.7% of the total mentions of words/terms in the database. Historically, Eastern European shipping companies have maintained ownership of some of the largest fleets in Europe. However the decentralisation, deregulation and liberalisation of markets has drastically altered the national demand for sea transport. Fundamental shifts in fleet structures and strategies, as well as repositioning in the markets base upon tonnage renewal became necessary. Accordingly, all of the Eastern European liner shipping companies examined assumed extensive fleet and tonnage renewal programmes, though each with varying degrees of success.

In addition to manifest analysis, in order to determine more accurate results, a latent analysis of the literature relating to Eastern Europeoan transitional liner shipping and the results presented in Table 6.3. A total of 159 refereed publications from the period of 1989-2010 were considered to be appropriate for inclusion in this analysis. The results of latent analysis utilising item as the recording unit are not dissimilar than the results produced using manifest analysis. The first three ranked categories are the same, namely: (1) privatisation, (2) commercialisation and (3) European Union accession. Whereas the fourth and the fifth ranked categories have changed, both in terms of positioning and importance.

Results of latent analysis using item/theme unit of measure			
Category	**Articles where dominant theme**	**Percentage of dominance rate**	**Rank**
Liberalisation	8	5.3	8
Deregulation	1	0.6	10
Commercailisation	28	17.6	2
Privatisation	31	19.2	1
Modernisation	19	11.8	5
Fleet and tonnage renewal	20	12.3	4
Market and service orientation	12	7.5	7
Cooperation and organisation	3	1.7	9
European Union accession	24	15.9	3
Maritime governance	13	8.1	6
Total	**159**	**100**	**N/A**

Table 6.3 Results of latent analysis using item/theme unit of measure

(*Source*: Author 2010)

As can be seen in Table 6.3, the fourth category has changed from maritime governance to fleet and tonnage renewal. Maritime governance has dropped out of the top five and is now ranked sixth overall. Therefore, a new category has replaced the fifth ranked category. Under latent measure of content, modernisation was found to be the fifth most important issue, with 11.8% of the total mentions of items in the database. At the start of period of transition, former socialist shipping companies suffered from public ownership, prevailing regional networks, insufficient investment in fleets and tonnage, inferior technology to that of the West, poor organisation and management, and limited understanding of customer service. Modernisation of the tangible and intangible aspects of liner shipping was drastically needed. As a result, the majority of the Eastern European liner shipping companies undertook modernisation initiatives at all levels of company operation.

To provide further validation, it was deemed prudent to establish whether a particular category is mentioned in support of the original hypothesis, or whether the category is critical of the hypothesis. If the category is critical of the hypothesis, one must question the overall importance of the category in relation to the original hypothesis. In the case of this study, the original hypothesis may be summarised as the restructuring processes of Eastern European liner shipping during the period of transition. The aim is to distinguish whether a particular category is in support of this hypothesis, and thus has a direct relationship to the restructuring processes of Eastern European liner shipping, or whether the category tone is critical of the original hypothesis, and consequently, does not exhibit a direct relationship to the restructuring processes of Eastern European liner shipping. By establishing the percentage of a category that is supportive or critical of the original hypothesis, one may achieve greater validity when accepting or rejecting a particular category's relationship with the original hypothesis of the study.

Accordingly, each portion of text that was identified as falling into a manifest content analysis category was then coded, either as: (1) endorsing, whereby the subject of the manifest content category is viewed in a favourable light; (2) neutral, wherein the manifest category is mentioned, but not presented in either a positive or negative tone; and (3) critical, whereby the subject of the manifest category is presented in a manner that is critical of the initiative. For example, a portion of text that fell within the privatisation category would then be labelled either endorsing, neutral, or critical with regard to the restructuring process of Eastern European liner shipping during the period of transition. Where the decision has proven too difficult due to the inherent ambiguity of the central theme or due to the application of multiple themes, the article has been ignored for the purpose of this analysis. Table 6.4 presents the results of latent content coding for the categories deemed relevant to the enquiry of Eastern European liner shipping during transition.

Latent content coding of content analysis								
Latent content coding	**Endorsing**		**Neutral**		**Critical**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Liberalisation	6	75	2	25	0	0	8	100
Deregulation	0	0	1	100	0	0	1	100
Commercialisation	22	79	5	18	1	3	28	100
Privatisation	26	84	1	3	4	13	31	100
Modernisation	15	79	4	21	0	0	19	100
Fleet and tonnage renewal	18	90	2	10	0	0	20	100
Market and service orientation	9	75	2	17	1	8	12	100
Cooperation and organisation	2	67	1	33	0	0	3	100
European Union accession	19	79	1	4	4	17	24	100
Maritime governance	11	85	0	0	2	15	13	100
Total	**128**	**N/A**	**19**	**N/A**	**12**	**12**	**159**	**N/A**

Table 6.4 Latent content coding of content analysis (*Source*: Author 2010)

The results of Table 6.4 confirm that privatisation is the most important consideration in the restructuring process of Eastern European liner shipping. Privatisation was nearly always addressed in a positive tone, with 84% of articles endorsing privatisation as a core theme, 13% of articles critical of privatisation as a core theme, and 3% of articles neutral. Commercialisation is recognised as the

second major consideration, with 79% of articles endorsing commercialisation as a core theme. Whilst, European Union accession is the third most important consideration in the restructuring of processes of Eastern European liner shipping, it is however presented in a more critical light, arguing for a slight decrease in the significance of European Union accession in terms of liner shipping restructuring.

Despite the fact that one of the four categories established by latent analysis was different from those that emerged from manifest analysis, the results generally have a high level of correlation. Table 6.5 illustrates the combined results from manifest and latent analyses and ranks the importance between the categories using the derived average percentages of total mentions for each one of them. The combined results of content analysis reflect the ease with which categories can be quantified, and subsequently may be included as constructs for the development of the conceptual model, in its attempt to provide a typology of the relationship between liner shipping change and Eastern European transition.

Combined results of content analysis				
Category	**Manifest percentage of mentions**	**Latent percentage of mentions**	**Average percentage**	**Rank**
Liberalisation	1.9	5.3	3.60	8
Deregulation	0.5	0.6	0.55	10
Commercailisation	19.8	17.6	18.70	2
Privatisation	26.1	19.2	22.65	1
Modernisation	6.6	11.8	9.20	6
Fleet and tonnage renewal	8.7	12.3	10.50	4
Market and service orientation	4.3	7.5	5.90	7
Cooperation and organisation	3.9	1.7	2.80	9
European Union accession	17.5	15.9	16.70	3
Maritime governance	10.7	8.1	9.40	5
Total	**100**	**100**	**100**	**N/A**

Table 6.5 Combined results of content analysis (*Source*: Author 2010)

Table 6.6 presents the results of category rank under manifest, latent and combined methods. As can be seen, across all methods the top three categories are consistently privatisation, commercialisation and European Union accession.

While these categories correspond very closely to the important categories produced by all methods of content analysis, from this point on the rankings diverge between the different methods employed. This may be indicative of the difficulty of quantifying abstract influences into predictive models, however this does not negate their potential for explaining the restructuring process of Eastern European liner shipping as all of the categories analysed in the literature database exhibited a high degree of endorsement in their relationship to the original hypothesis. It is only in the level of importance in the restructuring process of Eastern European liner shipping that the categories portray variance.

Results of category rank under manifest, latent and combined methods of content analysis			
Rank	**Manifest**	**Latent**	**Combined**
1	Privatisation	Privatisation	Privatisation
2	Commercialisation	Commercialisation	Commercialisation
3	European Union accession	European Union accession	European Union accession
4	Maritime governance	Fleet and tonnage renewal	Fleet and tonnage renewal
5	Fleet and tonnage renewal	Modernisation	Maritime governance
6	Modernisation	Maritime governance	Modernisation
7	Market and service orientation	Market and service orientation	Market service orientation
8	Cooperation and organisation	Liberalisation	Liberalisation
9	Liberalisation	Cooperation and organisation	Cooperation and organisation
10	Deregulation	Deregulation	Deregulation

Table 6.6 Results of category rank under manifest, latent and combined methods
(*Source*: Author 2010)

When evaluating the results of content analysis it is important to consider the relationship between categories. There is a strong relationship between the top three categories. During the period of Eastern European transition privatisation could not be removed from a succession of basic restructuring needs. The elimination of former far-reaching state protection and the introduction of sudden and strong competition as part of extensive liberalisation and deregulation programmes had led to a drastically altered situation in regional shipping markets. Fundamental changes in Eastern European liner shipping became essential for its survival in a competitive free market. Privatisation could not develop to its full

advantage without commercialising economic structures of Eastern European liner shipping. Which in turn was vital for the successful operation of Eastern European liner shipping fleets in the single European transport market, as well as a necessary component in the integration of Eastern Europe to the European Union.

6.7 Conclusion

To identify the major transition constructs hypothesised as influential in the restructuring process of Eastern European liner shipping, it is essential to carry out an analysis of the literature reviewed. Content analysis provides a research tool for the assessment of choice literature pertaining to Eastern European liner shipping change and Eastern European transition, and thus facilities the development of the conceptual model by ensuring transitional constructs in the restructuring process of Eastern European liner shipping are accurately identified and specified. The results of the various forms of content analysis undertaken within this study generally confirm what most would expect to be the most important factors or influences in the restructuring of Eastern European liner shipping during the period of transition, namely privatisation, commercialisation and European Union accession. The results of the content analysis highlighted that the categories most often included as influential variables in the processes of restructuring in Eastern European liner shipping, were found to be strongly confirmed in the application of more mechanistic approaches to content analysis, such as those based on simple frequency counts of words or terms. It maybe that the inherent difficulty of quantifying latent themes means that they are not easily incorporated into predictive models utilised in the explanation of restructuring processes for Eastern European liner companies. However this does not negate their potential for explaining the restructuring process of Eastern European liner shipping as all of the categories analysed in the choice literature database exhibited a high degree

of endorsement in their relationship to the original hypothesis. It is only in the level of importance in the restructuring process that the categories portray variance.

Utilising the categories identified by the content analysis of the choice literature relevant to the restructuring process of Eastern European liner shipping, the next chapter discusses the relative influence of those categories in terms of the impact of Eastern European transition upon Eastern European liner shipping. The identified categories are shaped into transitional constructs, which form the basis of the conceptual model developed to provide a typology of the relationship between economic and political transition and Eastern European liner shipping.

CHAPTER SEVEN

Conceptual Model Development

So far the main research concepts have been reviewed, allowing one to analyse the condition of Eastern European liner shipping before and after the changes that have taken place between 1989 and 2010. The contextual framework within which liner shipping had to operate under the Communist regime has been explored. The macroeconomic effects of privatisation and restructuring of former socialist liner companies has been examined, as has the integration of Eastern European liner shipping to the European system, both in terms of expected effects for Eastern European and international shipping fleets.

Content analysis was applied as a research technique for the objective description of constructs from transition literature that may be hypothesised as influential in the restructuring processes of Eastern European liner shipping. Utilising the identified constructs, this chapter discusses the formation of the conceptual model employed to provide a typology of the relationship between Eastern European transition and Eastern European liner shipping change. The development of the model is based on the premise that characteristics of Eastern European liner shipping change may be associated with the macroeconomic, political and social organisational characteristics of transition.

This study is of particular interest as it is the first attempt to develop a model to identify the process of Eastern European liner shipping from command to market economy. Up until now, Eastern European liner companies have had to endure changes of restructuring in the process of transition and European integration largely alone. It is hoped that the establishment of a transition model will enable Eastern European liner companies to analyse the effect of transition

upon regional liner shipping, and thereby identify the most advantageous restructuring strategies for each transition phase, while other European Union competitors may also use the model to gain greater understanding of the transitional processes of former socialist liner shipping fleets and their level of adaptation to the European system, in order to exploit any arising weaknesses.

By considering scientific approaches to model building, this chapter describes the process through which the conceptual model of the study is developed. The conceptual model is presented and each evolutionary component is analysed. In order to assess the model empirically a set of hypotheses is formed. The original contribution of the study is discussed, as well as the practical application and usefulness of the model for practitioners in liner shipping.

7.1 The conceptual model

Figure 7.1 presents the conceptual model developed for this study. The model does not seek to test or explain casual relationships. Rather it aims to explore the possibility of an underlying typology between the characteristics of Eastern European liner shipping change and the characteristics of economic, political and social transition in Eastern Europe. The model aspires to classify the relationship between systematic transition and the strategic restructuring processes utilised in Eastern European liner shipping. Furthermore, the model aims to examine the impact of European Union accession as an element of economic transformation, specifically in terms of the adaptation of Eastern European liner shipping fleets to the single European transport system.

The model allows for investigation of the existence of an association between the hypothesised behavioural characteristics of the Eastern European liner

shipping companies and the economic and political aspects of Eastern European transition over time. It has never been the case that an old economic system should be reduced to naught whilst a new system should start from the beginning. Many valuable elements of the planned system can be preserved and utilised to support the creation of new enterprises and the redevelopment of older ones. Accordingly, the model profiles the formation of strategic restructuring employed by Eastern European liner companies through means of several evolutionary components necessarily processed during transition.

The model is set within the framework of forms which derive from the existing macroeconomic stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, economic and social changes. In terms of this research, the following are of significance: liberalisation, deregulation, privatisation, commercialisation and European Union accession. Such processes (known as transitional constructs) have been selected as a result of the content analysis in chapter six, which provides a systematic and objective research tool for the assessment of choice literature pertaining to Eastern European liner shipping change and Eastern European transition, and thus the identification of key transitional constructs in the process of restructuring.

The model analyses Eastern European liner shipping by profiling the formation of restructuring into diminishing, permanent and incipient evolutionary components. It is not until the model is operational that one may see restructuring forms that are of a specific character for the liner sector, such as technical and structural changes. The unique formations may be attributed to the correlation between the liner industry and its international characteristics, which are different from domestic activity, and thus need alternative provisions.

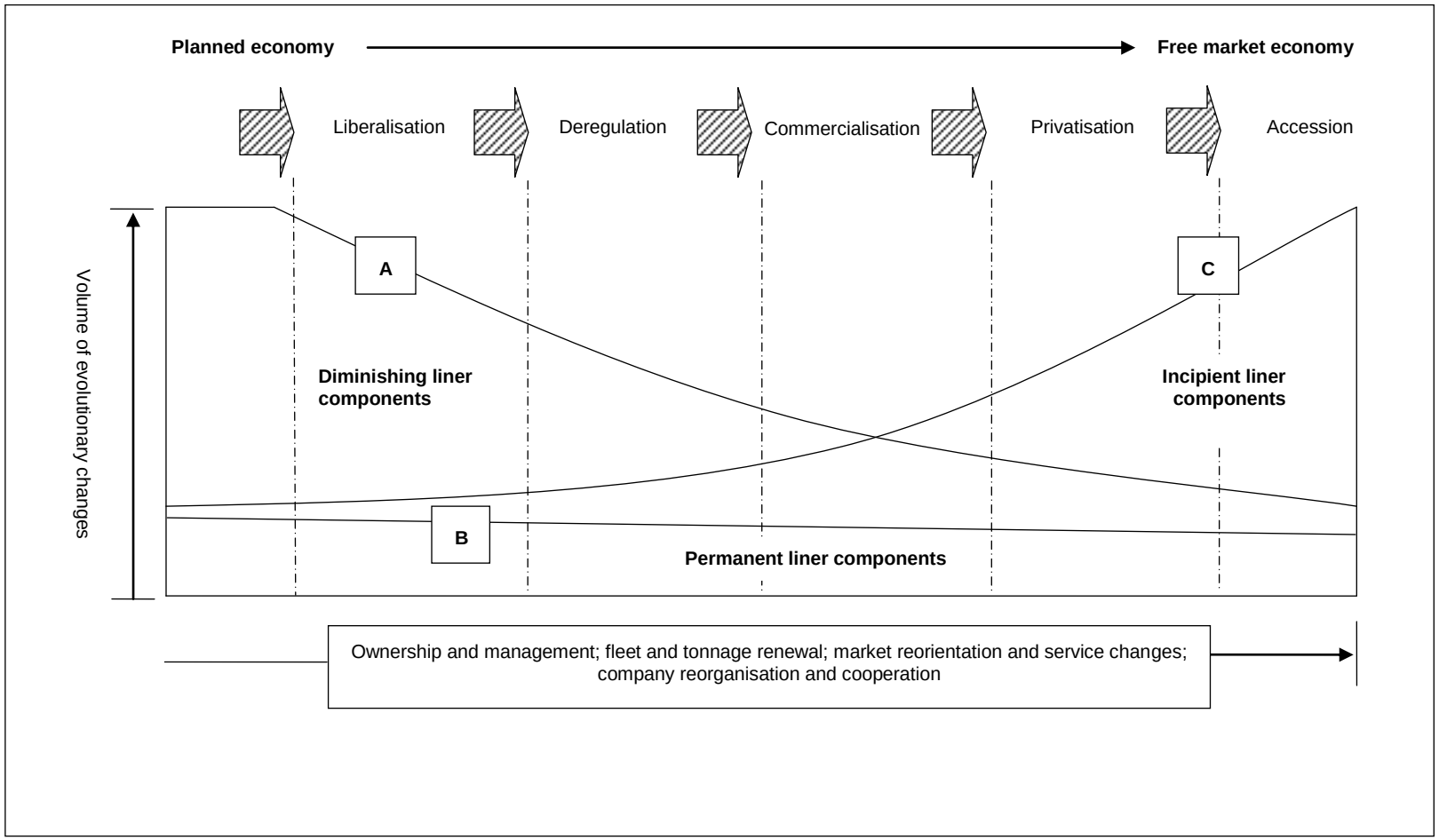

Figure 7.1 The conceptual model (*Source*: Author 2010)

The model permits for the exploration of evolutionary behaviour in Eastern European liner shipping, in terms of the following fields: ownership and management, fleet and tonnage renewal, market reorientation and service changes, and company reorganisation and cooperation. As explained in section 3.2 (Chapter Three), these fields represent the core attributes of the operational framework vital for the operations strategy of the liner shipping company.

The model displays certain characteristics that are common features of an economy in transition. The model acknowledges the starting point as the planned economy, exhibiting the domination of a ruling communist party, and a domination of real socialism and its apparatus over all the forms of economic activity. The transformation of Eastern European liner shipping takes place synchronous with transition from an authoritarian system to a multiparty system of democracy, and a transition from a planned economy based on state-owned domination to a market economy based on private ownership, free competition, a universal financial economy and direct links with the world market. The model portrays the end of transition as the free market economy. In reality it is hard to tell when an economy is leaving the transition, but in terms of this research the aim is for Eastern European liner companies to compete in the free market.

The model allows for the investigation of two categories of evolutionary component in Eastern European liner shipping: those of a tangible, and those of an intangible nature. Tangible components incorporate shipping fleets, cargo handling amenities, port infrastructure, storage facilities, and other technical equipment for modern production and new services. Intangible components encompass regulations stimulating free competition, administration and

ownership, environmental and sustainable development standards, technical solutions inducing further progress, and strategies for finance and profitability.

It is envisaged that not all relationships between Eastern European liner shipping companies and their modes of privatisation and restructuring will be the same, this is because the character of economic legislation in specific countries is different, as is the structure of political and social powers setting the direction of transformation. However, it is still possible to produce a workable model, as the core of transitional restructuring has standard mechanisms inherently applied, and thus the effect on relative liner industries is the same.

The review of communism literature revealed the major problems faced by Eastern European liner shipping companies at the start of transition. It was suggested that the resolution maybe found in the strategic restructuring of liner companies during the transitional years. Bearing in mind that Eastern European shipping and its relationship transitional change has been largely unexplored, it was decided to develop a conceptual model that will permit the exploration and deepening of our understanding of such relationships. Hence, the conceptual model does not seek to solve the problems faced by Eastern European liner companies but to improve understanding that will allow logical decision-making and actions that may contribute towards the creation of successful market based companies operational in the European Union and beyond.

The model permits for the exploration of Eastern European transition, not only through an analysis of the Eastern European liner shipping industry (which it was specifically designed for), but due to its adaptable and simplistic

epistemology, the model may be applied to a range of other industries from primary, secondary and tertiary sectors. This does not devalue the model in terms of the specific nature of the enquiry, rather it provides an opportunity for economic analysts to employ the model to other Eastern European industries operational during the same period of transition, consequently allowing for a meaningful comparison of the applicable behavioural microsystems.

7.2 Evolution of components in transitional liner shipping

The conceptual model demonstrates the process of transition over time for Eastern European liner companies. The model highlights the relationship between three conceptualised evolutionary components which describe the choices made by Eastern European liner companies in terms of fleets, markets and company organisation in relation to economic restructuring processes relevant for the entire industry. Evolutionary components are inevitably interconnected and interdependent. As Eastern European liner companies cease to require components new components are sought for replacement. Moreover, components may be added to the system in a supportive role of long-term (permanent) components such as infrastructure and superstructure.

7.2.1 Diminishing components in Eastern European liner shipping

The collapse of communism brought a changed operating environment for Eastern European liner shipping. It became necessary to abandon certain components that were either unsuitable for the market economic system, technically outdated, or incompatible with international standards of practice. Figure 7.2 illustrates the diminishing components from the conceptual model.

As time passes, the number of components removed from the old system is slowly reduced, demonstrated by the downward curve in the model.

The model demonstrates the significance of disposing a high number of intangible solutions originating from the planned economy at the inception of transition. These may be summarised as: guarantees for monopoly position, favouritism towards state ownership, use of fixed prices, a ban on foreign investments, and a legal obligation to use the services of the national carrier. Conversely, other solutions could not be removed straight away. These solutions required public acceptance, initiation of privatisation and legal representation. These may be summarised as: ownership transfer, central investment in infrastructure and superstructure, and a reduction in state subsidies to bring states in line with European Union competition laws.

In the tangible domain, the model exemplifies a number of components of the Eastern European liner industries inherited from the past, that had resulted from investment blunder, a limited accessibility to advanced materials or contemporary intellectual property which could also be disposed of. Furthermore, solutions that were incompatible with the market economy system, or not compatible with European Union and international standards of practice were also disposed of. Fleet renewal programmes featured heavily here, as the reduction in demand for shipping had led to major cutbacks. The geographical servicing of particular routes was discontinued, as were the carriage of certain cargoes and the servicing of some ports. State ownership of shipping fleets and assets became less common, whilst traditional partnerships between former socialist shipping corporations broke up and many joint services ended.

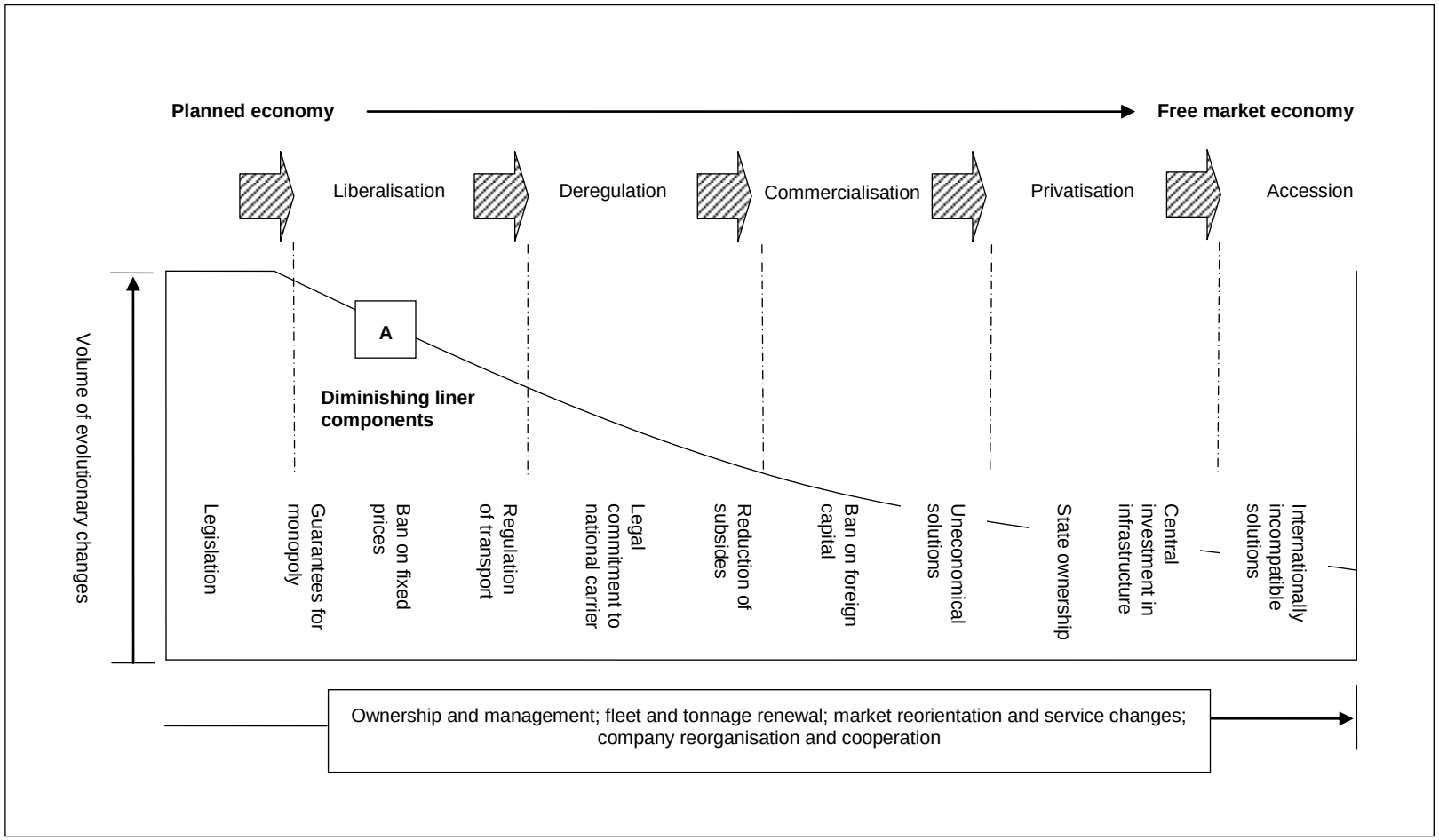

Figure 7.2 The conceptual model: diminishing components in liner shipping during transition (*Source*: Author 2010)

7.2.2 Permanent components in Eastern European liner shipping

Unlike many other industries, liner shipping under communism became customised for survival in international markets, since it had to compete directly with shipping interests worldwide. To achieve this, the industry managed and operated a number of competitive and flexible components. Although no arrangement is perpetually indispensable, these components are preserved as permanent solutions at least in some fragmentary form in the market economy system. It is likely that such solutions will remain in existence for evolutionary changes, for a period of 25-35 years. Figure 7.3 shows the permanent components from the conceptual model. Notably, as time passes the number of components removed from the old system is slowly reduced in correlation with the increase in incipient components that provide new solutions and more durable technologies for Eastern European liner shipping companies.

In the tangible domain, the model demonstrates the need for Eastern European liner companies to maintain certain components from the planned market economy for an extended period of time. Former profitable geographical service patterns and transit markets remained operative under the new market system. The transportation of certain cargoes was kept, as was the serving of particular ports. Elements of commercial management still exist, as do the activities in technical management. Moreover, various forms of state protection survive via liner consortias, while some form of state ownership still remains due to lack of foreign and national interest. In terms of ports and infrastructure, modernised container and multipurpose cargo terminals and intermodal transport links continues, as does the operation of specialised tonnage suitable for further service under market conditions and increased international competition.

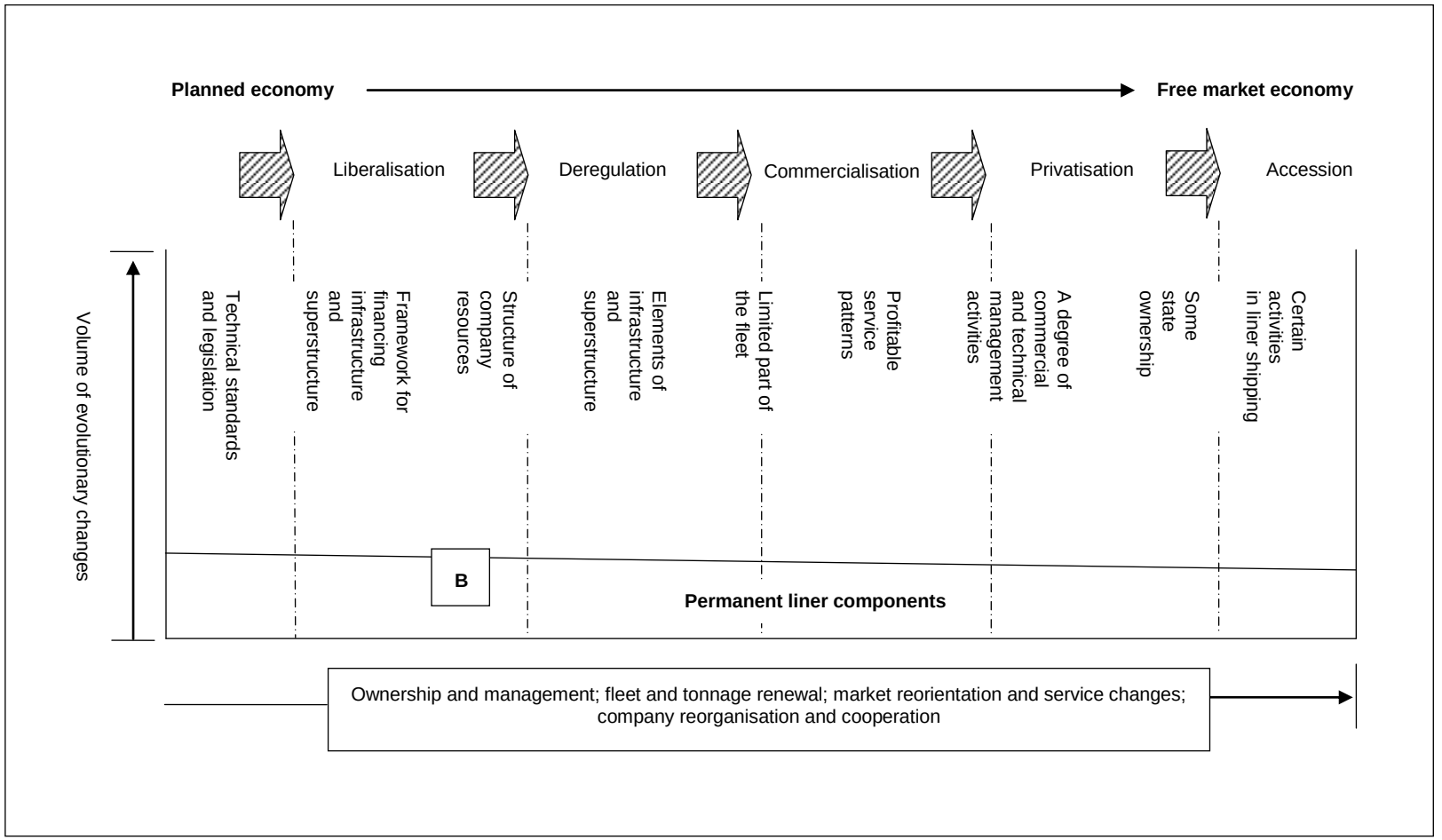

Figure 7.3 The conceptual model: permanent components in liner shipping during transition (*Source*: Author 2010)

The model also highlights the importance of retaining a number of intangible solutions from the planned economy. The majority of these comprise of technical standards based on the regulations of the United Nations or of the International Maritime Organisation. In addition, a fundamental framework for a system for financing infrastructure based on state and local budgets still exists, as does a similar situation in terms of companies' resources and bank credits.

7.2.3 Incipient components in Eastern European liner shipping

One of the most distinctive features of restructuring in Eastern European liner shipping during the period of transition is the growth of incipient components stimulating further development. Here, main ideas concern improving competitiveness in international markets, restoring financial norms, improving safety standards and reducing ecological externalities. Figure 7.4 illustrates the incipient components in Eastern European liner shipping. As time passes more components are introduced, representing continued commercialisation and adjustment to the European Union, as shown by the upward curve in the model.

In the tangible domain, the model highlights the need for Eastern European liner companies to introduce certain components. Here, former fleet strategies and functions have begun to be replaced with principles of self-dependence, self-governance and self-financing. Eastern European liner companies have begun to adapt to European Union operating standards. In particular, vessel class and tonnage are being modernised according to the growing demands of shippers. Domestic and foreign infrastructure continues to expand in line with multimodal transport. Active manning policies are being implemented, managerial techniques improved, and shore-based activities brought in-house.

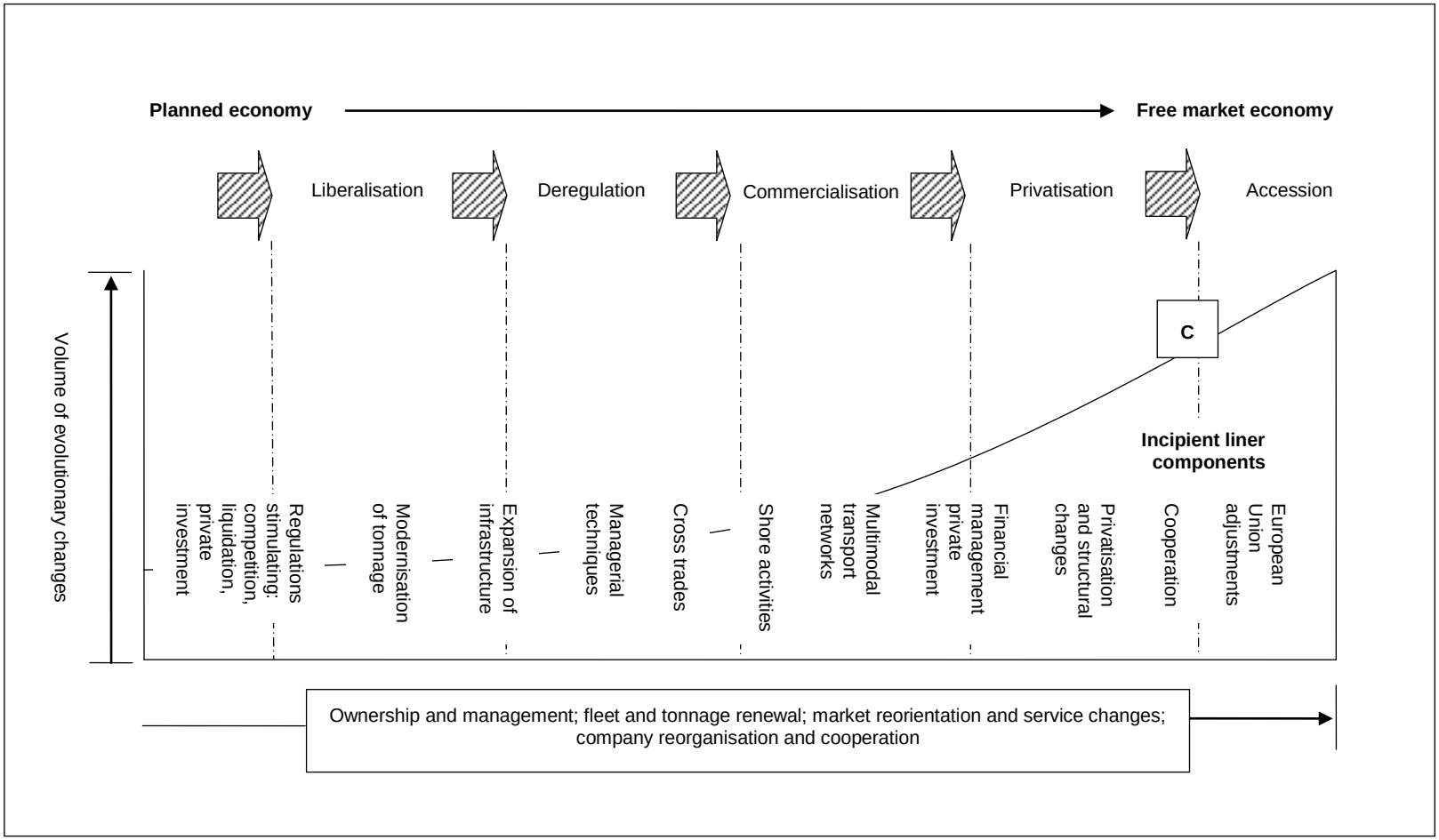

Figure 7.4 The conceptual model: incipient components in liner shipping during transition (*Source*: Author 2010)

Former necessary participation of the home-based fleet in transporting domestic sea-borne trade has been mostly replaced by the activities of liner shipping expanding into international cross-trade and transit markets. Eastern European transitional shipping has also moved towards geographical and product niches that are largely determined by major carriers. Cooperation and the joining together with other shipping companies has started to become necessary.

The model also demonstrates the significance of introducing a high number of intangible solutions at the inception of transition. The necessity for incipient components initially arose in the intangible domain of legislation and regulation. The introduction of market-based economic regulations became essential to stimulate the establishment of new enterprise, accelerate restructuring, encourage competition, and attract foreign investment for privatisation.

7.3 Microanalysis of evolutionary restructuring

To understand the process of evolutionary restructuring, one must consider the findings from the microanalysis of the model. In the course of restructuring in Eastern European liner shipping it is not the case that conceptual components from a specific group (i.e. diminishing, permanent and incipient) are initiated on a perfect continuum. In reality components are abolished or introduced as specific economic, political and social events occur. This does not detract from the correlation between the three conceptual groupings; rather it considers the wider operating environment of Eastern European liner shipping companies.

An illustration of the microanalysis of diminishing components in Eastern European liner shipping is provided in Figure 7.5. From the model one may see

a wave like formation of singular economic, political or social events prevalent over time during the period of transition. As each event occurs it initiates a response from Eastern European liner companies. Certain components are abandoned from the old system that are deemed to be incompatible or uneconomical for the market economy system. Components may only be abolished if they coincide with the applicable legal, economic, political and social environment. Thus, components may require a change in the economic situation to bring about new legislation to allow them to be removed. For example, the liberalisation of Eastern European shipping achieved: the removal of regulatory controls over pricing fixing; the end of transport monopolies; the elimination of a legal commitment to national carriers; the termination of discriminatory shipping practices for home fleets concerning access to markets, ports and infrastructure; and the compliance with European and international legislation, which in turn initiated the diminishment of poor quality tonnage.

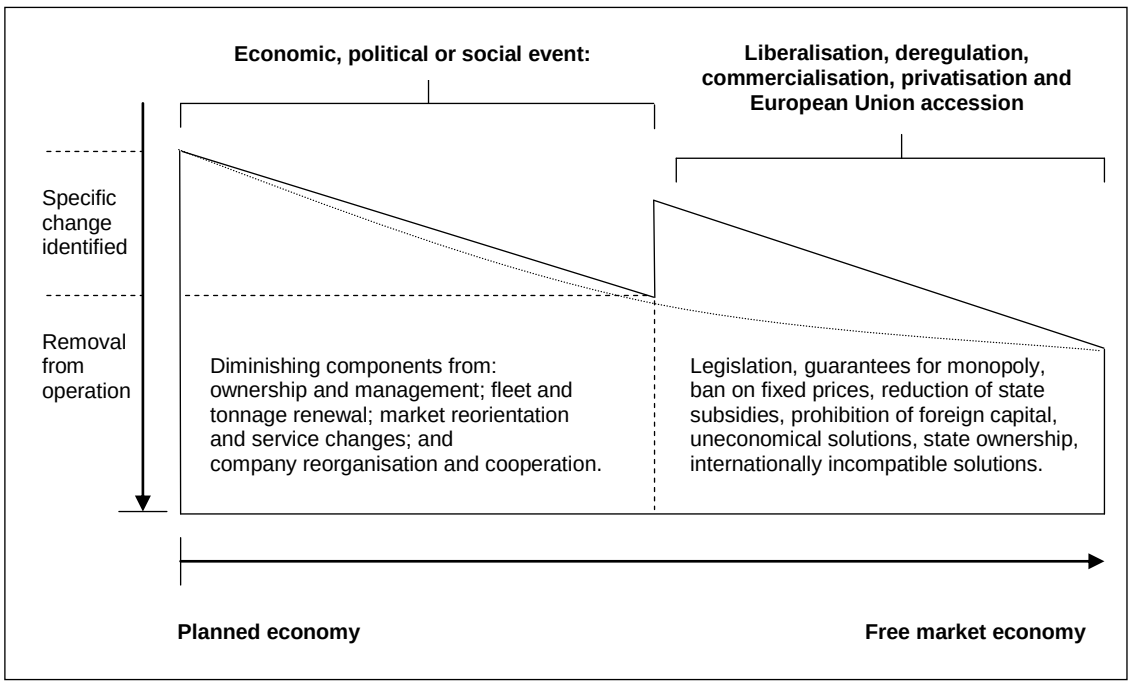

Figure 7.5 Microanalysis of diminishing components (*Source*: Author 2010)

A microanalysis of permanent components in Eastern European liner shipping is provided in Figure 7.6. From the model one may see a similar wave like formation of singular economic, political or social events common over time during the period of transition, however in the case of permanent components the period in which components from Eastern European liner shipping are phased out is substantially greater, shown by the larger longitudinal wave length. Generally, permanent components may take 30-35 years to replace, however in some cases the period may be much greater, usually due to cost.

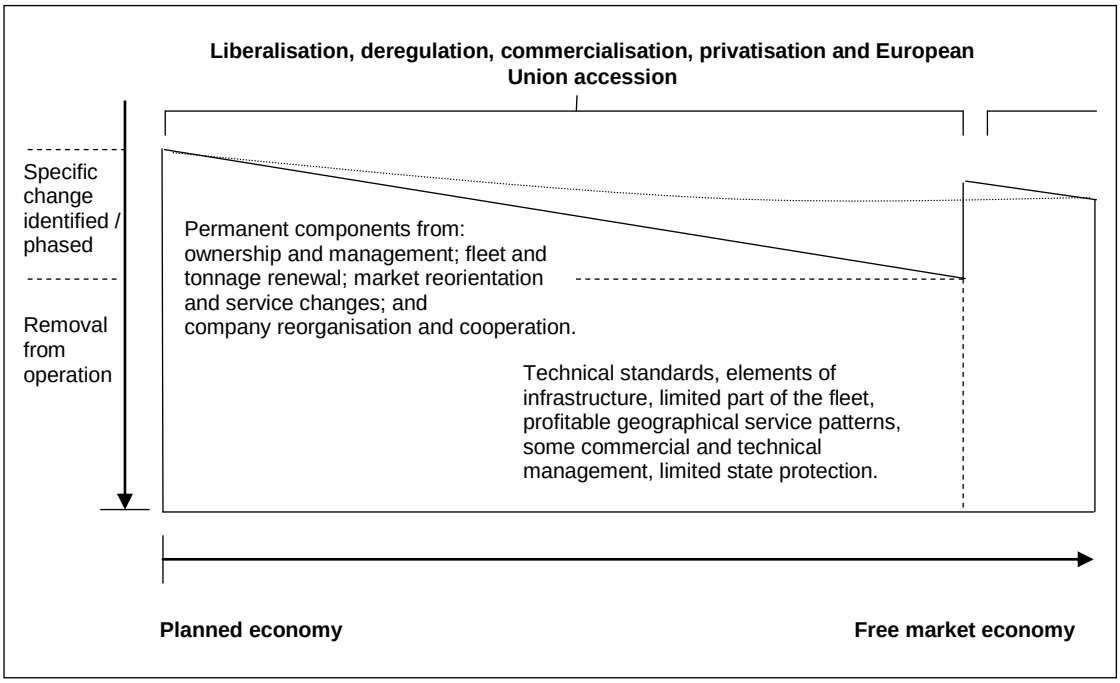

Figure 7.6 Microanalysis of permanent components (*Source*: Author 2010)

Permanent components in Eastern European liner shipping are less likely to be affected by the periodic economic and political changes as and when they happen. Rather, permanent components are more likely to respond to the overall implications of Eastern European transition. For example, a valuable inheritance for Eastern European liner shipping is the containerised terminals in

seaports and the widely developed railways network for intermodal transport. Since, it is likely that these will not be replaced for many years after the period of transition, one may assume that their removal will be independent of the timing of individual transitional processes. Nonetheless, as with all Eastern European liner components they are still interconnected to such processes.

An amplification of the microanalysis of incipient components in Eastern European liner shipping is provided in Figure 7.7. From the model, one may see a wave like formation of singular economic, political or social events prevalent over time during the period of transition, however in the case of incipient components as each event occurs certain components are introduced by Eastern European liner companies. Components may only be brought about if an applicable legal, economic and social environment has developed.

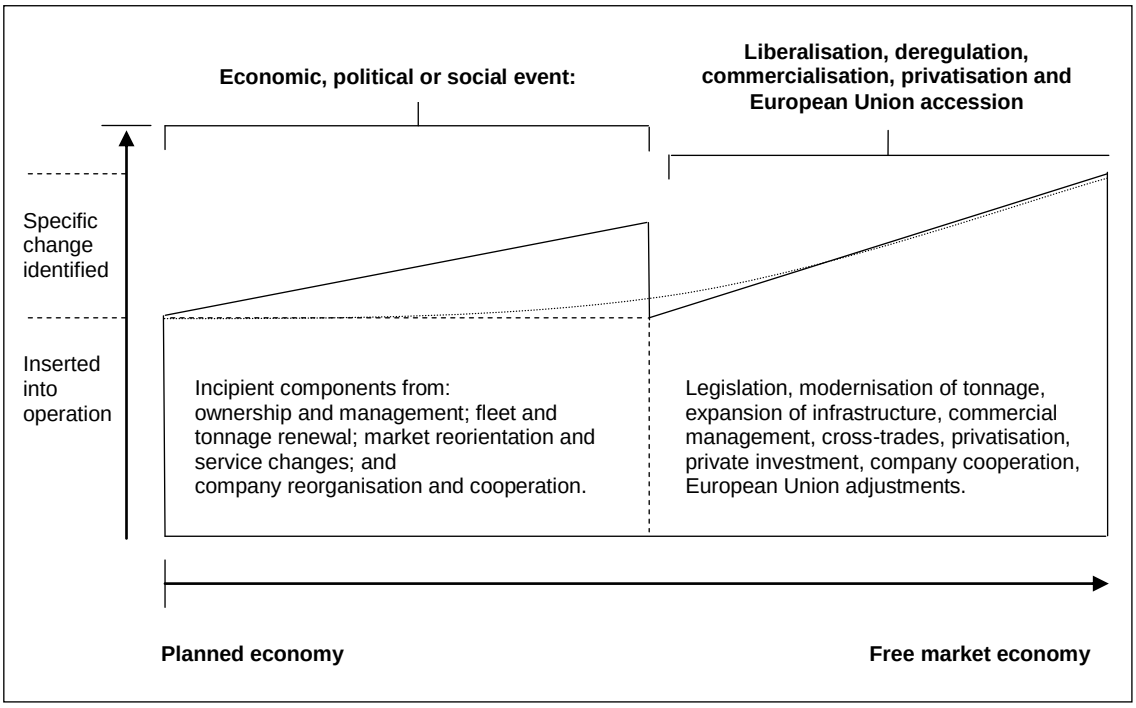

Figure 7.7 Microanalysis of incipient components (*Source*: Author 2010)

Components may require a change in the economic situation to bring about new legislation to allow them to be introduced in the sector. For example, privatisation of Eastern European liner companies required the acceleration of liquidation or restructuring of unprofitable shipping firms, stimulation of competition on the markets, and the securing of private and foreign investment. Notably, European Union accession has brought about the introduction of many new components for Eastern European liner shipping so as to improve the transfer of shipping in a new competitive and regulated market environment.

7.4 Contextual drivers in Eastern European liner shipping

A preliminary framework of the contextual drivers operational in the conceptual model is provided in Figure 7.8. The framework illustrates the restructuring process of Eastern European liner shipping from communism to the free market and European Union membership. A division is made between the evolutionary changes that derive from the existing macroeconomic programmes of the whole economy, such as ownership, legal, social legal, and economic changes (position 1), and those evolutionary changes that are sector specific for the liner industry, such as structural, functional, spatial and technical (position 2).

The model illustrates the influences of such contextual drivers during transition. Contextual drivers are used because of their ability to accommodate the broad nature of economic, political and social data, whilst highlighting their interconnectivity. The model identifies European Union accession as a critical element of transition (position 3). The transformation of Eastern European liner shipping has been fundamentally influenced by integration with the European Union. Eastern European countries have begun to harmonise existing maritime frameworks and infrastructure with that of the European transport market.

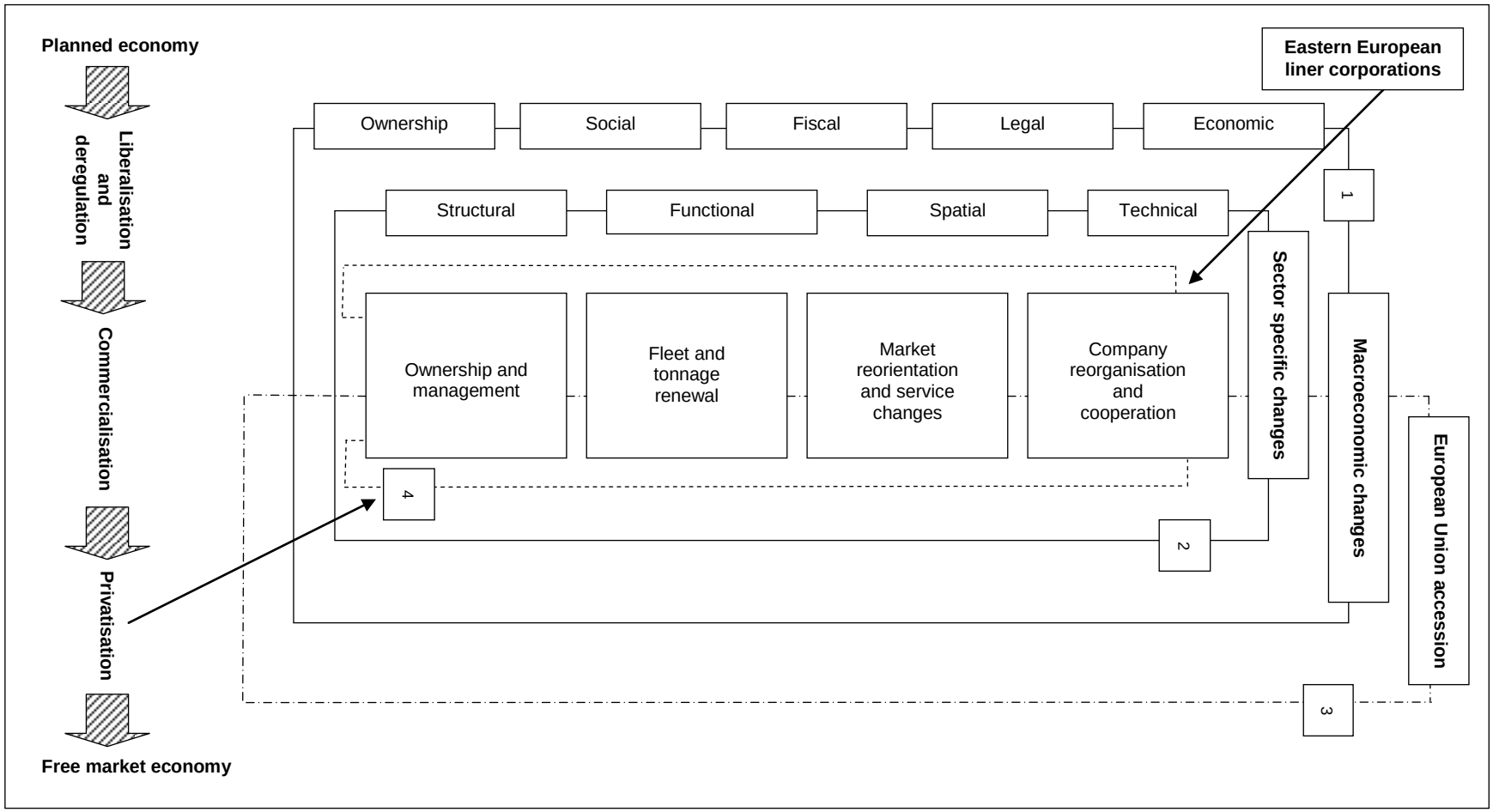

Figure 7.8 Transitional liner shipping contextual drivers (*Source*: Author 2010)

In terms of Eastern European liner shipping, the effect of this integration is expressed in the rapid enactment of new legislation to promote competition, increase protection of seafarers, and reduce environmental emissions. It is also expressed in the technical transformation of shipping fleets and infrastructure. In addition, the model also highlights the significance of privatisation (position 4) as one of the most decisive factors for successful transition. Privatisation must be recognised as the core of the transition processes in Eastern European liner shipping companies. Here, newly structured ownership and property rights, and the incentives arising from these, can lead to an improvement in commercialisation, restructuring, and an increase in efficiency and profitability. As can be seen from the model, privatisation has a fundamental effect on the individual fields of ownership and management, fleet and tonnage renewal, market reorientation and service changes, and company reorganisation and cooperation. Privatisation brings about the necessary funding from national and foreign investment to aid restructuring processes and efficiency improvements.

7.5 Specification of theoretical hypotheses

In order to assess the model empirically, certain theoretical propositions or hypotheses have to be specified. The hypotheses are based on the above discussion of the model and its various elements. Each of the research hypotheses is specified below in the five conceptual categories that structure the study and represent the main stages in transitional liner shipping as identified in the preceding chapters. They are: liner shipping under communism; liner shipping and systematic transition; formation of evolutionary restructuring in liner shipping; privatisation and strategic restructuring; and adaptation to the single European transport system. The conceptual categories lead to a set of

conceptual hypotheses, also identified in the preceding chapters. Each of these conceptual hypotheses then leads to a set of conceptual statements, which form the basis for the empirical work introduced in the following chapters.

7.5.1 Conceptual category 1

Liner shipping under communism

Conceptual hypothesis 1.1

Liner shipping under communism lagged behind its counterparts from the Western world. Fleets and infrastructure were out-dated, markets and service offerings uneconomical, and management and ownership structures ineffective.

Conceptual statement 1.1.1

Up until mid-1989, the majority of Eastern European liner shipping companies were owned, financed and managed by a series of state monopolies.

Conceptual statement 1.1.2

Two main types of socialist influence over Eastern European liner shipping related activities may be identified. Firstly, socialist domination of political and macroeconomic shipping goals. Secondly, centralisation of national fleet structure to implement national shipping policy and foreign targets.

Conceptual statement 1.1.3

The main functions of liner shipping under communism were: to transport goods for national foreign trade economically (i.e. run fleets, ports, agencies etc.), to provide some form of security, and to earn hard currency wherever possible.

Conceptual statement 1.1.4

The outcome of centralised administration was a tendency to neglect the whole of the under-funded Eastern European liner shipping industry, thus ensuring poor quality fleets and infrastructure, and congestion and bottlenecks.

Conceptual statement 1.1.5

By 1989, the majority of Eastern European liner shipping companies lacked the skills to compete, the investment to fund new activities, the infrastructure to survive, and the organisation to provide a competitive framework.

7.5.2 Conceptual category 2

Liner shipping and systematic transition

Conceptual hypothesis 2.1

Eastern European liner companies have undergone restructuring changes largely without the aid of state guidance and a transitional model to follow, in their process of changing into commercial companies in market economies.

Conceptual statement 2.1.1

Eastern European liner companies have not been able to rely on an established transition theory in their course of restructuring into profitable entities operational in competitive market economies.

Conceptual statement 2.1.2

Transition decisions have been dictated by specific national framing conditions. They have often been irregular reactions to short-term changes, influenced by mechanisms of supply and demand, and/or private interests.

Conceptual statement 2.1.3

Changes in the political framework of Eastern European liner shipping and the market transition of the Eastern European shipping companies concerned did not match each other, nor did they run synchronously.

Conceptual statement 2.1.4

Although liberalisation and deregulation led to strong competition and to the abolition of state protection, the installation and successful operation of new shipping political frameworks was pending.

Conceptual statement 2.1.5

Liner shipping during the period of transition had to undergo changes under circumstances of widely absent state support, otherwise common in the shipping sector in market economies.

7.5.3 Conceptual category 3

Formation of evolutionary restructuring in liner shipping

Conceptual hypothesis 3.1

Transitional changes in Eastern European liner shipping portray evolutionary components (diminishing, permanent and incipient), which describe the choices made by liner companies in relation to the wider operating environment.

Conceptual statement 3.1.1

Transitional changes in Eastern European liner shipping has been carried out within the framework of the macroeconomic stabilisation-cum-transformation

programmes of the whole economy, such as ownership, fiscal, legal, economic and social changes.

Conceptual statement 3.1.2

Some forms of Eastern European liner shipping restructuring are deeply customised for the unique function and technical operation of Eastern European liner companies, such as structural, functional, technical and spatial changes.

Conceptual statement 3.1.3

During the period of transition, Eastern European liner shipping abandoned components in the industry that were: incompatible with the market economic system, aggravating efficiency, technically outdated, and/or incompatible with European Union regulations and policy and international standards of practice.

Conceptual statement 3.1.4

During the period of transition, Eastern European liner shipping companies retained components in the industry that featured: internationally competitive solutions, high value infrastructure and superstructure, employee expertise, and specialised tonnage suitable for further service under market conditions.

Conceptual statement 3.1.5

During the period of transition, Eastern European liner shipping companies introduced new components in the industry to: stimulate the establishment of new enterprises, encourage competition on the markets, attract foreign investment and private enterprise, and increase efficiency and service quality.

7.5.4 Conceptual category 4

Privatisation and strategic restructuring

Conceptual hypothesis 4.1

The transfer to private ownership in Eastern European liner shipping may help to bring about fundamental restructuring processes required as part of transition, resulting in improved efficiency and increased investment.

Conceptual statement 4.1.1

From a systemic point of view privatisation is the most decisive factor for successful transition in Eastern European liner shipping.

Conceptual statement 4.1.2

Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability.

Conceptual statement 4.1.3

Privatisation will support Eastern European liner shipping companies with the acceptance of the laws and principles of operation characteristic of the European Union and international transport market.

Conceptual statement 4.1.4

Privatisation of Eastern European liner shipping cannot be removed from a succession of fundamental restructuring needs. Core changes are essential in the fields of: ownership and management, fleets and tonnage, markets and service offerings, and company organisation and cooperation.

Conceptual statement 4.1.5

Poor financial conditions, economic and political instability, slow rates in the increase of production and inherent socialist foundations, continue to hamper the privatisation processes of Eastern European liner shipping companies.

7.5.5 Conceptual category 5

Adaptation to the single European transport system

Conceptual hypothesis 5.1

Accession to the European Union may be seen as a fundamental element of transition in Eastern European liner shipping, bringing about an acceleration in the modernisation of fleets and a quality improvement in shipping services.

Conceptual statement 5.1.1

The process of transition in Eastern European liner shipping is influenced by the European Union. Just as no model of economic transition exists so no pattern has been formed for the adaptation of liner shipping to the European Union.

Conceptual statement 5.1.2

The objectives of shipping policy in Eastern European countries should in principle be the same: fair competition, privatisation encouragement, modernisation of fleets and infrastructure, removal of barriers to trade, improvement of the quality of service, and environmental protection.

Conceptual statement 5.1.3

The integration of Eastern European liner shipping to the single European transport market has been expressed in the endorsement of new legislation of

transport directives. It is also expressed in the technical transformation of company structure, organisation and operations.

Conceptual statement 5.1.4

Integration with the European Union transport policy will bring benefits to liner shipping through: increased efficiency by elimination of formalities at ports, acceleration of modernisation of fleets as a result of the range of financing, and quality improvement in services due to deeper organisational integration.

Conceptual statement 5.1.5

It is likely that the level of adjustment to European Union transport policy in Eastern European liner shipping will actively affect the rate and the scope of adaptation processes in other sectors of the economy.

7.6 Original contribution

It is important to consider at this stage whether the conceptual model designed and the predicted outcomes with make an original contribution to research, satisfy the study's objectives and have significant practical usefulness.

Many aspects of this research, should contribute towards its originality. To begin with the broad objective of the thesis is to provide an analysis of the level of adaptation to the demands of the free market placed upon the Eastern European liner corporations by the post-1989 economic, political and social transformations. To achieve this, the study aims to develop a systematic transition model to identify the process of strategic restructuring in Eastern European liner shipping from the planned economy to the free market economy.

The research has been confined to analyse the condition of Eastern European liner shipping before and after the changes which have taken between 1989 and 2010. The model achieves this by considering the type and volume of evolutionary components (diminishing, permanent and incipient) in relation to: ownership and management, fleet and tonnage renewal, market reorientation and service changes, and company reorganisation and cooperation.

The study aims to assess the impact of Eastern European transition upon Eastern European liner shipping, and distinguish the key areas of change and the relationship of changes to the liner industries. The model achieves this by selecting the most important elements of transition that have a direct impact on Eastern European liner shipping, and are thus heavily influential in the overall restructuring processes of Eastern European liner companies, namely: liberalisation, deregulation, commercialisation, privatisation and European Union accession. The impact may be measured by considering the volume of evolutionary changes that occur in Eastern European liner shipping companies.

Moreover, the research also attempts to examine the adaptation of Eastern European liner shipping industries to the European Union transport system as an element of transition. The model achieves this by placing European Union accession as an equal element of restructuring in Eastern European liner shipping. Specifically, the model permits one to explore the significance of accession in terms of the transformation of liner shipping by considering the evolutionary components that occur prior to and during the period of European Union accession. One may notice the high number of incipient components that occur as part of the adaptation process to the European Union single market. It

may be assumed from this that European Union accession is indeed a critical part of transition and strategic restructuring in Eastern European liner shipping.

In addition to making an original contribution through the development of understanding in the sphere of Eastern European economic, political and social transition and Eastern European liner shipping change, the research also aims to make an original contribution by identifying appropriate techniques for utilisation in scientific inquiry in the maritime industry. The extent to which an original contribution has been made is reviewed in detail in chapter nine.

7.6 Practical application and model usefulness

As stipulated in chapter one, the research enquiry should aim for the advancement of theoretical knowledge with practical applicability and usefulness. The advancement of knowledge comes from the development of theory and the improvement of practice. It is envisaged that the proposed model and its empirical development will have significant applications for Eastern European, European Union and other worldwide liner shipping practitioners.

The model will be empirically developed and tested through the accumulation of data from liner shipping practitioners. Its practical usefulness comes from the fact that industry users, such as managers and directors from Eastern European liner shipping companies, may influence streams of decisions carried out in the model. Such decisions may involve pursuing new structures and strategic alternatives in the process of restructuring in liner shipping. This information has potential utility for managers from Eastern European liner companies, since it allows them to analyse the effect of transition upon liner

shipping, and thereby identify the most advantageous restructuring strategies for each transition phase. Hence, uncovering implicit transition frameworks may provide Eastern European shipping managers with some control over them.

Chapter one illustrated the limited attention given to Eastern European liner shipping companies with regard to the period of transition. The importance of relationship development between Eastern European political, economic and social reform and Eastern European liner shipping change was established. The model aims to identify the dimensions implicit in relationships in Eastern European liner shipping and Eastern European transition. Revealing these dimensions and classifying them in terms of evolutionary components will provide a greater understanding of relationship strengths and weaknesses. Eastern European liner shipping companies may be able to use the classification for positioning their company in accordance with their transitional objectives, as guided by their membership obligations to the European Union. Determination of relationship profiles on the basis of company characteristics will provide a greater understanding of the progression of Eastern European liner shipping during the last two decades. On this basis, liner shipping managers and directors will be better informed when taking decisions with regard to fleet and markets, and company organisation and management.

The profiles of relationships will also provide important insights with regard to the organisational characteristics of Eastern European liner companies and the association characteristics of transition. Through knowledge of the association between transitional change and organisational characteristics, liner companies will be able to identify the type of relationship that exists between themselves

and their operational environment, and what may be required in order to improve the relationship. It will also be possible for managers to understand that changing conditions in transition may affect the organisational characteristics of their shipping companies, and thus take actions to prevent adverse effects.

The literature review of Eastern European liner shipping facilitated the identification of problems encountered by Eastern European liner shipping companies up to the present day. Identifying the characteristics present in Eastern European liner shipping, prior to and during the period of transition may provide an explanation for the existence of such problems as: archaic fleets, limited network services, over-manned positions, inadequate investment and poor management. If this is the case, Eastern European liner shipping companies will be able to take appropriate corrective action and combat the problems encountered. Furthermore, by communicating the results of the study to Eastern European liner shipping companies, in a way that relates to their current market activities, it may be possible to provide a stronger foundation for the operation of service provision in Eastern European liner shipping.

Finally, it is envisaged that application of the model will not only be useful to managers and directors from Eastern European liner shipping companies, but will also be of benefit to other European and international liner shipping companies, bearing in mind the importance of Eastern European liner shipping in European and international shipping, and the significant value and distinct advantages of relationship development in business. Accordingly, such competitors may call upon the model to aid understanding of the effect of transition upon shipping, and thereby take advantage of the fact that transitional

liner shipping in the Eastern European countries has largely lost touch with global activity and market decisive players, although broad privatisation and restructuring has taken place. Managers may use the model to forecast events and draw up counter business plans to retain their competitive advantage. European and international liner operators may also look for the advantages and weaknesses of their new found competitors and take the opportunity to either exploit these, strengthen their own operational activities in defense, or choose to join/merge with Eastern European liner shipping companies.

7.7 Conclusion

This is study is of particular interest as it is the first attempt to develop a transition model to identify the process of Eastern European liner shipping from the command to market economy, and of topical significance as the precedence of liner shipping reflects the growth of lighter industrial sectors in the region. It is also of importance as it considers the impact of accession to the European Union and the implications of this in terms of the adaptation of liner shipping.

The results from the content analysis highlighted a number of constructs from transition literature that are hypothesised as influential in the restructuring processes of Eastern European liner shipping. Utilising these constructs, the conceptual model was developed to provide a typology of the relationship between Eastern European transition and Eastern European liner shipping change. The development of the model is based on the premise that characteristics of Eastern European liner shipping change may be associated with the macroeconomic, political and social organisational characteristics of transition. The conceptual model demonstrates the process of transition over

time for Eastern European liner shipping companies. The model highlights the relationship between three interconnected and inter-dependent evolutionary components which describe the choices made by Eastern European liner shipping companies in terms of fleets, markets and company organisation in relation to restructuring processes relevant for the entire industry.

It is anticipated that the establishment of a transition model will enable Eastern European liner companies to analyse the effect of transition upon regional liner shipping, and thereby identify the most advantageous restructuring strategies for each phase, while other European and worldwide liner competitors may also use the model to gain greater understanding of the transitional processes of former socialist liner shipping fleets and their level of adaptation to the single European transport market in order to exploit any arising weaknesses.

In order to test the model empirically, several hypotheses were formulated to represent each of the five conceptual categories that structure the study and represent the main stages in transitional liner shipping. They are: liner shipping under communism; liner shipping and systematic transition; formation of evolutionary restructuring in liner shipping; privatisation and strategic restructuring; and adaptation to the European Union transport system. The next chapter describes the empirical research method employed to test the conceptual statements developed from the hypotheses of the research enquiry.

CHAPTER EIGHT

The Empirical Research Method

To analyse the relationship between Eastern European economic, political and social transition and Eastern European liner shipping change, it is essential to implement an appropriate methodology by which the conceptual model and related hypotheses specified in chapter seven will be tested in the real world. In determining the type of methodology for data collection, substantial consideration is given to the available and applicable methods and whether these techniques are compatible with the research aims and objectives. The methodology for data analysis will be discussed and presented in chapter nine.

Accordingly, this chapter presents the character and process of the empirical research methodology selected to assess the quality of the conceptual model and related hypotheses in an attempt to provide a typology of the relationship between Eastern European transition and Eastern European liner shipping change. Beginning with the operationalisation of the conceptual model and a discussion of the research purpose and objectives and the ensuing type of data required, the chapter then outlines the choice of method, design of the research instrument, process of Delphi survey methodology, means of consensus, size and selection of panel participants, and the importance of validity and reliability.

In as far as possible, the empirical research design has been structured so as to address the following aspects: (1) identification of the data required in order to connect empirical materials to the conceptual model and the conceptualised hypotheses (McBurney and White 2012); (2) identification of the most feasible methods for data capture and the development of research instruments for data

collection, with a view to the envisaged analysis of the particular type of data (Bryman 2012); and (3) identification of the most appropriate source for primary data collection (Matthews and Ross 2010). The data capture section (stage 2) in Figure 8.1 illustrates the major issues that will be considered in this chapter.

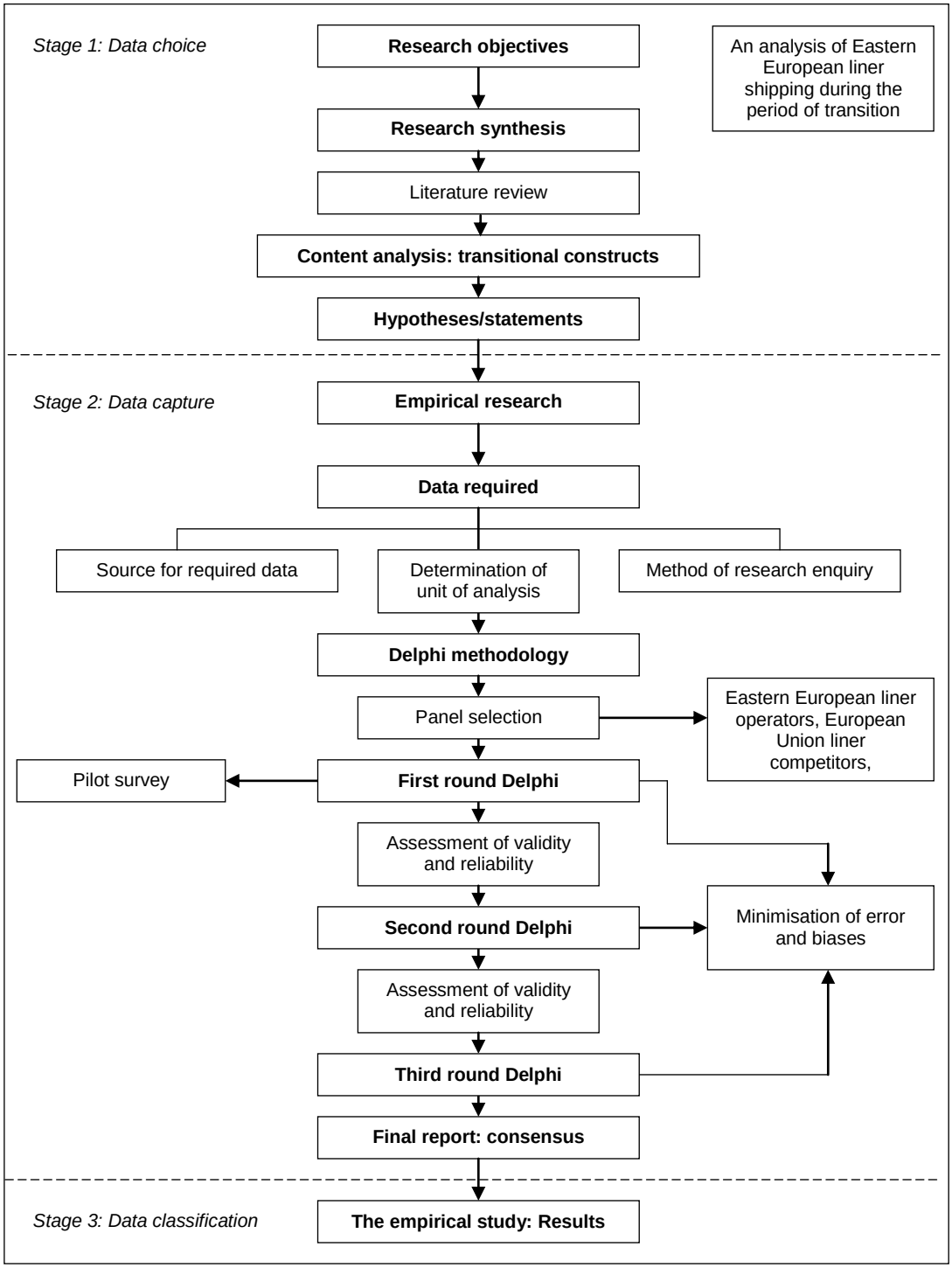

Figure 8.1 Operationalisation methodology (*Source*: Author 2010)

8.1 Research purpose and objectives

It is essential to outline a framework of research aims and objectives that will guide methodological development. The following objectives have been set:

(1) To identify the situation of Eastern European liner shipping under communism, specifically in terms of: ownership structures; operational functions; fleets and markets; productivity; and shipping political frameworks;
(2) To characterise the situation of Eastern European liner shipping during the period of systematic transition, specifically in terms of: transition theory models; shipping political frameworks; and state aid and support;
(3) To identify the formation of evolutionary restructuring in Eastern European liner shipping, specifically in terms of: diminishing, permanent and incipient components; macroeconomic changes; and sector specific changes;
(4) To identify the utilisation of privatisation as a mechanism of restructuring in Eastern European liner shipping, specifically in terms of: the advantages of newly structured ownership rights; and current barriers to privatisation;
(5) To characterise the adaptation of Eastern European liner shipping to the European transport system, specifically in terms of: the utility of European Union accession as an element of transition; adaptation theory models; shipping political frameworks; and interrogational aspects for shipping fleets.

The purpose of this study is not to test the relationship perceptions of industry-users, academics and government officials, but to identify and describe them. The limited amount of scientific research in the subject area means that the research is exploratory. Hence, the valuable contribution of this empirical study is vested in identification, classification and description rather than explanation.

8.2 Data required

Since the overall research aim is to ascertain the association between Eastern European transition and Eastern European liner shipping change, the data required for this research may be profiled into four areas, namely: ownership and management, fleet and tonnage renewal, market reorientation and service changes, and company reorganisation and cooperation. From these, the data is analysed to distinguish between organisational and relationship characteristics of Eastern European liner companies and economic and political transition. Figure 8.2 provides an illustration of the schematic data requirements.

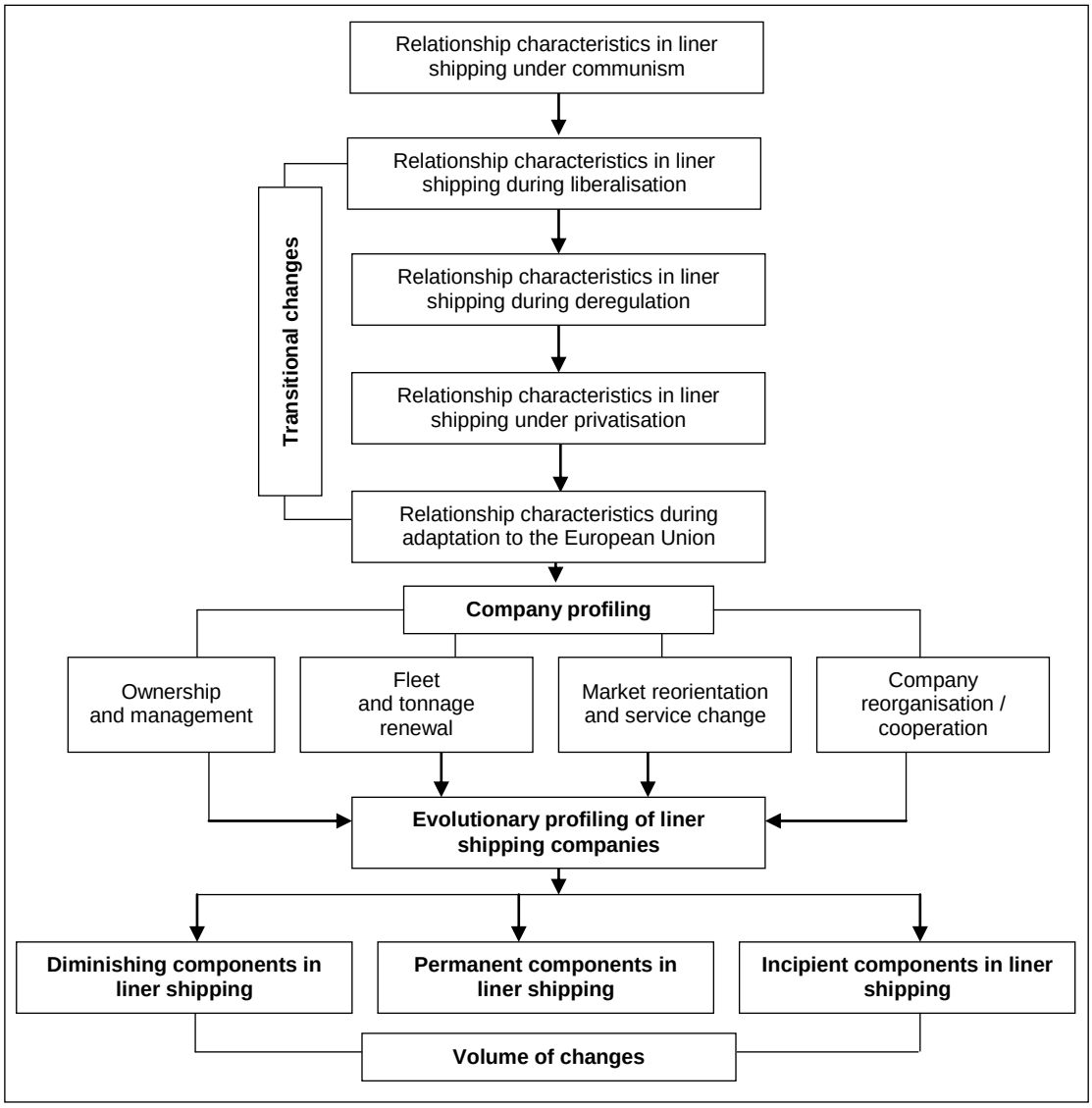

Figure 8.2 Schematic of data requirements (*Source*: Author 2010)

The first type of data requires the identification of the operational and functional characteristics of Eastern European liner shipping under communism. This is to provide a benchmark for the analysis of the extent of transitional changes which have taken place in Eastern European liner shipping. The second type of data requires the investigation of the association between the relationship profiles and organisational characteristics of Eastern European liner shipping during the strategic restructuring processes of: liberalisation, deregulation, privatisation, commercialisation and European Union accession. Such processes are highlighted as key transitional constructs in chapter six. The third, and final, type of data requires the identification of the volume of evolutionary changes in Eastern European liner shipping, specifically in terms of diminishing, permanent and incipient components. The type and range of variables present in particular relationships will be elicited directly from participants of the primary data.

8.3 Choice of methodology in a transitional liner shipping context

The choice of a qualitative or a quantitative methodology will be guided by the objectives of the research, and the ease with which the required data may be retrieved by employing one or the other method. Bearing in mind the aims and objectives of the research (as stipulated in Chapter One), a combination of qualitative and quantitative techniques towards data capture and analysis will be utilised in this study. This is because the elicitation of relationship characteristics from Eastern European liner shipping restructuring, requires a flexible and adaptable approach that will capture the full richness of the data.

Hence, what is envisaged is primarily to use a qualitative approach to capture the relationship dimensions of transitional liner shipping. In order to investigate

the possibility of a correlation between economic, political and social aspects of transition and Eastern European liner shipping evolutionary change, it is essential to design an instrument that will facilitate utilisation of statistical methods of analysis regarding what respondents/experts say. On the other hand, a statistical quantitative instrument is to be utilised for the collection of data determining company profile and productivity assessments.

The use of both methods is feasible as qualitative and quantitative methods are not mutually exclusive, but are logically independent and can therefore, be mixed and matched. The quantitative approach implies gathering specific information on many cases of transitional liner shipping, and then looking for a pattern in the variables. This aspect allows confidence in accepting reliability of the research findings. The qualitative approach in contrast, emphasises the importance of the context in understanding the issue. In this approach, the aspects of the issue are often viewed in the context of the case and information is needed at such a depth as to give more detail on the examined statement.

Since this study seeks the opinion of industry experts on ideological issues as well as obtaining attitudes concerning the application of this ideology to the Eastern European liner shipping sector, it was deemed likely that a quantitative survey would give invalid results, since the respondent may not understand the full meaning behind the hypotheses of the survey. A more qualitative approach would enable a depth of response not possible in a quantitative survey, but nevertheless desirable in a topic with such limited previous research.

8.4 Qualitative approaches

The three main techniques for the application of qualitative research are: group discussions or focus groups (Berg 2008), in-depth interviews (structured, semi-structured and unstructured) (Wengraf 2004) and questionnaires or surveys (C). Figure 8.3 illustrates the type of qualitative research available.

Adams *et al* (2004) denotes the process of group discussions or focus groups as involving the researcher and a specific assemblage of people. This type of research method can be structured, semi-structured or unstructured. The role of the researcher is to act as a moderator or facilitator (Davies 2007). The idea is to spark a dialogue between group members guided by the original research objectives (Denzin and Lincoln 2011). Group discussion has not been selected for this research because a strong personality might dominate discussion and others may simply agree (Flick 2009). Moreover, the group process may inhibit some people from making a full contribution. This is particularly relevant in a society such as post-Soviet Europe, where the social structure is likely to have a strong impact on the participation of group members (Cottam and Roe 2006).

Grix (2004) identifies the process of in-depth interviews as the purposeful exchange of meanings, whereby the main lines of communication are between the interviewer and the respondent, rather than between the respondents themselves as in the case of group discussions. Interviews can be structured, semi-structured or unstructured. In-depth interviews are often appropriate in the case of private behaviour and attitudes, and to explore relationships between attitudes and bahaviour at an individual level (Gilgun 2010). The in-depth interview was not selected as it gives a wide range of opinions but without any attempt to obtain consensus (Yin 2008), it is very time-consuming both in terms

of conducting the interview and analysing the findings (Dawson 2009), and there is generally less opportunity for creativity (Matthews and Ross 2010).

Hannes and Lockwood (2011) describe the use of questionnaires or surveys as involving a list of questions sent to specific individuals, who then respond. It is vital that the questions be clear, unambiguous and easy to understand (Kumar 2010). This type of research method can also be structured, semi-structured or unstructured. Consideration should be given to the logical sequencing of questions and the context setting (Barbour 2007). Neuman (2010) stipulates that questionnaires have clear limitations for questions requiring visual aids, open-ended questions and complex questions. Other limitations comprise of poor rates of return from respondents (Silverman 2011), lack of control over who fills out the questionnaire (Myers 2008), and potentials person-specific and situation-specific bias (Gibbs 2008). Withstanding such limitations, the primary data for the study will be collected by means of a questionnaire in the form of a Delphi survey. Visual aid and open-ended questions are not required for the survey. Moreover, the limitation over who fills out the questionnaire is not applicable as the questionnaire is to be sent directly to the identified participant who has agreed in advance to complete the questionnaire. It is also hoped that by securing participant commitment in advance the rate of return will increase.

Keeney *et al* (2010) denotes the process of a Delphi survey as a number of rounds and series of questionnaires, where in each round panels of experts are asked to supply opinions about a specific subject. The Delphi technique provides some elements that help to eliminate the problems associated with group discussion. Firstly, it provides feedback to the individual contributors of

knowledge, assessment of a group judgment or view, the opportunity to revise individual contributions of knowledge, and a degree of anonymity for the individual responses (Zeedick 2011). Secondly, it enables the collections of opinions, irrespective of personalities, identifying exactly who said what (Woods 2006), and thus recruitment difficulties can be overcome (Weber *et al* 1995).

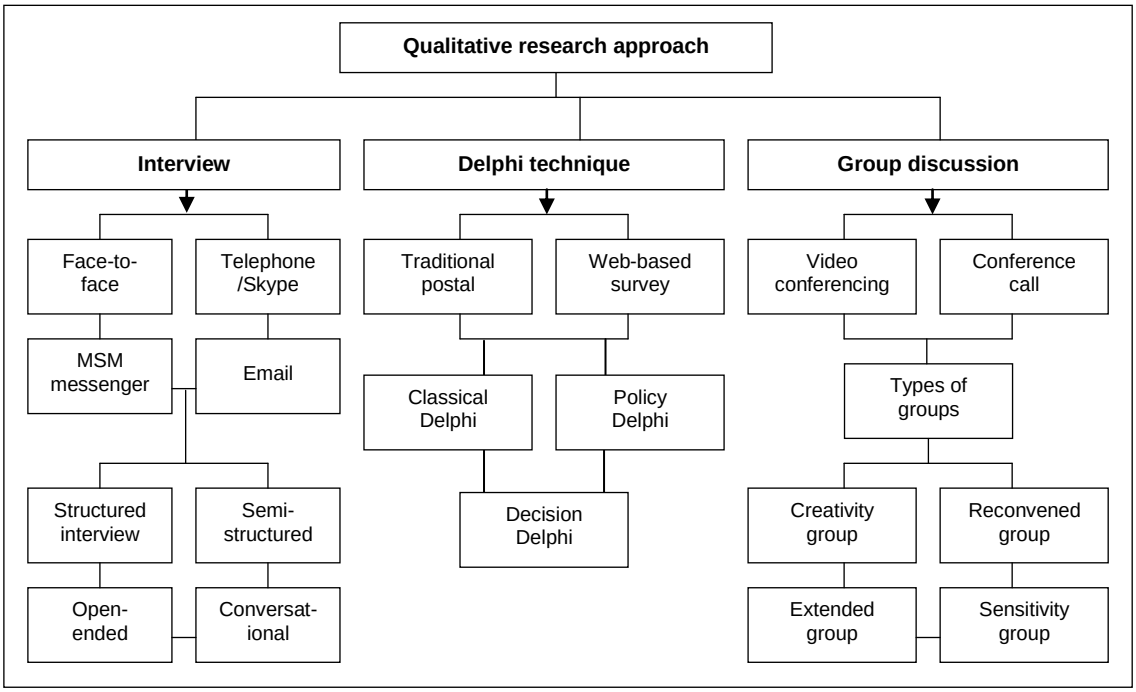

Figure 8.3 Techniques and types of qualitative research available

(*Source*: Author 2010)

8.5 Delphi technique defined

Miller *et al* (2010) describes the Delphi technique as a method for structuring a group communication process so that the process is effective in allowing a group of individuals as a whole, to deal with a complex problem. Rowe and Wright (2011), provides further clarification, when stating the Delphi technique comprises a systematic method of collecting opinions from a chosen group of experts through a series of questionnaires, usually in two or three rounds. Feedback on the group's opinion distribution is provided between question

rounds, whilst preserving the anonymity of the participant's responses. However, a fully comprehensive definition may be found in Wechsler (1978, p23), whereby the author typifies the Delphi method in the following way:

> *"It is a survey which is steered by a monitor group, comprises several rounds of a group of experts, who are anonymous among each other and for whose subjective-intuitive prognoses a consensus is aimed at."*

In terms of this research, the Delphi technique is based on structural surveys and makes use of the intuitive available knowledge of the participants who are experts in their field (Robertson and Mackinnon 2002). The aim is to deliver qualitative as well as quantitative results, whilst exhibiting explorative, predictive, even normative elements (Stewart 2001). The technique comprises two or more rounds, in which in the second and later rounds of the survey the results of the previous round are given as feedback. Therefore, the experts answer from the second round on under the influence of their colleagues opinions. Hence, the method employed for the study of Eastern European liner shipping is a relatively strong structured group communication process.

There are three main types of Delphi techniques: (1) Classical Delphi, whereby the aim is to deal with technical topics, and seeks consensus among a homogeneous group of experts; (2) Policy Delphi, whereby the aim is to generate the strongest possible opposing views on the potential resolution of a major policy issue; and (3) Decision Delphi, wherein the aim is to employ openly known experts for decision-making on social developments (Sharkey and Sharples 2001). The empirical study in this research is conducted by means of a combination of Classical and Policy Delphi. On the one hand the enquiry tries to generate different ideas and opinions from Eastern European liner

companies operational during transition, and on the other hand the enquiry tries to reach consensus among participants on evolutionary restructuring and the level of adaptation reached by liner companies during European accession.

8.5.1 The origins and use of the technique

There is general agreement that the Delphi technique was first applied in technology forecasting studies initiated by the Research and Development (RAND) Corporation for the American military in 1944 (Keeney *et al* 2010; Gupta and Clarke 1996; and Goodman 1987). Since that time, it has become a popular way of harnessing opinion from people with expertise, although the technique itself and the purposes for which it has been used have been extensively altered by research analysts over the years (Chen *et al* 2012; Broomfield and Humphries 2001; Williams and Webb 1994; Sackman 1975).

Whilst the originators did not situate Delphi in any particular theory, subsequent scholars have attempted to do so (Frewer *et al* 2011; Linstone and Turoff 2004; Hasson *et al* 2000). A wide range of traditions in Western philosophy has been invoked in this context, with one schema, presented by Mitroff and Turoff (1975), suggesting that the method may be understood through the basis of empirical science, theoretical science and a combination of the two approaches. The operationalisation of Delphi technique for the analysis of Eastern European liner shipping during the period of transition utilises a joint approach.

Over the years, Delphi studies have grown both in number and diversity, thus confirming the flexible nature of the methodology (Bryman 2012). In particular, Delphi has been employed in the following contexts: nursing (Keeney *et al*

2010); administration and planning (Watkins 2011); leadership (Shaw 2011); social work (Hanafin and Brooke 2005); business (Bleicher 2011); marketing (Brunner 2010); education (Zeedick 2011); and management. Delphi has also been applied extensively in the field of transport and logistics. Here, the technique had been utilised for studying indefinable or multidimensional questions and for the assessment of development and future possibilities. For example, in 1987, Kapoor used the Delphi technique to examine international maritime fraud (Kapoor 1987). In 1992, Cranfield Centre for Logistics and Transportation carried out a Delphi survey to analyse the future of logistics in Europe (Cranfield University, 1994). In 1997, Abdel-Fattah applied the Delphi method to examine the privatisation of road freight companies in Egypt. In 2011, Makitalo used the Delphi technique to consider the rail freight market in Finland (Makitalo 2011), while in the same year Scheibe applied a Delphi survey to study goal formulation in transport planning (Scheibe 2011).

8.5.2 Characteristics of Delphi technique

The Delphi technique may be typified by six common characteristics, which are discussed in more detail below, namely: (1) its focus on researching the future or things about which little is known; (2) reliance on the use of expert opinion; (3) anonymity, maintained through the utilisation of remote group processes; (4) adoption of an iterative research process; (5) dependence on the use of controlled feedback; and (6) creation of a consensus of opinion (Powell 2003).

Firstly, Delphi is a methodology used for developing forecasts of future events (Aligica and Herritt 2009), for conceptualising (Popper 2008), and inventing incidents that are about to happen (Kuusi 1999). Delphi is also useful where

there is a lack of agreement or incomplete state of knowledge concerning either the nature of the problem or the components which must be included in a successful solution. In terms of this research, the characteristic of futurism is desirable as one of the main objectives of the study is to analyse the restructuring processes of transitional liner shipping in Eastern Europe and from these forecast future events for regional liner shipping companies.

Secondly, Delphi is characterised by its reliance on the use of subject specific experts brought together in group format via the structure of knowledgeable research panels (Clayton 1997). The collective opinion of these experts is used as the source of information. Shaw (2011) defines an expert as a person who has the appropriate knowledge and experience to participate in a Delphi survey. The membership of a panel may be national or international (Wood 2005), from industry, government or academia (Okoli and Pawlowski 2004), or from different social/professional stratifications. All of which is relevant in this research, since the study of transitional liner shipping crosses national frontiers, cultures, languages, and political and economic groupings (Hasson and Keeney 2011).

Thirdly, Delphi is a technique characterised by anonymity (Jeffery *et al* 2000), allowing the participants to freely express their opinions without undue pressures to conform from others in the group (Linstone and Turoff 1975). Decisions are evaluated on their merit, rather than who has proposed the idea (Goluchowicz and Blind 2011). In terms of this research, the characteristic of anonymity is particularly useful as it allows experts such as; industry users, governmental officials, and academics from a variety of countries to express their opinions without having to physically travel to take part in the research.

Fourthly, Delphi is a methodology characterised by its adoption of an iterative research process (Hasson *et al* 2000). The typical Delphi requires a group of specialists to respond to an iterative series of written questionnaires (known as rounds) interspersed with summarised information derived from earlier responses to allow the participants to refine their views in light of the progress of the groups work from round to round (Zeedick 2011). In terms of this study, the characteristic of iteration provides flexibility and adaptability, which suits the changeable nature of the transitional research context (Cottam and Roe 2004).

Fifthly, Delphi is characterised by its use of controlled feedback (Landeta *et al* 2011). Here, participants are asked to reconsider their answers and make judgments. The feedback procedures assure that only directly relevant information is asked of the panel (Greatorex and Dexter 2000). Feedback stimulates thinking, with the objective of the group reaching consensus. In terms of this research, controlled feedback allows a diverse group of experts every opportunity to achieve a valid and reliable set of conclusions.

The final Delphi characteristic of particular interest is the development of consensus. Consensus is typically observed through the variances of the decreases in standard deviations in subsequent iterations (Watkins 2001), and defined as an agreement in opinion of all concerned, or as a majority view (Popper 2008). In terms of this research, the closer the experts in transitional theory and liner shipping are able to reach, the greater the accuracy of results.

8.5.3 Choice of Delphi methodology in a transitional context

There are a number of reasons that the Delphi technique has been selected for

the empirical study. Primarily, the method was chosen to collect opinions and judgments about the past, present and future, in particular areas where there is a lack of empirical data, as is the case of transitional liner shipping in Eastern Europe and its level of adaptation to the European Union transport system. The importance of getting a comprehensive overview of transitional liner shipping in Eastern Europe was critical to the conceptual underpinning of its development.

Another reason for applying Delphi technique in this research is its versatility. Delphi can be used in a wide range of environments, e.g. policy-making, business planning, and industry predictions, all of which are of significance for the study. Cost and time are further reasons for using Delphi. The Delphi technique may be facilitated via postal service or email, making it very efficient (Stewart 2001). Efficiency is important for experts, who by their nature are busy people. In this research study it was felt that the Delphi approach would offer ease of participation and general user-friendliness for experts, thus avoiding timely meetings and endless face-to-face debates to collect the required data.

The Delphi technique allows for participant anonymity, which is particularly important when securing commitment from companies of the former Soviet Union, whom often exhibit caution in business. Anonymity is also of significance when attaining information from liner shipping companies operational in the highly competitive European Union. Here, company survival may be dependent on their ability to protect the specifics of their internal operational environment. It is expected that the response rate for Delphi technique will be higher than for a normal questionnaire, as panel members agree to participate in writing prior to the commencement of the survey (Marchais-Roubelat and Roubelat 2011).

Further, it is likely that this type of approach will gather a broader spectrum of responses than other types of qualitative research, as it enables the participation of multiple stakeholders from a variety of backgrounds.

Lastly, the Delphi technique was chosen as it enables participants to explore the original hypothesis and any subsequent developments, thus offering participants a sense of inclusiveness and ownership of the final research indicator, whilst having the assurance of anonymity (Popper 2008). What's more, the technique provides a systematic approach that is open and transparent, and scientific and rigorous (Vinnari and Tapio 2009). It is hoped that this will enhance the status of the findings, which will be important when the data collected is analysed and presented to a wider audience (Bryman 2012).

8.5.4 The Delphi process

Scholars have presented numerous methods of carrying out Delphi. In terms of this research, three rounds of Delphi are utilised to address the situation of regional liner shipping during economic, political and social transition. Figure 8.4 illustrates the Delphi process of the study, comprising of twelve stages used from the design of the research hypothesis to the validity of the third round.

To begin with the first step towards implementing the Delphi method is to formulate a research hypothesis, which includes the definition of variables and the rationale for relating the variables to one another (Alexander 2004). The hypothesis of this study endeavours to direct the research to critically analyse the impact of Eastern European transition upon Eastern European liner shipping and evaluate the level of adaptation of liner shipping companies to the

single European transport system as a fundamental element of restructuring. In terms of the Delphi study, the objectives are: to gain consensus about indicators that take account of the key aspects of evolutionary restructuring in Eastern European liner shipping; to gain consensus about indicators that can facilitate comparisons between Eastern European economic, political, and social transition and Eastern European liner shipping change; and to gain consensus about indicators that take account of the mechanism of accession to the European Union as an extension of regional transition and the effect this has in terms of strategic restructuring in Eastern European liner shipping.

After developing a feasible hypothesis, the next step is to begin designing the research from a macro and micro perspective. A review of different research methods (both qualitative and quantitative) is undertaken (Bryman 2012). Macro-analysis questions will be utilised to gain a deeper level of understanding with regard to the qualitative of what experts say about transitional liner shipping in Eastern Europe. While micro-analysis will be used to gain situation specific company information via the use of quantitative methodology.

Selecting research participants is the next critical point of Delphi since it is their opinions on which the output of the Delphi is based (Christian 2003). Delphi's claim to credibility lies in its ability to draw on expertise (Miller 2001), and this is promoted by purposeful selection of experts for inclusion in the panel. There are four main requirements for expertise: (i) knowledge and experience with the issues under investigation (Campbell *et al* 2004); (ii) capacity and willingness to participate (Matthews and Ross 2010); (iii) sufficient time to participate in the survey (McKenna 1994); and (iv) effective communication skills (Zeedick 2011).

In terms of this study, since expert opinion is required, a purposive sample is necessary where people are selected not to represent the general population, but rather their expert ability to answer the questions in relation to Eastern European liner shipping (Bolger *et al* 2011). The sample frame the investigation is to include is those individuals or groups the researcher is reasonably able to obtain (Parente, and Anderson-Parente 2011). Thus, wherever possible the author is to draw upon the collaborative links already established between academic institutes, governing bodies, liner shipping companies, and the University of Plymouth, International Shipping and Logistics Group.

The research comprises three main groups to operationalise the Delphi survey and collect the primary data, namely: (1) industry-users, specifically encompassing the opinions and industry experience of Eastern European liner shipping operators; (2) policy-makers, embracing the positions and experience of major organisations involved in regulation and governance of Eastern European liner shipping; and (3) academics, encompassing the opinions and expertise of scholars researching Eastern European liner shipping, liner shipping in the European Union, and the single European transport market. All participants will remain anonymous, with fastidious attention to protect the participant's identity and the integrity of the company or organisation involved.

There is no precise mechanism for identifying the number of participants or the number of panels for inclusion in any individual study (Rowe and Wright 2011). Drockhoff (1975) points out that a positive relationship between group size and group performance in the Delphi studies cannot be recognised. Rather, it has been suggested that the size of the panel may vary according to the topics

covered (Millar 2001), the nature of the different viewpoints included (Landeta *et al* 2011), and the resources available (Sharkey and Sharples 2001). Wang *et al* (2003) included two panels differentiated by location (Chinese experts N = 63; international experts N = 60), Van Zolingen and Klassen (2003) included four different stakeholder groups in one panel, whilst Schuster *et al* (1997) formed two panels (with nine experts in each). In other studies single panels were formed, although there was substantial variation in the numbers of experts included. For instance, Whitman (1990) included 75 experts in their study, Kapoor (1987) included 39 experts in their research, whilst Campbell *et al* (2000) included more than 300 experts in their study. Thus, there does not appear to be an optimum number of panels or participants (Lai *et al* 2002).

In the context of this study, the multi-dimensional nature of Eastern European liner shipping during the period of transition, coupled with the desire to analyse five conceptual categories, led to two possible options in respect of the panel of expertise. These were: a single panel of experts, heterogeneous in formal knowledge and experiential base; or a number of separate panels, each of which could focus on one of the five categories representative of transitional liner shipping, as identified and conceptualised in Chapter Seven (Woods 2006). After much debate, a single panel of experts was chosen for the research enquiry. The main reason for the choice was to allow for the identification of each conceptualised category to be situated within the overall context of transition in the hope of achieving a synergetic quality. Other reasons included the simplicity associated with single panel administration (Nowack *et al* 2011) and the opportunity to share expertise across all panel members throughout the course of the study (Goluchowicz and Blind 2011).

This Delphi survey comprises of three rounds in which participants will be invited to comment on the main hypotheses (statements) of the study. Experts will be asked to state whether they ‘agree’, ‘disagree’ or are ‘unable to comment’ on 25 statements, separated into five conceptualised categories. Statements are developed from the content analysis of the literature review and the formulation of the conceptual model. The composition of the panel of experts for the Delphi survey of this study is found in chapter nine.

When using Delphi technique, researchers need not only to achieve a desirable response rate in the first round but they must concern themselves with maintaining high response rates in the following iterations (Ludwig 1997). Due to the potential scarcity of qualified participants to form panels of experts, the ability to achieve and maintain an ideal response rate can either ensure or jeopardise the validity of a Delphi study (Parente and Anderson-Parente 2011).

A number of key mechanisms have been identified as helpful in decreasing attrition between rounds and these include: making contact with the participant prior to the launch of the survey (Zeedick 2011); ensuring participants are fully informed about the study (Hasson *et al* 2000); having short follow up periods between rounds (Taylor and Lyon); issuing reminders by email, telephone and personal contact (Gupta and Clarke 1996); and offering incentives such as stamped addressed envelopes and thank you notes (Campbell *et al* 2004).

In relation to this study, prior to the start of the data collection, each nominee is to be sent an advanced letter on University of Plymouth headed paper, stating the following: (1) that the nominee would be personally written to inviting them

to participate in the Delphi survey; (2) how the nominee was chosen; (3) a concise description of the survey; (4) a time expectation; (5) confidentiality assurances; (6) importance of the participant views; and (7) contact details for nominees to call for further information about the research study. Appendix (1) presents a sample copy of the advanced letter to potential participants.

Linstone and Turoff (1975) advise that the cover letter enclosed with the research enquiry is of vital importance, as many participants would decide whether to take part on the basis of the contents of the letter. To improve the response rate of participants in this study, the cover letter is: (1) written on University of Plymouth letterhead paper, to stress the importance of the study and the fact that the research is for academic purposes (Neuman 2010); (2) personalised, to help create belief on the part of the respondent that he/she is receiving the researchers individual attention (Bolger *et al* 2011); (3) contextualised, to comprise of the study's original hypothesis and research objectives (Popper 2008); (4) theorised, to include a brief synopsis of Delphi technique and what may be expected in terms of data collection (Goodman 1987); (5) confidentiality, to facilitate the process of anonymity through the use of survey identification numbers (Bryman 2012); (6) functionality, to consist of deadlines for every round of Delphi (Goodman 1987); (7) incentives, to comprise of stamped addressed return envelopes and thank you notes (Punch 2005); and (8) contact details, to allow for the exchange of letters. Appendix (2) provides a sample copy of the explanatory cover letter Delphi round one.

Alongside the cover letter of Delphi round one, the author deemed it appropriate to include a timeline of data collection. The timeline comprises of the weekly

schedule of events relating to Delphi. The participant may track the overall progress of the study, in addition to the progress made by the panel of experts. It is hoped that the timeline will be a useful administration tool, as well as a method to increase the feel of inclusiveness. The timeline for Delphi round one may be utilised to highlight the commitment required in advance, thus reducing the level of attrition between rounds. Given that this is an original idea, the timeline is to be piloted at the same time as Delphi round one. Appendix (3) presents a sample copy of the timelines to accompany rounds one and two.

To increase the likelihood of reaching consensus, it is also prudent at this stage of the study to include the terminology framework relevant to each round. Frewer *et al* (2011) states that misunderstandings from poor technical use of words, terms, theory and phenomena in questionnaire design may be avoided if the researcher invests the time to make something clearer by explaining it in greater detail and relating it to the research context. Accordingly, Appendix (4) provides a sample copy of terminology framework for Delphi round one.

Following the identification of experts to participate in the survey, the researcher must now formulate the Delphi round one questionnaire. Careful attention must be given to developing the initial broad research question, as this guides the context in which the rest of the questions (statements) are placed. Crisp *et al* (1997) stipulates that the role of round one is to identify issues to be addressed in later rounds. Open-ended questions are recognised to increase the richness of the data collected. Due to the complex nature of the research topic (Von Brabant 2011; Gros and Steinherr 2009; McDonald and Dearden 2005) and the many disciplines involved (Cottam and Roe 2004), a combination of open-

ended, semi-structured and structured questions will be used in this study.

The conceptualised hypotheses identified in chapter seven, form the 25 statements for Delphi round one. The list of statements was developed from the results of a numerical research synthesis (Schreier 2012). The 25 statements are categorised into five synchronous groups that help to answer the original hypothesis of the research enquiry. They are: (1) liner shipping under communism; (2) liner shipping and systematic transition; (3) formation of evolutionary restructuring in liner shipping; (4) privatisation and strategic restructuring; and (5) adaptation to the European Union transport system. During the development of Delphi round one, good practices were adhered to particularly in relation to: the issue of questionnaire length; the importance of unambiguous questions; the analytical significance of response format; and the implications of having a heterogeneous group of participants. However, it is the correlation between the indicator (statement) and the original research hypothesis that is of crucial value, addressed by the following questions: (1) Is the statement applicable to the restructuring of Eastern European liner shipping during the period of transition? (2) Is the statement complete or does it require additional support to address the issues of restructuring in Eastern European liner shipping? (3) Is the statement applicable to all forms of evolutionary restructuring in Eastern European liner shipping? (4) Is the data for the statement easily obtained? and (5) Is the statement understandable?

The situation around pilot testing in respect of the Delphi technique is uncertain. Powell (2003) argues that pilot testing is merely optional, whereas Creswell (2008) suggests that pilot testing of each round may of benefit. Nonetheless, in

view of the importance of this study to the future of Eastern European liner shipping, it was deemed appropriate to compose a three-round pilot-study, with experts (n = 6) who do not take part in the main study. Appendix (5) provides the pilot study utilised in the case of this research. As a result of the pilot study, the following modifications were made: (1) changes to the layout of the survey, to increase user friendliness; (2) changes to the contents, in relation to the adaptation of Eastern European liner shipping to the European Union; (3) changes to the sequencing of statements, to improve research synergy; and (4) changes to specific words/terms, to further the analytical value of the study.

After considering and acting upon the findings from the pilot testing of the survey, the next step is for the round one questionnaires to be distributed by postal service or email to the Delphi participants, who then complete and return them to the researcher (Chen *et al* 2011). On return of the questionnaire, the results are then analysed according to the research paradigm (Shaw 2011). In the case of this study, statements without a majority opinion (measured by Average Percent of Majority Opinion) are to be included in the second round.

The next step is to form questions for round two of the Delphi survey (Okoli and Pawlowski 2004). The round one responses are the basis with which to develop the questions in the round two questionnaire (Cabaniss 2001). Depending upon the research goals, the researcher may direct the focus of the research, or be directed by the opinions of the participants (Rowe and Wright 2011). With regard to this study, expert opinions on transitional liner shipping are analysed and where appropriate included in the development of round two questionnaire.

Following this, the round two questionnaire to the research participants is

released and returned for analysis. However, the participants are first given the opportunity to verify that the round one responses did indeed reflect their opinions and are given the chance to change or expand their round one responses now that the other research participants answers are shared with them (Goluchowicz and Blind 2011). Ranking and rating the output of the first round is common (Hanafin and Brooke 2005). In terms of this study, statements without a majority opinion are to be included in the third round of Delphi.

In a similar way to the use of round one responses to form the basis of round two, this step involves the round two responses to develop the round three questionnaire with additional questions to verify the results (Zeedick 2011), to understand the boundaries of the research (Neuman 2010), and to understand where these results can be extended (Okoli and Pawlowski 2004). Typically, the questions become more focused on the specifics of the research at each round (Aligica and Herritt 2009). In relation to this research, as the rounds progress evolutionary components (which form the core of restructuring processes of Eastern European liner shipping during transition) are stringently tested. Namely in the fields of: ownership and management, fleet and tonnage renewal, market and service reorientation, and company reogranisation and cooperation.

The next step the researcher is required to follow, comprises of the final round of analysis which is conducted following a similar process used to analyse the data in rounds one and two: use the appropriate technique for the question type (Parente and Anderson-Parente 2011). Again the research participants are given the opportunity to change their answers and to comment on the emerging and collective perspective of the research participants. The process stops if the research question is answered: for example, consensus is reached, theoretical

saturation/stability is achieved, or insufficient information has been exchanged (Lincoln and Guba 2000). With regard to this study, stability of statements continues to be measured utilising Average Percent of Majority Opinion. Following the final round, the Delphi results are verified and the extent the results can be generalised are also investigated (Shaw 2011). In terms of this research where consensus is unable to be reached, individual stability is to be tested by means of a non-parametric comparison test of two paired samples.

Iteration is a key feature of the Delphi technique and feedback on questionnaire analysis is provided to each participant at each round. Rowe and Wright (1999), defined feedback as the means by which information is passed between panelists so that individual judgment may be improved and debasing may occur. The purpose of feedback is to allow each expert to revise his or her own judgment in light of the judgment of others (Van Zolingen and Klaassen 2003). Marchais-Roubelat and Roubelat (2011) denotes that one of the most common forms of feedback is measures of central tendency (mean, median), which may or may not be accompanied by a measure of dispersion (standard deviation).

In terms of the study of Eastern European liner shipping, feedback is given between each round and at the end of the study, utilising measures of central tendency. Proponents of Delphi methodology also stipulate that the timing of feedback is also an issue, suggesting that the quality of the Delphi study increases as the time between filling in a questionnaire and the next one being mailed becomes shorter (Bolger *et al* 2011). The time between the release of individual questionnaires to participants in this study is guided by: the duration of questionnaire return time between rounds from Eastern Europe, level of analysis required between rounds, and a difficult communication structure.

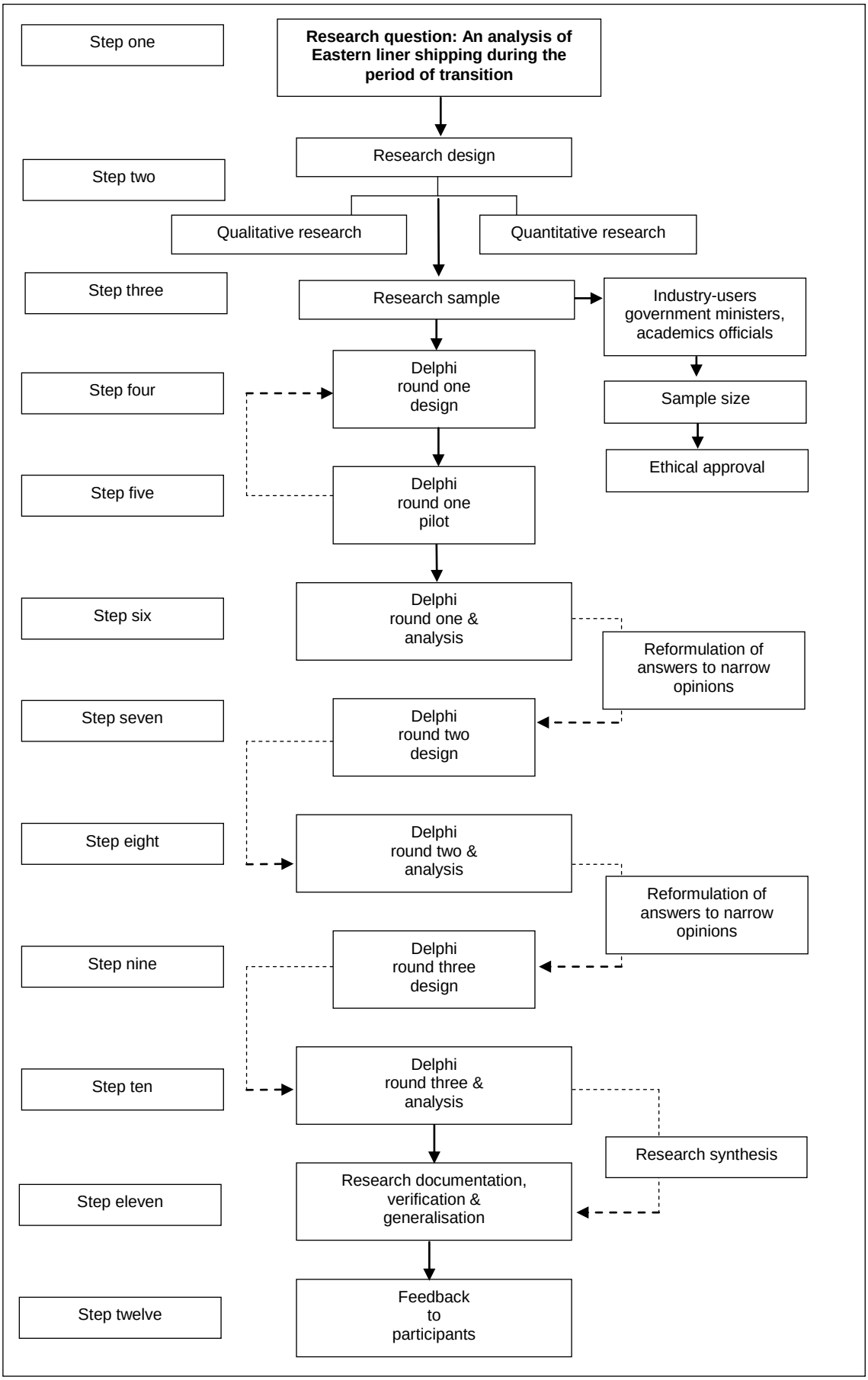

Figure 8.4 The Delphi process of the empirical study (*Source*: Author 2010)

8.5.5 Means of consensus

Consensus has been identified as one of the most contentious components of the Delphi technique. The aim of the Delphi technique is to achieve consensus but this is not a straightforward concept and is generally poorly explained. Although some authors have presented qualitative judgments of consensus (e.g. Millar 2001), in general an empirical approach is taken. Consensus is usually determined by statistically measuring the variance in responses across rounds (Bryman 2008). Less variance is understood to mean greater consensus (Rowe and Wright 1999), although this has itself been the subject of some controversy. Bardecki (1984), cited in Rowe and Wright (2011), that respondents with more extreme views were more likely to drop out of the study than participants with more moderate views. The conclusion was drawn that the decrease in variance can be a consequence of attrition rather than consensus.

The Delphi methodology was originally designed as a long-term forecasting method, attempting to achieve consensus among a group of experts. Consensus was considered to be the stopping criteria for most early Delphi surveys. However Hussler *et al* (2011) suggested that stability of results between two Delphi rounds is a more appropriate stopping criterion especially as most changes in Delphi responses occur in the first two rounds. After the first round it has to be decided which statements proceed to the second round for further investigation, and then again for the second to third round. In this study consensus is used to determine which statements have to be further investigated. Nevertheless, in the second round a measure which takes into account such variations from the norm, is one that measures stability of the respondents' vote distribution over successive rounds of Delphi. After three

rounds when statements have still not reached consensus or stability, these are recommended for further investigation, which is not in the scope of this study.

In most Delphi, consensus is assumed to have been achieved when a certain percentage of the votes fall within a prescribed range (Aligica and Herritt 2009). Consensus means that there is general agreement about a statement. According to Kapoor (1987), the prescribed range may be determined by the Average Percent of Majority Opinions (APMO) equation, see equation 8.1. This equation produces a cut off rate that determines whether consensus has been achieved or not. In order to reach consensus a statement must achieve a percentage for 'agree' or 'disagree' that is higher than the APMO cut-off rate. Statements that do not reach consensus in the first round proceed to the second round, then from the second round to the third until agreement.

$$APMO = \frac{Majority\ Agreements + Majority\ Disagreements}{\Sigma\ opinions\ expressed}$$

Equation 8.1 APMO cut-off rate for consensus (*Source*: Kapoor 1987)

Munier and Rond (2001), among others, suggest that the possibility that participants may simply alter their estimates in order to conform to the group (conformance), without actually changing their opinions (consensus), must be considered. Their own work in testing the influence of expert knowledge on consensus suggests, however that consensus is the more likely explanation for decreased variance. Their conclusion that it can be theoretically demonstrated that the median response of the entire group should move towards the true

value supports a move towards consensus rather than conformance. Studies focusing on the number of rounds needed in a Delphi survey to achieve consensus suggests that most changes occur in the transition from the first to the second round (Goluchowicz and Blind 2011). The number of rounds in the modified technique may be decreased to as few as two, if panellists have been provided with an event list, and if early group consensus is achieved.

Stability as the stopping criterion allows the existence of disagreement in the final stage. Stability refers to the consistency of responses between successive rounds of a Delphi survey. Group stability occurs when there is no significant difference between the response-category frequencies of two successive Delphi rounds. Individual stability occurs when there are no significant differences between individual answers of successive Delphi rounds (Frewer *et al* 2011). Individual stability provides more information and successive Delphi rounds than group stability, however both will be established during this enquiry. An χ^2 test may be used to test if there is stability. The χ^2 test is expressed as:

$$\chi^2 = \sum_{i=1}^{m} \sum_{j=1}^{n} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

With O_{ij} and E_{ij} as the observed and expected frequencies for the i^{h} Delphi round and the j^{th} response interval.

Equation 8.2 χ^2 test for determining group and/or individual stability

(*Source*: Chaffin and Talley 1980)

A condition for applying for the χ^2 test for stability is that the sample size must be large enough. For successful results of the χ^2 test, the expected values (Eij)

must be larger than five (Hasson and Keeney 2011). The sample size in this survey is relatively small (31 responses), this could lead to problems when analysing the second and third round statements. To test if there is group stability (if the Delphi rounds and response categories are independent) two hypotheses have to be tested by means of an χ^2 test (Chaffin and Talley 1980):

H0: The Delphi rounds are independent of the responses obtained in them
H1: The Delphi rounds are not independent of the responses obtained in them

If the null-hypothesis H0 is accepted it means that the response frequencies for the response categories are basically the same for all further Delphi rounds and that group stability has been achieved and thus the Delphi survey can be stopped. However, if the alternative hypothesis H1 is accepted, further Delphi rounds are required. To test if there is individual stability the following hypotheses have to be test by an χ^2 test:

H0: Individual responses of round *i* and *i* + 1 are independent
H1: Individual responses of round *i* and *i* +1 are dependent

If the null hypothesis H0 is rejected it means that there is individual stability; it is to be expected that panellists whose comment was 'agree' in the *i* round also vote for agree in the *i* + 1 round.

8.5.6 Research Ethics

Punch (1998) stipulates that ethical issues impact all stages of the research process, and start with the researchers' choice of topic and method. A researcher has a set of moral principles that guide them in their choice of how to conduct themselves with regard to such topics as confidentiality, anonymity,

legality, professionalism and privacy when dealing with people in research (Grix 2004). Thus, as a researcher you have a duty to make sure you ask any person involved in the research whether they consent to participation in the first place, and then make it clear how you intend to collect, analyse and disseminate the data you have gathered by conversing with them (in person or in writing).

In this study, the researcher believed it was ethical to adopt a Delphi technique to identify the process of restructuring by Eastern European liner shipping companies during the period of transition. First, this technique facilitates the engagement of more expertise than any other group method (Popper 2008). In addition, this type of study allows for the fair representation of the views of each participant as each participant has an equal opportunity to have their views taken into account, which may not have been possible with focus groups.

The potential for harm in this study is relatively low, because participants are to be chosen on the basis of their expertise alone. However, other ethical issues comprising of consent, privacy and confidentiality of data were considered and informed consent is to be obtained at the start of each Delphi round. Following the guidelines set out by the Faculty Research Ethics Committee (FREC), a number of processes are to be adhered to in the course of the research to ensure no harm of participants. A description of the ethical protocol, along with indications of how the study conforms is provided in Appendix (6).

Essentially, participants are to be informed about the purpose of the study, the procedures to be followed, the anticipated time commitment, and contact details to ask questions about the study. Participants are free to withdraw from the

study at any time. In a research context, the right to privacy can be violated during the course of an investigation or following the dissemination of findings. In the case of this study, every effort is to be made to protect the privacy of the participants. Two ways of protecting privacy are through confidentiality and anonymity. The essence of anonymity is that information provide by participants should not lead to their identity, and such anonymity is afforded by Delphi technique. No individual names or positions are to be linked to individual responses in the survey feedback. Confidentiality is also to be addressed in the study, here the study will ensure that any data collected and its sources will remain confidential unless participants have consented to their disclosure.

8.5.7 Criticisms of the technique

Despite the advantages of the Delphi technique, a number of theoretical and procedural objections have been expressed. To begin with the possible influences of person-specific and situation-specific biases hamper the reliability of the Delphi technique as a judgment method (Chen *et al* 2012). Yet, in this research, person-specific bias may be difficult to avoid, as there are only a few experts in the area of Eastern European liner shipping during the period of transition, and adaptation to the European transport system. Consequently, the study relies on their professionalism to offer unbiased opinions.

Opponents to the method also propose that the commitment of participants to completing the Delphi process is often related to their interest and involvement in the question or hypothesis being examined (Rowe and Wright 2011). However, in terms of this study, it could be seen as a tradeoff with the high level of anonymity, which the technique provides and maintains (Landeta *et al* 2011).

A further objection is that consensus is poorly explained in the studies with which the Delphi technique has been employed (Hasson *et al* 2000). However, in this research a combination of consensus and individual stability methods have been utilised and a detailed account of each is given. Another criticism is that anonymity may lead to a lack of accountability because the response may not be traced back to the individual (Sackman 1975). Yet, in this research anonymity is expressed as a good quality, allowing participants to speak freely without fear of reprisal in terms of employment or company protection.

In addition, it has also been suggested that a consensus approach may lead to a diluted version of the best opinion, and the result representing the lowest common denominator (Powell 2003). However, it could be argued that all approaches to gain consensus run this risk. Further still, other opponents cite time and labour-intensity as negative attributes, thus leading to high costs. Yet, it could be argued that the cost of travelling to interview experts and the use of hotels, would be substantially greater (Parente and Anderson-Parente 2011).

8.6 Validity of the research instrument

Validity may be considered the degree to which the study accurately reflects or assesses the specific concept that the research is attempting to measure (Neuman 2010). This is not the same as reliability, which is the extent to which a measurement gives results that are consistent (Bryman 2012). Validity must always be examined in relation to the intended purpose of the measuring instrument. This is because a measuring instrument might be valid for measuring a specific phenomena but invalid for measuring other. In this study the concept under investigation is the type and form of strategic restructuring

undertaken by Eastern European liner shipping companies during the period of economic, political and social transition. In order to explore this concept further, a sufficient number of representatives from Eastern European liner shipping companies, government ministries and academics have been secured and a research instrument based on a three-tiered Delphi survey has been designed.

Validity is not an all or nothing attribute, rather it based on matters of degrees (Punch 2005). This means that to assert that a measure of a concept has validity would be inaccurate. However, a positive outcome of a test of the validity of a measure would support the validity of that measure, and further enable the improvement of the validity of the measure from the knowledge gained through its application. Evidence of validity is a prerequisite of scientific inquiry, and it is advantageous to use more than one method of validity. Accordingly, there are three main tests that may be utilised to assess the validity of a concept: content validity, criterion validity and construct validity.

8.6.1 Content validity

Content validity is based on the extent to which the content of the test matches a content domain associated with the construct (Matthews and Ross 2010). A test has content validity built into it by careful selection of which items to include (Goluchowicz and Blind 2011). Items are chosen so that they comply with the test specification, which is drawn up through a thorough examination of the subject domain. Thus, the task of the researcher is to specify the domain of the content that is relevant to the particular measurement situation, and then to the select items associated with the domain of the content (Rowe and Wright 2011).

In this study there are five domains of interest that are relevant to the investigation of the concept. The first involves the relationship characteristics between Eastern European liner shipping and Eastern European communism. The second comprises of the relationship characteristics between Eastern European liner shipping and Eastern European transition. The third involves the relationship characteristics between evolutionary restructuring and Eastern European liner shipping change. The fourth includes the relationship characteristics between privatisation and restructuring and Eastern European liner shipping. Lastly, the fifth comprises of the relationship characteristics between Eastern European liner shipping change and accession to the European Union. Therefore, content validity depends on how well all transitional relationship attributes that might be present in Eastern European liner companies are adequately represented and included in the Delphi survey, in addition to how well all evolutionary characteristics of Eastern European liner companies are included and represented in the Delphi survey.

A series of stages have been taken in order to provide content validity to the research instrument. Firstly, as proposed by Nowack *et al* (2011), a comprehensive literature search was undertaken to develop a greater understanding of the characteristics of Eastern European liner shipping during the period of transition. Next, the literature search together with consultation of previous studies of the characteristics of transitional liner shipping companies provided a variety of measures that have been adapted for use in this research. Assessment of content validity was also undertaken through subjective judgment. The measures were presented to a director of a former socialist liner shipping company. He carried out extensive research on the characteristics of

transitional liner shipping companies (Anon 2011a); (Anon 2011b). Subjective judgments were also sought during the Delphi survey pilot study. During the pilot study, Eastern European shipping companies managers and directors were asked to comment and criticise the measures presented to them and to provide comments on the measurement instrument in terms of length, comprehensiveness, and whether it aroused their interest (Bryman 2012).

Opponents of content validity have criticised the criteria for establishing the attainment of content validity by a measure (Chen *et al* 2012). Hence, in the absence of such criteria content validity rests mainly on appeals to reason regarding the adequacy with which important content has been sampled, and on the adequacy with which the content has been cast in the form of items.

8.6.2 Criterion validity

Creswell (2008) describes criterion validity (often divided into concurrent and predictive validity) as an indicator to predict future events that are logically related to a construct. Criterion validity in the social sciences compares the way people rate on the new measure with how they rate on well-established measures of the concept (De Vaus 2007). If ratings on the new measure match those of an established measure it is possible to be confident of its validity.

This research investigates the relationship characteristics between Eastern European transition and Eastern European liner shipping change. Therefore, a suitable test of the instruments criterion validity could have been to see if predictions about relationship characteristics were true. A criterion might have been the quality of service of Eastern European liner companies from the

perspective of the consumer, before and after privatisation and restructuring as part of the process of regional transition. This is not, however the purpose of the study which is to investigate, identify and describe any relation or association between economic, political and social transitional characteristics and Eastern European liner shipping change characteristics, not to predict the specific quality of shipping services before and after regional transition. Furthermore, even if such a study was done, the findings are entirely subjective and strictly empirical, as they would have been based on a set of correlation values. As a result, criterion validity was not utilised in the methodology of this study.

8.6.3 Construct validity

Construct validity defines how well a test measures up to its claims. It refers to whether the operational definition of a variable actually reflects the true theoretical meaning of a concept (Silverman 2010). This validity is established by relating the measuring instrument to a general theoretical framework.

The concept that has been developed in this study is that Eastern European liner shipping companies have experienced dramatic restructuring and privatisation during the period of transition. Further, liner shipping companies have utilised European Union accession requirements as an economic element of transitional restructuring. To test the validity of this concept a research instrument to collect the appropriate data has been developed. This data will be interpreted through the use of suitable analytical techniques (see Chapter Eight) in order to investigate the hypothesised associations. If the hypotheses developed in chapter seven are accepted, then this research will provide one piece of evidence to support the construct validity of the concept. The extent to

which the theory examined in this study is in line with previously established theories will also provide an assessment of the validity of the construct.

8.7 Reliability of the research instrument

For research to be meaningful, research requires dependability, consistency and reproducibility measurements (Denzin and Lincoln 2011). Measurements are conceived to be reliable to the extent that they are repeatable and that any random influence, which tends to make measurements different from occasion or circumstance to circumstance is a source of measurement error (Gay 1987). De Vaus (2007) stipulates that the reliability of a research instrument concerns the extent to which the instrument yields the same results on repeated trials. If a research instrument consistently assigns the same score to individuals or objects with equal values, the instrument is considered reliable (Frewer *et al* 2011). Therefore, reliability involves the reproducibility of test scores i.e. the degree to which one can expect relatively constant deviation scores of individuals across testing situations on the same, or parallel, testing instrument. Literature denotes three basic methods for estimating the reliability of a concept: stability reliability, internal consistency, and equivalency reliability.

8.7.1 Stability reliability

Bryman (2012) describes stability reliability as the agreement of measuring instruments over time. To determine stability, a measure or test is repeated on the same subjects at a future date (Hasson and Keeney 2011). Results are compared and the correlation between two sets of results then calculated, and the obtained coefficient is the reliability estimation, which could be defined as a ration of the true variance of the observed variance (Neuman 2010).

The standard approach for measuring stability reliability is the test-retest procedure. In this method, the same instrument is applied to the respondents usually over a time period of two-three weeks, and under as similar administration conditions as possible (Aligica and Herritt 2009). The results of the repeated measurements are then correlated. A high correlation coefficient would indicate that the measuring instrument is reliable (Landeta *et al* 2011). The empirical methodology for this study utilises stability to make sure the Delphi survey reliably and accurately captures the qualitative of what is said when inconsistent responses between successive rounds occur (Woods 2006).

The types of problems associated with the test-retest method have strong similarities with the general problems of Delphi survey, as discussed in 8.4.7 criticisms of the technique. Nonetheless, there are a few worth mentioning. For example, different results may be obtained depending on the time period between the first and second administrations. Bohrnstedt (1970) suggests that the longer the time interval between measurement and re-measurement, the lower the reliability. In terms of this study, the author aims to set a three week period between each of the rounds of Delphi. This is to allow participants to fully consider their answers, and receive and return the survey from a difficult communication structure in Eastern Europe. Another criticism of the technique is that a respondent's attitude may change during the time period between the administrations. For instance, there is a possibility that managers may be alerted to the issues put forward during the first administration and change their attitudes in the second. In terms of this research, it is doubtful that participants will change their attitudes in the second and third rounds of Delphi, because they are experts and thus likely to have substantial knowledge about the

research study area. A further criticism is that the experience in the first testing may also influence responses in the second administration, if for instance the previous responses are remembered. However, this is not applicable for Delphi as the technique relies on the opportunity for participants to be given the general opinion of the panel in the second and third rounds, as part of the methodology, and then an informed final decision is made by the participant.

8.7.2 Internal consistency reliability

Davies (2007) defines internal consistency as the extent to which tests or procedures assess the same characteristic, skill or quality. Internal reliability addresses the consistency of the implementation of a rating system, and measures the precision between the observers or the measuring instruments used in a study (Kasomo 2010). In essence, the researcher compares the test items that measure the same construct to determine the tests internal consistency. This type of reliability is more frequently used by social scientists than any of technique, as researchers may interpret data and predict the value of scores and the limits of the relationship among variables, with relative ease.

The internal consistency method is the most frequently used method in social sciences. It involves correlation among all items or questions in a questionnaire without the need to divide items or create forms. The internal consistency method evaluates whether all items in a questionnaire are using the same construct. Internal consistency is based on the concept that items or questions designed to measure the same underlying construct should be highly correlated. This means that each item or question is used to compare consistency of responses with other items in the questionnaire for the sample.

8.7.3 Equivalency reliability

Equivalency reliability consists of applying two equivalent forms of the same research instrument to the same subjects (Yin 2008). The results obtained from this administration of the two instruments are then assessed on an item by item basis (Mattews and Ross 2010). This means that a reliability coefficient will be calculated by correlating the answers of the two versions of each question. Ideally the two alternative forms would be strictly parallel tests and should be administered above two weeks apart (Denzin and Lincoln 2011).

One problem associated with alternative forms is that of extra time and expense involved in obtaining two equivalent forms. The most important problem however is that of constructing two truly equivalent forms. Hence a low correlation may reflect either an unreliable item/instrument, or the fact that the two forms are not equivalent (Creswell 2008). It is difficult to show whether the measures have intrinsically low reliability or whether the forms are non-equivalent in content. The limited use of this method for reliability assessment has been attributed to the difficult of developing alternative forms (Adams et al 2007). Due to the complexities involved in applying this method to a Delphi survey, it would not be possible to administer two alternative forms to Eastern European liner operators, maritime governmental officials, and academics.

It was possible however, to use some questions in alternative form in the same instrument. The equivalent form questions (depicted as statements for the purpose of this study) were inserted in two parts of the survey. Section two: liner shipping and systematic transition, statement 2.1.1 ‘Eastern European liner companies have not been able to rely on an established transition theory in

their course of restructuring into profitable entities, operational in competitive market economies' and statement 2.1.5 'Liner shipping during the period of transition had to undergo changes under circumstances of widely absent state support, otherwise common in the shipping sector in market economies'. Section four: Privatisation and strategic restructuring, statement 4.1.1 'From a systemic point of view privatisation is the most decisive factor for successful transition in Eastern European liner shipping' and statement 4.1.2 'Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability'. Although it is worth noting that the statements selected reflect a relatively low level of correlation, as this reliability methodology was only a derivative of another used in the study.

8.7 Conclusion

The chapter aimed to describe the character and process of the empirical research methodology selected to assess the quality of the conceptual model and related hypotheses in their attempt to provide a typology of the relationship between Eastern European transition and Eastern European liner shipping change. Initially, the research aims and objectives were clarified to guide the choice of research method. This was followed by a debate between qualitative and quantitative methodologies in association with the transitional context and longitudinal nature of the research enquiry. Qualitative approaches were presented and the Delphi technique selected. From here a discussion of the method was given set within a framework of validity and reliability.

To summarise, a panel of experts comprising industry-users, policy-makers and academics will be sought to participate in the Delphi survey from each of the

Eastern European countries of interest. Participants will be asked their opinions in terms of ‘agree’, ‘disagree’ and ‘unable to comment’ for the 25 conceptualised statements identified in chapter seven, and developed from the numerical content analysis of the literature review in Chapter Six. The results of Delphi round one are to be collected and analysed. Statements without a majority opinion are to be included in the second round, reformulated with the aid of comments received from the panellists. The results from Delphi round two are to be collected and analysed. Statements without a majority opinion are to be included in the third round, reformulated with the aid of comments received from panellists. Finally, the results from Delphi round three are to be collected and analysed. Statements with a majority opinion are held as true, and therefore in support of the original research hypothesis, while statements without a majority opinion go on to require individual stability testing, which occurs when group consensus cannot be reached. The next chapter provides the results of the empirical study in its analysis of transitional liner shipping.

CHAPTER NINE

The Empirical Study

The previous chapter confirmed the utilisation of Delphi technique as the chosen methodology for data collection in the analysis of Eastern European liner shipping during the period of transition. The numerical literature synthesis highlighted the transitional constructs that were hypothesised as influential in the evolutionary restructuring processes of Eastern European liner shipping. Using these constructs, the conceptual model and related hypotheses were developed to provide a typology of the relationship between Eastern European transition and Eastern European liner shipping change. The assumptions of the conceptual model structured a list of conceptualised statements, which in turn have been used to formulate round one of the Delphi survey.

This chapter presents the empirical study used to analyse the quality of the results obtained from the Delphi survey. Beginning with a discussion of the process of panel selection, followed by the presentation of the pilot study, the chapter then outlines the process of the first round of Delphi and the use of 'average percentage of opinions' to overcome the effects of the difference in panel size. The results of the three rounds are presented and a discussion is made of each statement as it reaches consensus, incorporating findings from the literature review in association with any further comments from panellists. The chapter concludes with an analysis of the participants views of the study.

9.1 Panel of expertise for the study

Understanding the restructuring processes of Eastern European liner shipping was centrally important to the development of transitional liner shipping

indicators (statements). The study therefore committed to reaching consensus across many different areas of evolutionary restructuring. Consequently, it seemed logical to have a single panel of experts as this could protect against fragmentation and lack of coherence within the indicator grouping (Shaw 2011).

As stated in chapter eight, the selection of appropriate participants is arguably the most important stage in the entire process of Delphi, because it directly relates to the quality of the results generated (Jacobs 1996). Participants of Delphi must be highly trained and competent within the specialised area of knowledge related to the target issue (Powell 2003). Thus, considering the vital part experts play in the overall success of the results, the panel selection for this study was extremely rigorous, taking place over a period of seven months.

9.1.1 Process of panel selection

In alignment with the guidelines of Bolger and Wright (2011), the study applied a multiple-step iterative approach to identify experts. Eight different stages were processed for each of the Eastern European countries under investigation, namely: (1) identify country of interest (i.e. Estonia, Latvia, Lithuania, Poland, Romania and Bulgaria); (2) identify the relevant stakeholders groups (academics, industry-users and policy-makers); (3) identify the names of relevant English speaking individuals in stakeholder groups; (4) identify all established Eastern European links with the International Shipping and Logistics Group; (5) identify the names of relevant English speaking individuals from established Eastern European links with the Centre of International Shipping and Logistics; (6) contact experts identified on list and ask contacts to nominate other English speaking relevant experts; (7) contact experts with

established Eastern European links with the International Shipping and Logistics Group and ask contacts to nominate other English speaking relevant experts; and (8) invite all experts to join the panel. Figure 9.1 provides an illustration of the stages utilised in the panel selection for the empirical study.

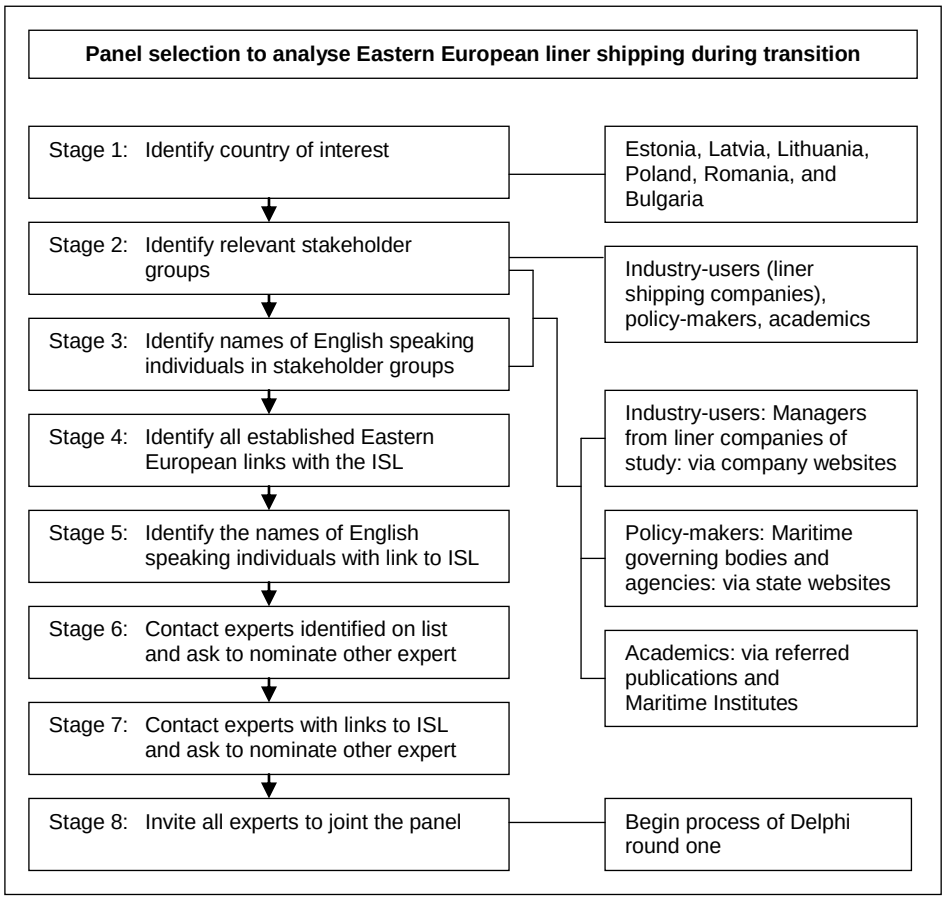

Figure 9.1 Panel selection process (*Source*: Author 2010)

As part of the panel selection process it was necessary to identify individual nominees from within relevant stakeholder groups. Identification of individuals from the industry-users group (i.e. the six former-socialist liner shipping companies identified in chapter one) was straightforward, whereby names were obtained from current company websites. If a merger or acquisition had occurred, managers who dealt with the former socialist company were sought,

or hereafter general managers. Romania was the only country in which the author was unable to find a representative from the industry-users group. This is because Romline Shipping Company was no longer in operation. To keep continuity in the research, an alternative representative was not sought.

Identification of individuals from the academic group was more complex. Problems arose because of the absence of a central database for academics or researchers with an interest in maritime affairs in the countries analysed. Hence, a labourious task was undertaken in which referred publications were searched to obtain the names of authors writing in the area of Eastern European shipping and its adaptation to the single European transport market. In addition, maritime institutes and subject-specific research centres in Eastern Europe were contacted for recommendations. Finally, since this particular stakeholder group has formed a number of connections with the International Shipping and Logistics Group, where possible these were drawn on.

Identification of individuals from the policy-makers group was the most difficult. Problems occurred in distinguishing the level of regulating body, selecting who was appropriate to contact, and obtaining contact details largely due to security. In the end, a three-tiered approach was taken: national, supranational and international. In terms of national, the states department of transport was contacted for details of a maritime nature. At the other end of the spectrum: the United Nations Conference on Trade and Development (UNCTAD); the Organization for Economic Co-operation and Development (OECD); the Alliance of Maritime Regional Interests in Europe (AMRIE); and the International Maritime Organization (IMO) were all liaised with as part of panel formation.

9.2 Pilot Delphi study

In recognition of the overall importance of the study for liner operators and maritime policy-makers, it was deemed appropriate to compose a three-tiered pilot Delphi survey. Following the successful application for ethical approval by the Faculty Research Ethics Committee (FREC), a preliminary pilot Delphi study was undertaken to test the reliability and validity of the Delphi research procedure. Six pilot study participants were identified utilising the same panel selection method as the main survey. Hereafter these experts were excluded from taking part in any further aspect of the study. Appendix (5) provides the pilot study used for investigation of liner shipping during the period of transition.

The pilot Delphi study was conducted over a four-month period, from December 2009 until mid March 2010. Round one commenced on the 7th December 2009 and was completed by the 28th December. The results from round one were complied and analysed. A report was prepared and the questionnaire for round two and the accompanying glossary (comprising of: explanatory cover letter, terminology framework sheet, Delphi round two survey, and appropriate timeline) were designed based on the outcomes of the initial round. The second round questionnaires were sent to participants on 4th January 2010, and by the time this round closed on the 24th January, 83.3% of the panel was received. Over the following week these responses were analysed and the final questionnaire and glossary was prepared. The third round commenced on 1st February and was completed by the 26th February. As before, 83.3% of the panel agreed to participate. A thank you letter was sent to all participants on the 8th March. The findings from the three-tiered pilot Delphi study was confirmed, the structure of the Delphi study was appropriate, and the methodology was

considered suitable to achieve the aims of the empirical research enquiry, and therefore with the following minor amendments: (1) small changes to the layout of the survey, to increase user friendliness; (2) slight changes to the contents, in relation to the adaptation of Eastern European liner shipping to the European Union; (3) minor changes to the sequencing of statements, to improve research synergy; and (4) negligible changes to specific words/terms, to further the analytical value of the study, the actual Delphi survey was ready to commence.

9.3 The Delphi study

The Delphi study began in April 2010 and did not conclude until the end of June 2010. The study comprised three rounds of questionnaires, made up of 25 statements for participants to consider and ultimately reach consensus upon. The length of time between rounds was designed to be the shortest possible, within the means of the chosen mechanism of distribution. This study utilised postal services to transport the three rounds of Delphi questionnaires between the University of Plymouth and panel members across Eastern Europe. A four-week turnaround time was employed, to maintain synergy (Goodman 1987), increase accuracy of findings (Powell 2003), and reduce the likelihood of any changes in the context of the actual research study (Rowe and Wright 2011).

Following the pilot study, and the appropriate amendments to Delphi round one questionnaire, the 165 eligible potential participants of the study were sent an advanced welcome letter on the 5th April 2010, inviting them to take part in the study, revealing how they were chosen, and presenting a brief description of the research and methodology, a time expectancy, and contact details for further information. Appendix (1) presents a sample copy of the advanced letter.

Two weeks later on the 19th April, potential participants received a postal package containing four documents. Firstly, an explanatory cover letter presented the aims and the context of the research, and informed potential participants that the study was an iterative process, comprising of three rounds of questionnaires, to be conducted during the period 19th April - 28th June 2010, and that participants would remain anonymous. Appendix (2) provides a sample copy of the explanatory cover letter. Secondly, potential participants received a terminology framework sheet to offer clarification of crucial terms and words applicable to the study. Appendix (4) presents a sample copy of the terminology framework Delphi round one. Thirdly, a copy of Delphi round one and a stamped addressed envelope was provided for convenience. Appendix (7) presents a sample copy of Delphi round one. Fourthly, potential participants received a timeline as an administration and explanation tool for the research study. Appendix (3) provides a sample copy of timeline Delphi round one.

On 3rd May, a reminder letter was sent by post to potential participants who had not returned their survey, stipulating the importance of their individual contribution to the survey, a brief description of the aims of the study and methodology, the importance of the research to the liner shipping industry, contact details for additional information, and an appreciation of their time. Appendix (8) presents a sample copy of reminder letter Delphi round one.

9.3.1 Panel participation

Of the initial 165 potential participants that were invited to take part in the survey, 36 agreed to participate (representing 21.8% of the total potential participants contacted), 62 refused to participate (representing 37.6% of the

total potential participants contacted), 46 did not respond (representing 27.9% of the total potential participants contacted), 13 agreed to participate but did not (representing 7.9% of the total potential participants contacted) and, 8 were uncontactable (representing 4.5% of potential participants contacted). Table 9.1 demonstrates panel participation response rates to Delphi round one.

Response rates Delphi round one		
Responses	**Potential participant**	**Percentage**
Participants	36	21.8
Failure to reach	13	7.9
Refused to participate	62	37.6
Will participate but did not	8	4.8
No response	46	27.9
Total contacted	**165**	**100**

Table 9.1 Panel participation Delphi round one (*Source*: Author 2010)

There are many reasons why people choose not to respond to a survey. Sometimes, there is a time factor (Grix 2004), which may have had a particular influence in the policy-makers group. While other reasons for non-participation may surround the accessibility of the survey itself, such as poor design (Adams *et al* 2007), incomprehensive instructions (Yin 2008), and ambiguous language use (Denzin and Lincoln 2011). However, since a pilot study was carried out for this research, it is anticipated that poor survey design was not an overriding factor for non-participation. Finally, Goluchowicz and Blind (2011) suggest that a lack of interest in the subject of study may also result in a decrease in survey participation. In the case of this study, of the potential participants who did not take part in the survey, a small number of the group whom actively refused to take part in the study may fall into this category of the research enquiry.

9.3.2 Size and structure of panel

Table 9.2 provides an illustration of the size and structure of the panel of

experts selected to participate in the analysis of Eastern European liner shipping during the period of economic, political and social transition. Notably, the panel is categorised into stakeholders: industry-users, academics and policy-makers. Stakeholder relationships are usually characterised by mutual interdependence among interest groups with different rights, objectives, expectations and responsibilities (Chen *et al* 2012). The stakeholders of this study are unified through the original research hypothesis, and through each other. Their role is to impart their experience, knowledge and perceptions to further the exploration of Eastern European liner shipping during transition.

Size and structure of panel: Delphi round one		
Categories	**Number**	**Percentage**
Industry-users	11	30.6
Academics	17	47.2
Policy-makers	8	22.2
Total	**36**	**100**

Table 9.2 Size and structure of panel: Delphi round one (*Source*: Author 2010)

Given that a key objective is to provide an analysis of the restructuring processes utilised by former socialist liner shipping companies as part of regional transition, managers and directors from the following corporations were contacted to take part: Estonian Shipping Company (ESCO), Latvian Shipping Company (LSC), Lithuanian Shipping Company (LISCO), Polish Ocean Lines (POL), and Navigation Maritime Bulgare (NMB). Such enterprises represent the largest, and in most cases, the only national container line which continued to operate for an extended period of time during transition. Table 9.2, illustrates that industry-users account for 30.6% of Delphi round one panel structure.

The next category is policy-makers, making up 22.2% of the panel structure. In this study the problem-solving model is applied, whereby the researcher plans,

executes and disseminates the findings (Frewer *et al* 2011). While, the policy-maker, reads the results, interprets the findings, and then acts upon them (De Vaus 2007). Policy-makers influence and determine policies across many different areas of Eastern European liner shipping operational during the period of systematic transition, such as: liberalisation, deregulation, privatisation, commercialisation, and adaptation to the European system. Thus, they are the source of a great deal of knowledge, and supportive of research and innovation.

The last category contributing are the academics, consisting of the largest number of participants and representing some 47.2% of the panel. This is not surprising, since academics are most often found in subject clusters. Accordingly, as this research was designed at the International Shipping and Logistics Group, University of Plymouth, it follows that other academics are likely to either have a personal interest in Eastern European shipping and/or the single European transport system, or know of another who does. Furthermore, the Centre also offers a sizeable international collaboration portfolio, made up of other research institutions with a primary interest in shipping and logistics.

Since the study provides an exploration of the impact of transition on six liner companies from Estonia, Latvia, Lithuania, Poland, Romania and Bulgaria, the author sought to secure an English-speaking representative from each of these countries, for each of the stakeholder groups on the panel of experts (i.e. industry-users, policy-makers and academics). The author considered the cost/benefit analysis of translating the Delphi survey into the six geographical languages of the study. However, given the number rounds and the number of languages, it was deemed unfeasible, both in terms of questionnaire

formulation and questionnaire analysis. It was also felt that the meaning of what was being said in each of the 25 conceptualised statements might be compromised or lost in translation. Therefore, only experts with good use of English were sought for the research enquiry. Table 9.3 depicts the size and structure of the panel of experts by country participation for Delphi round one.

Size and structure of panel by country participation: Delphi round one												
Categories	**Estonia**		**Latvia**		**Lithuania**		**Poland**		**Romania**		**Bulgaria**	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Industry-users	4	57.1	3	42.9	2	40.0	1	10.0	0	0.0	1	25.0
Academics	3	42.9	1	14.2	3	60.0	6	60.0	2	66.7	2	50.0
Policy-makers	0	0.0	3	42.9	0	0.0	3	30.0	1	33.3	1	25.0
Total	**7**	**100**	**7**	**100**	**5**	**100**	**10**	**100**	**3**	**100**	**4**	**100**

Table 9.3 Size and structure of panel by country participation: Delphi round one (*Source*: Author 2010)

As can be seen in Table 9.3, it proved exceedingly difficult to secure an English-speaking expert for each of the stakeholder groups, from each of the geographical countries of interest. Therefore, as many collaborative links with the International Shipping and Logistics Group and other maritime research institutions were exploited as possible. For some countries such as Poland and Lithuania, the contacts were plentiful, where for example the University of Plymouth has developed and sustained mutually beneficial working relationships. However, for other countries, such as Bulgaria and Romania, the contacts were far fewer, and in a number of cases it was not possible to secure the cooperation of an appropriate expert at all. For example, in Estonia out of the 23 known contacts only 7 agreed to participate in the survey, and none of them were government officials. While, in Romania, out of the 17 known contacts, only 3 agreed to participate in the survey, and none of them were industry-users (although this may be an exceptional case, as the former

national container line (Romline Shipping Company) had bankruptcy proceedings listed in 2006, and as a consequence is no longer in operation.

9.4 Analysis of Delphi round one

Analysis that takes place in a Delphi study has two purposes. First, analysis should provide feedback between each round (Bolger and Wright 2011), and second it should be able to identify when consensus has been reached (Popper 2008). There does not, however appear to be agreement about the best method of mathematical aggregation, here studies have been known to employ a variety of descriptive statistics, to include: median, mode, percentages, ranks, upper and lower quartile ranges, regression, and statistical average of points for each factor, in the pursuit of statement consensus (Okoli and Pawlowski 2004).

This study has selected Average Percent of Majority Opinion (APMO) as the statistical measure to identify statement consensus in Delphi round one. Justification for use of the APMO formula is supported by: Hwang (2004), Cottam and Roe (2002), Saldanah and Gray (2002), Abdel-Fattah (1997), and Kapoor (1987). Whether an individual statement has reached consensus depends on the APMO cut-off rate. To determine the APMO cut-off rate, the numbers of majority agreements and disagreements have to be calculated. This is achieved by expressing the participants comments ‘agree’, ‘disagree’ and ‘unable to comment’ in percentages per statement. A comment has reached majority in the case when its percentage is greater than 50% (Kapoor 1987). After totaling the majority agreements and disagreements, their sum is divided by the total number of opinions expressed. In relation to this study, the responses from round one were analysed and the APMO calculated, with the

full results presented in Tables 9.5-9.9. However, the actual APMO cut-off rate calculation for consensus in Delphi round one is provided in Equation 9.1.

$$APMO = \frac{\text{Majority Agreements} + \text{Majority Disagreements}}{\Sigma \text{ Opinions Expressed}} \qquad 77.1\% = \frac{475 + 153}{814}$$

Equation 9.1 APMO cut-off rate for consensus in Delphi round one

(*Source*: Adapted by Author from Kapoor 1987)

Table 9.4 also illustrates the process of calculation for APMO cut-off rate, Delphi round one. Here, the number of statements that reached consensus utilising the APMO calculation is given, in addition to the number of those statements that did not, and therefore will be reformulated into round two.

Delphi round one, Average Percent of Majority Opinions (APMO)	
Majority agreements	475
Majority disagreements	153
Total opinion expressed	814
Average Percent of Majority Opinions	**77.1%**
Delphi round one, statement consensus using APMO	
Number of statements reaching consensus following APMO	9
Number of statements to be reformulated into Delphi round two	16

Table 9.4 APMO cut-off rate for consensus in Delphi round one

(*Source*: Author 2010)

The process of Average Percent of Majority Opinion (APMO) is depicted in Figure 9.2, which provides a conceptualisation of the various stages utilised to identify consensus in individual statements from each successive round of Delphi. The process is repeated until an optimal level of consensus is reached. In this research, the APMO process is used to support three rounds of Delphi.

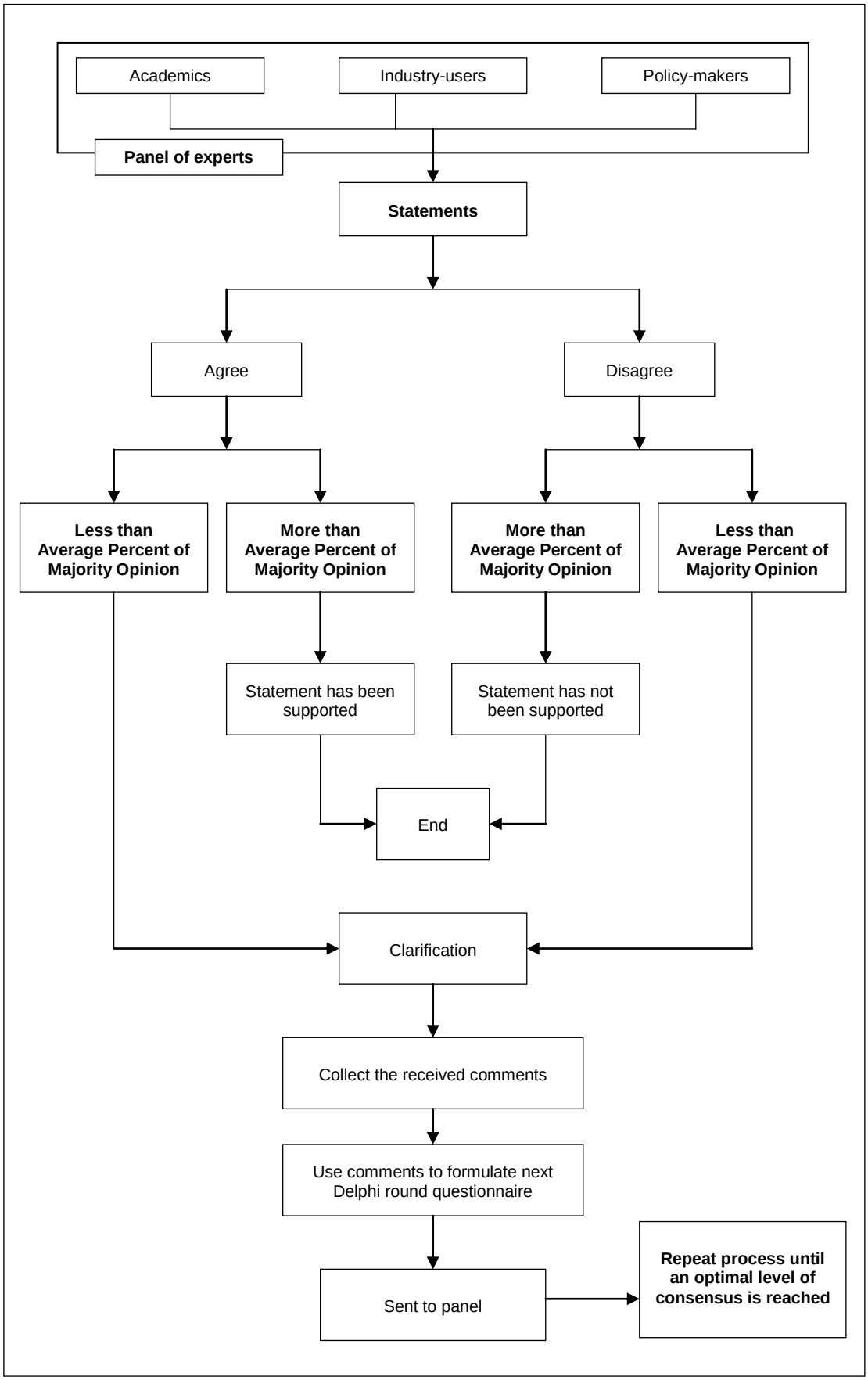

Figure 9.2 Use of Average Percent of Majority Opinion between Delphi rounds

(*Source*: Adapted by Author from Fattah 1997)

Table 9.5 Analysis of Delphi round one (*Source*: Author 2010)

Analysis of Delphi round one to determine consensus										
H	**No.**	**Statements**	**Agreed**		**Disagreed**		**U.A.C***		**Opinions expressed**	**Consensus**
			No.	**%**	**No.**	**%**	**No.**	**%**		
1	1.1.1	Up until mid-1989, the majority of Eastern European liner shipping companies were owned, financed and managed by a series of state monopolies.	34	94.4	0	0	2	5.6	34	Yes Agreed with 94.4%
1	1.1.2	Two main types of socialist influence over Eastern European liner shipping related activities may be identified. Firstly, socialist domination of political and macroeconomic shipping goals. Secondly, centralisation of national fleet structure to implement shipping policy and foreign targets.	17	47.2	14	38.9	5	13.9	31	No
1	1.1.3	The main functions of liner shipping under communism were: to transport goods for national foreign trade economically (i.e. run fleets, ports, agencies etc.), to provide some form of security, and to earn hard currency wherever possible.	33	91.7	0	0	3	8.3	33	Yes Agreed with 91.7%
1	1.1.4	The outcome of centralised administration was a tendency to neglect the whole of the under-funded Eastern European liner shipping industry, thus ensuring poor quality fleets and infrastructure, and congestion and bottlenecks.	16	44.4	17	47.2	3	8.3	33	No
1	1.1.5	By 1989, the majority of Eastern European liner shipping companies lacked the skills to compete, the investment to fund new activities, the infrastructure to survive, and the organisation to provide a competitive framework.	28	77.8	5	13.9	3	8.3	33	Yes Agreed with 77.8%
2	2.1.1	Eastern European liner companies have not been able to rely on an established transition theory in their course of restructuring into profitable entities operational in competitive market economies.	31	86.1	4	11.1	1	28	35	Yes Agreed with 86.1%
2	2.1.2	Transition decisions have been dictated by specific national framing conditions. They have often been irregular reactions to short-term changes, influenced by mechanisms of supply and demand, and/or private interests.	13	36.1	19	52.8	4	11.1	32	No
2	2.1.3	Changes in the political framework of Eastern European liner shipping and the market transition of the Eastern European shipping companies concerned did not match each other, nor did they run synchronously.	9	25.0	23	63.9	4	11.1	33	No
2	2.1.4	Although liberalisation and deregulation led to strong competition and to the abolition of state protection, the installation and successful operation of new shipping political frameworks was pending.	22	61.1	11	30.6	3	8.3	33	Yes Agreed with 61.1%
2	2.1.5	Liner shipping during the period of transition had to undergo changes under circumstances of widely absent state support, otherwise common in the shipping sector in market economies.	34	94.4	1	2.8	1	2.8	35	Yes Agreed with 94.4%
3	3.1.1	Transitional changes in Eastern European liner shipping has been carried out within the framework of the macroeconomic stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, legal, economic and social changes.	23	63.9	12	33.3	1	2.8	35	Yes Agreed with 63.9%
3	3.1.2	Some forms of Eastern European liner shipping restructuring are deeply customised for the unique function and technical operation of Eastern European liner companies, such as structural, functional, technical and spatial changes.	9	25.0	26	72.2	1	2.8	35	No

Table 9.5 Analysis of Delphi round one continued (*Source*: Author 2010)

Analysis of Delphi round one to determine consensus										
H	**No.**	**Statements**	**Agreed**		**Disagreed**		**U.A.C***		**Opinions expressed**	**Consensus**
			No.	**%**	**No.**	**%**	**No.**	**%**		
3	3.1.3	During the period of transition, Eastern European liner shipping abandoned components in the industry that were: incompatible with the market economic system, aggravating efficiency, technically outdated, and/or incompatible with European Union regulations and policy and international standards of practice.	31	86.1	1	2.8	4	11.1	32	Yes Agreed with 86.1%
3	3.1.4	During the period of transition, Eastern European liner shipping companies retained components in the industry that featured: internationally competitive solutions, high value infrastructure and superstructure, employee expertise, and specialised tonnage suitable for further service under market conditions.	22	61.1	5	13.9	9	25.0	27	Yes Agreed with 61.1%
3	3.1.5	During the period of transition, Eastern European liner shipping companies introduced new components in the industry to: stimulate the establishment of new enterprises, encourage competition on the markets, attract foreign investment and private enterprise, and increase efficiency and service quality.	29	80.6	0	0	7	19.4	29	Yes Agreed with 80.6%
4	4.1.1	From a systemic point of view privatisation is the most decisive factor for successful transition in Eastern European liner shipping.	34	94.4	2	5.6	0	0	36	Yes Agreed with 94.4%
4	4.1.2	Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability.	27	75.0	7	19.4	2	5.6	34	Yes Agreed with 75.0%
4	4.1.3	Privatisation will support liner shipping companies with the acceptance of the laws and principles of operation characteristic of the European Union and international transport market.	15	41.7	17	47.2	4	11.1	32	No
4	4.1.4	Privatisation of Eastern European liner shipping cannot be removed from a succession of fundamental restructuring needs. Core changes are essential in the fields of: ownership and management, fleets and tonnage, markets and service offerings, and company organisation and cooperation.	24	66.7	10	27.7	2	5.6	34	Yes Agreed with 66.7%
4	4.1.5	Poor financial conditions, economic and political instability, slow rates in the increase of production and inherent socialist foundations, continue to hamper the privatisation processes of Eastern European liner shipping companies.	14	38.9	19	52.8	3	8.3	33	No
5	5.1.1	The process of transition in Eastern European liner shipping is influenced by the European Union. Just as no model of economic transition exists so no pattern has been formed for the adaptation of liner shipping to the European Union.	27	75.0	1	2.8	8	22.2	28	Yes Agreed with 75.0%
5	5.1.2	The objectives of shipping policy in Eastern European countries should in principle be the same: fair competition, privatisation encouragement, modernisation of fleets and infrastructure, removal of barriers to trade, improvement of the quality of service, and environmental protection.	25	69.4	4	11.1	7	19.4	29	Yes Agreed with 69.4%

Table 9.5 Analysis of Delphi round one continued (*Source*: Author 2010)

Analysis of Delphi round one to determine consensus										
H	No.	Statements	Agreed		Disagreed		U.A.C*		Opinions expressed	Consensus
			No.	%	No.	%	No.	%		
5	5.1.3	The integration of Eastern European liner shipping to the single European transport market has been expressed in the endorsement of new legislation of transport directives. It is also expressed in the technical transformation of company structure, organisation and operations.	16	44.4	18	50.0	2	5.6	34	No
5	5.1.4	Integration with the European Union transport policy will bring benefits to liner shipping through: increased efficiency by elimination of formalities at ports, acceleration of modernisation of fleets as a result of the range of financing, and quality improvement in services due to deeper organisational integration.	29	80.5	5	13.9	2	5.6	34	Yes Agreed with 80.5%
5	5.1.5	It is likely that the level of adjustment to European Union transport policy in Eastern European liner shipping will actively affect the rate and the scope of adaptation processes in other sectors of the economy.	22	61.1	8	22.2	6	16.7	30	Yes Agreed with 61.1%
			475		**153**				**814**	

(*) U.A.C = Unable to comment

9.4.1 Consensus reached after Delphi round one

With the results of Equation 9.1, achieved by the process in Figure 9.2, it can be determined which of the statements from Delphi round one have achieved consensus. Nine statements during round one reached a percentage of agreement that was higher than 77.1%, and thus reached consensus. Each of the statements is discussed herein making use of the comments from the panel.

Liner shipping under communism

Statement 1.1.1

Up until mid-1989, the majority of Eastern European liner shipping companies were owned, financed and managed by a series of state monopolies.

Panellists agreed that most, if not all, Eastern European shipping companies, with specific interests in lighter trades, were state owned prior to the end of one-

party communist rule. Members advised that since shipping companies came under the sphere of large-scale productive assets, they were automatically included as state property. Comments pertained that few, if any, attempts had been made to privatise shipping companies, largely due to the domination of the regime in power over property rights and administrative control. As a result, governments were highly involved in all aspects of shipping, by providing or regulating services. Arguments in support of this statement also stipulated that shipping companies were further controlled by the integrated financial structure. All major financial decisions were taken by the state on behalf of the shipping company. Since private finance was not tolerated, socialist shipping had a substantial investment shortage, which ultimately led to operational difficulties and an increasing reliance on the state for commercial decision-making.

Liner shipping under communism

Statement 1.1.3

The main functions of liner shipping under communism were: to transport goods for national foreign trade economically (i.e. run fleets, ports, agencies), to provide some form of security, and to earn hard currency wherever possible.

The arguments for agreeing with this statement arose because panellists recognised the role central government played in setting shipping policy. Comments suggested that as finance was exceedingly limited for the service sector in general, liner shipping had to transport goods for national foreign trade on a no thrills service, with only mandatory maintenance of fleets and infrastructure. Members articulated that a heightened state of Soviet paranoia led to military-strategic aims being added to shipping policy functions. Here,

socialist shipping orientated liner fleets towards roll-on roll-off tonnage for its multi-purpose usage, instead of the cellular tonnage that was being introduced globally. Furthermore, panellists also agreed that a main task of socialist shipping was to earn foreign currency largely through the cross-trades, and to save upon expenses wherever possible at home. All members agreed that shipping under communism was not carried out for commercial reasons alone, and consequently the functions were in contrast to those of the western world.

Liner shipping under communism

Statement 1.1.5

By 1989, the majority of Eastern European liner shipping companies lacked the skills to compete, the investment to fund new activities, the infrastructure to survive, and the organisation to provide a competitive framework.

The main reason panellists agreed with this statement is because of the significant amount of change that has had to take place since 1989 to ensure the survivability of former socialist liner shipping companies. Comments pertained that the problems inherited from the communist period, continue to underpin many of the contemporary developments and dilemmas within Eastern European liner shipping. Such problems were summarised as: insufficient investment, poor managerial know-how, neglect of human resources and technical skill, and limited organisational structures. Archaic fleets and infrastructure were unable to be updated or replaced, due to the prioritisation of heavy industry. Panellists declared that with the exception of the cross-trades, liner shipping under communism was devoid of any real commercial incentive, since shipping fleets were guaranteed traffic regardless of their efficiency and

punctuality, and balance sheets were wiped clean in spite of performance. They thus had no experience of competition from within the sector, or through experience with other sectors operational in the CMEA region.

Liner shipping and systematic transition

Statenent 2.1.1

Eastern European liner companies have not been able to rely on an established transition theory in their course of restructuring into profitable entities operational in competitive market economies.

Almost all the panellists agreed with this statement, which works in collaboration with statement 2.1.5. Comments pertain that the strategic restructuring of Eastern European liner shipping companies during systematic transition is an extremely complex process, involving change at every level of organisational structure. Panellists agree that to date, there has been no established transition theory/model for shipping companies to follow in their course of restructuring into autonomous, profitable companies operating in market economies. As a consequence, liner shipping companies have had to make decisions with regard to: ownership and management, market reorientation and services changes, fleet and tonnage renewal, and company reorganisation and cooperation largely alone. Members stated that it was still in the interest of Eastern European liner companies for such a model to be developed, since the period of transition has not finished, particularly in light of European Union membership, which is now widely seen as a necessary process in restructuring.

Liner shipping and systematic transition

Statement 2.1.5

Liner shipping during the period of transition had to undergo changes under circumstances of widely absent state support, otherwise common in the shipping sector in market economies.

Most panellists agreed with this statement, which has a strong correlation with statement 2.1.1, since both statements advocate that Eastern European liner shipping has undergone substantial change without any form of support, albeit from economic analysts in terms of the development of a theory/model to offer guidance, or through sector-specific support from Eastern European governments. Panellists stipulated that the state protection afforded to liner shipping fleets to secure hard currency and increase military flexibility during communism, was not replaced by adequate shipping political frameworks, otherwise common in the market sector. Members felt that government ministers overlooked the effect of an immediate withdrawal of state protection, alongside the sudden introduction of competition via liberalisation and deregulation. A number of panellists noted their surprise that more Eastern European liner shipping companies had not liquidated as a result of the lack of support offered by the maritime division of national transport departments.

Formation of evolutionary restructuring in liner shipping

Statement 3.1.3

During the period of transition, Eastern European liner shipping abandoned components in the industry that were: incompatible with the market economic system, aggravating efficiency, technically outdated, and/or incompatible with European Union regulations and policy and international standards of practice.

The arguments for agreeing with this statement arose because the majority of panellists recognised that a large number of components operational in socialist liner shipping had to be removed to allow for the succession of market-orientated components as part of the transition towards capitalism. Thus, this statement has a strong correlation to statement 3.1.5, which embraces the introduction of new components as part of evolutionary restructuring. Panellists stated to ensure survivability Eastern European liner shipping companies should 'cut-away the dead wood', meaning the disposal of outdated technologies, laying-up of archaic vessels, and removal of unprofitable service patterns. Members stressed the importance of compliance with the European Union, specifically in terms of the elimination of guarantees for monopoly position, use of fixed pricing, and a legal obligation to use the national carrier. The general stance was that companies should move away from being ship transportation suppliers, to being integrated service providers for customers.

Formation of evolutionary restructuring in liner shipping

Statement 3.1.5

During the period of transition, Eastern European liner shipping companies introduced new components in the industry to: stimulate the establishment of new enterprises, encourage competition on the markets, attract foreign investment and private enterprise, and increase efficiency and service quality.

A large proportion of the panel agreed with this statement on the principle that if one removes components that are by their nature ineffective, technically outdated or incompatible with European Union standards of practice, then this necessarily implies that new components must be found to replace them. Comments pertain that Eastern European liner companies should restructure

with a much stronger focus on coming up with new ways to serve the customer, rather than executing the traditional business model, in one set way. Members suggested companies should seek to maximise profits and minimise costs, at an acceptable level of risk. Panellists presented the importance of developing effective investment strategies, adapting to technological advances, integrating the role of the shipping company into the supply chain management, and complying with policy and legislative change to improve safety standards and reduce ecological noxiousness as part of membership of the European Union.

Privatisation and strategic restructuring

Statement 4.1.1

From a systemic point of view privatisation is the most decisive factor for successful transition in Eastern European liner shipping.

Almost all the panellists agreed with this statement, recognising privatisation as the core process in transitional restructuring of former socialist liner shipping companies. Members stated that privatisation can make Eastern European liner shipping companies work as market-orientated firms with increased efficiency, productivity and profitability. Panellists felt there were few, if any, alternatives to privatisation for transitional restructuring in Eastern European liner companies, since the depth and breadth of change required was all encompassing, and the finance necessary could not be matched by state treasury. Members stipulated that new found ownership rights in Eastern European liner shipping have had a positive effect in terms of company restructuring, as it has been utilised as a way of securing capital investment, managerial know-how, and approving the maintenance, development and modernisation of liner fleets and infrastructure.

Finally, panel members argued that privatisation in Eastern European liner shipping has provided considerable assistance in the acceptance of the laws and principles of operation characteristic of the international transport market.

Adaptation to the European Union transport system

Statement 5.1.4

Integration with the European Union transport policy will bring benefits to liner shipping through: increased efficiency by elimination of formalities at ports, acceleration of modernisation of fleets as a result of the range of financing, and quality improvement in services due to deeper organisational integration.

The arguments for agreeing with this statement arose because the majority of panellists appreciated the advantages to be found as part of the adaptation of Eastern European liner shipping to the single European transport market. Comments pertain that Eastern European liner shipping will benefit from the increase in efficiency of transport systems as a whole, a reduction in shipping costs and tariffs passed onto customers, better use of regional resources, a reduction in empty vehicle runs resulting from free access to forwarding orders, and a quality improvement in liner services. However, members also took the opportunity to raise a number of concerns in relation to the integration of Eastern European liner shipping with the European Union. Specifically, participants highlighted: the inadequacies of state aid to allow Eastern European liner companies to implement legislative changes; the difference in quality between Eastern European liner fleets and those of the European Union making it difficult to successfully compete; and the resistance of public attitude towards transitional change associated with European Union membership.

9.4.2 Reformulation of statements for Delphi round two

The statements that did not reach consensus after the first round were reformulated and included in Delphi round two. The reformulated statements of Delphi round two must accurately convey the meaning which participants attempted to communicate by means of the Delphi round one (Chen *et al* 2012; Rowe and Wright 2011; Delbecq 1975). Typically, Delphi statements become more focused on the specifics of the research aims and objectives as each round comes to pass (Parente and Anderson-Parente 2011). The following sub-sections specify the original statements from Delphi round one and the reformulated statements for Delphi round two, justified by arguments for the changes from participants in accordance with the original research aims.

Liner shipping under communism

Original statement 1.1.2

Two main types of socialist influence over Eastern European liner shipping related activities may be identified. Firstly, socialist domination of political and macroeconomic shipping goals. Secondly, centralisation of national fleet structure to implement shipping policy and foreign targets.

Reformulated

Liner shipping under communism was controlled through central administration of shipping policy and state implementation of national fleet structures.

Argument(s)

Shipping under communism has always been a field of great national interest not only because of shippers demand, but also for other economic, political and social reasons. Since shipping was regarded as necessary it became subject to

central planning procedures, with the government setting all major shipping goals. As the size and structure of the fleet also had a direct relationship to national shipping policy, central government sought to influence them too.

Liner shipping under communism

Original statement 1.1.4

The outcome of centralised administration was a tendency to neglect the whole of the under-funded Eastern European liner shipping industry, thus ensuring poor quality fleets and infrastructure, and congestion and bottlenecks.

Reformulated

By 1989, the majority of socialist shipping fleets showed signs of insufficient investment, and vessels were often old and obsolete. Competitive transport qualities became deficient as regards frequency, transit time and punctuality.

Argument(s)

The maritime transport sector under communism was severely neglected as a deliberate consequence of its low prioritisation in comparison to heavy industry. Inevitably, a lack of interest in difficult economic times, led to a shipping sector characterised by poor investment and archaic technologies. As a result, competitive transport qualities became deficient, and compared with other major international fleets Eastern European liner fleets were unreliable.

Liner shipping and systematic transition

Original statement 2.1.2

Transition decisions have been dictated by specific national framing conditions.

They have often been irregular reactions to short-term changes, influenced by mechanisms of supply and demand, and/or private interests.

Reformulated

National framing conditions influenced the process and speed of transitional restructuring in Eastern European liner shipping more than any other factor.

Argument(s)

At the beginning of transition, all Eastern European liner companies were driven by the same need; to move from shipping under communism to shipping in the free market. However, the speed and process of restructuring in individual liner shipping companies was dependent on the particular national framing conditions of the country of registration, and included: legislative matters, interest rates, political stability, growth, investment, debt, and production.

Liner shipping and systematic transition

Original statement 2.1.3

Changes in the political framework of Eastern European liner shipping and the market transition of the Eastern European shipping companies concerned did not match each other, nor did they run synchronously.

Reformulated

National framing conditions and European Union influence, dictated the development of shipping policy and political frameworks governing Eastern European liner shipping.

Argument(s)

Without exception, every formerly socialist country in Eastern Europe has moved towards greater democracy and greater market orientation. In every country, that political economic shift has produced a corresponding shipping revolution. National framing conditions, in accordance with European Union guidance, dictated the development of the political framework of shipping. The speed and process of this was dependent on the specific country of registration.

Liner shipping and systematic transition

Original statement 2.1.4

Although liberalisation and deregulation led to strong competition and to the abolition of state protection, the installation and successful operation of new shipping political frameworks was pending.

Reformulated

At the start of the period of transition, the shipping policy and political frameworks which existed did not match the new economic, political and social situation of Eastern Europe.

Argument(s)

The end of communism brought a changed policy framework for Eastern European liner shipping. The inadequacies of socialist shipping warranted the need for fundamental amendments to shipping policy and political frameworks. However, the installation of new adequate shipping political frameworks (as part of transition) remained pending. Therefore Eastern European liner shipping entered the phase of transition largely without governmental aid and support.

Formation of evolutionary restructuring in liner shipping

Original statement 3.1.1

Transitional changes in Eastern European liner shipping has been carried out within the framework of the macroeconomic stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, legal, economic and social changes.

Reformulated

The reorientation of policies on a macroeconomic scale has a clear influence on the strategic restructuring processes in Eastern European liner shipping during the period of transition.

Argument(s)

The large-scale nature of the shipping industry pertains that its transformation is carried out within the framework of forms which develop from changes in the economy as a whole. The remodelling of policies on a macroeconomic scale has a substantial influence on transport, and the shipping industry in particular. Policies, which effect transitional liner shipping, concern those relating to market conditions, the budget, anti-inflation, ecology, credit, and the energy industry.

Formation of evolutionary restructuring in liner shipping

Original statement 3.1.2

Some forms of Eastern European liner shipping restructuring are deeply customised for the unique function and technical operation of Eastern European liner companies, such as structural, functional, technical and spatial changes.

Reformulated

The complex nature of strategic restructuring in Eastern European liner shipping denotes the requirement for customised solutions as part of transitional change.

Argument(s)

Alongside the reorientation of policies on a macroeconomic scale for the whole economy other policies are exclusively designed for the strategic restructuring of Eastern European liner shipping companies during the period of transition. Many of the unique formations may be attributed to the correlation between the liner industry and its international characteristics, which are different from domestic orientated activity, and thus require alternative provisions.

Formation of evolutionary restructuring in liner shipping

Original statement 3.1.4

During the period of transition, Eastern European liner shipping companies retained components in the industry that featured: internationally competitive solutions, high value infrastructure and superstructure, employee expertise, and specialised tonnage suitable for further service under market conditions.

Reformulated

Although no arrangement is perpetually indispensable, during transition Eastern European liner companies preserved a number of components that were compatible with the market system or had remained internationally competitive.

Argument(s)

The restructuring of Eastern European liner shipping may be broken down into three evolutionary components; diminishing, permanent and incipient. In terms

of permanent components, since Eastern European liner companies held some westernised characteristics, due to its international nature under communism, it follows that it operated a number of competitive components which could be preserved at least in some fragmentary form in the market economy.

Privatisation and strategic restructuring

Original statement 4.1.2

Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability.

Reformulated

Privatisation as part of transition in Eastern European liner shipping is most comprehensive, implying new ownership structures and efficiency criteria, leading to greater management know-how and company restructuring.

Argument(s)

Market economies are characterised by dominantly private structures of ownership. Thus, privatisation must be regarded as one of the most important features of Eastern European transition. Privatisation within the context of transition differs from other worldwide privatisation programmes. Here, key transformations of ownership structures are often utilised to support companies with investment decisions, management know-how, and company restructuring.

Privatisation and strategic restructuring

Original statement 4.1.3

Privatisation will support liner shipping companies with the acceptance of the laws and principles of operation characteristic of the European Union and international transport market.

Reformulated

Privatisation is seen as a meaningful way to minimise the state's influence on economic decision-making, while supporting integration into international economic networks, such as the European Union.

Argument(s)

A fundamental aim of privatisation in Eastern European liner shipping is to increase company efficiency. One of the ways to achieve this is to minimise the state's influence on economic decision-making and thereby increase the chance of productivity. Another aim of privatisation is to support Eastern European liner shipping's integration into international economic networks, such as the European Union, wherein investment opportunities are seen as plentiful.

Privatisation and strategic restructuring

Original statement 4.1.4

Privatisation of Eastern European liner shipping cannot be removed from a succession of fundamental restructuring needs. Core changes are essential in the fields of: ownership and management, fleets and tonnage, markets and service offerings, and company organisation and cooperation.

Reformulated

Privatisation of transitional liner shipping cannot be separated from a series of

internal restructuring needs. However, substantial difference of opinion exists about the sequencing of privatisation and restructuring in the shipping industry.

Argument(s)

Privatisation and restructuring often go hand in hand in economies in transition. Eastern European maritime authorities have to decide whether to privatise national shipping corporations before or after strategic restructuring, or whether both should proceed simultaneously. The majority of Eastern European liner companies have begun to undertake privatisation and broad restructuring, though they are pursuing these goals at differing speed with varied success.

Privatisation and strategic restructuring

Original statement 4.1.5

Poor financial conditions, economic and political instability, slow rates in the increase of production and inherent socialist foundations, continue to hamper the privatisation processes of Eastern European liner shipping companies.

Reformulated

Privatisation processes in Eastern European liner shipping continue to be hindered by poor financial conditions and a lack of public acceptance.

Argument(s)

Since the beginning of transition there have been a number of barriers to privatisation processes in Eastern European liner shipping. Today, the main barriers to structural changes in ownership rights continue to be the deficit of necessary capital to finance privatisation, in addition to the lack of public support for the privatisation of state shipping fleets and infrastructure. Both will

be required to change for privatisation to be fully implemented.

Adaptation to the European transport system

Original statement 5.1.1

The process of transition in Eastern European liner shipping is influenced by the European Union. Just as no model of economic transition exists so no pattern has been formed for the adaptation of liner shipping to the European Union.

Reformulated

Eastern European liner companies have had to undergo essential changes in their adaptation to the single European transport market predominantly alone.

Argument(s)

The transformation of Eastern European liner shipping has been fundamentally influenced by integration with the European Union. Eastern European liner companies have begun to harmonise existing maritime frameworks and infrastructure with that of the European Union. However, Eastern European liner companies have had to endure essential changes in their adaptation process largely alone, as no model exists to provide guidance and support.

Adaptation to the European transport system

Original statement 5.1.2

The objectives of shipping policy in Eastern European countries should in principle be the same: fair competition, privatisation encouragement, modernisation of fleets and infrastructure, removal of barriers to trade, improvement of the quality of service, and environmental protection.

Reformulated

Eastern European liner companies have similar obstacles to overcome as part of European Union accession. Priorities include: setting the principles of market regulation, modernising fleets, and adapting to the European transport system.

Argument(s)

A general direction for the adaptation of Eastern European liner shipping to the European Union is marked by the association agreements and the White Papers (1995) and (2001). The priorities for Eastern European liner companies are necessarily the same as they have endured similar histories. The basic aim for maritime authorities is to ensure market regulation for fair competition, improve safety standards, and adapt to the European transport system.

Adaptation to the European transport system

Original statement 5.1.3

The integration of liner shipping to the single European transport market has been expressed in the endorsement of new legislation of transport directives. It is also expressed in the technical transformation of company structure, organisation and operations.

Reformulated

Since joining the European Union, Eastern European liner shipping has seen a dramatic improvement in managerial know-how, service quality, niche specialisation, and adherence to safety and environmental legislation.

Argument(s)

European Union membership has had a remarkable effect on former socialist

shipping fleets. Accessional changes may be considered part of regional economic transition. The effect of this integration is two fold: (1) tangible, to include the modernisation of fleets and infrastructure, and choice of trained seafarers; and (2) intangible, to include the rapid enact of transport regulations and directives, managerial know-how and organisational restructuring.

Adaptation to the European transport system

Original statement 5.1.5

It is likely that the level of adjustment to European Union transport policy in Eastern European liner shipping will actively affect the rate and the scope of adaptation processes in other sectors of the economy.

Reformulated

The integration of Eastern European liner shipping to the single European transport market is in the interest of the whole of Europe, and will actively assist in the adaptation processes in other sectors of the economy.

Argument(s)

The relationship between Eastern European liner shipping and European Union accession is complex and poorly understood. The integration of Eastern European liner shipping to the single European transport market is likely to cause substantial effects on the rate of economic productivity and the scope of economic growth throughout the region. Therefore, the creation of a fully integrated transport system across the whole of Europe is in the interest of all.

9.5 Administration of Delphi round two

On 17th May, participants who completed Delphi round one received a postal package containing four documents. Firstly, an explanatory cover letter, acknowledging an appreciation for their time in Delphi round one and the value of their continued support, a brief description of the aims of the study and the importance of the study in relation to the liner shipping industry, the level of consensus reached in Delphi round one, the purpose of Delphi round two, new methodological instructions and deadlines. Appendix (9) provides a sample copy of explanatory cover letter Delphi round two. Secondly, participants received a terminology framework sheet to offer clarification of crucial terms and words applicable to round two. Appendix (10) presents a sample copy of the terminology framework Delphi round two. Thirdly, a copy of Delphi round two and a stamped addressed envelope was provided. Appendix (11) provides a sample copy of Delphi round two. Fourthly, participants received a timeline as an administration and explanation tool. The timeline offers participants the opportunity to understand the overall framework of the research design. It also provides the panel of experts with an up to date administrative resource. Appendix (12) presents a sample copy of timeline Delphi round two.

Two weeks later, on 31st May a reminder letter was sent by post to participants who had not returned Delphi round two, stating the importance of their individual contribution to survey, a brief description of the aims of the study and methodology, the importance of the research to the liner shipping industry, contact details for additional information, and appreciation of their time. Appendix (13) presents a sample copy of reminder letter Delphi round two.

9.5.1 Response rates Delphi round two

Of the 36 panel members who were sent Delphi round two of the study, 32 completed the questionnaire, providing a healthy response rate of 88.9% for this round. Table 9.6 depicts the size and structure of the panel participant response rates for Delphi round two. In total four panel members departed from Delphi round one. However, in terms of the distribution of stakeholders, Delphi round two retained the same structure. Academics formed the largest category, with 50% of the total number of participants. Policy-makers formed the smallest category, with 21.9% of the total number of participants. While, industry-users remained in-between, with 21.9% of the total number of participants.

Size and structure of panel: Delphi round two		
Categories	**Number**	**Percentage**
Industry-users	9	28.1
Academics	16	50.0
Policy-makers	7	21.9
Total	**32**	**100**

Table 9.6 Size and structure of panel: Delphi round two (*Source*: Author 2010)

Table 9.7 presents the size and structure of the panel by country participation for Delphi round two of the study. In comparison with Table 9.3 (depicting the size and structure of panel by country participation for Delphi round one of the study), three notable movements occurred. Firstly, two Estonian participants from the industry-users stakeholder group departed from the study (leaving 71.4% of the total Estonian industry-users from Delphi round one). Secondly, one Latvian participant from the policy-makers stakeholder group departed from the study (leaving 85.7% of the total Latvian policy-makers from Delphi round one). Thirdly, one Romanian participant from the academics stakeholder group departed from the study (leaving 50% of the total Romanian academics from Delphi round one). Accordingly, the above stakeholder groups retained representation from the six Eastern European countries of the research.

Size and structure of panel by country participation: Delphi round two												
Categories	**Estonia**		**Latvia**		**Lithuania**		**Poland**		**Romania**		**Bulgaria**	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Industry-users	2	40.0	3	50.0	2	40.0	1	10.0	0	0.0	1	25.0
Academics	3	60.0	1	16.6	3	60.0	6	60.0	1	50.0	2	50.0
Policy-makers	0	0.0	2	33.4	0	0.0	3	30.0	1	50.0	1	25.0
Total	**5**	**100**	**6**	**100**	**5**	**100**	**10**	**100**	**2**	**100**	**4**	**100**

Table 9.7 Size and structure of panel by country participation: Delphi round two

(*Source*: Author 2010)

9.5.2 Analysis of the responses to Delphi round two

In relation to this study, the responses from round two were analysed and the APMO calculated, with the full results presented in Table 9.9. The actual APMO cut-off rate for consensus in Delphi round two is provided in Equation 9.2.

$$\text{APMO} = \frac{\text{Majority Agreements} + \text{Majority Disagreements}}{\Sigma\ \text{Opinions Expressed}} \qquad 83.1\% = \frac{336 + 38}{450}$$

Equation 9.2 APMO cut-off rate for consensus in Delphi round two

(*Source*: Adapted by Author from Kapoor 1987)

Table 9.8 also illustrates the process of calculation for APMO cut-off rate, Delphi round two. Here, the number of statements that reached consensus utilising the APMO calculation is given, in addition to the number of those statements that did not, and therefore will be reformulated into round two.

Delphi round two, Average Percent of Majority Opinions (APMO)	
Majority agreements	336
Majority disagreements	38
Total opinion expressed	450
Average Percent of Majority Opinions	**83.1%**
Number of statements reaching consensus following APMO	7
Number of statements to be reformulated into Delphi round three	9

Table 9.8 APMO cut-off rate for consensus in Delphi round two

(*Source*: Author 2010)

Table 9.9 Analysis of Delphi round two (*Source*: Author 2010)

Analysis of Delphi round two to determine consensus										
H	**No.**	**Statements**	**Agreed**		**Disagreed**		**U.A.C***		**Opinions expressed**	**Consensus**
			No.	**%**	**No.**	**%**	**No.**	**%**		
1	1.1.2	Liner shipping under communism was controlled through central administration of shipping policy and state implementation of national fleet structures.	24	75.0	4	12.5	4	12.5	28	Yes Agreed with 75.0%
1	1.1.4	By 1989, the majority of socialist shipping fleets showed signs of insufficient investment, and vessels were often old and obsolete. Competitive transport qualities became deficient as regards frequency, transit time and punctuality.	31	96.9	0	0	1	3.1	31	Yes Agreed with 96.9%
2	2.1.2	National framing conditions influenced the process and speed of transitional restructuring in Eastern European liner shipping more than any other factor.	13	40.6	16	50.0	3	9.4	29	No
2	2.1.3	National framing conditions and European Union influence, dictated the development of shipping policy and political frameworks governing Eastern European liner shipping.	14	43.8	13	40.6	5	15.6	27	No
2	2.1.4	At the start of the period of transition, the shipping policy and political frameworks which existed did not match the new economic, political and social situation of Eastern Europe.	29	90.6	1	3.1	2	6.3	30	Yes Agreed with 90.6%
3	3.1.1	The reorientation of policies on a macroeconomic scale has a clear influence on the strategic restructuring processes in Eastern European liner shipping during the period of transition.	21	65.6	3	9.4	8	25.0	24	Yes Agreed with 65.7%
3	3.1.2	The complex nature of strategic restructuring in Eastern European liner shipping denotes the requirement for customised solutions as part of transitional change.	29	90.6	1	3.1	2	6.3	30	Yes Agreed with 90.6%
3	3.1.4	Although no arrangement is perpetually indispensable, during transition Eastern European liner companies preserved a number of components that were compatible with the market system or had remained internationally competitive.	30	93.7	0	0	2	6.3	30	Yes Agreed with 93.7%
4	4.1.2	Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability.	31	96.9	0	0	1	3.1	31	Yes Agreed with 96.9%
4	4.1.3	Privatisation is seen as a meaningful way to minimise the state's influence on economic decision-making, while supporting integration into international economic networks, such as the European Union.	29	90.6	2	6.3	1	3.1	32	Yes Agreed with 90.6%
4	4.1.4	Privatisation of transitional liner shipping cannot be separated from a series of internal restructuring needs. However, substantial difference of opinion exists about the sequencing of privatisation and restructuring in the shipping industry.	18	56.3	9	28.1	5	15.6	27	No
4	4.1.5	Privatisation processes in Eastern European liner shipping continues to be hindered by poor financial conditions and a lack of public acceptance.	21	65.6	7	21.9	4	12.5	28	Yes Agreed with 65.7%
5	5.1.1	Eastern European liner companies have had to undergo essential changes in their adaptation to the single European transport market predominantly alone.	30	93.7	0	0	2	6.3	30	Yes Agreed with 93.7%

(*) U.A.C = Unable to comment

Table 9.9 Analysis of Delphi round two continued (*Source*: Author 2010)

Analysis of Delphi round two to determine consensus										
H	No.	Statements	Agreed		Disagreed		U.A.C*		Opinions expressed	Consensus
			No.	%	No.	%	No.	%		
5	5.1.2	Eastern European liner companies have similar obstacles to overcome as part of European Union accession. Priorities include: setting the principles of market regulation, modernising fleets, and adapting to the European transport system.	17	53.1	6	18.8	9	28.1	23	Yes Agreed with 53.1%
5	5.1.3	Since joining the European Union, Eastern European liner shipping has seen a dramatic improvement in managerial know-how, service quality, niche specialisation, and adherence to safety and environmental legislation.	23	71.9	3	9.4	6	18.8	26	Yes Agreed with 71.9%
5	5.1.5	The integration of Eastern European liner shipping to the single European transport market is in the interest of the whole of Europe, and will actively assist in the adaptation processes in other sectors of the economy.	21	65.6	3	9.4	8	25.0	24	Yes Agreed with 65.7%
			336		**38**				**450**	

(*) U.A.C = Unable to comment

9.5.3 Consensus reached after Delphi round two

With the results of Equation 9.2, achieved by the process in Figure 9.2, it can be determined which of the statements from Delphi round two have achieved consensus. Seven statements during round two reached a percentage of agreement that was higher than 88.1%, and thus reached consensus. Each of the statements is discussed herein making use of the comments from the panel.

Liner shipping under communism

Statement 1.1.4

By 1989, the majority of socialist shipping fleets showed signs of insufficient investment, and vessels were often old and obsolete. Competitive transport qualities became deficient as regards frequency, transit time and punctuality.

Most panellists agreed that socialist fleets were largely archaic. Technologies used were rather backwards, i.e. leaning towards general-purpose vessels

rather than the more lighter (specialised) tonnage introduced worldwide. Socialist shipping fleets had not kept up with advancing international quality requirements. Moreover, old vessels with a high need for repair and maintenance led to considerable costs, which in general could not be accounted for. Members advised that in addition to the vast array of functions the industry was expected to fulfill, another reason socialist shipping suffered from insufficient funds was due to the community obligations it was required to meet. These included housing, education, medical assistance and other items. Further, socialist shipping was inappropriately utilised as a vast employment agency, in which companies were grossly over staffed in respect of their true staffing needs. The result of years of financial neglect and poor priorisation in investment decision-making, led to an industry that became characterised by transport qualities, which were deficient as regards regularity and reliability.

Liner shipping and systematic transition

Statement 2.1.4

At the start of the period of transition, the shipping policy and political frameworks which existed, did not match the new economic, political and social situation of Eastern Europe.

An overwhelming majority of panellists agreed that the inadequacies of socialist shipping warranted the need for fundamental amendments during the transition process. Accordingly, all economic and political systems based on the principles of the centrally planned economy initiated swift and extensive restructuring programmes, which included: liberalisation, deregulation, commercialisation and privatisation. However, members advised that although broad changes had

occurred in terms of the economic, political and social framework of Eastern Europe, the actual sector-specific policy frameworks were notably far behind and thus, did not match the new operational environment that shipping companies found themselves in post-1989. Comments pertain that a lack of political leadership, combined with little understanding of the processes involved in systematic transition, meant that industries were often left to fend for themselves. As a result the Eastern European liner shipping industry entered the period of transition largely without governmental assistance and support.

Formation of evolutionary restructuring in liner shipping

Statement 3.1.2

The complex nature of strategic restructuring in Eastern European liner shipping denotes the requirement for customised solutions as part of transitional change.

Arguments for agreeing with this statement pertain that although some industries may follow the central fold of national restructuring, other industries may require a more tailored approach in their transformation towards operating in a liberalised market. Panellists confer that the complex nature of strategic restructuring and privatisation processes (embracing: ownership and management, feet and tonnage renewal, market reorientation and service changes, and company reorganisation and cooperation) in Eastern European liner shipping justifies the requirement for industry-specific solutions, such as technical, structural and spatial arrangements as part of transitional change within the economy. Members cited the industrial importance of Eastern European liner shipping to both local and regional economies as another reason for customised solutions. Furthermore, the ability of the Eastern

European liner industry to actively support the restructuring and recovery processes of other sectors of the economy (across: primary, secondary, tertiary and quaternary) was also suggested in support of industry-specific solutions.

Formation of evolutionary restructuring in liner shipping

Statement 3.1.4

Although no arrangement is perpetually indispensable, during transition Eastern European liner companies preserved a number of components that were compatible with the market system or had remained internationally competitive.

Most panel members agreed that some element of the old shipping system under communism should be retained, at least in some fragmentary form in the new market economy. Cost was predominately cited as the greatest reason for preserving tangible components from the old system and incorporating them into the new system. Members highlighted container terminals and the railway network as good examples of valuable inheritance from the past, which would continue to be useful in the age of cellular traffic and multimodal logistics links. Panellists also stipulated that some solutions were to be maintained because they worked in harmony with international norms or had remained international competitive. For example, liner shipping under communism had become one of the most westernised branches of the economy, due to its involvement in the highly competitive cross-trades to earn hard currency. Panellists also presented a number of intangible components as suitable for further exploitation. Mainly these were based on the regulations of the United Nations or on conventions and international agreements for technical solutions, such as seafarer safety.

Privatisation and strategic restructuring

Statement 4.1.2

Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability.

A large majority of panellists agreed with this statement, citing that since Eastern European liner companies operate on the line of contact with the international market, transformations of ownerships structures are particularly important. Members suggested a number of ways that privatisation could lead to improvements in Eastern European liner shipping. In particular, privatisation was expected to help towards company restructuring and from this to have a positive effect on the operational efficiency of company. Panellists acknowledged the role newly structured ownership and possession rights play in increasing efficiency and performance levels of Eastern European liner companies. Comments pertain that privatisation may bring a much needed capital injection to allow for the maintenance, development and modernisation of shipping fleets and associated infrastructure, all of which was required to increase the competitive nature of liner companies. Greater profitability was seen as a byproduct of increased commercalisation in liner shipping, again referred to as another incentive for the privatisation of ownership structures.

Privatisation and strategic restructuring

Statement 4.1.3

Privatisation is seen as a meaningful way to minimise the state's influence on economic decision-making, while supporting integration into international economic networks, such as the European Union.

Panellists argued that a division in state ownership and its consequential management of a company would have the immediate effect of reducing the power of the state's influence on economic decision-making in Eastern European liner shipping companies. Comments cited that privatisation would assist with the integration of Eastern Europe with international economic networks, such as the European Union. This is achieved by ensuring the operation of the same market-based mechanisms utilised in corresponding liner shipping industries. Here, panellists stipulated the adherence of international codes of practice to achieve similar standards and quality of service as another way to support integration into global economic networks. Comments also pertain that tangible aspects of Eastern European liner shipping may also have an influence on integration, namely through onboard ship technologies and cargo handling equipment, reducing time taken in ports. Seafarer training was another area discussed, introducing the utility of standard training technique

Adaptation to the European transport system

Statement 5.1.1

Eastern European liner companies have had to undergo essential changes in their adaptation to the single European transport market predominantly alone.

The majority of panellists conceded that there had been no simple set of guidelines or framework to determine the course of adaptation to the single European transport market. Many argued that such a framework would have been difficult to produce as the starting point of each Eastern European country was profoundly different. Panellists stated that some Eastern European liner companies adopted existing experiences of other liner shipping countries from

member states who had joined recently, however such experiences could only be relied upon to a limited amount, as such shipping companies were not registered or based in countries that had been through systematic transition. Comments maintained that the adaptation of Eastern European liner companies to the European Union continues to be extremely challenging. Objectives require changes at every level, from market operations and its organisation, through to the technical and legal adaptation to the single market, and approval of international conventions, particularly in terms of safety and ecology.

9.5.4 Reformulation of statements for Delphi round three

The statements that failed to reach consensus after the second round were reformulated and included in Delphi round three. The reformulated statements of Delphi round three have attempted to reflect the meanings of comments made in Delphi round two (Hussler *et al* 2011; Nowick *et al* 2011; Popper 2008; Okoli and Pawlowski 2004). The following sub-sections specify the original statements from Delphi round two and the reformulated statements for Delphi round three, justified by arguments for the changes from participants in accordance with the original research objectives as set out in chapter one.

Liner shipping under communism

Original statement 1.1.2

Liner shipping under communism was controlled through central administration of shipping policy and state implementation of national fleet structures.

Reformulated

The role of central administration was all pervasive and affected the structure of liner shipping organisation and operation throughout the period.

Argument(s)

The shipping sector in socialist shipping economies was particularly unique because of its strong public goods and services approach. State property and state activity in shipping was regarded as necessary as was state protection. Shipping was generally subject to central planning procedures, with the government setting political, economic and social shipping goals. Such administration affected the implementation of national fleet structures.

Liner shipping and systematic transition

Original statement 2.1.2

National framing conditions influenced the process and speed of transitional restructuring in Eastern European liner shipping more than any other factor.

Reformulated

Regional factors will continue to interact and influence national framing conditions which generates shifting patterns of transitional restructuring processes in Eastern European liner shipping.

Argument(s)

Eastern European countries are moving towards market economies at differing speeds from varied points of departure. Multi-faceted regional factors will continue to interact and influence individual national developments for some time. It is these framing conditions which actively generate shifting patterns of transitional restructuring in Eastern European liner shipping, particularly in the fields of fleet and tonnage renewal, and market and service reorientation.

Original statement 2.1.3

National framing conditions and European Union influence, dictated the development of shipping policy and political frameworks governing Eastern European liner shipping.

Reformulated

The political events which have taken place in Eastern European since 1989 have transformed the entire economic and spatial environment within which Eastern European liner shipping policy and political frameworks is formed.

Argument(s)

It is clear that the entire process of economic and social transformation, in which Eastern European liner shipping has a crucial role to play, depends on the success of political reforms in post-Soviet Europe. Such political reforms, affect the fabric of national framing conditions which dictates the development of shipping policy and political frameworks governing Eastern European liner shipping during the period of economic, political and social transition.

Formation of evolutionary restructuring in liner shipping

Original statement 3.1.1

The reorientation of policies on a macroeconomic scale has a clear influence on the strategic restructuring processes in Eastern European liner shipping during the period of transition.

Reformulated

The two-way interaction between Eastern European liner shipping and regional

economic development highly influenced the transitional restructuring processes in Eastern European liner shipping.

Argument(s)

The relationship between Eastern European liner shipping and economic development represents in many ways the struggle between post-communist restructuring and the emergence of a new Europe. It is these processes which dictate the development of restructuring programmes governing Eastern European liner shipping in the free market, and can be summarised by the following transitional changes; ownership, social, fiscal, legal and economic.

Privatisation and strategic restructuring

Original statement 4.1.4

Privatisation of transitional liner shipping cannot be separated from a series of internal restructuring needs. However, substantial difference of opinion exists about the sequencing of privatisation and restructuring in the shipping industry.

Reformulated

The breakdown of economic structures had led to a drastically changed situation in shipping markets. Privatisation by, after, or before restructuring became essential for transitional liner shipping companies.

Argument(s)

Within the context of transition, the collapse of economic structures in connection with liberalisation and deregulation in Eastern Europe, led to a radically changed situation in Eastern European liner shipping. Core changes in

the form of ownership and possession rights became essential. However, such changes could not be removed from a succession of fundamental restructuring processes across every aspect of Eastern European liner shipping operation.

Privatisation and strategic restructuring

Original statement 4.1.5

Privatisation processes in Eastern European liner shipping continues to be hindered by poor financial conditions and a lack of public acceptance.

Reformulated

The main difficulties Eastern European liner shipping companies face in the course of transitional privatisation are the weak legal and financial structures that dominate the decision-making process of foreign investors.

Argument(s)

There are a number of obstacles to overcome before the process of privatisation in Eastern European liner companies may be considered complete. In particular, the areas of company functioning and market regulation are of great importance. Here, further development is required to: reassure private investors, attract private investment, protect local and foreign investment, and ensure the correct provision of technological support for financial transactions.

Adaptation to the European transport system

Original statement 5.1.2

Eastern European liner companies have similar obstacles to overcome as part of European Union accession. Priorities include: setting the principles of market regulation, modernising fleets, and adapting to the European transport system.

Reformulated

The adaptation of Eastern European liner shipping to the European Union is a multi-dimensional process, requiring capital-consuming modernisation and transformation programmes.

Argument(s)

Although the objective of European Union spatial enlargement is meeting with political and social acceptance, there are still dilemmas in the process. The adaptation of Eastern European liner shipping is a lengthily procedure, comprising not only of legal adjustment, but also an adaptation regarding organisation, management and function. Thus, shipping companies remain in the process of vastly expensive modernisation and transformation programmes.

Adaptation to the European transport system

Original statement 5.1.3

Since joining the European Union, Eastern European liner shipping has seen a dramatic improvement in managerial know-how, service quality, niche specialisation, and adherence to safety and environmental legislation.

Reformulated

It is not a foregone conclusion that joining the European Union will be beneficial. However, a rise in efficiency due to an increase in commercialisation, and an improvement in safety and environmental protection may be reported.

Argument(s)

Incorporation of Eastern European liner shipping into the European transport

market has both positive and negative effects. On the positive side, Eastern European liner companies have the opportunity to: increase efficiency through commercialisation, accelerate the modernisation of fleets and infrastructure, improve the quality of services due to deeper organisational integration, increase managerial know-how, and reduce environmental emissions.

Adaptation to the European transport system

Original statement 5.1.5

The integration of Eastern European liner shipping to the single European transport market is in the interest of the whole of Europe, and will actively assist in the adaptation processes in other sectors of the economy.

Reformulated

Eastern European liner shipping actively assists in the consolidation of the internal market, and has a vital role to play in the integration and adaptation processes of other sectors of the economy into the European Union.

Argument(s)

The evolution of shipping has always been linked to economic development. Eastern European liner shipping is no exception to this as a factor shaping economic activities in terms of European Union integration and consolidation of the internal market. Eastern European liner shipping is shaped by economic development and through its adaptation to the European Union. Moreover, it has the ability to assist in the adaptation of other sectors of the economy too.

9.6 Administration of Delphi round three

On 14th June, participants who completed Delphi round two received a postal package containing four documents. Firstly, an explanatory cover letter, acknowledging an appreciation for their time in Delphi round two and the value of their continued support, a brief description of the aims of the study in the context of economic, political and social transformation, and the importance of the study in relation to the Eastern European liner shipping industry, the level of consensus reached in Delphi round two, the purpose of Delphi round three, any new methodological instructions and deadlines. Appendix (14) provides a sample copy of explanatory cover letter Delphi round three. Secondly, participants received a terminology framework sheet to offer clarification of crucial terms and words applicable to round three. Appendix (15) presents a sample copy of the terminology framework Delphi round three. Thirdly, a copy of Delphi round three questionnaire and a stamped addressed envelope was provided. As part of Delphi round three, participants were asked to rate their overall satisfaction with the process of Delphi technique itself. Appendix (16) provides a sample copy of Delphi round three. Fourthly, participants received a timeline as an administration tool. The timeline offers participants the opportunity to understand the evolutionary framework of the overall research design. Appendix (17) presents a sample copy of timeline Delphi round three.

On 28th June, a reminder letter was sent by post to participants who had not returned their survey, stipulating the importance of their individual contribution to survey, a brief description of the aims of the study and methodology, the importance of the research to the liner shipping industry, contact details for additional information, and appreciation of their time. Appendix (18) presents a

sample copy of reminder letter Delphi round three.

Four weeks later on 26th July, participants received a thank you letter, comprising a brief overview of the purpose of the research, the use of methodology, structure and size of panel, an overview of the research findings, importance of the study from liner shipping industry-users perspective, governance perspective, original contribution to knowledge, and most importantly an appreciation for their considerable time and effort. Reassurance of confidentially is stipulated, and details of pending publications given. Appendix (19) presents a sample copy of the thank you letter on completion.

9.6.1 Response rates Delphi round three

Of the 32 panel members who were sent Delphi round two of the study, 31 completed the questionnaire, providing an excellent response rate of 96.9% for this round. Table 9.10 presents the size and structure of the panel participant response rates for Delphi round three. As may be seen, only one panel member departed from Delphi round two, and in this case it was a panel member from the academic category, which did not impact the overall structure of the panel.

Size and structure of panel: Delphi round three		
Categories	**Number**	**Percentage**
Industry-users	9	29.0
Academics	15	48.4
Policy-makers	7	22.6
Total	**31**	**100**

Table 9.10 Size and structure of panel (*Source*: Author 2010)

Table 9.11 presents the size and structure of the panel by country participation for Delphi round three of the study. In comparison with Table 9.7 (depicting the size and structure of panel by county participation for Delphi round two of the

study), one notable movement occurred. Of the six Polish participants from the academics stakeholder group, only five remained to take part in Delphi round three (leaving 83.3% of the total Polish academics from Delphi round one). The overall response rates for the study may be found in section 9.7.

Size and structure of panel by country participation: Delphi round three												
Categories	**Estonia**		**Latvia**		**Lithuania**		**Poland**		**Romania**		**Bulgaria**	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Industry-users	2	40.0	3	50.0	2	40.0	1	11.1	0	0.0	1	25.0
Academics	3	60.0	1	16.6	3	60.0	5	55.6	1	50.0	2	50.0
Policy-makers	0	0.0	2	33.4	0	0.0	3	33.3	1	50.0	1	25.0
Total	**5**	**100**	**6**	**100**	**5**	**100**	**9**	**100**	**2**	**100**	**4**	**100**

Table 9.11 Size and structure of panel by country participation: Round three

(*Source*: Author 2010)

9.6.2 Analysis of the responses to Delphi round three

In relation to this study, the responses from round three were analysed and the APMO calculated, with the results presented in Table 9.13. The actual APMO cut-off rate for consensus in Delphi round three is provided in Equation 9.3.

$$\text{APMO} = \frac{\text{Majority Agreements} + \text{Majority Disagreements}}{\Sigma\ \text{Opinions Expressed}} \qquad 84.1\% = \frac{201 + 17}{259}$$

Equation 9.3 APMO cut-off rate for consensus in Delphi round three

(*Source*: Adapted by Author from Kapoor 1987)

Table 9.12 also illustrates the process of calculation for APMO cut-off rate, Delphi round three. Here, the number of statements that reached consensus utilising the APMO calculation is given, in addition to the number of those statements that did not, and will thus require individual stability to be calculated.

Delphi round three, Average Percent of Majority Opinions (APMO)	
Majority agreements	201
Majority disagreements	17
Total opinion expressed	259
Average Percent of Majority Opinions	**84.1%**
Number of statements reaching consensus following APMO	5
Number of statements to be reformulated into Delphi round three	4

Table 9.12 APMO cut-off rate for consensus in Delphi round three

(*Source*: Author 2010)

Analysis of Delphi round three to determine consensus										
H	**No.**	**Statements**	**Agreed**		**Disagreed**		**U.A.C***		**Opinions expressed**	**Consensus**
			No.	**%**	**No.**	**%**	**No.**	**%**		
1	1.1.2	The role of central administration was all pervasive and affected the structure of liner shipping organisation and operation throughout the period.	30	96.8	0	0	1	3.2	30	Yes Agree with 96.8%
2	2.1.2	Regional factors will continue to interact and influence national framing conditions which generates shifting patterns of transitional restructuring processes in Eastern European liner shipping.	16	51.6	11	35.5	4	12.9	27	Yes Agreed with 51.6%
2	2.1.3	The political events which have taken place in Eastern European since 1989 have transformed the entire economic and spatial environment within which Eastern European liner shipping policy and political frameworks is formed.	12	38.7	17	54.8	2	6.5	29	No
3	3.1.1	The two-way interaction between Eastern European liner shipping and regional economic development highly influenced the transitional restructuring processes in Eastern European liner shipping.	18	58.0	9	29.0	4	13.0	27	Yes Agreed with 58.0%
4	4.1.4	The breakdown of economic structures had led to a drastically changed situation in shipping markets. Privatisation by, after, or before restructuring became essential for transitional liner shipping companies.	29	93.5	1	3.2	1	3.2	30	Yes Agreed with 93.5%
4	4.1.5	The main difficulties Eastern European liner shipping companies face in the course of transitional privatisation is the weak legal and financial structures that dominate the decision-making process of foreign investors.	28	90.3	0	0	3	9.7	28	Yes Agreed with 90.3%
5	5.1.2	The adaptation of Eastern European liner shipping to the European Union is a multi-dimensional process, requiring capital-consuming modernisation and transformation programmes.	21	67.7	5	16.1	5	16.1	26	Yes Agreed with 67.7
5	5.1.3	It is not a foregone conclusion that joining the European Union will be beneficial. However, a rise in efficiency due to an increase in commercialisation, and an improvement in safety and environmental protection may be reported.	30	96.8	1	3.2	0	0	31	Yes Agreed with 96.8%
5	5.1.5	Eastern European liner shipping actively assists in the consolidation of the internal market, and has a vital role to play in the integration and adaptation processes of other sectors of the economy into the European Union.	29	93.5	2	6.5	0	0	31	Yes Agreed with 93.5%
			201		**17**				**259**	

Table 9.13 Analysis of Delphi round three (*Source*: Author 2010)

(*) U.A.C = Unable to comment

9.6.3 Consensus reached after Delphi round three

With the results of Equation 9.3, achieved by the process in Figure 9.2, it can be determined which of the statements from Delphi round three have achieved consensus. Five statements during round three reached a percentage of agreement that was higher than 84.1%, and thus reached consensus. Each of the statements is discussed herein making use of the comments from the panel.

Liner shipping under communism

Statement 1.1.2

The role of central administration was all pervasive and affected the structure of liner shipping organisation and operation throughout the period.

The majority of panellists agreed that central planning in Eastern European liner shipping had led to a sector that was heavily characterised by endemic shortages, slow technical change, poor quality of service, and an over-expanding public sector of which shipping in general played an important part. Highly influenced by the CMEA and its Soviet-led directives, Eastern European governments set political, economic and social goals for individual liner shipping companies. Members pertained that in theory central planning was a top-down process whereby the physical plans and structures for each company was formulated. However, in practice the centre invariably had less information than individual shipping companies with regard to production possibilities and constraints. Panel members conferred that to facilitate control, Eastern European liner companies were aggregated into large vertically integrated conglomerates with highly monopolistic structures. In the end, such structures led to an industry that was poorly managed and vastly under-funded.

Privatisation and strategic restructuring

Statement 4.1.4

The breakdown of economic structures had led to a drastically changed situation in shipping markets. Privatisation by, after, or before restructuring became essential for transitional liner shipping companies.

By agreeing with this statement, panellists affirmed that during the period of economic, political and social transition, privatisation could not be removed from a series of fundamental restructuring needs in Eastern European liner shipping. Developments seek the formation of an optimal structure encompassing ownership and management, fleet and tonnage renewal, market reorientation and service changes, and company reorganisation and cooperation. However, a wide variety of opinion exists with regard to the sequencing of these changes in relation to privatisation. Most panellists saw privatisation as a mechanism of restructuring, along with liberalisation, deregulation, commercialisation and adaptation to the European Union transport system. Others implied that privatisation should occur before restructuring with the future company owner deciding the process of restructuring himself, or after restructuring in the utilisation of preparatory stages for privatisation. Today, the majority of Eastern European liner companies have begun to undertake privatisation and broad restructuring, though each has met such goals with varying degrees of success.

Privatisation and strategic restructuring

Statement 4.1.5

The main difficulties Eastern European liner shipping companies face in the course of transitional privatisation is the weak legal and financial structures that dominate the decision-making process of foreign investors.

Arguments for agreeing with this statement arose because the majority of panellists involved in Eastern European liner shipping had witnessed the struggles shipping companies endure to secure foreign investment in the process of privatisation. Nowhere has this been more palpable than Romania, which has suffered enormous difficulties in the course of privatisation, with the eventual loss of the former socialist national liner company. Panel members presented privatisation as the core process of Eastern European transition, stipulating that barriers to this process could jeopardise the overall success of transitional restructuring in Eastern European liner shipping. Numerous obstacles were disclosed as barriers to the process and mechanisms of privatisation and restructuring in Eastern European liner shipping. However, the main barrier was considered to be the lack of necessary capital to finance privatisation. In particular, greater foreign investment is needed. Comments suggested that stronger legal and financial structures would provide the reassurance clients required to attract, process and secure foreign investment.

Adaptation to the European transport system

Statement 5.1.3

It is not a foregone conclusion that joining the European Union will be beneficial. However, a rise in efficiency due to an increase in commercialisation, and an improvement in safety and environmental protection may be reported.

Since it is widely recognised that European Union shipping has a long-standing commitment to quality shipping and sustainable development principles, most panellists cited the adaptation of Eastern European liner shipping to the single European transport market as a positive element of economic transformation.

However, members stipulated that the lack of adaptation theory in the process of European integration, made the overall outcome of accession for Eastern European liner shipping companies an increasingly uncertain one. Nonetheless, comments purport that from the inception of European Union accession, there has been a noticeable enactment of transport regulations and directives, the introduction of the free-flow of labour for the better use of regional resources, and an improvement in managerial know-how and organisational restructuring. In addition there have been technical advancement in Eastern European liner shipping fleets and infrastructure, and the quality improvement of service offering in relation to safety of seafarers at sea and environmental protection.

Adaptation to the European transport system

Statement 5.1.5

Eastern European liner shipping actively assists in the consolidation of the internal market, and has a vital role to play in the integration and adaptation processes of other sectors of the economy into the European Union.

Initially, members stated that it would be difficult to quantify the value of Eastern European liner shipping and the economic relevance of the sector in terms of European Union accession and consolidation of the internal market. However, all panellists agreed that Eastern European liner shipping had a significant role to play in the accession of new member states. Panellists cited the importance of Eastern European liner shipping in relation to other sectors of the economy also in the process of transition and adaptation to the European Union. The success of integration and adaptation of Eastern European liner shipping to the European Union was suggested to have an impact on the single European

transport market, both in terms of growth and intensity of transit-traffic. Overall, members purport that Eastern European liner shipping forms an essential part of European Union trade and prosperity, thus demanding innovative solutions in transitional restructuring programmes to ensure long-term sustainability.

9.6.4 Analysis of Delphi round three

Following the three rounds of Delphi survey, of the 25 statements originally developed to test the aims of the research alongside the conceptual model, 21 statements reached consensus through the utilisation of APMO calculations (equating 84% of the total statements). This left a total of four statements which did not reach consensus using a group stability method (see Table 9.14).

Statements that failed to reach group stability, utilising APMO calculations										
H	No.	Statements	Agreed		Disagreed		U.A.C*		Opinions expressed	Consensus
			No.	%	No.	%	No.	%		
2	2.1.2	Regional factors will continue to interact and influence national framing conditions which generates shifting patterns of transitional restructuring processes in Eastern European liner shipping.	16	51.6	11	35.5	4	12.9	27	Yes Agreed with 51.6%
2	2.1.3	The political events which have taken place in Eastern European since 1989 have transformed the entire economic and spatial environment within which Eastern European liner shipping policy and political frameworks is formed.	12	38.7	17	54.8	2	6.5	29	No
3	3.1.1	The two-way interaction between Eastern European liner shipping and regional economic development highly influenced the transitional restructuring processes in Eastern European liner shipping.	18	58.0	9	29.0	4	13.0	26	Yes Agreed with 58.0%
5	5.1.2	The adaptation of Eastern European liner shipping to the European Union is a multi-dimensional process, requiring capital-consuming modernisation and transformation programmes	21	67.7	5	16.1	5	16.1	26	Yes Agreed with 67.7%

Table 9.14 Statements failing to reach group stability (*Source*: Author 2010)

(*) U.A.C = Unable to comment

As discussed in chapter eight, stability is the stopping criterion, which allows the existence of disagreement in the final stage of Delphi technique. It refers to the consistency of responses between successive rounds of Delphi survey. Two

types of stability are recognised. The first is group stability, which occurs when there is no significant difference between the response category frequencies of two successive Delphi rounds (Bolger and Wright 2011). Hence, in this study group stability was reached for 21 statements utilising the APMO equation to test if there was stability. The second is individual stability, which occurs when there are no significant differences between individual answers of successive Delphi rounds (Powell 2003). Accordingly, individual stability is to be used for the remaining statements utilising the χ^2 test to check if there is stability.

The χ^2 test is illustrated in Equation 9.4:

$$\chi^2 = \sum_{i=1}^{m} \sum_{j=1}^{n} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

With O_{ij} and E_{ij} as the observed and expected frequencies for the i^{th} Delphi round and the j^{th} response interval.

Equation 9.4 χ^2 test for determining group and/or individual stability

(*Source*: Chaffin and Talley 1980)

The participant's answers to Delphi round three are given in Table 9.13. Initially the answers to Delphi round three were tested for individual stability. A χ^2 test for independence (Equation 9.4) was used to analyse the following hypotheses:

H0: Individual responses of round i and $i + 1$ are independent

H1: Individual responses of round i and $i +1$ are dependent

Consequently by H0 (thus accepting H1) it could be concluded that there would be no significant difference between individual responses in the different rounds and thus there would be individual stability. This theory is now applied below.

9.6.5 Calculating individual stability

To determine whether or not a statement has reached individual stability a χ^2 test is used. The equation for the χ^2 test is illustrated in 9.4. In order to calculate the χ^2 value for each statement, the answers of Delphi rounds two and three are required. The answers to the Delphi round two are given in Table 9.9 and the answers to Delphi round three are given in Table 9.13. The following is an example for the calculation of the χ^2 value of statement 2.1.2. Tables 9.15 and 9.16 below are contingency tables of the observed responses to statement 2.1.2 in Delphi rounds two and three. They detail the responses to the categories 'agree', 'disagree' and 'unable to comment'. Based on these contingency tables the χ^2 value for the statement is calculated by Equation 9.4.

Observed frequencies					
Response interval		**Delphi round two**			
		Agree	**Disagree**	**U.A.C**	**Total**
Delphi round three	**Agree**	13			16
	Disagree		11		11
	U.A.C			4	4
	Total	13	16	2	31

Table 9.15 Observed frequencies in rounds two and three for statement 2.1.2 (*Source*: Author 2010)

(*) U.A.C = Unable to comment

Expected frequencies				
Response interval		Delphi round two		
		Agree	Disagree	U.A.C
Delphi round three	Agree	6.7	7.7	1.5
	Disagree	4.6	5.6	1.8
	U.A.C	1.6	2.0	0.3

Table 9.16 Expected frequencies for Delphi round three for statement 2.1.2

(*Source*: Author 2010)

(*) U.A.C = Unable to comment

Tables 9.15 and 9.16 are calculated as follows:

Expected frequencies: statement 2.1.2

- The expected value for agreeing with statement 2.1.2 in the third round after agreeing in the second round = (13 x 16) / 31 = 6.7
- The expected value for disagreeing with statement 2.1.2 in the third round after agreeing in the second round = (13 x 11) / 31 = 4.6
- The expected value for agreeing with statement 2.1.2 in the third round after disagreeing in the second round = (16 x 16) / 31 = 8.2

(NB: reaching stability)

Expected frequencies: statement 2.1.3

- The expected value for agreeing with statement 2.1.3 in the third round after agreeing in the second round = (14 x 12) / 31 = 5.4
- The expected value for disagreeing with statement 2.1.3 in the third round after agreeing in the second round = (14 x 17) / 31 = 7.6

- The expected value for agreeing with statement 2.1.3 in the third round after disagreeing in the second round = (13 x 12) / 31 = 5.0

(NB: reaching stability)

Expected frequencies: statement 3.1.1

- The expected value for agreeing with statement 3.1.1 in the third round after agreeing in the second round = (21 x 18) / 31 = 12.1
- The expected value for disagreeing with statement 3.1.1 in the third round after agreeing in the second round = (21 x 9) / 31 = 6.0
- The expected value for agreeing with statement 3.1.1 in the third round after disagreeing in the second round = (3 x 18) / 31 = 1.7

(NB: Not reaching stability)

Expected frequencies: statement 5.1.2

- The expected value for agreeing with statement 5.1.2 in the third round after agreeing in the second round = (17 x 21) / 31 = 11.5
- The expected value for disagreeing with statement 5.1.2 in the third round after agreeing in the second round = (17 x 5) / 31 = 2.7
- The expected value for agreeing with statement 5.1.2 in the third round after disagreeing in the second round = (6 x 21) / 31 = 4.0

(NB: Not reaching stability)

9.6.6 Non-parametric test for paired sample statements

During the calculation for the χ^2 values of each statement, it appeared that the χ^2 test for stability was an inappropriate test for statements 5.1.2 and 3.1.1, since the expected values were smaller than five. In order to make a

pronouncement about which statements reached individual stability there are two possibilities: increase the number of participants invited to take part in the study (Sharkey and Sharples 2001) or measure the extent of individual stability between successive Delphi rounds by means of a non-parametric comparison test of two paired samples (Parente and Anderson-Parente 2011).

Increasing the number of Delphi participants is not possible due to the limited availability of time and the impossibility of producing the same conditions again (Chen *et al* 2012), thus using a non-parametric comparison of two samples is the best solution. According to Triola (1998) rank correlation, the non-parametric version of parametric measure uses rank as the basis for measuring the strength of the association between two variables. In 1975, Linstone and Turoff suggested three reasons for employing the method: firstly it allows the use of more of the information contained in the distribution; secondly, the stability measure is relatively simple to calculate and has much greater power and validity than parametric tests of variance; and perhaps the most important, thirdly one of the original objectives of Delphi as the identification of areas of difference as well as agreement within the participating group.

The procedure used for the non-parametric test is based upon the principle that if two samples are drawn from identical populations and the individual scores are ranked as one combined collection of values, using the sum of these values will suggest group stability of statements. According to Landeta *et al* (2011) if individual responses of round two and three are dependent then one should be able to predict the responses of three from the responses of round two. This will provide a stopping technique for the third round of Delphi survey.

The non-parametric test technique has been employed for statements 3.1.1 and 5.1.2. The method involved ranking the qualitative responses (agree, disagree and unable to comment) in order to create quantitative results for statistical evaluation. This was achieved by assigning a score of 1 to responses of disagree and 2 of those responses that agreed with the statement. Where participants were unable to comment, their inputs were removed from the results. By subtracting the ranked scores of the third round from those of the second round (whilst removing any signs), the differences show the variation between responses. Thus the percentage change (index of predictive association or group stability) is determined by dividing the net changes by the number of participants. When the rank index approaches one there is no predictive association and thus no group stability. However, when the index approaches zero there is complete predictive association and thus stability. Conversely individual stability of statements is simply established when each participant votes successively over both rounds of Delphi questionnaire.

The rank index of predictive association for statement 3.1.1 is 0.25 (see Table 9.17) and statement 5.1.2 (see Table 9.18). Thus, these statements have now reached individual stability, and therefore no further Delphi rounds are required.

	Rank index of predictive association for statement 3.1.1																							
P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
D1	1	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	1	2
D2	1	2	2	1	2	1	2	2	2	1	2	2	1	1	2	2	2	2	1	1	2	2	1	2
Di	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0

Table 9.17 Rank index of predictive association for statement 3.1.1

(*Source*: Author 2010)

Group = 6/24 = 0.25

(stable 18 / unstable 6)

	Rank index of predictive association for statement 5.1.2																						
P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
D1	2	2	2	2	1	2	2	2	2	1	2	2	1	2	1	2	2	1	1	2	2	2	2
D2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	1	2	2	2	2	2	2	2	2
Di	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0

Table 9.18 Rank index of predictive association for statement 5.1.2

(*Source*: Author 2010)

Group = 4/23 = 0.17

(stable 19 / unstable 4)

Key:	P = Panellist	D1 = Delphi round one
	D2 = Delphi round two	Di = Differences

9.7 Response rates

As discussed in chapter eight, what constitutes an optimal number of subjects in a Delphi study never reaches a consensus in literature (Marchais-Roubelat and Roubelat 2011; Okoli and Pawlowski 2004). However, Witkin and Altschuld (1995) note that the approximate size of a Delphi panel is generally fewer than 50 and more than 20. Therefore, since the number of experts who participated in all three rounds of this study was 31, the panel size was satisfactory.

An accurate measure of the response rate of a Delphi survey is found in the overall difference between the number of potential participants and the number of agreed participants following the data collection of the final round (Hasson and Keeney 2011). Table 9.1 depicts the response rates of Delphi rounds two and three. This survey has a respectable overall response rate of 18.7%, which is high in terms of the average Delphi return rate (Rowe and Wright 2011). In this study, of the 36 panel members who completed Delphi round one (representing 21.8% of the total potential participants contacted), 32 panel members went on to complete Delphi round two (representing 88.8% of the total participants from Delphi round one). From here, of the 32 panel members who

completed Delphi round two, 31 panel members went on to complete Delphi round three, thus representing 96.4% of the total participants from Delphi round two, and 18.7% of the total potential participants contacted for the study. Table 9.19 shows the response rates to the three rounds of the Delphi study.

Overall response rates: Delphi study					
Panel	**Round one**	**Round two**		**Round three**	
	(n)	**(n)**	**%**	**(n)**	**%**
Industry-users	11	9	81.8	9	100
Academics	17	16	94.1	15	93.7
Policy-makers	8	7	87.5	7	100
Total	**36**	**32**	**88.9**	**31**	**96.9**

Table 9.19 Overall response rates (*Source:* Author 2010)

9.8 Participants view of the Delphi technique

As part of the third round questionnaire, panel members were asked for their opinions about the Delphi technique itself. Specifically, experts were asked to consider the process of the study, as well as the advantages and disadvantages of methodology utilised as a research tool in the context of the study. Appendix (22) provides a sample of the evaluation sheet given to the panel members of survey. Table 9.20 highlights that 90.3% of the participants indicated they were either satisfied or very satisfied with the approach used to collect scientific data in relation to transitional liner shipping in Eastern Europe.

Level of satisfaction with the process of data collection		
	Frequency	**Percentage**
Unacceptable	0	0
Very dissatisfied	1	3.2
Dissatisfied	2	6.5
Satisfied	9	29.0
Very satisfied	19	61.3
Total	31	100

Table 9.20 Overall level of satisfaction with the process of data collection

(*Source:* Author 2010)

9.8.1 Advantages of Delphi as stated by participants

The main advantages noted by participants for undertaking Delphi technique in relation to the research subject area fell into three categories: inclusive, comprehensive, and systematic. In terms of inclusiveness, panel members expressed the approaches ability to gather a wide range of responses from multiple stakeholders, professions and nationalities, and successfully accommodate a wide range of views. The importance of building a comprehensive understanding of transitional liner shipping in Eastern Europe was critical to the conceptualisation and modelling of restructuring processes utilised by liner shipping companies. The Delphi technique was cited as a unique approach to allow a holistic response from panellists, thereby reflecting the wide range of influences causing liner shipping change. Participants reported that the Delphi technique also provides a systematic and rigorous research method deemed to enhance the research findings. Participants stated that the method provided a means for prioristation of the key areas in economic and political transition in liner shipping restructuring processes during transition.

9.8.2 Disadvantages of Delphi as stated by participants

The main disadvantages identified with the method fell into two categories: lack of group effects, and differing understanding of stakeholders. A small number of participants cited that they would have welcomed the possibility for dialogue and discussion, particularly with regard to the grey areas of the study. Some felt that the process of completing questionnaires in isolation did not allow for the development of ideas in transitional liner shipping. Participants also highlighted the varying backgrounds of key stakeholders and how this may influence their understanding of statements. Appreciation was given to the terminology sheet between rounds, however one participant felt a seminar to discuss the theoretical and policy context might have led to a deeper understanding.

CHAPTER TEN

Conclusions, Implications and Theory Development

The aim of this chapter is to discuss the implications for theory and practice emanating from the results of the study. To begin with a discussion of the original contribution to theory development in the area of Eastern European liner shipping is given, with specific consideration to the five conceptualised categories of the study: liner shipping under communism; liner shipping and systematic transition; formation of evolutionary restructuring in liner shipping; privatisation and strategic restructuring; and adaptation to the single European transport system. The chapter provides the implications of the research for practitioners, with particular emphasis given to the stakeholders of the study: industry-users, policy-makers and academics. The chapter also discusses the conceptual model, and whether it has succeeded in capturing the complexities that characterise multi-discipline situations of interest. In addition, the limitations of the study are presented and recommendations for further research made. Finally, it should be noted that this chapter will also take into consideration any changes that have occurred in Eastern European liner shipping since the start of the research and the implications of those in the context of this study.

10.1 Contribution to theory development

Dawson (2009) suggests that a significant contribution to theory development may be seen as the summing up of past knowledge in the form of general positions and the fusion of diverse views and partial knowledge's in general frameworks of explanation. Hence, theory is a process of separating practice in conceptual language so as to connect with past knowledge (Saunders *et al* 2012). A careful look at practice can generate new theory or inspire new

practice. All the stages of this study have the potential to make significant contributions to theoretical advancement. This is reflected in the literature reviews as well as the wider implications of the research for practitioners.

10.1.1 Eastern European liner during the period of transition

Although, it is still too early in the Eastern European transformation process to provide a comprehensive model of transition in Eastern European liner shipping, since the patterns and methods accepted in specific countries differ (Von Brabant 2011), and the transformation process itself has not yet been completed (Beachain *et al* 2012), some developments in the formation of evolutionary restructuring in Eastern European liner shipping can be pointed to with a degree of certainty. Using the conceptual categories identified in chapter seven and applied throughout the research, the following is a representation of the main findings of the literature review synthesis and the empirical study.

10.1.2 Liner shipping under communism

All Eastern European countries began economic and political transformations bearing a heavy burden of socialist heritage (Harris 2012; Dale 2011; Linden and Marcel 2009; Gros and Steinherr 2009; Lavigne 2007). At the start of transition, the entire Eastern European liner shipping fleet was owned, financed and managed by a series of state monopolies (Cottam and Roe 2008). To avoid ‘anarchy within the markets’ governments dictated shipping strategies, leaving only limited possibilities for market orientated decision-making at enterprise level (Breitzmann and Von Seck 2002). Essentially, plans were dictated by the needs of other producing industries, which determined the capacity, characteristics and investment within shipping (Cottam and Roe 2006).

Under an umbrella of self-sufficiency, all maritime apparatus was designed and constructed in the Council for Mutual Economic Assistance (CMEA) region at the cost of utilising shipyards that lacked any commercial incentive to develop new products or the ability to import them from outside (Ernst and Yong 1990). Following central policy, the main functions were to transport goods for national foreign trade economically (Fairplay 01.06.1995), to provide some sort of covert state security (Bergstrand and Doganis 1987), and to earn hard currency or restrict its expenditure (Walenciak *et al* 2001). The outcome of such centralised administration was a tendency to neglect the under-funded transport system, ensuring poor quality liner fleets, infrastructure, congestion and bottlenecks (Hall 1993), coupled with priority in the shipping sector given to those activities that were either related to heavy industrial needs such as bulk shipping or were good currency earners, i.e. the cross-trades (Lloyds Ship Manager 1991).

It was not only the governance but also the structure of socialist national fleets that sought to implement national shipping policy. The specific structure of the fleets showed a distinct intricacy (Zurek 2003). In general liner shipping endured mandatory regional service networks with short-sea shipping routes instead of global service activity. Shipping structures were organised into regional groups by geographical and cargo specialisation (Liagras and Roe 2003). Government price regulations dictated all shipping costs (Polak and Heertje 1999), while maritime operators and ports were guaranteed traffic through cargo allocation measures regardless of their efficiency.

Commonly shipping companies were part of vast integrated maritime conglomerates characterised by deep organisational and production structures

(Bak and Burnewicz 1999). Each sizeable state firm tended to encompass all the activities that had any sort of relationship to the core of the industry, thus benefiting from the effects of centralisation of resources, and avoiding the necessity of relying upon other state enterprises (Dobrowolski 2003). Yet over time none of the socialist states were in a position to render this into sustainable competitiveness on international markets (Breitzmann 2001). Growing problems of the socialist economies and the restricted autonomy of shipping contributed to delays in enacting trends in containerisation, increasing ship sizes, installation of communication networks, or of setting up new organisational arrangements (Levinson 2008). The Eastern European liner sector thus entered the transitional phases after 1989 lacking the skills to compete (Roe 1998), the infrastructure to survive (Chrzanowski 1997), an organisation to provide a competitive framework, nor any real appreciation of the need for these things.

10.1.3 Liner shipping and systematic transition

Transition in Eastern Europe is of a fundamental nature, comprising the change from a centrally planned economy to a free market (Dale 2011), and the change from a ruling communist party to a multiparty system of parliamentary democracy (Pons and Service 2012). However, since the economy in transition tends to be ephemeral, whereby its rules are neither defined nor put into effect according to a standard scenario (Pickles 2007), liner shipping corporations in the region have not been able to rely on an established transition theory in their conversion into market-orientated companies (Cottam and Roe 2004). Decisions have rather been dictated by national framing conditions (Grant and Rawcliffe 2010), momentary responses to fiscal change (Harris 2012), or largely influenced by sudden developments in supply and demand (Lavigne 2011).

The inadequacies of socialist shipping warranted the need for fundamental amendments during the transition process. Accordingly, all economic systems based on the principles of the centrally planned economy initiated swift and extensive restructuring programmes encompassing the following four strands: liberalisation, deregulation, commercialisation and privatisation.

Liberalisation, involves the exposure of Eastern European liner shipping to the free market, achieved through the removal of most regulatory controls over pricing, while permitting carriers to enter and leave the market at will (Schroder and Vonderau 2009). Shippers were at liberty to select their choice of carriers and foreign fleets gained access to formerly restricted Eastern European shipping markets (Bak and Burnewicz 1999). Market-based principles were adopted to eliminate discriminatory shipping practices or preferential treatment for home fleets concerning access to markets, ports and infrastructure.

Deregulation resolved to weaken government influence and forge greater competition in shipping markets. Deregulation served as a catalyst for increased innovation, greater advancement in technology, and freedom of intellectual property (Thorstenboeck 2010). Furthermore, deregulation enlarged the scope for economic decision-making at company level in liner shipping. Central management and controlling functions were replaced by allocation through markets and prices (Dobrowolski 2003). Large state corporations were broken into smaller enterprises to exploit efficient and flexible arrangements.

Commercialisation intends to provide provision for a changed policy framework for shipping functioning on the basis of customer-orientated services and profit

making activities (Cottam and Roe 2007). Thus, seeking international competitiveness, budget limits for shipping companies were promptly hardened and state subsides annulled (Misztal 2003). Profit aims replaced earlier product maximisation behaviour (Button 2010). Eastern European liner companies gained economic autonomy, as well as strategic and operative responsibility.

The above three elements of transition lessened the states' interventionist power, however from a systemic point of view it is the fourth strand which has the largest influence on change, that is privatisation (Salvatore *et al* 2012; Ahemti 2010; Kovacs and Tardos 2007). Privatisation is widely recognised as the core of the transition processes in Eastern European liner companies (Breitzmann and Von Seck 2002). Here, newly structured ownership and possession rights, and the incentives arising from that, can lead to company restructuring, increased efficiency and profitability (Bjrnskov and Potrafke 2011).

Yet despite the retreat of former far-reaching state protection (McCormick 2011) and the introduction of strong competition in the marketplace (Gustavasson *et al* 2009), Eastern European liner shipping underwent essential changes of restructuring under circumstances of widely absent state support otherwise common in the shipping sector in market economies (Cottam and Roe 2007).

10.1.4 Formation of evolutionary restructuring in liner shipping

Transitional changes in Eastern European liner shipping have been carried out within the framework of forms derived from the stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, spatial, organisational and social changes (Salvatore and Montrony 2012). Some forms

of restructuring in liner shipping display similar characteristics to those on a macroeconomic scale, whereas others are deeply customised for the unique function and technical operation of liner fleets, ports and their ancillary services.

The Eastern European transition countries examined revealed both differences and common characteristics in the restructuring processes of liner fleets. However, one feature above all others dominated every transformation programme, and this was the evolutionary nature of restructuring. Accordingly across all Eastern European liner shipping industries unique evolutionary patterns of diminishing, permanent and incipient components are functional within the fields of: ownership and management, fleet and tonnage renewal, market and service reorientation, and company reorganisation and cooperation.

Components in the transformation process comprise both tangible and intangible solutions. Tangible components incorporate shipping fleets, cargo handling amenities, port infrastructure, storage facilities, and other technical equipment for modern production and new services. Intangible components encompass regulations stimulating free competition, administration and ownership, environment and sustainable development standards, technical solutions inducing further progress, and strategies for finance and profitability.

Along with the collapse of the former political system in the years 1989-1990, it was initially necessary to abandon certain components in Eastern European liner shipping. Diminishing components thus incorporated a number of solutions which were either: incompatible with the market economic system (Misztal 2001), aggravating the efficiency and performance levels of the system

(Sawiczewski 2001), technically outdated (Zurek 2003), or incompatible with international standards of practice and legislative norms (Von Seck 1998).

Although Eastern European liner shipping displayed many antiquated characteristics associated with the old Soviet system, because of its international nature it also held some westernised characteristics (Lijewski 1996). Liner shipping under communism became customised for survival in international markets since it had to compete directly with shipping interests worldwide. To achieve this, the industry managed and operated a number of competitive and flexible components. Although no arrangement is perpetually indispensable, a number of components are preserved as permanent solutions in liner shipping, at least in some fragmentary form for the market economy.

Possibly the most distinctive feature of the restructuring processes in Eastern European liner shipping during the period of transition is the growth of incipient components which stimulate the development of the entire industry. The necessity for incipient components initially arose in the intangible domain of legislation and regulation (Mickiewicz 2010). The introduction of market-based economic regulations became indispensable to stimulate the establishment of new enterprise (Harris 2012), accelerate the liquidation or restructuring of unprofitable firms (El-Agraa 2011), encourage competition on the markets (Peeters 2012), and attract private and foreign investments (Bandelj 2008). These foundations provided the means to achieve: an increase in quality of service and efficiency (Levinson 2008); modernisation and restoration; improvement in safety standards and environmental credentials, and ultimately the commercialisation of Eastern European liner shipping fleets.

10.1.5 Privatisation and strategic restructuring

From a systemic point of view privatisation must be regarded as one of the most influential attributes for successful transition in Eastern European liner shipping. Privatisation was suggested to diminish government intervention by relocating economic activities to the private sector (Svasek 2008), combined with substituting the central planning model with a market orientated model, which would result in increased efficiency of the whole economy (Engerer 2001).

Privatisation of Eastern European liner shipping industries has the same basis as in the market economy countries. The function of privatisation has been to reduce the state involvement in the sector, improve efficiency, raise funds from selling state assets and create popular capitalism (Schroder and Vonderau 2009). The difference comes in terms of the nature of privatisation, where in non-market economies privatisation includes reversing the economic model as a necessary step to achieve privatisation (Berkovich 2009). It includes the liberalisation of tariffs, removal of controls on imports, elimination of the ban on access of foreign capital to fleets and infrastructure, the reduction of subsidises to unprofitable services, and freeing the exchange rates (Berend 2009). Today, some countries, such as Bulgaria and Romania are still in the process of setting up privatisation schemes, while others, notably Poland, already have their basic system which reflects the acceptance of privatisation as a decisive factor for transition, albeit yet to be applied to the entirety of the shipping sector.

During the period of Eastern European economic, political and social transition, privatisation could not be removed from a succession of basic restructuring needs (Cottam and Roe 2007). The elimination of former far-reaching state

protection and the introduction of sudden and strong competition as part of extensive liberalisation and deregulation programmes had led to a drastically altered situation in regional shipping markets. Fundamental changes in Eastern European liner fleets, ancillary services and infrastructure became essential for survival in a competitive market (Breitzmann 2001). However, the speed and sequencing of these changes was, and still is, important to the privatisation and restructuring policies of liner companies (Myant and Drahokoupil 2010).

Over twenty years after the inception of transition, some Eastern European liner shipping corporations have just started privatisation through liquidation and preparatory restructuring, while others are in the process of secondary redistribution and final division of property. Although it is not yet creditable to measure the economic performance of privatisation liner shipping corporations from the old Soviet bloc, preliminary conclusions suggest that privatisation has had some success in stabilising company finances, introducing investment for modernisation of fleets and infrastructure and increasing managerial know-how.

Nonetheless, privatisation equating international competitiveness requires the Eastern European liner sector to not only commit to extensive restructuring, but to overcome a variety of obstacles to processes of privatisation (Motamen-Samedian 2006). Main barriers appear to be the lack of foreign investment, in addition to the slow legislative environment needed to support changes of ownership (Change 2006). Such problems may have contributed to demise of a number of former socialist shipping companies. In terms of this research, Romline Shipping Company was no longer able to operate in such conditions, and in 2006 the Constanta Commercial Court declared the company bankrupt.

10.1.6 Adaptation to the European transport system

The process of liner shipping restructuring is carried out in an international context, which influences its development. This is evident in the adoption of the Eastern European countries of the existing solutions utilised in the shipping system of Western European countries (Cottam and Roe 2008). With the single European transport market in harmony with competition principles and commercialism, it was almost inevitable that Eastern European countries would join the European Union (Aslund and Dabrowski 2007). However, what was not inevitable was the incorporation of accessional adaptation processes as part of evolutionary restructuring programmes in Eastern European liner shipping.

Just as no economic model exists for the transformation of Eastern European liner shipping to shipping in the free market, so also no model exists for the adaptation processes of Eastern European liner shipping in the European Union (Cottam and Roe 2004). Transition shipping thus had to undergo obligatory changes of restructuring and commercialisation in the process of integration, under circumstances of widely absent state support otherwise common in shipping sectors in market-orientated countries. Furthermore, it is hard to create an adaptation model to shape the new market relations gained from membership to the European Union, as the experiences of individual Eastern European liner sectors differ, and the process itself has not yet completed.

Over the last two decades, European Union policy has been extended from the initial integration strategy to Eastern European spatial enlargement (Tatham 2009). The European Union has enacted numerous guidelines for new member states. Under European Union supervision, restructuring components are

obliged to implement certain laws, but also adapt regarding administration function and geographical arrangements (Schneider 2012). In terms of integration strategies, European Union policy is a mixture of legal regulation and inter-state cooperation. A general direction for the adaptation of Eastern European liner shipping to the European Union is market by such documents as association agreements and the White Paper on the preparation of Central and Eastern European countries for integration with the European internal market.

Eastern European maritime authorities have begun to make existing shipping policy frameworks conform to that of the single European transport market. The effect of this integration is expressed in the swift enactment of new legislation to promote privatisation, increase competition, improve the protection of seafarers and reduce environmental emissions (Levinson 2008). It is also expressed in the technical transformation of liner fleets and infrastructure (Lorange 2005).

The integration of Eastern European liner shipping with the European Union has proved to be a challenging process. Initially, difficulties arose due to the change in the demand for shipping services (Von Seck 1999), competition between transport suppliers (Burnewicz 1995), a limit to government subsidies, changes in the fiscal systems (Smith 2002), and the tightening of technical standards, as well as ecological restrictions (Burnewicz and Bak 1999). Conversely, in the long-run liner industries can expect to see the modernisation of fleets and infrastructure (Zurek 2003), an increase in the efficiency of transport systems as a result of the elimination of formalities at borders and ports (Paixao 2001), and a quality improvement in liner services due to deeper organisational integration of the transport chain (Cottam and Roe 2006).

10.2 Modelling phenomena in transitional liner shipping

Jaccard and Jacoby (2010) stipulate that the initial step in theory development is the abstraction of complex phenomena in the form of models. Although there have been many shipping related models of a mathematical nature, few models have been developed to classify or explain phenomena of a social nature in a maritime context. This study has shown that modelling phenomena in a maritime context can further our understanding of complex social situations. The examination of liner shipping during the period of transition is a complex process because of the multidisciplinary nature of transition (Favero 2012; Lavigne 2011; Myant and Drahokoupil 2010; McDonald and Dearden 2005).

The model developed in the study, is based on the premise that characteristics of Eastern European liner shipping change may be associated with the macroeconomic, political and social organisational characteristics of transition. The model demonstrates the process of transition over time for Eastern European liner companies, highlighting the relationship between inter-connected and inter-dependent components, describing the choices made by liner shipping companies in terms of fleets, markets and company organisation, in relation to restructuring processes relevant for the entire transport industry.

By simplifying and focusing the situation of transitional liner shipping it was possible to conceptualise the potential relationships between macroeconomic transitional change (i.e. liberalisation, deregulation, privatisation and commercialisation) and the evolutionary restructuring changes of liner companies, measured by diminishing, permanent and incipient components in the following areas: ownership and management; tonnage and fleet renewal,

market reorientation and service changes, and company reorganisation and cooperation. The empirical examination and analyse would not have been possible if the underlying principles of the model were not applied.

10.2.1 Theory development - original contribution to knowledge

Russo (2008) argues that for theory development to be significant, social forces must carry it. To be carried by social forces it must match their worldview and articulate their interests, serving an ideological function. In terms of this research, to serve the interests of stakeholders, i.e. Eastern European liner ship operators, the theory that is derived from the thesis must make sense and be able to explain things in a manner suitable for business application.

The theory put forward in this study is that the restructuring of Eastern European liner shipping is being carried out within the framework of forms which derive from changes in the economic macrosystem as a whole (liberalisation, deregulation, commercialisation, privatisation and accession), characterised by synergetic patterns of evolutionary components functional within the fields of: ownership and management, fleet and tonnage renewal, market reorientation and service changes, and company reorganisation and cooperation.

The results of the study offer sufficient evidence to support the theory in the sample examined. Specifically, section 4.6 (Chapter Four) provides literature-based evidence to support the theory of evolutionary components operational in divisions of Eastern European liner shipping. Section 7.3.1 (Chapter Seven) presents evidence derived from the conceptual model of the formation of evolutionary restructuring in relation to changes in the economic macrosystem

as a whole. While, section 7.3.2 offers a detailed evaluation of the correlation through a microanalysis of individual components (diminishing, permanent, and incipient) functional in Eastern European liner shipping during transition.

Finally, the empirical study confirms the theory in sections 9.4.1 and 9.5.3 (chapter nine) through the structured analysis of opinions of industry-users, policy-makers and academics from Eastern Europe in relation to the formation of evolutionary restructuring in liner shipping. Here, out of the five conceptual category groupings, category number three (formation of evolutionary restructuring in liner shipping) reached consensus overall quicker than any other category. Furthermore, of the five statements in category number three, only one statement reached the final round of Delphi, and from here, no statements from this category went on to require individual stability testing. Thus, one may conclude that experts in the sample believe statements with the strongest association to the developed theory to be held as true.

10.2.2 Validation of the conceptual model

Since the evidence acquired from the empirical examination supports the conceptual model developed in chapter seven, it can be claimed that on the basis of the results, the conceptual model is successful in adequately accommodating real-life phenomena. Nonetheless, the dual criteria cited by Britt (1979) was utilised to assess the success of the model. The first criterion related to the models' ability to increase our capacity to describe what is going on and how it takes place. On the evidence from this study, the model can be used for making inferences regarding the privatisation and restructuring processes utilised in Eastern European liner shipping during transition. Further,

since the model is of a longitudinal nature, designed to assess the level of demands of the free market placed upon the Eastern European liner shipping companies by the post-1989 economic, political and social transformations over time. It is able to provide an examination of the stages and processes of restructuring through its evolutionary nature, and from these make forecasts and predictions about future events. The second criterion related to the models' ability to increase our capacity to understand how various theories apply to the situation being analysed. The model explores several macroeconomic areas crucial to success of transition. Highlighting the relationship between each transitional domain, and revealing dependence or interconnectivity. The model utilises past theories of economic stabilisation-cum-transformation to build a new theory that embraces the Eastern European liner shipping industry.

10.3 Implications for world practitioners

The fundamental purpose of the research enquiry is to aim for the advancement of theoretical knowledge with practical applicability and usefulness. The advancement of knowledge comes from the development of theory and the improvement of practice. It is envisaged that the findings from the conceptual model and the empirical enquiry via the three-tiered Delphi survey, will have significant applications and widespread implications for Eastern European, European Union and other worldwide liner shipping practitioners.

The practical usefulness of the study is derived from the fact that managers and directors from Eastern European liner shipping companies may use the findings from the model and the empirical enquiry to pursue new structures and strategic alternatives in the process of restructuring in liner shipping. The information has

potential utility for managers from Eastern European liner companies, since it allows them to analyse the effect of transition upon liner shipping, and thereby identify the most advantageous restructuring strategies for each evolutionary phase of transition. Hence, uncovering implicit transition frameworks may provide Eastern European shipping mangers with some control over them.

Previous to this study, Eastern European liner companies have received limited attention with regard to transition. The importance of relationship development between Eastern European political, economic and social reform and Eastern European liner shipping change was established. Accordingly, this research aims to identify the dimensions implicit in Eastern European liner shipping and Eastern European transition. Revealing these and classifying these in terms of evolutionary components has provided understanding of relationship strengths and weaknesses. Eastern European liner companies may be able to use the classifications for positioning their company in accordance with their transitional objectives, as guided by their membership obligations to the European Union. Determination of relationship profiles on the basis of company characteristics will provide a greater understanding of the progression of Eastern European liner shipping during the last two decades. On this basis, liner shipping managers and directors will be better informed with making decisions with regard to fleets, markets and company organisation and management.

The profiles of relationships will also provide crucial insights into the organisational characteristics of Eastern European liner companies and the association characteristics of transition. Through knowledge of the association between transitional change and organisational characteristics, Eastern

European liner companies will be able to identify the type of relationship that exists between themselves and their operating environment, and what may be required to improve the relationship. It will also be possible for managers to understand that changing conditions in economic and political transition may affect the organisational characteristics of their shipping companies, and thus take actions to prevent adverse effects or to benefit directly from the event.

The study also identified the characteristics present in Eastern European liner shipping, prior to and during the period of transition. These may provide an explanation for the existence of such problems as: archaic fleets, limited network services, over-manning at sea and on shore, inadequate investment, inferior technology, poor training and ineffective management. Eastern European liner shipping companies will be able to take appropriate corrective action and combat the problems encountered. Moreover, by communicating the results of the study to Eastern European liner companies, in a way which relates to their current market activities, it may be possible to create a stronger foundation for the operation of future service provision from Eastern European liner companies, even if they have merged with other shipping companies.

It is envisaged that the study will not only be useful to managers and directors from Eastern European liner shipping companies, but will also be of benefit to other European and international liner shipping companies, bearing in mind the importance of Eastern European liner shipping in European and international shipping, and the significant value and distinct advantages of relationship development in business. Such competitors may utilise the findings from the study to aid understanding of the effect of transition upon shipping fleets and

thereby take advantage of the fact that transitional liner shipping in the Eastern European countries has largely lost touch with global activity and market decisive players, although broad privatisation and restructuring has taken place. Managers may call upon the results of the study to forecast significant events and draw up counter business plans to retain their competitive advantage. European and international operators may also look for advantages and weaknesses of their new found competitors and take the opportunity to exploit these, strengthen their own operational activities, or choose to join/merge with Eastern European liner companies in a bid to improve company security.

10.4 Limitations of the research

Given the size and intricacy of the original research proprosal, it would be arrangoant to suppose that such a study does not suffer from certain limitations. Limitations arise because of objectivity and complexity of real world phemomena and the fact that the study has to implement a level of abstraction. Further, the researcher may have limited resources at their disposal, and the success of the study should be judged in the context of these issues.

10.4.1 Longitudinal nature of the study

This study is longitudinal not cross-sectional, i.e. it assesses Eastern European liner shipping relations over a period of time, and not at a point in time. A study of the latter type may have given a more detailed account of the structures that dominated Eastern European shipping in a single moment of transition, which could have provided a quantifiable evaluation of liner companies. However, the longitudinal approach that was used was able to present stages of development measured by evolutionary components, which worked in correlation with the

empirical study, which was interested in the qualitative content of what experts said, rather than the statistical generalisation of a moment in time.

10.4.2 Non-probability sampling

Another criticism of the study is that a probability sample was not drawn. Therefore, inferences from the sample to all of the Eastern European liner operators population cannot be strengthened by the knowledge about the probability that certain kinds of cases will fall into the sample. As has previously be stated, probability sampling for Delphi methodology would be extremely difficult, due to the number of different stakeholder groups, incorporating a variety of experts, each representing a specific country of interest. The commitment required from the Delphi survey is relatively high, as is the level of knowledge and expertise required to participate. Therefore the sample of the study was drawn on the basis of convenience. The sample however represents the opinions of experts from Eastern European liner companies, maritime ministries, governing bodies, and research institutes across six different Eastern European countries that recently succeeded in membership to the European Union. Further, taking into account that the original objective of the study was based around exploration and discovery, rather than a statistical justification of how transitional liner companies behave with respect to the research issues, the sample drawn does not mitigate the value of this undertaking.

10.4.3 Sample size

In social science research undertakings, it is usually preferable to have a proportionally large sample size (Bryman 2012; (Bolger and Wright 2011; Silverman 2009; Yates 2004). However in real world research, many theoretical

requirements cannot be met. In this case, due to the panel selection process identified in section 9.1.1 (Chapter Nine) and illustrated Figure 9.1, only a certain number of people could have been regarded as experts. The validity and success of Delphi technique is principally based on the qualifications of experts to be approved for panel membership (Okoli and Pawlowski 2004; Powell 2003). In the case of study, it would be misleading to suggest that every possible expert was included in the survey, because some potential participants refused to participate, while for others it was not possible to establish contact.

10.4.4 Loss of group interaction through Delphi technique

On the third round of Delphi, participants were given the opportunity to disclose their opinion of the use of Delphi technique as a tool for data collection (within the boundaries of the subject of study). Participants were asked to raise any disadvantages associated with the method. Of the issues that arose, a small number of participants noted that it was difficult to sometimes understand why other participants on the panel did not prioritize particular statements over others. This coupled with the wide variety of stakeholders, meant that a strong argument for the inclusion of a statement may be lost. While other participants cited the disadvantages to not getting the effect of group interaction. One particular participant wrote that they would have welcomed the possibility for dialogue and discussion about ambiguous areas. Furthermore, in the process of individuals completing questionnaires in isolation, it did not allow for the development of ideas/discussions of issues, as happens with focus groups.

10.4.5 Recommendations for further research

This study presented a detailed analysis of the Eastern European liner industry during the period of economic, political and social transition. Although some

questions may be answered on the basis of the study the study has also raised a number of other questions that require further investigation.

Firstly, it would be highly beneficial if a comparison was carried out between Eastern European liner shipping and European Union liner shipping at the end of the period of transition. The current stage of the transformation process in Eastern Europe, has deeply influenced the existing arrangements in Eastern European liner shipping, despite the fact that none of the Eastern European countries have yet completed the process of transition. Therefore, it is reasonable to suppose that many more changes are likely to happen in terms of evolutionary restructuring, and more specifically the adaptation process to the single European transport system. The expected effects of transition on both Eastern European and European Union liner shipping companies is anticipated to be sizeable, particularly as the creation of a market economy system in the Eastern European countries affects changes in the scale, volume and demand structure of shipping within the European Union and on an international scale. Whether liner operators choose to work together through joint ventures and mergers or strengthening company defenses remains to be seen.

Secondly, it would be useful if an evaluation were carried out between former socialist liner companies from countries which joined the European Union, and former socialist liner companies from countries that did not join the European Union. This study has provided considerable evidence to suggest that the adaptation process to the single European transport market plays a significant part in the overall process of transition (i.e. alongside liberalisation, deregulation, commercialisation, and privatisation). However, by isolating the

conceptual construct of accession (and therefore adaptation to the European Union), one may evaluate how this element of transition has affected former socialist liner shipping companies in terms of: ownership and management; fleet and tonnage renewal; market reorientation; and company reorganisation.

Thirdly, one of the propositions of the study is that the success of transition in Eastern European liner shipping, does not rest with complex aspects of privatisation (although privatisation is clearly a vital construct), but rather through sound evolutionary restructuring. It became clear that a mere change in ownership would not guarantee improved competitiveness, which must be considered a key construct for successful transition. Competitiveness in international liner shipping is deeply connected with commercialisation, and customer-orientated activity. Therefore, a quantitative study to evaluate the level of commercialisation (profitability achieved through customer-orientated activity) of former socialist liner companies post-transition would be of value.

Finally, it would be advantageous to consider the relationship between the national citizen and Eastern European liner shipping companies. In both the empirical study and the literature review, present impediments to change in Eastern European liner shipping were cited as not only the shortage of foreign investment and legislation for change, but also the transformation of public attitude, such that there will be acceptance of privatisation, foreign investment, competition and modernisation in Eastern European liner shipping. Accordingly, a study to investigate the relationship between former national liner corporations, and company employees and general public citizens would be beneficial in the process of improving the quality of these relationships.

REFERENCE

Abdel-Fattah, N. (1997) *Privatisation of the road freight industry in Eqypt and Hungry*. PhD Thesis. University of Plymouth.

Ackerson, L. (2007) *Literature search strategies for interdisciplinary research*. Scarecrow Press.

Adams, G., and Schvaneveldt, J. (1991) *Understanding research methods*. Longman.

Albi, A. (2005) *European Union enlargement and the constitutions of Central and Eastern Europe*. Cambridge University Press.

Alderton, P. (2011) *Reeds sea transport: operations and economics*. Adlard Coles Nautical.

Aligica, P., and Evans, A. (2009) *The neoliberal revolution in Eastern Europe: economic ideas in the transition from communism*. Edward Elgar Publishing Ltd.

Allen, M., Titsworth, S., and Hunt, S. (2008) *Quantitative research in communication*. Sage Publications.

Alvesson, M., and Karreman, D. (2011) *Qualitative research and theory development: Mystery and method.* Sage Publications.

Ambler, J., Shaw, D., and Symons, L. (1985) *Soviet Union and East European transport problems*. Croom Helm Publishing.

Anders, H. (2009) *Content analysis*. Open University Press.

Ando, A. (2003) *Essays on the structure of social science models.* MIT Press.

Annells, M., Deroche, M. & Koch, T. (2005). A Delphi study of district nursing research priorities in Australia. *Applied Nursing Research* Vol. 18 (1), pp 36-43.

Artis, M., Banerjee, A., and Marcellino, M. (2010) *The Central and Eastern European countries and the European Union*. Cambridge University Press.

Artis, M., and Nixson, F. (2007) *Economics of the European Union. Policy and analysis*. Cambridge University Press.

Aslund, A. (2009) *Russia the balance sheet.* The Peterson Institute for International Economics.

Aslund, A. (2007) *How capitalism was built: The transformation of Central Eastern Europe, Russia and Central Asia*. Cambridge University Press.

Aslund, A. (2001) *Building capitalism: The transformation of the Former Soviet Bloc.* Cambridge University Press.

Aslund, A., and Dabrowski, M. (2007). *Europe after the enlargement*. Cambridge University Press.

Auld, F., and Murray, E. (2011) Content analysis of psychotherapy. www.all-about-psychology.com.

Avery, A.J., Boki, S.P. & Sheikh, A. (2005). Identifying and establishing consensus on the most important safety features of GP computer systems: e-Delphi study. *Informatics in Primary Care* Vol. 13 (1) pp 3-12.

Avison, D., and Fitzgerald. (2006) *Information systems development: Methodologies, techniques and tools.* McGraw-Haill Higher Education.

Babbie, E. (1995) *The practice of social research*. Wadsworth Publishing.

Back-Pettersson, S., Hermansson, E., Sernert, N. & Bjorkelund, C. (2008). Research priorities in nursing – a Delphi study among Swedish nurses. *Journal of Clinical Nursing* Vol. 17 (16) pp 2221-2231.

Baddeley, M., and Barrowclough, D. (2009) *Running regressions: A practical guide to quantitative research in economics, finance and development studies.* Cambridge University Press.

Bafoil, F. (2009) *Central and Eastern Europe* (CERI series in international relations and political economy). Hampshire: Palgrave Macmillan.

Bailey, K. (1994) *Methods of social research*. The Free Press.

Baird, A. (1997) Port privatisation: An analytical framework. In proceddings of: *International Association of Maritime Economist Conference*, 22-24 September, City University, London.

Bak, J., and Burnewicz, M. (1999) Transport in economies in transition. In: Polak, J., and Heertje, A. (eds) *Analytical transport economics: an international perspective*. Cheltenham: Edward Elgar Publishing.

Balcerowicz, L. (1995) *Socialism, capitalism, transformation*. Central European University Press.

Baldwin, R., and Wyplosz, C. (2012) *The economics of European integration*. McGraw-Hill Higher Education.

Balnaves, M., and Caputi, P. (2001) *Introduction to quantitative research methods: An investigative approach*. Sage Publications.

Bandelj, N. (2008) *From communist to foreign capitalists*. Princeton University Press.

Banersee, A., and Marcellino, M. (2006) *The Central and Eastern European countries and the European Union*. Cambridge: Cambridge University Press.

Barbour, R. (2007) *Introducing qualitative research: A student's guide to the craft of doing qualitative research*. Sage Publications.

Beachain, D., Sheridan, V., and Stan, S. (2012) *Life in post-communist Eastern Europe after European Union membership*. Routledge Publishing.

Beesley, M. (1997) Privatisation: Reflections on United Kingdom experience. In: M.E. Beesley (ed), *Privatisation, regulation and deregulation*, London.

Bendul, J. (2012) *Performance orientated integration of combined transport into supply chain concepts: Simulation-based potential analysis and practical guidance*. Springer Gabler.

Berelson, B. (1971) *Content analysis in communication research*. Hafner.

Berend, I. (2009) *From the Soviet Bloc to the European Union: The economic and social transformation of Central and Eastern Europe since 1973*. Cambridge: Cambridge University press.

Berenyi, I., and Ivanova, O. (1997) *Time of transition*. Seatrade Review, July, pp 55-63.

Berg, B. (1995) *Qualitative research methods for the social sciences*. Allyn and Bacon.

Berglof, E., and Roland, G. (2006) *The economics of transition: The fifth Nobel symposium in economics*. Hampshire: Palgrave-Macmillan.

Bergman, M. (2009) *Mixed research methods*. London: Sage Publications.

Bergstrand, S., and Doganis, R. (1987) *The impact of Soviet shipping*. Boston: Allen and Unwin Publishing.

Berkovich, G. (2009) *Watching communism fall: A memoir of life in the Soviet Union*. McFarland and Co Inc.

Bideleux, R., and Jefferies, I. (1998) *A history of Eastern Europe; crisis and change*. Routledge Publishing.

Bishop, M., and Kay, J. (1988) *Does privatisation work? (Lessons from the United Kingdom)*. London Business School.

Bjrnskov, C., and Potrafke, N. (2011) Politics and privatisation in Central and Eastern Europe. *Economics of Transition*. Vol.19, Issue 2, pp 201-230.

Black, T. (1999) *Doing quantitative research in the social sciences: An integrated approach to research design, measurement and statistics.* Sage Publications.

Black, J., and Champion, D. (1976*) Methods and issues in social research*. New York: John Wiley and Sons.

Blakie, N. (2000) *Designing social research*. Cambridge University Press.

Blaxter, L., Hughes, C. and Tight, M. (2006) *How to research*. Buckingham: Open University Press.

Bleicher, J. (2011) *Scenario methods as a means for enhancing organisational learning: A Delphi study*. Proquest, Umi Dissertation Publishing.

Blouet, B. (2012) *The European Union and neighbours: A geography of Europe in the modern world.* John Wiley and Sons.

Blumberg, B., Cooper, D., and Schindler, P. (2008) *Research business methods*. McGraw-Hill Publishing.

Blyton, E. (1999) *The economics of Soviet merchant shipping policy*. Pan Press.

Boeije, H. (2009) *Analysis in qualitative research*. London: Sage Publications.

Bolger, F., and Wright, G. (2011) Improving the Delphi process: Lessons from social psychological research. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1500-1513.

Bolger, F., Stranien, A., Wright, G., and Yearwood, J. (2011) Does the Delphi process lead to increased accuracy in group-based judgmental forecasts or does it simply induce consensus amongst judgmental forecasters? *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1671-1680.

Bomberg, B., Petesa, J., and Stubb, A. (2008) *The European Union: How does it work?* Oxford: Oxford University Press.

Bosteels, B. (2011) *The actuality of communism*. Verso Books.

Bouma, B., and Atkinson, G. (1995) *A handbook of social science research*. Oxford University Press.

Branch, A. (2007) *Elements of shipping*. Routledge Publishing.

Braniff, M. (2011) *Integrating the Balkans: Conflict resolution and the impact of European Union expansion*. I.B.Tauris.

Breitzmann, K. (2001) Future demand in Baltic Sea transport, long-term projections from a German perspective. In: Misztal, K., and Zurek, J. *Maritime Transport in a Global Economy*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Breitzmann, K. (1996) *Market transition and structural changes in shipping and ports of Baltic Sea countries*. Germany: Baltic Institute of Marketing, Transport and Tourism, University of Rostock.

Breitzmann, K. (1994) *Shipping, ports and transport in transition to a market economy*. Germany: Baltic Institute of Marketing, Transport and Tourism, University of Rostock.

Breitzmann, K. (1993) Transition from a planned to a market economy. In: Gwilliam, K (ed): *Current issues in maritime economics*. Dordrecht: Kluwer, 1993. P22-35.

Breitzmann, K., and Von Seck, F. (2002) *Baltic Sea transport: structure, development and future challenges*. Germany: Baltic Institute of Marketing, Transport and Tourism, University of Rostock.Breitzmann, K., and Von Seck, F. (1999) *Privatisation and restructuring of shipping companies in transition*. 8th WCTR Proceedings. Germany: Baltic Institute of Marketing, Transport and Tourism, University of Rostock.

Breitzmann, K., and Von Seck, F. (1994) *Market transition and privatisation in East Germany - the shipping case.* Germany: Baltic Institute of Marketing, Transport and Tourism, University of Rostock.

Britt, D. (1997) *A conceptual introduction to modelling: Qualitative and quantitative perspectives*. Psychology Press.

Broadman, H., Paas, T., and Welfens, P. (2010) *Economic liberalisation and integration policy; options for Eastern Europe and Russia*. Germany: Springer.

Broomfield, D. and Humphries, G.M. (2001) Using the Delphi technique to identify the cancer education requirements of general practitioners. *Medical Education,* 35: 928-937. February.

Bruce, N., Pope, D., and Stanistreet, D. (2008) *Quantitative methods for health research*. Wiley-Blackwell.

Brunner,

Bruszt, L., and Holzhacker, K. (2009) *The trans-nationalization of economies, states and civil societies*. Germany: Springer.

Bryman, A. (2012) *Social research methods*. Buckingham: Open University Press.

Bryman, A. (2008) *Social research methods*. Buckingham: Open University Press.

Bryman, A. (1988*) Quantity and quality in social research*. Routledge Publishing.

Bryman, A., and Bell, E. (2011) *Business research methods.* Oxford University Press.

Buchanan, D., and Bryman, A. (2009) *The SAGE handbook of organisational research methods*. London: Sage Publications.

Budd, R. (1967) *Content analysis and research in communication*. London: The Macmillan Company.

Burda, M., and Wyplosz, C. (2009) *Macroeconomics: A European text*. Oxford University Press.

Burnewicz, J., and Bak, M. (1999) *Analytical transport economics.* Cheltenham: Edward Elgar.

Burnewicz, J. (1995) *Access to European transport markets*. Seminar on the integration of Central and Eastern European transport markets. Paris: OECO,

1996, pp 24-44.

Button, K. (2010) *Transition economics*. Edward Elgar Publishing.

Cahill, M. (2010) Transport, environment and society. *Journal of Social Policy*. Vol. 40, Issue 02, pp 430-432.

Cameron, S., and Price, D. (2009) *Business research methods*. London: Chartered Institute of Personnel and Development.

Campbell, J., and Pederson, O. (1996) *Legacies of change, transformations of post-communist European economies*. New York: Aldine de Gruyter,

Campbell, S., Cantrill, J. and Roberts, D. (2000) Prescribing indicators for UK general practice: Delphi consultation study. *BMJ,* 321: 425-428.

Campbell, S., Shield, T., Rogers, A. and Gask, L. (2004) How do stakeholder groups vary in a Delphi technique about primary mental health care and what factors influence their ratings? *Qual Saf Health Care,* 13 (6): 428-34.

Canfield, J. (1993) Independent Baltic States ports: The outlook for commercial viability. *Maritime Policy and Management*, Vol. 20, No. 2, pp 133-152.

Carney, T. (1972) *Content analysis: A technique for systematic inference from communications*. London: B.T.Batsord Ltd.

Chadwick, B., Bahr, H., and Albercht, S. (1988) *Social science research methods*. Prentice Hall.

Chaffin, W., and Talley, W. (1980) Individual stability in Delphi studies, *Technological Forecasting and Social Change*, No. 16, pp 67-73.

Chang, E., Hanjalic, A., and Sebe, N. (2006) *Multimedia content analysis, management and retrieval*. SPIE Press.

Charemza, W., and Strzala, K. (2002) *East European transition and European Union enlargement: A quantitative approach*. Physica-Verlag HD.

Chiva, C., and Phinnemore, D. (2011) *The European Union's 2007*

enlargement. Routledge Publishing.

Chrzanowski, I. (1997) Polish shipping and shipping policy. *Maritime Policy and Management*, Vol. 4, 281-291.

Christensen, L., Johnson, B., and Turner, L. (2010) *Research methods, design and analysis*. London: Allyn and Bacon.

Cohen, S. (2009) *Soviet fates and lost alternatives: from Stalinism to the new cold war*. Columbia University Press.

Cohen, L., Manion, L. and Morrison, K. (2000) *Research methods in Education (5th Edition).* London: Routledge Falmer.

Cohen, L. and Manion, L. (1994) *Research methods in education (4th Edition).* London: Routledge Falmer.

Collis, J., and Hussey, R. (2009) *Business research: a practical guide for undergraduate and postgraduate students.* Hampshire: Palgrave-Macmillan.

Commission of the European Community. (1997) Greenpaper on seaports and maritime infrastructure, COM (97), 678 Final.

Commission of the European Community. (1996) Towards a new maritime strategy, COM (96), 81 Final.

Commission of the European Community. (1991) Opening up the Internal Market.

Commission of the European Community. (1990) Implementation of the four regulations in the field of maritime transport, SEC (90), 1954 Final.

Commission of the European Community (1989) Future for community shipping industry. COM(89), 266 Final.

Cook, L. (2007) *Post-communism welfare states: reform politics in Russia and Eastern Europe*. Cornwell University Press.

Cooper, D., and Schindler, P. (2010) *Business research methods*. McGraw-Hill

Publishing. Cox, T. (2008) *Challenging communism in Eastern Europe: 1956 and its legacy*. Routledge Publishing.

Cottam, H., and Roe, M. (2008) Adaptation of the Eastern European shipping fleets to the Single European Transport Market (SETM). Paper presented at the *Tourism around the Baltic Sea Conference*, May 21-23, 2008: University of Rostock, Hansestadt Stralsund, Germany.

Cottam, H., and Roe, M. (2007) An analysis of macroeconomic privatisation of Eastern European maritime transport during the period of transition. In: *The reality and dilemmas of globalisation*, University of Gdansk, Sopot Publishing.

Cottam, H., Roe., and Challacombe, M. (2007a) The impact of transitional changes of maritime passenger transport on Croatian tourism development. *Maritime Policy and Management*. 34, 3, ISSN 0308 8839.

Cottam, H., Roe, M. and Challacombe, J. (2007b) Transitional models of strategic restructuring in Central and Eastern European maritime transport. Paper presented at the International Association of Maritime Economists (IAME) Annual Conference, July 4-6. 2007, Athens, Greece.

Cottam, H., and Roe, M. (2006) Restructuring of maritime transport and the development of tourism in the Black Sea region. Paper presented at Tourism and Hospitality Industry 2006: *New Trends in Tourism and Hospitality Management* Conference. Opatia, Croatia.

Cottam, H., Roe., and Challacombe, J. (2006) Transitional changes of maritime passenger transport upon Croatian tourism development. Croatian Association of Maritime Science and Transport Annual Conference: University of Rijeka, Croatia.

Cottam, H., and Roe, M. (2005) Privatisation and structural reforms of Eastern European maritime passenger transport during the period of transition. Paper

presented at the *Tourism around the Baltic Sea* Conference, May 18-20, 2005: University of Rostock, Hansestadt Stralsund, Germany.Cottam, H., and Roe, M. (2004a) The impact of transitional changes on maritime transport in Eastern Europe. *Maritime Policy and Management*. 31, 4, ISSN 0308 8839.

Cottam, H., and Roe, M. (2004b) Sequential modelling of post-1989 transition processes in Eastern European shipping industries. Paper presented at the *Tourism around the Baltic Sea Conference*, May 26-28, 2004: University of Rostock, Hansestadt Stralsund, Germany.

Cottam, H., and Roe, M. and Heijveld, H. (2003) The maritime sector in Central and Eastern European countries during transition. Paper presented at the *Tourism around the Baltic Sea Conference*, May 21-23, 2003: University of Rostock, Hansestadt Stralsund, Germany.

Cottrell, S. (2009) *Critical thinking skills: developing effective analysis and argument*. Hampshire: Palgrave-Macmillan.

Creswell, J. (2011) *Educational research: Planning, conducting and evaluating quantitative and qualitative research*. Pearson Education.

Creswell, J. (2008) *Research design: qualitative, quantitative and mixed methods approaches*. London: Sage publications.

Creswell, J., and Plano-Clark, V. (2010) *Designing and conducting mixed methods research*. London: Sage Publications.

Crisp, J., Pelletier, D., Duffuield, C., Adams, A. and Nagy, S. (1997) The Delphi method? *Nursing Research,* Vol. 46 No. 2, pp 116-118.

Croner's World Directory of Freight Conferences (1985).

Cudahy, B. (2008) *Box Boats: How container ships changed the world.* Fordham University Press.

Cullinane, K., and Toy, N. (2000) Identifying influential attributes in freight

route/mode decisions: a content analysis. *Transportation Research* (2000) 41-53.

Curry, J. (2007) *Central and East European politics: From communism to democracy*. Rowman & Littlefield Publishers.

Cutcliffe, J.R. and McKenna, H.P. (2002) When do we know that we know ? Considering the truth of research findings and the craft of qualitative research. *International Journal of Nursing Studies,* Vol. 39. pp 611-618.

Czermanska, R. (2001). Review of ports of Germany. In: *Materials of problems of marine economy*. Marine Institute. No. 1 34-37.

Dabrowski, M., and Maliszewska, M. (2011) *European Union Eastern neighbourhood: Economic potential and future development*. Germany: Springer.

Dale, G. (2011) *First the transition, then the crash; Eastern Europe in the 2000s*. Pluto Press.

Dani, H. (2009) *Balance sheets: contents, analysis and interpretation*. Orient Paperbacks India.

Daniels, R. (2007) *The rise and fall of communism in Russia*. Yale University.

Dawidowicz, P. (2011) *Literature reviews made easy; a quick guide to success*. London: Information Age Publishing.

Dawson, C. (2009) *Introduction to research methods*. How To Books.

Dedman, M. (2009) *The origins and development of the European Union 1945-2009: A history of European integration.* Routledge Publishing.

De Vaus, D (2002) *Research design in social research*. London: Sage Publications.

Denscombe, M. (2002) *Ground rules for good research: a ten-point guide for social researchers*. Buckingham: Open University Press.

Denzin, N.K. and Lincoln, Y.S. (1994) Introduction: entering the field of qualitative research. In: Denzin, N.K. and Lincoln, Y.S. (eds.) *Handbook of qualitative research.* London: Sage: 1-17.

Dinan, D. (2010) *Ever closer Union: An introduction to European integration.* (The European Union series). Hampshire: Palgrave-Macmillan.

Dinan, D. (2004) *Europe recast: A history of European Union.* (The European Union series). Hampshire: Palgrave-Macmillan.

Divakaran, A. (2009) *Multimedia content analysis: theory and applications (signals and communication technology).* Germany: Springer.

Dobrowolski, K. (2003) The privatisation of state-owned enterprises in Poland's economy. In: *Processes of change in ownership in maritime transport in Poland and East Germany*. Germany: Institute of Transport and Logistics, University of Rostock.

Dobrowolski, K. (1994) The privatisation of state-owned enterprises in Poland's economy. In: Processes of change in ownership in maritime transport in Poland and East Germany. Germany: Institute of Transport and Logistics, University of Rostock.

Dochartaigh, N. (2007) *Realism and sociology: anti-foundationalism, ontology and social research*. London: Routledge.

Duff, A. (2009) *The struggle for Europe constitution*. New York: The Federal Trust.

Economist (1993) Poland: Not as bad as it looked maybe. September 25.

Economist (1992) Democracy in Eastern Europe. Feburary 01.

Economist (1991) Comecon: Life after death. April 20.

Edmonds, A., and Kennedy, T. (2012) *An applied reference guide to research designs: quantitative, qualitative and mixed methods.* Sage Publications.

Edwards, L.H. (2002) Research priorities in school nursing: a Delphi process *The Journal of School Health* Vol.12 (5), pp 173-177.

Efstathiou, N., Ameen, J. & Coll, A.M. (2008). A Delphi study to identify healthcare users‟ priorities for cancer care in Greece. *European Journal of Oncology Nursing* Vol.12 (4), pp 362-371.

El-Agraa, A. (2011) *The European Union: Economics and policies.* Cambridge University Press.

Emden, C. and Sandelow ski, M. (1999) The good, the bad and the relative, part two: goodness and the criterion problem in qualitative research. *International Journal of Nursing Practice,* 5: 2-7.

Ernst and Young (1992) *Doing business in Poland*. Warsaw.

Ernst and Young (1990) Commission of the European Communities: An analysis of the maritime transport sector of East European Communities. Final Report. Vol. 4 *The Maritime Transport Sector in Poland*, November.

Ernst and Young (1990) Commission of the European Communities: An analysis of the maritime transport sector of East European Communities. Final Report. Vol. 5 *The Maritime Transport Sector in Bulgaria*, November.

Estrin, S., Grzegorz, W., and Kolodko, M. (2007) *Transition and beyond*. Hampshire: Palgrave-Macmillan.

Estrin, S. (1994) *Privatisation in Central and Eastern Europe*. New York: Longman Publishing.

Eyre, J. (1990) Maritime privatisation. *Maritime Policy and Management*. Vol. 17, pp 113-121.

Fairplay (1991) Poland’s pace of change is still too slow. August 15.

Fairplay (1990) Romanian Line sinks partner. July 12.

Fairplay (1990) Sealand in Soviet joint venture. May 31.

Fairplay (1990) Gdansk yard partially privatised. May 10.

Fairplay World Shipping Directory (1988-2012), Fairplay Publications, Surrey.

Falkner, G., Holzleithner, E., and Treib, O. (2008) *Compliance in the enlarged European Union*. Ashgate Publishing Ltd.

Favero, E. (2012) *European Union: Economic and political developments*. Nova Science Publications.

Fenwick, J., Butt, J., Downie, J., Monterosso, L. & Wood, J. (2006). Priorities for midwifery research in Perth, Western Australia: A Delphi Study *International Journal of Nursing Practice* Vol. 12, pp 78-93.

Financial Times (2001) Lithuania preparing for European Union: into Europe with a bridging role. April 27.

Financial Times (1993) Poland poised to be a post communist success story. Feburary 24.

Financial Times (1991) Comecon gives up the ghost of Stalin. May 10.

Fine, T. (2009) *Political science research methods: linking theory, methodology and analysis*. Financial Times / Prentice Hall.

Fink, A. (2009) *Conducting research literature reviews: from the internet to paper*. London: Sage Publications.

Fistung, D. (2011) *On the road to sustainability: The case of the Romanian transport sector*. Economics Centre of Industry and Services - Romanian Academy, Bucharest, 13th September.

Flick, U. (2009) *Managing quality in qualitative research. London: Sage Publications*.

Focas, C. (2004) *Transport issues and problems in Southeastern Europe*. Ashgate Publishing.

Frankfort-Nachmais, C., Nachmais, D. (2007) *Research methods in the social*

science. Arnold.

Frankfort-Nachmais, C., Nachmais, D. (1996) *Research methods in the social science*. Arnold.

Franzosi, R. (2010) *Quantitative narrative analysis* (Quantitative applications in the social sciences). Sage Publications.

Franzosi, R. (2008) Content analysis. London: Sage Publications (Benchmarks in Social Research Methods series). Cambridge University Press.

Franzosi, R. (2004) *From words to numbers: narrative, data and social science*. Cambridge University Press.

Frateschi, C., and Salvini, D. (1992) *A comparative analysis of economic reforms in Central and East Europe.* Dartmouth Publishing Company Ltd, Aldershot.

Fredrick, W., and Preston, L. (1990) *Business ethics: research issues and empirical studies*. Holland: Elsevier.

Frewer, L., Fischerm A., Wentholt, Marvin, H., Ooms, B., Coles, D., and Rowe, G. The use of Delphi methodology in agrifood policy development: Some lessons learned. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1514-1525.

Gabrisch, H and Pohl, R. (1999) *European Union enlargement and its macroeconomic effects in Eastern Europe: currencies, prices, investment and competitiveness*. Palgrave Macmillian, London.

Gardner, B. (1997) European Union Competition policy and liner shipping conferences, *Journal of Transport Economics and Policy*, Vol. 31, pp 317-324.

Gergen, K.J. (1995) Social construction and the educational process. In: Steffe, L. and Gale,J. (eds.) *Constructivism in education.* Hove, UK: Lawrence Erlbaum Associates: 17-40.

Gerring, J. (2001) *Social science methodology: a critical framework*. Cambridge: Cambridge University Press.

Geyer, M., and Fitzipatrick, S. (2010) *Beyond totalitarianism: Stalinism and Nazism compared*. Cambridge University Press.

Gibbs, G. (2010) *Using computers in qualitative data.* Sage Publications.

Gibbs, G. (2008) *Analysing qualitative data (Qualitative research kit).* Sage Publications.

Gilgun, J. (2009) *Qualitative research methods for the social sciences*. New York: Academic Press.

Givoni, M., and Banister, D. (2010) *Integrated transport: From policy to practice.* Routledge Publishing.

Goodman, C.M. (1987) The Delphi technique: A critique. *Journal of Advanced Nursing,* Vol. 12, pp 729-734.

Goluchowicz, K., and Blind, K. (2011) Identification of future fields of standardization: An explorative application of the Delphi methodology. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1526-1541.

Gong, Y., and Xu, W. (2007) *Machine learning for multimedia content analysis*. Springer.

Gottschalk, L., and Bechtel, R. (2008) Computised content analysi of speech and verbal texts and its many applications. Nova Science Publishers.

Graham, E., Oding, N., and Welfens, P. (2005) *Internationalisation and economic policy reforms in transition countries*. Germany: Springer.

Grant, R., and Rawcliffe. J. (2009) *Communism: systems of government*. Evans Brothers Limited.

Gray, D. (2009) *Doing research in the real world*. London: Sage Publications.

Greatorex, J. and Dexter, T. (2000) An accessible analytical approach for

investigating what happens between the rounds of a Delphi study. *Journal of Advanced Nursing* Vol. 32, Issue 4, pp 1016-1024.

Greenway, A. (1980) *Soviet merchant ships*. Havant: Kenneth Mason Publishing.

Grix, J. (2004) *The foundations of research*. London: Palgrave-Macmillian.

Gros, D., and Steinherr, A. (2009) *Economic transition in Central and Eastern Europe: planting seeds*. Cambridge: Cambridge University Press.

Gros and Steinherr. (2004) *Economic transition in Central and Eastern Europe.* Cambridge University Press, Cambridge.

Gros, D., and Steinherr, A. (1995) *Winds of change: Economic transition in Central and Eastern Europe.* Cambridge: Cambridge University Press.

Guba, E. and Lincoln, Y. (1994) Competing paradigms in qualitative resea2010rch. In: Denzin, N.K. and Lincoln, Y.S. (eds.) *Handbook of qualitative research.* London: Sage: pp 105-117.

Gupta, U.G. and Clarke, R.E. (1996) Theory and applications of the Delphi technique: A bibliography (1975-1994) *Technological Forecasting and Social Change,* Vol. 53. pp 185-211.

Gustavsson, S., Karlsson, C., and Persson, T. (2011) *The illusion of accountability in the European Union*. Routledge.

Gustavsson, S., Oxelheim, L., and Pehrson, L. (2009) *How unified is the European Union?* Germany: Springer.

Hall, D. (1993) *Transport and economic development in Central and Eastern Europe*, London: Belhaven.

Hair, J., Money, A., Samouel, P., and Page, M. (2007) *Research methods for business*. John Wiley & Sons. Harris, S. (2012) *Communism on tomorrow street: mass housing and everyday life after Stalin*. Woodrow Wilson Centre

Press.

Hanafin, S., and Brooks, A. (2005) *The Delphi technique: A Methodology to support the development of a national set of child well-being indicators*. Stationary Office.

Hannes, K., and Lockwood, C. (2011) *Synthesizing qualitative research: Choosing the right approach.* Wiley-Blackwell.

Hanssens, D., Parsons, L., and Schultz, R. (2003) *Market response models: Econometric and time series analysis*. Germany: Springer.

Hart, C. (2005) *Doing a literature review.* London: Sage Publications.

Hart, P., Ledger, G., and Roe, M. (1993) *Shipping policy in the European Community*. Aldershot: Averbury Publishing.

Hartas, D. (2010) *Educational research and inquiry: Qualitative and quantitative approaches*. Continuum.

Hartley, T. (2010) *The foundations of the European Union*. Oxford University Press.

Hasson, F., and Keeney, S. (2011) Enhancing rigour in the Delphi technique research. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1695-1704.

Hasson, F., Keeney, S. and McKenna, H. (2000) Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing,* Vol. 32, No. 4: 1008-1015.

Hedlund, S. (1999) *Russia's market economy: A bad case of predatory capitalism*. London: UCL Press.

Henderson, A., and Johnson, J. (2011) *Conceptual models: Core to good design*. Morgan and Claypool Publishers.

Hennink, M., Hutter, I., and Bailey, A. (2010) *Qualitative research methods*.

Sage Publications.

Hensher, D., Button, K., Haynes, K., and Stopher, P. (2004) *Handbook of transport geography and spatial systems*. Emerald Group Publishing.

Heritier, A. (2001) *Differential Europe. The European Union impact on national policy-making*. Labdham: Rowman and Littlefield.

Hinc, S., and Miotke-Dziegel, J. (1999) Polish ferry shipping - determinants of development in the 21st century. In J. Vainio. *Problems of development of shipping in the Baltic Sea region*. Centre for Maritime Studies, University of Turku.

Hitiris, T. (2002) *European Union economics*. Financial Times / Prentice Hall.

Hix, S., and Hoyland, B. (2011) *The political system of the European Union*. (The European Union Series). Palgrave-Macmillan.

Hix, S. (2008) *Whats wrong with the European Union*. Polity Press.

Hoen, H. (1998) *The transformation of economic systems in Central Europe*, Edward Elgar Publishing.

Holland, M., and Doidge, M. (2012) *Development policy of the European Union*. Palgrave-Macmillan.

Holloway, I. (1997) *Basic concepts for qualitative research*, Blackwell Science Publishing.

Holsti, O. (1968) Content analysis. In Lindzey, G., and Aronson, E. *The handbook of social psychology*. Addison-Wesley.

Hongyi, C., Wakeland, W., and Yu, J. (2012) A two-stage technology foresight model with system dynamics simulation and its application in the Chinese ICT industry. *Technological Forecasting and Social Change*. Vol 79, Issue 7, pp1254-1267.

Humphreys, M. (2010) *Sustainability in European transport policy.* Oxford University Press.

Huntus, S., and Roe, M. (2003) Container ports and shipping the Baltic Sea market place. In: Zurek, J. *Polish maritime transport sector - actual situation and trends*. Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Hus, C. (2007) The Delphi-technique: Making sense of consensus. Practical *Assessment, Research & Evaluation*. Vol 12, No.10. August.

Hussler, C., Muller, P., and Ronde, P. (2011) Is diversity in Delphi panelist groups useful? Evidence from a French forecasting exercise on the future of nuclear energy. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1642-1653.

Hutton, B. (2012) *Planning sustainable transport*. Routledge.

Isaacs, J. (1984) *A verbal content analysis: of the early memories of psychiatric patients*, Berkely: California School of Professional Psychology.

Israel, M., and Hay, I (2006) *Research ethics for social scientists.* London: Sage Press.

Jaccard, J., and Jacoby, J. (2010) *Theory construction and model-building skills: A practical guide for social scientists.* Guilford Press.

Januszkiewicz, W. (2001) Globalisation and the service sector, with particular reference to maritime transport. In: Misztal, K., and Zurek, J. *Maritime Transport in a Global Economy*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Jauernig, C., and Roe, M. (2001) International logistics in Lithuania at the time of transition, *Transport Reviews*, Vol. 21, No. 1, pp 117-135.

Jennex, M. (2012) Conceptual models and outcomes of advancing knowledge

management. IGI Global.

Jesson, J., and Matheson, L. (2011) *Doing your literature review; traditional Kland systematic techniques*. London: Sage Publications.

Johannsen, L. (2009) *Comparing the incomparable; pathways beyond*. London: Aarhus University Press.

Johnson, R., and Lawler, G. (2009) *Lenin, Stalin and Communist Russia: The myth and reality of communism*. Aber Publishing.

Jordan, A., Kunkel, D., Manganello, J., and Fishbein, M. (2008) *Media messages and public health: A decisions approach to content analysis.* Routledge.

Jupp, V., and Norris, C. (1993) *Traditions in documentary analysis*. Open University Press.

Junker, J., and Pennink, B. (2009) *The essence of research methodology: a concise guide for master and PhD students in management science*. Germany: Springer.

Kapsa, E., and Roe, M. (2006) An analysis of the current situation for Polish ferry operators in a transitional environment, *Transporti Europei*, Vol 34, pp 1-20.

Kasomo, D. (2010) *An introduction to research methods: Basics, methods and analysis.* LAP LAMBERT Academic Publishing.

Katsikas, S. (2011) *Bulgaria and Europe: shifting identitires (anthem Series on Russia East Europe and Eurasian Sage,* Anthem Press.

Kaufmann, M. (2009) *Socialism and communism in their practical application*. Biblio Bazaar Press.

Kavaliauskas, T. (2012) *Transformations in Central Europe between 1989 and 2012: geopolitical, cultural and socioeconomic shifts*. Lexington Books Ltd.

Keeney, S., Hasson, F. and McKenna, H.P. (2001) A critical review of the Delphi technique as a research methodology for nursing. *International Journal of Nursing Studies,* 38: pp 195-200.

Kemp-Welch, A. (2008) *Poland under communism: A cold war history*. Cambridge University Press.

Kennedy, M. (2012) *Content analysis of organizational management.* Terry College of Business, University of Georgia.

King, J. (2012) *Search engine content analysis: Analysing the subject distribution of the largest and most popular search engines*. VDM. Verlag.

Kiriazidis, T., and Tzanidakis, G. (1995) Recent aspects of the EU maritime policy, *Maritime Policy and Management.* Vol. 22, No. 2 pp179-186.

Kirkpatrick, G. (1994) *Transition experiences compared: Lessons from Eastern and Central Europe*. OECD Report.

Kirschbaum, S. (2007) *Central European history and the European Union*. Hampshire: Palgrave-Macmillan.

Klages, M. (2012) *Literary theory*. Oxford University Press.

Knell, M., and Rider, C. (1992) *Socialist economies in transition: Apprasials of the market mechanism*. Cheltenham: Edward Elgar.

Knill, C. (2001) *The Europeanisation of national administrations. Patterns of institutional change and persistence*. Cambridge University Press.

Kompatsiaris, Y., Merialdo, B., and Lian, S. (2012) *TV content analysis: techniques and applications*. Auerbach Publications.

Koralewicz, J., Bialecki, I., and Watson, M. (1987) Crisis and transition. Saint Martins Press.

Kornai, J. (1997) Struggle and hope: *Essays on stabilisation and reform in a post-socialist economy*. Cheltenham: Edward Elgar.

Korosteleva, E. (2012) *The European Union and its Eastern neighbours: Towards a more ambitious partnership?* Routledge.

Kotkin, S., and Gross J. (2009) *Uncivil society: 1989 and the implosion of the Communist establishment* (Modern Library Chronicles) Modern Library.

Kovacs, J., and Tardos, A. (2007) *Reform and transformation in Eastern Europe: Soviet type economies in the threshold of change*. London: Taylor and Francis.

Koves, A. (1992) *Central and East European economies in transition: The international dimesion*, Westview Press.

Kowalski, R. (2006) *European communism 1848-1991*. Hampshire: Palgrave Macmillian.

Kreft, K. (2003) The use of neural networks in modelling the transport processes.In: Zurek, J. *Polish maritime transport sector - actual situation and trends*. Gdansk: Institute of Maritime Transport and Seaborne Trade, Gdansk.

Krippendorff, K. (2012) *Content analysis: An introduction to its methodology*. London: Sage Publications.

Krippendorff, K., and Bock, M. (2008) *The content analysis reader*. London: Sage Publications.

Krkoska, L. (1999) A neoclassical growth model applied to transition in Central Europe. *Journal of Comparative Economics*, Vol. 27 pp 259-80.

Krzyzanowski, M. (2001) Development policies for the Polish maritime industry. In: *Bulletin of the Maritime Institute in Gdansk*, Vol xxviii No. 1.

Krzyzanowski, M. (1993) The adaptation of Polish shipping companies to market conditions. *Maritime Policy and Management*, Vol 20, 301-397.

Kulachi, *Romanian Journal of European Affairs*. Vol. 12, No.1, March.

Kumar, R. (2010) *Research methodology; a step-by-step guide for beginners*.

London: Sage Publications.

Kvist, J., and Saari, J. (2007) *The Europeanisation of social protection*. The Policy Press.

Lai, V.S., Wong, B.K. and Cehung, W. (2002) Group decision-making in a multiple criteria environment: A case using the AHP in software selection. *European Journal of Operational Research,* 137: 134-144.

Lambert, A. (2011) Europeanisation in new member and candidate states. *Living Reviews in European Governance*. Vol. 6. No.1.

Landeta, J., Barrutia J., and Lertxundi, A. (2011) Hybrid Delphi: A methodology to facilitate contribution from experts in professional contexts. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1629-1641.

Lane, D. (2007) *The transformation of state socialism; system change, capitalism or something else; studies in economic transition*. Palgrave-Macmillian.

Lapan, S., and Quartaroli. (2009) *Research essentials: an introduction to designs and practices (research methods for the social sciences).* New York: Jossey Bass.

Larsen, B., Freeland, F., and Hardy, S. (2006) *Shaping European Union regional policy: Economic, social and political pressures.* Regional Studies Association.

Latuszynska, M. (2011) *Modelling of consequences of transport corridors development*. LIBERTAS.

Lave, C., and March, J. (1993) *An introduction to models in the social sciences*. University Press of America.

Lavgine, M. (2011) *The Soviet Union and Eastern Europe in the global economy* (International Council for Central and Eastern Europe). Cambridge

University Press.

Lavigne, M. (2007) *Economics of transition: from socialist economy to market economy*. Hampshire: Palgrave Macmillan.

Ledger, G., and Roe, M. (1996a) Positional change in the Polish liner shipping market: a framework approach. *Maritime Policy and Management*, Vol. 22, No. 4, 295-318.

Ledger, G., and Roe, M. (1996b) *East European change and shipping policy*, *Plymouth Studies in Contemporary Shipping*. Aldershot: Ashgate Publishing.

Leeflang, P., Wittink, D., Wedel, M., and Naert, P. (2000) *Building models for marketing decisions*. Germany: Springer.

Leetaru, K. (2012) *Data mining methods for the content analyst: An introduction to the computational analysis of content*. Routledge.

Leonard, D. (2010) *Guide to the European Union (Economists guide to the European Union)*. Economists Books Ltd.

Lepori, C. (2010) *Sustainable intermodal freight transport in Europe: Motorways of the Seas services and innovative railway terminals*. LAMBERT Academic Publishing.

Levinson, M. (2008) *The box: how the shipping container made the world smaller and the world economy bigger*. United States: Princeton University Press.

Levinson, M. (1984) *Soviet maritime freight transport*, Soviet Transportation Research Project, Working Paper No. 6. Wharton Econometric Forecasting Associates Washington.

Lewis, P., and Mansfeldova, Z. (2006) *The European Union and party politics in Central and Eastern Europe*. Palgrave-Macmillan.

Liagras, I., and Roe M. (2003) Liner shipping development in the Baltic Sea

ports. In: Zurek, J *Polish maritime transport sector - actual situation and trends*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Lichtman, M. (2012) *Qualitative research in education: A users guide*. Sage Publications.

Lichtman, M. (2010) *Understanding and evaluating qualitative educational research*. Sage Publications.

Lijewski, T. (1996) The impact of political change on transport in Central and Eastern Europe. *Transport Reviews*, Vol. 16, 37-53.

Liliopoulous, A. (2003) *An analysis of the role of the Baltic ports in the trans Siberian railway market*. Ph.D Thesis. Plymouth.

Lincoln, Y., and Guba, E. (2000) Paradigmatic controversies, contradictions, and emerging confluences. In: Denzin, N.K. and Lincoln, Y.S. (eds.) *Handbook of qualitative research.* London: Sage: 163-188.

Lincoln, Y.S. and Guba, E.G. (1985) *Naturalistic inquiry.* London: Sage.

Linden, V., and Marcel, D. (2009) *Western Marxism and the Soviet Union: A survey of critical theories and debates since 1917: 5* (Historical Materialism Book). Haymarket Books.

Linstone, H.A. and Turoff, M. (1975) *The Delphi method techniques and applications.* Massachusetts, Reading: Addison-Wesley.

Lithuanian Shipping Company (2012) (Accessed 06.02.2012) Available from: World Wide Web http://www.ljl.lt/.

Lloyds List (2009) Special report on Bulgaria: Weathering the road from communism to capitalism. November 27.

Lloyds List (2009) From communism to capitalism. November 27.

Lloyds List (2008) Bearing a heavy burden. November 06.

Lloyds List (2008) Multitude of problems makes for an uneasy year. July 30.

Lloyds List (2008) Box lines prepare for their big bang. July 30.

Lloyds List (2008) Looking to life after conferences. July 10.

Lloyds List (2008) The world is getting rounder. June 11.

Lloyds List (2007) Why nations need to observe the rules of the global game. January 03.

Lloyds List (2004) POL seeks out an international partner. September 02.

Lloyds List (2004) Why Varna carries the torch for Bulgarian shipping. August 13.

Lloyds List (2003) Improved handling facilities should bring in more traffic. July 28.

Lloyds List (2003) Hopes are high in EU countdown. January 28.

Lloyds List (2003) Membership of EU sets direction for winning ways. January 23.

Lloyds List (2002) Next step in privatisation lined up. July 18.

Lloyds List (2002) Navibulgar looks to renew fleet. April 15.

Lloyds List (2001) Eastern European yards need cash aid to survive EU entry. November 23.

Lloyds List (2001) Political uncertainty marks real progress. July 28.

Lloyds List (2001) Neighbourly competition hots up. June 29.

Lloyds List (2000) Lasco records first profit. November 02.

Lloyds List (2000) Difficult year at Estonian shipping. June 28.

Lloyds List (2000) Special report on Romania: End of line for troubled Navrom. May 13.

Lloyds List (2000) Cash row holds back Ventspils progress. March 23.

Lloyds List (1999) LISCO on rocky road to privatisation. June 25.

Lloyds List (1999) Romania: New breed of maritime firm starting to emerge. May 14.

Lloyds List (1999) Estonia shipping firm shake up. April 15.

Lloyds List (1999) Special report on Bulgaria: NMB planning renewal. April 08.

Lloyds List (1999) Russian crisis hits EBRD finances. March 12.

Lloyds List (1998) Navrom liquidation procedures begin. September 18.

Lloyds List (1998a) Multitude of problems makes for an uneasy year. July 30.

Lloyds List (1998b) Box lines prepare for their big bang. July 30.

Lloyds List (1998) Looking to life after conferences. July 10.

Lloyds List (1998) Special report: Latvia, Estonian and Lithuania: ESCO awaits turbulent seas of exchange listing. June 18.

Lloyds List (1998) The world is getting rounder. June 11.

Lloyds List (1998) Romline in ownerless ships row. June 10.

Lloyds List (1998) Special report on Romania: Fleet clean up finally starts. May 13.

Lloyds List (1998) Latvian setback. March 13.

Lloyds List (1997) Special report on Poland: Polish Ocean Lines rises from the ashes. September 24.

Lloyds List (1997) Mixed news for Latvian shipping company. September 01.

Lloyds List (1997) Special report on Latvia, Estonia and Lithuania: LISCO in warning of lower profits. June 03.

Lloyds List (1997) Special report on Latvia, Estonia and Lithuania: ESCO is poised to go private. June 02.

Lloyds List (1997) Special report on Romania: Companies struggle in free market transition. May 14.

Lloyds List (1997) Special report on Bulgaria: Navibulgar well set to survive turmoil. February 23.

Lloyds List (1996) Special report on Bulgaria: Varna Port. February 23.

Lloyds List (1995) Maritime sector enjoys economic success after restructuring. May 26.

Lloyds List (1995) Special report Latvia: LSC considers fleet renewal option. April 07.

Lloyds List (1994) Special report: Baltic ports and shipping. February 11.

Lloyds List (1994) Romania to step up privatisation. January 13.

Lloyds List (1993) An alliance for growth: The merger of senator line and Deutsche Seereederei Rost. December 02.

Lloyds List (1993) Special report on Commonwealth of Independent States. December 02.

Lloyds List (1993) Owners blast EC liners rules. November 15.

Lloyds List (1993) Special report: Romline survives crisis. October 27.

Lloyds List (1993) Special report on Romania: Romanian shipping. October 27.

Lloyds List (1993) ESCO to open Rostock-Tallin Ro-Ro service. August 20.

Lloyds List (1991) Soviet Union special report: shipping companies used joint ventures to halt fleet decline, in the face of increased competition. October 11.

Lloyds List (1991) Lithuanians nationalise shipping. September 03.

Lloyds List (1991) Effective European maritime policy vital. September 03.

Lloyds List (1991) Soviet shipping readies itself for old unions break up. September 02.

Lloyds List (1991) Latvian shipping company in shipping shares deals: LSC leads the way down Soviet privatisation. August 12.

Lloyds List (1990) Special report on Poland: Year of changes for Polish Ocean Lines. September 03.

Lloyds List (1990) Special report on Poland: Polish Ocean Lines strives for efficiency. September 03.

Lloyds Register of Shipping, *Statistical tables* (1950-1999).

Lloyds Shipping Economist (2009) Short on Short Shipping. February 02.

Lloyds Shipping Economist (2009) *Gateway to recovery*. February 02.

Lloyds Shipping Economist (2009) *Filling the berths*. March 02.

Lloyds Shipping Economist (2009) *EC Guidelines applicable to liner shipping from 18 October*. August 01.

Lloyds Shipping Economist (2007) *In the Balance*. July 01.

Lloyds Shipping Economist (2007) *Eastern Eyes*. November 01.

Lloyds Ship Manager (1995): *Poland. Special report*: August.

Lloyds Ship Manager (1991): Special supplement: *Reformation of Soviet shipping*. United Kingdom: August.

Lowe, S. (2000) *Textbook of research ethics: Theory and practice.* Germany: Springer.

Lorange, P. (2005) *Shipping company strategies: global management under turbulent conditions*. Elsevier Publications.

Lovell, S. (2009) *The Soviet Union: A very short introduction* (Very Short Introductions) Oxford: Oxford University Press.

Lukowski, J., and Zawadzki, H. (2006) *A concise history of Poland* (Cambridge concise histories). Cambridge University Press.

Marchais-Roubelat, A., and Roubelat, F. (2011) The Delphi method as a ritual: Inquiring the Delphic Oracle. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1491-1499.

Marelli, E., and Signorell, M. (2010) *Economic growth and structural features of transition*. Hampshire: Palgrave-Macmillan.

Marinov, A. (2001) The present state of Bulgarian maritime transport sector as a basis for the development of combined sea/land system in the Baltic Sea region. In: Misztal, K., and Zurek, J. *Maritime Transport in a Global Economy*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Marshall, C., and Rossman, G. (2006) *Designing qualitative research*. London: Sage Publications.

Marlow, P., and Nair,R. (2006) Liner shipping and information exchange - a European perspective, *Marine Policy*. Vol. 30, No. 6 pp 681-8.

Maslov, G. (1984) Soviet liner shipping. *Soviet Shipping*, January 1984.

Matthews, R., and Ross, L. (2010) *Research methods: A practical guide for the social sciences.* Longman.

Mayhew, A. (1998) *Recreating Europe*. Cambridge University Press.

Maxim, P. (1999) *Quantitative research methods in the social sciences*. USA: Oxford University Press.

McBurney, D., and White, T. (2012); *Research methods; International edition*. Sage Publications.

McCall, C., and Wilson, T. (2010) *Europeanisation and hibernicisation: Ireland and Europe*. Rodopi B.V.

McCornville, J. (1999) *Economics of maritime transport, theory and practice*. Witherby Publishers.

McCormick, S. (2011) *European Union politics*. Hampshire: Palgrave-Macmillan.

McCornmick, S. (2008) *Understanding the European Union*. Hampshire:

Palgrave-Macmillan.

McDermott, K., and Stibble, M. (2006) *Revolution and resistance in Eastern Europe; challenges to Communist rule*. Berg Publishers.

McDonald, F., and Dearden, S. (2005) *European economic and integration*. Harlow: Prentice Hall Publications.

McKenna, H. P., Hasson, F. & Smith, M. (2002). A Delphi survey of midwives and midwifery students to identify non-midwifery duties *Midwifery* Vol. 18, pp 314-322.

McKenna, H. (1994) The Delphi technique: A worthwhile research approach for nursing? *Journal of Advanced Nursing,* 19: 1221-1225.

McMahan, E., Day, S., Funk, R., and Coleman, L. (2010) *Literature and the writing process*. London: Prentice Hall.

Merriman, J. (2009) *A history of modern Europe*: v. 1 & 2. W.W Norton Press.

Mickiewicz, T. (2010) *Economics of institutional change; Central and Eastern Europe revisited (Studies in economic transition)*. Hampshire: Palgrave-Macmillan.

Mickiewicz, T. (2008) *Economic transition in Central European and Commonwealth of independent states*. Hampshire: Palgrave Macmillan.

Miles, M., and Huberman, A. (1994) *Qualitative data analysis*, Sage Publications.

Millar, G. (2001) The development of indicators for sustainable tourism: results of a Delphi survey of tourism researchers. *Tourism Management,* 22: 351-362.

Miotke-Dziegiel, J. (2001) The employment in the sea transport firms; results of economic transformation and the restructurisation of enterprises. In: Zurek, J. *Maritime transport in a global economy.* Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Mis, B. (2012) *Quantitative research: An introduction*. Amazon Media.

Misztal, K. (2003) Challenges of the 21st century in relation to Baltic seaports. In: Zurek, J *Polish maritime transport sector - actual situation and trends*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Misztal, K. (1999) Polish seaports determinants of developments in the 21st Century. In: Vainio, *Problems of developments of shipping in the Baltic Sea region*. Turkey: Centre for Maritime Studies, University of Turku.

Misztal, K. (1997) Competitiveness of Polish ports in the context of future membership of Poland in the European Union. In: J. Zurek (ed), *Competitiveness in maritime transport and seaports*. Poland: University of Gdansk.

Mole, R. (2012) *The Baltic States from the Soviet Union to the European Union: identity, discourse and power in the post-communist transition of Estonia, Latvia and Lithuania*. Routledge.

Molloy, P. (2009) *The lost world of communism*. BBC Books.

Monti, M. (1996) *The single market and tomorrow's Europe.* European Commission, London: Kogan Page.

Moore, K. (1980) *Development of USSR and CMEA shipping*. Greenwich Forum VI 1980: 138-48.

Morecroft, J. (2007) *Strategic modelling and business dynamics: A feedback systems approach.* John Wiley and Sons.

Morita, K. (2004) *Economic reforms: capital markets in Central Europe in transition and development*. Ashgate Publishing, London.

Myant, M., and Drahokoupil, J. (2010) *Transition economies; political economy in Russia, Eastern Europe and Central Asia*. John Wiley and Sons.

Myers, M. (2008) *Qualitative research in business and management*. Sage Publications.

Naert, P., and Leeflang, H. (1978) *Building implementable marketing models*. Boston: Martinus Nijhoff Social Science Division.

Neal, L. (2007) *The economics of Europe and the European Union*. Cambridge: Cambridge University Press.

Nello, S. (2011) *The European Union: economics, politics and history*. McGraw-Hill Higher Education.

Nello. S. (2002) Preparing for enlargement in the European Union. The tensions between economic and political integration. *International Political Science Review*, Vol 23. No. 3 pp 2913-17.

Nello, S., and Pierani, P. (2010) *International trade, consumer interests and reform*. Routledge.

Nello, S., and Smith, K. (1998) *The European Union and Central and Eastern Europe: The implications of enlargement in stages*. Ashgate Publishing Ltd.

Nelson, N. (1992) *Romania after tyranny*. London: Westview Press.

Neuman, W. (2009) *Social research methods: qualitative and quantitative approaches*. Boston: Allyn and Bacon.

Nijkamp, P., and Giaoutzi, M. (2008) *Network strategies in Europe: Developing the future for transport and ICT*. Ashgate Publishing, London.

Nowack, M., Endrikat, J., and Guenther, E. (2011) Review of Delphi-based scenario studies: Quality and design considerations. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1603-1615.

Nugent, N. (2010) *The government and politics of the European Union*. Palgrave-Macmillan.

Nugent, N. (2004) *European Union enlargement*. Palgrave-Macmillan.

Oliver, P. (2012) *Succeeding with your literature review*. London: Open University Press.

Oppenheim, A. (1992) *Questionnaire design, interviewing and attitude measurement*, London: Pinter Publishers.

Orbie, J. (2009) *Europe's global role: External policies of the European Union*. Ashgate Publishing, London.

Owens, W., and Correa, D. (2009) *The handbook to literary research*. Routledge.

Paixao, A., and Marlow, P. (2001) A review of the EU shipping policy, *Maritime Policy and Management*, Vol. 28, No. 2, pp 187-198.

Pallis, A. (2002) The European Union port policy in a historical perspective. *European Research Studies*, Vol. 8, No.1. pp 21-42.

Pajarillo, E. (2008) *A conceptual model of nursing information behaviour.* VDM Verlag Dr. Muller

Parente, R., and Anderson-Parente, J. (2011) A case study of long-term Delphi accuracy. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp 1705-1711.

Parker, W. (2009) *Social studies today: research and practice*. Routledge.

Pasukeviciute, I. (2003) *An economic analysis of the impact of EU accession upon crude oil and oil production policy in Lithuania*. Ph.D. thesis. Plymouth.

Pasukeviciute, I., Liliopoulou, A. and Roe, M. (2005) *Container logistics; potential of the Baltic States ports in the Transiberian market*, Logistics Research Network Conference Proceedings, 339-344, Plymouth September 7-9th 2005.

Peeters, J. (2012) *Politics and economics in Central and Eastern Europe* (European political, economic and security issues). Nova Science Publications

Inc.

Petrakas, G. (2000) *Integration and transition in Europe: economic geography of interaction*. Routledge, London.

Pickles, J. (2007) *State and society in post-socialist economies; studies in Central and Eastern Europe*. Hampshire: Palgrave-Macmillan.

Pinder, J., and Usherwood, S. (2007) *The European Union: A very short introduction*. Oxford University Press.

Pipes, R. (2003) *Communism: a history*. Modern History Library.Polak, J., and Heertje, A. (1999) *Analytical transport economics: an international perspective*. Edward Elgar.

Polish Ocean Lines (2012) (Accessed 02.01.2012). Available from World Wide Web: http://www.pol.com.pl/sub=1.

Pons, S., and Service, R. (2012) *A dictionary of 20th century communism*. Princeton University Press.

Portes, R. (1994) *Economic transformation in Central Europe*, Centre for Economic Policy Research, London.

Powell, C. (2003) The Delphi technique: myths and realities. *Journal of Advanced Nursing,*41(4): 376-382.

Punch, K. (2005) *Introduction to social research: quantitative and qualitative approaches*. London: Sage Publications.

Quinlan, C. (2011) *Business research methods*. Cengage Learning EMEA.

Reed, J. and Roskell, V. (1997) Focus groups: Issues of analysis and interpretation. *Journal of Advanced Nursing,* 26: 765-771.

Radaelli, C. (2003) *The politics of Europeanisation.* Oxford University Press.

Rayen M., and Hahn, E. (2000) Building consensus using the policy Delphi method. *Policy, Politics & Nursing Practice*. Vol. 1, No. 4, pp 308-315.

Ridley, D. (2008) *The literature review: a step-by-step guide for students*. London: Sage Publications.

Riffe, D., Lacy, S., and Fico, F. (2005) *Analysing media messages: using quantitative content analysis in research.* Taylor and Francis.

Ritchie, J., and Lewis, J. (2003) *Qualitative research practice*. Sage Publications.

Rivers, C. (2011) *Current events: The European Union and the Eurozone crisis*. Oxford University Press.

Rodrigue, J., Comtois, C., and Slack, B. (2009) *The geography of transport systems*. Routledge.

Rodrigue, A., and Kroijer, A., and, Vassilis, T. (2008) Fiscal decentralization and economic growth in Central and Eastern Europe. *Growth and Change*, Gatton College of Business and Economics, University of Kentucky, Vol. 40, No. 3, pp 387-417

Roe, M (2002) Shipping policy in the globalisation era: the inter-relationship between international, supra-national and national shipping policies. In: C Grammenos (ed), *The handbook of maritime economics and business*, 495-511. Lloyd's of London Press.

Robertson, H.A. and MacKinnon, N.J. (2002) Development of a list of consensus-approved clinical indicators of preventable drug-related morbidity in older adults. *Clinical Therapeutics,* 24(10): 1595-1613.

Robson, C. (1993) *Real world research.* Oxford: Blackwell Publishing.

Roe, M. (2001a) *Polish shipping under communism*. Ashgate Publishing Limited: Aldershot.

Roe, M. (2001b) The role of Lithuania as a logistics landbridge to the European Union for the countries of the Former Soviet Union following accession. In: K

Misztal and J Zurek (eds), *Maritime Transport in the Global Economy*, pp 9-28. Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Roe, M. (1999) The commercialisation of East European liner shipping: the experience of Poland. *Maritime Policy and Management*, 26, 69-79.

Roe, M. (1998) *Containerisation in Central and Eastern Europe*. Plymouth Studies in Contemporary Shipping and Logistics. Aldershot: Ashgate.

Roe, M. (1997) *Development in the Baltic maritime marketplace*. Plymouth Studies in Contemporary Shipping and Logistics. Aldershot: Ashgate.

Roland, G. (2011) *Economies in transition: The long-run view (Studies in Development Economics and Policy)*. Hampshire: Palgrave-Macmillan.

Roland, G. (2008) *Privatisation: successes and failures*. Columbia University Press.

Roland, G. (2004) *Transition and economics: politics, markets and firms*. MIT Press.

Rosamond, B. (2000) *Theories of European integration.* Hampshire: Palgrave-Macmillan.

Rosati, D. (1992) The CMEA demise, trade restructuring and trade destruction in Central and Eastern Europe. *Oxford Review of Economic Policy*, Vol. 8, No. 1, pp 58-81.

Rothschild, J., and Wingfield, N. (1999) *Return to diversity; a political history of Eastern Europe since World War II*. Oxford: Oxford University Press.

Rowe, G., and Wright, G. (2011) The Delphi technique: Past, present and future prospects. *Technological Forecasting and Social Change*. Vol. 78, Issue 9, pp1487-1490.

Rowe, G. and Wright, G. (1999) The Delphi rechnique as a forecasting tool: Issues and analysis. *International Journal of Forecasting,* 15: pp 353-375.

Ruppert, L. (1999) Which new markets? European conference of ministers of transport, which changes for transport in the next century? 14th International Symposium on: *Theory and Practice in Transport Economics*, OECD, Paris, October 21-23, 1995: pp 109-34.

Sackman, H. (1975) *Delphi critique.* Massachusetts, Lexington: Lexington Books.

Saini, M., and Shlonsky, A. (2012) *Systematic synthesis of qualitative research*. USA: Open University Press.

Saldana, J. (2009) *The coding manual for qualitative researchers*. Sage Publications.

Salomon, A. (2003) Port of Gdansk as a port of the 21st century. In: Zurek, J *Polish maritime transport sector - actual situation and trends*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Salvatore, D., and Montrony, A. (2012) *Eastern and Central Europe: politics and economics*. Nova Science Publications.

Salvatore, D. (2012) *Introduction to international economies*. John Wiley and Sons.

Sandle, M. (2011) *Communism* (Seminar studies in history) Longman Press.

Sarantakos, S. (1993) *Social research*. Palgrave-Macmillain.

Sargent, A. (2010) *Seaways of the Empire: Notes on the geography of transport*. Nabu Press.

Saunders, M., Thornhill, A., and Lewis, P. (2012) *Research methods for business students*. Prentice Hall Publishing.

Savin-Baden, M., and Major, C. (2010) *New approaches tp qualitative research: wisdom and uncertainty*. London: Routledge.

Sawiczewska, Z. (2001) Integration of the Baltic maritime sector with the European Union. In: Zurek, J *Maritime transport in a global economy.* Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Saxena, H. (2005) *Transport geography*. Rawat Publications.

Schiefelbusch, M., and Dienel, H. (2009) *Public transport and its users*. Aldershot: Ashgate.

Schiff and Hafen 2003. *International Publication for Maritime Technology and Economics*, Vol 55. Gernany.

Schimmelfennig, F., and Sedelmeier, U. (2009) *The politics of European Union enlargement: Theoretical approaches.* Routledge.

Schneider, C. (2012) *Conflict, negotiation and European Union enlargement.* Cambridge University Press.

Schreier, M. (2012) *Qualitative content analysis in practice*. Sage Publications.

Schroder, I., and Vonderau, A. (2009) *Changing economies and changing identities in post-socialist Eastern Europe*. Lit Verleg Press.

Seatrade (1990) Special supplement: *Soviet maritime guide*. Bond, M (ed.): Colchester: Seatrade Publishing, 1990.

Sekaran, U., and Bougie, R. (2009) *Research methods for business: a skill building approach*. John Wiley & Sons.Sergi, B., and Bagatelas, W. (2009) *The wealth gap in Eastern Europe: v.6: economic and social development after communism* (International Library of Economics) I. B Tauris & Co Limited.

Sergi, S., and Bagatelas, W. (2009) *Industries and markets in Central and Eastern Europe*. Ashgate Publishing.

Sergi, S. (2005) *Communist economics in Russia*. Akademiai Kiado.

Sharkey, S.B. and Sharples, A.Y. (2001) An approach to consensus building using the Delphi technique: developing a learning resource in mental health.

Nurse Education Today, 21: 398-408.

Shields, S. (2012) *The international political economy of transition: Neoliberal hegemony and Eastern Central Europe's transformation*. Routledge RIPE studies in global political economy. Routledge.

Shields, S. (2009) *The international political economy of transition; neoliberal hegemony and Central and Eastern Europe transformation*. London: Routledge.

Silverman, D. (2011) *Interpretating qualitative research*. London: Sage Press.

Silverman, D. (2010) *Qualitative research*. London: Sage Press.

Silverman, D. (2009) *Doing qualitative research*. London: Sage Press.

Silverman, D. (2004) *Doing qualitative research: A practical handbook*. London: Sage Press.

Silverma, D., and Waneen (2010) *Reading and understanding research*. Sage Publications.

Singleton, R., Straits, B., Straits, M. (1993) *Approaches to social research*. Oxford University Press.

Snyder-Halpern, R. (2002) Indicators of organisational readiness for clinical information technology systems innovation: A Delphi Study. *International Journal of Medical Informatics,*63: 179-204.

Snyder-Halpern, R., Thompson, C. and Schaffer, J. (2003) Comparison of mailed vs. internet applications of the Delphi technique in clinical informatics research. http://w w w.amia.org/pubs/symposia/D200120.PDF [Accessed: 4th July 2004].

Smith, C. (2008) *Motivation and personality: Handbook of thematic content analysis.* Cambridge University Press.

Smith, A., and Pickles, J. (1998) *Theorising transition: The political economy of post-communist transformations.* London: Routledge.

Soanes, L., Gibson, F. & Bayliss, J. (2000). Established nursing research priorities on a paediatric haematology, oncology, immunology and infectious diseases unit: a Delphi survey. *European Journal of Oncology Nursing* Vol. 4, 108-117.

Springer (2010) *Multimedia content analysis*. Germany: Springer.

Staar, R. (1993) *Transition to democract in Poland*, New York: Saint Martins Press.

Stevens, H. (2004) *Transport policy in the European Union*. Basingstoke: Palgrave-Macmillan.

Stewart, J. (2001) Is the Delphi technique a qualitative method? *Medical Education,* 35: 922-923.

Stopford, M. (2008) *Maritime economics*, Routledge Publishing.

Svasek, M. (2008) *Post-socialism: politics and emotion in Central and Eastern Europe*. Germany: Berghahan Books.

Swain, G. (2009) *Eastern Europe since 1945*. Hampshire: Palgrave-Macmillan.

Swayne, R. (1983) The nature of the challenge. In: *Aims of industry, the challenge of Soviet shipping*. Aims of Industry and National Strategy Information Centre: London.

Symon, G., and Cassell, C. (2012) *Qualitative organisational research: Core methods and current challenges.* Sage Publications.

Tatham, A. (2009) *Enlargement of the European Union.* Kluwer Law International.

Taylor, Z., (1998) Polish transport policy: an evaluation of the 1994/5 White Paper. *Journal of Transport Geography*, Vol. 6, 227-236.

Thompson, B., MacAuley, D., McNally, O. & O‟ Neill, S. (2004). Defining the sports medicine specialist in the United Kingdom: a Delphi study. *British Journal of Sports Medicine* Vol. 38, p214- 217.

Times world atlases (2010) *The times reference atlas of the world*. Times Books.

Tobolska-Lamenta, D. (1997) The situation of Polish shipowners during the systemic transformation of the state economy. In J. Zurek (ed.) *Maritime transport and its role in the national economy*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk, 63-74.

Topidi, K., and Morawa, H. (2010*) Constitutional evolution in Central and Eastern Europe*. Ashgate.

Treiman, D. (2009) *Quantitative data analysis: doing social research to test ideas* (research methods for the social sciences). New York: Jossey Bass.

Turley, G., and Luke, P. (2010) *Transition economies: Two decades on*. London: Routledge.

Turner, I., and Roth, H. (2008) *Research analyse from start to finish*. Open University Press.

Turnock, D. (2009) *The transition from communism to the European Union*. Edward Elgar Publishing.

Turnock, D. (2001) *East Central Europe and the Former Soviet Union*. Edward Elgar Publishing.

Vanags, A. (1993) Comparative advantage and maritime transport in the Baltic States*. Maritime Policy and Management*, Vol. 20, No. 4, pp 319-324.

Van der Beek, A.J., Fringa-Dresen, M.H.W., van Dijk, F.J.H. & Houtman, I.L.D. (1997). Priorities in occupational health research: a Delphi study in the Netherlands. *Occupational and Environmental Medicine* Vol. 54, pp 504-510.

Van Zolingen, S. and Klaassen, C. (2003) Selection processes in a Delphi study about key qualifications in senior secondary vocational education. *Technological Forecasting and Social Change,* 70: 317-340.

Vari, A., and Tamas, P. (2010) *Environmental and democratic transition: policy and politics in Central and Eastern Europe*. Germany: Springer.

Vattimo, G., and Zabala, S. (2011) *Hermeneutic communism: from Heidegger to Marx*. Columbia University Press.

Veloso, A. (2011) *Affective content analysis: Feature extraction and modeling*. VDM. Verlag Dr. Muller.

Verdan, D (2010) *European Union expansion and corruption in Eastern Europe: An economic analysis of the effects of corruption and the significance it holds in the European Union*. Lambert Academic Publishing.

Vickerman, R. (1994) Transport infrastructure and region building in the European Community. *Journal of Common Market Studies*, Vol. 32, No. 1, pp 1-24.

Vickers, J., and Yarrow, G. (1988) *Privatisation, an economic analysis*, Cambridge MIT Press.

Vogt, P. (2011) *SAGE Quantitative research methods* (SAGE benchmarks in social research methods). Sage Publications.

Vogt, P., Gardner, D., and Haeffele, L. (2012) *When to use what research design*. Guilford Press.

Von Brabant, J. (2011) *Social economic integration; aspects of contemporary economic problems in Eastern Europe*. Cambridge University Press.

Von Seck, F. (2000) Restructuring of the shipping industry in the former command economies of the Baltic. *Journal of Transport Geography*, Vol. 8, No.2. 151-153.

Von Seck, F. (1999) *Managing transition: privatisation and restructuring of former socialist shipping companies in the Baltic Sea region*. Germany: Institute of Transport and Logistics, University of Rostock.

Von Seck, F. (1997) Strategic reorientation and restructuring – the East German liner shipping industry. In Misztal, K (ed): *Economic reforms: the maritime sector in Poland and Germany*. Gdansk University Press, 1997, p43-62.

Walenciak, A, Constantinou, A., and Roe, M. (2001) Liner shipping between East and West Europe: competitive developments in the Poland - United Kingdom trade. *Maritime Policy and Management*, Vol. 28, No. 4, 323-337.

Walker, A. (1975) *The empirical delineation of two musical taste culture: A content analysis of best-selling soul and popular recordings from 1962-1973*.

Wallace, H., Pollack, A., and Young, A. (2010) *Policy-making in the European Union*. Oxford University Press.

Wallace, H., and Wallace, W., and Pollack, A. (2005) *Policy-making in the European Union* (New European Union). Oxford University Press.

Wallace, M., and Wray A. (2006) *Critical reading and writing for postgraduates*. London: Sage Publications.

Walliman, N. (2010) *Research methods: The basics.* London: Sage Publications.

Walliman, N. (2005) *Your research project: a step-by-step guide for the first time researcher*. London: Sage Publications.

Wang, C.C., Wang, Y., Zhang, K., Fang, J., Liu, W., Luo, S., Tang, S., Wang, S. and Lu, V.C. (20 03) Reproductive health indicators for China's rural areas. *Social Science and Medicine,* 57(2): 217-225.

Ward, H. (1998) Using a child development model to assess the outcomes of social work interventions with families. *Children & Society,* 12: 202-211.

Ward, H. (eds.) (1995) *Looking after children: research into practice. The second report to the department of health on assessing outcomes in child care.* London: HMSO.

Watkins, J. (2011) *Shaping the future of Northeast Michigan: Utilising the Delphi method to inform planning scenario construction*. Lightning Source UK Ltd.

Weber, E., Weber, C., and Ford, N. (1995) *Developing with Delphi-orientated techniques*. Prentice Hall.

Weber, R. (1990) *Basic content analysis*. Newbury Park: Sage Publications.

Wechsler, P. (1978) *Delphi methods*. Florentz Publishing.

Wengraf, T. (2004) *Qualitative research interviewing*: Biographic narrative and semi-structured methods. Sage Publications.

West, M. (2001) *Theory, method and practice in computer content analysis*. Norwood, NJ: Ablex Publications.

White, S. (2007) *Developments in Central and Eastern European politics*. Duke University Press.

Wierenga, B. (2010) *Handbook of marketing decision models*. Germany: Springer.

Wilczynski, J. (2008) *Economics of socialism after World War II: 1945-1990*. Aldine Transection Publishing.

Williams, M., and Vogt, P. (2011) *The SAGE handbook of innovation in social research methods*. Sage Publications.

Williams, P., and Webb, C. (1994) The Delphi technique: A methodological discussion. *Journal of advanced nursing,* 19:180-186.

Williams, R., and Macmullen, A. (2008) *Understanding socialism: an introduction to ideas and issues*. Cheltenham: Edward Elgar Publishing.

Willusmsen (2011)

Wilson, B. (2001) *Soft systems methodology: Conceptual model building and its contribution*. John Wiley and Sons.

Wilson, J. (2010) *Essentials of business research: A guide to doing your research project.* Sage Press.

Winiecki, J. (2010) *Resistance to change in the Soviet economic system*. (Routledge studies of societies in transition). Routledge.

Winiecki, J. (2004) *The private sector after communism: New entrepreneurial firms in transition economies.* (Routledge studies of societies in transition). Routledge.

Winiecki, J. (2002) *Transition economies and foreign trade* (Routledge studies of societies in transition). Routledge.

Wolf, T. (1990) *Meta-analysis, quantitative applications*. No. 59. London: Sage Publications.

Wolcott, H (2009) *Writing up qualitative research*. London: Sage Publications

Woods, P. (2006) *Successful writing for qualitative researchers*. London: Routledge.

Wouters *et al* (2012) Public key validation for transport layer security. *Nokia Simens Networks*.

Wright,

Wrench, J., Thomas-Maddox, C., Richmond, V., and McCroskey, J. (2008) Quantitative research methods for communication: A hands on approach. USA: Oxford University Press.

Wrona, A., and Roe, M. (2002) The Polish maritime sector under transition. *Maritime Policy and Management*. Vol. 29, No. 1, 17-43.

Wydra, H. (2007) *Communism and the emergence of democracy*. Cambridge University Press.

Zecchini, S. (2001) *Lessons from the economic transition: Central and Eastern Europe in the 1990s*. Springer, Germany.

Zeedick, D. (2011) *The modeified Delphi method to analyse the application of instructional design theory to online graduate education*. Proquest, Umi Dissertation Publishing

Zentai, V., and Kovac, J. (2012) *Capitalism from the outside*. Central European University Press.

Zurek, J. (2003) Polish strategy in the maritime transport sector on the way to the European Union. In: Zurek, J. *Polish maritime transport sector - actual situation and trends*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Zurek, J. (2001) *The role of seaports in region development*. Gdansk: Institute of Maritime Transport and Seaborne Trade, University of Gdansk.

Zurek, J. (1999) Competitiveness in the process of Polish economy transformation with particular regard to the maritime transport sector. In: J. Zurek (ed), *Competitiveness in maritime transport and seaports*. Poland: University of Gdansk.

Zurek, J. (1997) Restructuring the Polish shipping companies: current state and trends. *Polish Maritime Review*. September, 22-25.

Zurek, J. (1994) *Shipping industry and economic transformation in Poland.* Centre for Maritime Studies, University of Turku (Series A17).

Zurek, J. (1991) Shipping and seaborne foreign trade economic correlations and relations: *Shipping and ports in the national economy*. Gdansk University.

APPENDIX

Appendix 01. Advanced letter requesting participation

Heidi Rebecca Cottam
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Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

5th April 2010

Dear Dr Smith (*personally addressed*)

Reference: Request to participate in a PhD study entitled: 'an analysis of Eastern European liner shipping during the period of transition'

Following discussion with Professor Michael Roe about my research, he recommended that I contact you. Firstly to introduce myself, my name is Heidi Cottam and I am an English PhD student. I am currently preparing my thesis in the context of transitional liner shipping in Eastern Europe. The study is of particular interest as it is the first attempt to develop a transition models to identify the process of Eastern European liner shipping from command to market economy, and of topical significance as the precedence of liner shipping reflects the growth of light (more modern) industrial sectors in the region.

The broad objective of the thesis is to provide an analysis of the level of adaptation to the demands of the free market placed upon the Eastern European formerly state-run liner shipping corporations by the post-1989 economic, political and social transformations. More specifically, the research is confined to include the following aims:
(1) To analyse the condition of Eastern European liner shipping before and after the changes which have taken place between 1989 and 2012.
(2) To assess the impact of transition upon Eastern European liner shipping and to develop models to distinguish areas of change and the relationship of changes to the liner industries.
(3) To evaluate through model maturity the significance of change in Eastern European liner shipping when related to competitors operational in the European Union.
(4) To assess the adaptation of Eastern European liner shipping industries to the European Union system as an element of transition.

To evaluate the conceptual model a number of hypotheses have been developed in order to support or reject them and to draw analysis upon the original research objectives. I would like to invite you as an expert in the field to participate in the research by considering these hypotheses. The research method is based on the Delphi technique, comprising of three rounds of questionnaires in which I ask you to comment upon several statements with 'agree', 'disagree' or 'unable to comment'. In either case of agreement or disagreement, I ask you to give arguments for your answer.

I would be immensely grateful if you would assist me in this study by being an expert panellist. The completion of each questionnaire and issues relating to it should take approximately 30-45 minutes. The questionnaire and other relevant information will be posted to you. Due to the potential sensitivity of information gained, all responses to the Delphi questionnaires will remain confidential and used only for the research objectives stated above. If you agree to take part in the Delphi process, which is due to take place between 19th April - 28th June 2010, please complete the consent form attached and return it in the stamped addressed envelope as soon as possible.

Thank you for your attention and time. I sincerely hope you will be able to assist me. I am looking forward to hearing from you.

Yours faithfully

Heidi Rebecca Cottam

Consent form: Delphi study
'An analysis of Eastern European liner shipping during the period of transition'

Date:

I, the undersigned, hereby give my consent to participate in the Delphi study, scheduled to take place from 19th April - 28th June 2010. My particulars are:

Title:
Surname:
Full initials:
Organisation:
Postal address:

Email address:
Telephone number:
Signature:

Please return this form (to the following address) on or before 14th April 2010.

Heidi Rebecca Cottam
International Shipping and Logistics Group (ISL)
University of Plymouth, A323 Portland Square,
Drake Circus, Plymouth, England, PL4 8AA
Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

Appendix 02: Explanatory cover letter Delphi round one

International Shipping and Logistics Group (ISL)
University of Plymouth, A323 Portland Square,
Drake Circus, Plymouth, England, PL4 8AA
Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

19th April 2010

Dear Dr Smith (*personally addressed*)

Reference: Delphi round one - participation in a PhD study entitled: 'an analysis of Eastern European liner shipping during the period of transition'

To begin with let me take this opportunity to thank you for agreeing to participate in this piece of research. The Delphi panel of which you are a member is comprised of 36 participants whom have been carefully selected based on their extensive knowledge of: Eastern European liner shipping; economic and political transition; and the single European transport market. By design, the panel members will remain anonymous to help prevent the opinion of any one member having an undue influence on the responses of the others.

The entire Delphi study is an iterative process comprising of a series of three consecutive questionnaires. The questionnaires examine the relationship between Eastern European transition and Eastern European liner shipping change by dividing the subject matter into the following topics: (1) liner shipping under communism: (2) liner shipping and systematic transition; (3) formation of evolutionary restructuring in liner shipping; (4) privatisation and strategic restructuring; and (5) adaptation to the single European transport system.

The first questionnaire is composed primarily of broad hypotheses, designed to allow for a diverse range of responses. When considering each statement please feel free to explain your opinion in as much detail as you wish. Once you have complete the questionnaire and returned it to me the results will be collated and then form the bases of the statements in Delphi round two questionnaire. Ensuing questionnaires aim to be more specific, and progressively clarify and expand on a portfolio of weighted criteria that could be used to evaluate the restructuring processes employed by Eastern European liner fleets during the period of transition and accession to the European Union. A third and final iteration of the process will then follow to help consolidate the consensus.

Finally, please rank your knowledge level in relation to Eastern European liner shipping and Eastern European transition, using the following guidelines:

Unfamiliar: You consider yourself unfamiliar with the topic area.

Acquainted: You have read or heard about the topic in the media.

Competent: You have a proficient level of knowledge about the topic.

Advanced: You were once an expert, but feel somewhat rusty now.

Expert: You consider yourself to belong to the community of people who currently dedicate themselves to the topic matter.

☐ Unfamiliar ☐ Acquainted ☐ Competent ☐ Advanced ☐ Expert

Thank you for your cooperation. Please return this document and Delphi questionnaire round one in the stamped addressed envelope provided.

Yours faithfully

Heidi Rebecca Cottam

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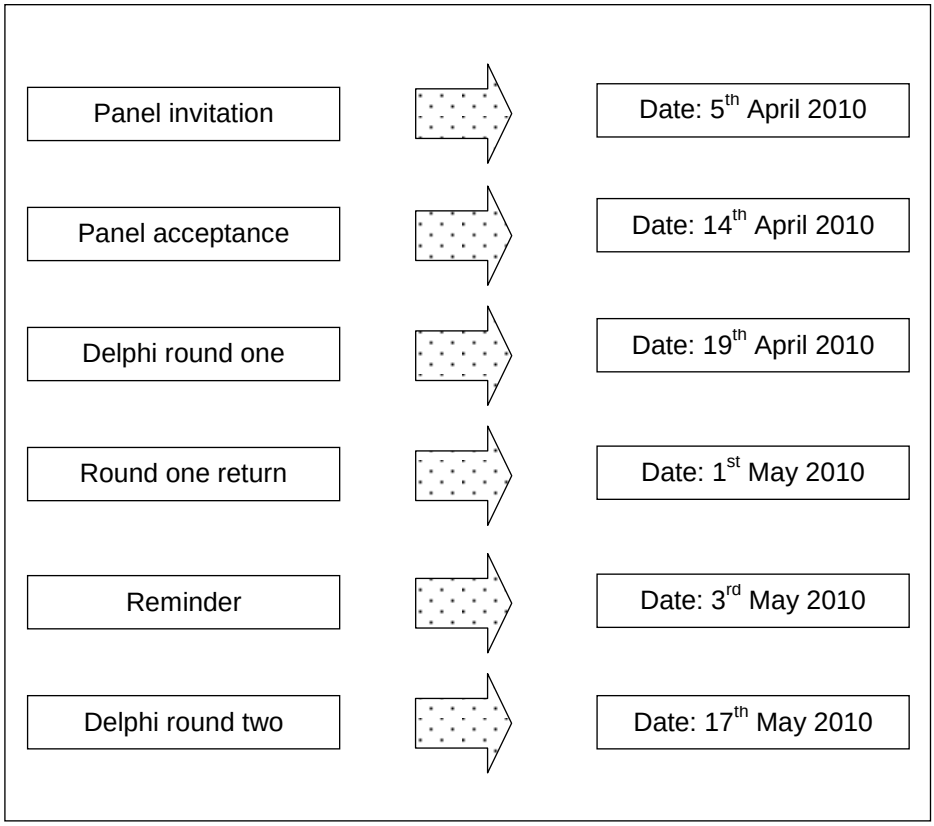
Appendix 03: Timeline data collection Delphi round one

Timeline Delphi round one
'An analysis of Eastern European liner shipping during the period of transition'



Heidi Rebecca Cottam
International Shipping and Logistics Group (ISL)
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Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

Appendix 04: Terminology framework Delphi round one

Terminology

Dear Delphi panellist, as the experts selected for this study represent a broad spectrum of professions and nationalities I have taken the liberty of including a list of definitions which are applicable to Delphi round one, in the expectation that they be of value to you.

(a) Accession: The process whereby European Union member states and the applicant country come to an agreement on the conditions for accession and adaptation of the treaties and institutions which are entailed by accession.

(b) Commercialisation: The process or cycle of introducing a new product or production method into the market for profit-orientated strategies.

(c) Deregulation: The removal of government controls from an industry or sector, to allow for a free and efficient marketplace.

(d) Eastern European shipping: Former socialist liner shipping in the region of Estonia, Latvia, Lithuania, Poland, Romania and Bulgaria.

(e) Evolutionary: The adjustment or changes in behaviour and structure of a company to become more suited to an environment.

(f) Liberalisation: Occurs when either the barriers or restrictions on free trade between countries are reduced or removed. Often times when these issues are eased, it can be considered as the promotion of free trade between those nations.

(g) Liner shipping: Shipping services operating on a regular trade route, with predetermined and publicly advertised schedules between advertised ports of call.

(h) Modernisation: The process of making repairs, renovations, revisions or adjustments to overhaul the old system, and therefore become more technologically advanced.

(i) Privatisation: The transfer of government services or assets to the private sector. State-owned assets may be sold to private owners, or statutory restrictions on competition between privately and publicly owned enterprises may be lifted. Services formerly provided by government may be contracted out. The objective is to increase efficiency and profitability.

(j) Restructuring: The process of reorganising where the composition and operations of an organisation can be completely changed. Restructuring may result in the elimination or replacement of departments and divisions of a company.

(k) Transition: A transition from an authoritarian system to a multiparty system of parliamentary democracy, and a transition from a system of planned economy based on state-owned domination to a market economy based on private ownership, free competition, a universal financial economy and direct ties with the world markets.

3

Appendix 05: Pilot study Delphi round one

Delphi round one
'An analysis of Eastern European liner shipping during the period of transition'

Please indicate your opinion on the following statements by ticking one of the choices available (i.e. agree, disagree, unable to comment). If your opinion is 'agree' or 'disagree', you are asked to motivate your opinion by including your comments in the designated space. If you have any other comments on the statement please feel free to include them.

Please indicate your area of activity:

☐ Industry experts (shipping corporations) ☐ Academic/research

☐ Transport governance ☐ Other, please specify……

1.1.1 'Up until mid-1989, the majority of Eastern European liner shipping companies were owned, financed and managed by a series of state monopolies.'

☐ Agree ☐ Disagree ☐ Unable to comment

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1.1.2 'Two main types of socialist influence over Eastern European liner shipping related activities may be identified. Firstly, socialist domination of political and macroeconomic shipping goals. Secondly, centralisation of national fleet structures to implement national shipping policy and foreign trade targets.'

☐ Agree ☐ Disagree ☐ Unable to comment

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1.1.3 'The main functions of liner shipping under communism were to transport goods for national foreign trade economically (i.e. run fleets, ports, agencies etc.), to provide some form of security, and to earn hard currency wherever possible.'

☐ Agree ☐ Disagree ☐ Unable to comment

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1.1.4 'The outcome of centralised administration was a tendency to neglect the whole of the under-funded Eastern European liner shipping industry, thus ensuring poor quality fleets and infrastructure, and congestion and bottlenecks'.

☐ Agree ☐ Disagree ☐ Unable to comment

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Appendix 05: Pilot study Delphi round one continued.

1.1.5. ‘By 1989, the majority of Eastern European liner shipping companies lacked the skills to compete, the investment to fund new activities, the infrastructure to survive, and the organisation to provide a competitive framework.’

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.1 ‘Eastern European liner companies have not been able to rely on an established transition theory in their course of restructuring into profitable entities operational in competitive market economies.’

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.2 ‘Transition decisions have been dictated by specific national framing conditions. They have often been irregular reactions to short-term changes, influenced by mechanisms of supply and demand, and/or private interests.’

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.3 ‘Changes in the political framework of Eastern European liner shipping and the market transition of the Eastern European shipping companies concerned did not match each other, nor did they run synchronously.’

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.4 ‘Although liberalisation and deregulation led to strong competition and to the abolition of state protection, the installation and successful operation of new shipping political frameworks was pending.’

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.5. ‘Liner shipping during the period of transition had to undergo changes under circumstances if widely absent state support, otherwise common in the shipping sector in market economies.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.1 ‘Transitional changes in Eastern European liner shipping has been carried out within the framework of the macroeconomic stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, legal, economic and social changes.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.2 ‘Some forms of Eastern European liner shipping restructuring are deeply customised for the unique function and technical operation of Eastern European liner companies, such as structural functional, technical and spatial changes.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.3 ‘During the period of transition, Eastern European liner shipping abandoned components in the industry that were: incompatible with the market economic system, aggravating efficiency, technically outdated, and/or incompatible with European Union regulations and policy, and international standards of practice.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.4 ‘During the period of transition, Eastern European liner shipping companies retained components in the industry that featured: internationally competitive solutions, high value infrastructure and superstructure, employee expertise, and specialised tonnage suitable for further service under market conditions.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.5 ‘During the period of transition, Eastern European liner shipping companies introduced new components in the industry to: stimulate the establishment of new enterprises, encourage competition on the markets, attract foreign investment and private enterprise, and increase efficiency and service quality.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.1 ‘From a systemic point of view privatisation is the most decisive factor for successful transition in Eastern European liner shipping.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.2 ‘Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.3 ‘Privatisation will support Eastern European liner shipping companies with the acceptance of the laws and principles of operation characteristics of the European Union and international transport market.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.4 ‘Privatisation of Eastern European liner shipping cannot be removed from a succession of fundamental restructuring needs. Core changes are essential in the fields of: ownership and management; fleets and tonnage; markets and service offerings, and company organisation and cooperation.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.5 ‘Poor financial conditions, economic and political instability, slow rates in the increase in production and inherent socialist foundations, continue to hamper privatisation processes of Eastern European liner shipping companies.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.1 ‘Accession to the European Union may be seen as a fundamental element of transition in Eastern European liner shipping, bringing about an acceleration in the modernisation of fleets and a quality improvement in shipping services.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.2 ‘The objectives of shipping policy in Eastern European countries should in principle be the same: fair competition, privatisation encouragement, modernisation of fleets and infrastructure, removal of barriers to trade, improvement of the quality of service, and environmental protection.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.3 ‘The integration of Eastern European liner shipping to the single European transport market has been expressed in the endorsement of new legislation of transport directives. It is also expressed in the technical transformation of company structure, organisation and operations.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.4 ‘Integration with the European Union transport policy will bring benefits to liner shipping through: increased efficiency by elimination of formalities at ports, acceleration of the modernisation of fleets as a result of the range of financing, and quality improvement in services due to deeper organisational integration.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.5 ‘It is likely that the level of adjustment to European Union transport policy in Eastern European liner shipping will actively affect the rate and the scope of adaptation processes in other sectors of the economy.’

☐ Agree ☐ Disagree ☐ Unable to comment

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……

Thank you for your expertise and time it is much appreciated.

Please return this questionnaire in the envelope provided.

If you would like any further information please contact myself at:

Heidi Rebecca Cottam / Dr Phil Culverhouse
University of Plymouth
Portland Square A323
Drake Circus
Plymouth, Devon
England, PL4 8AA
Tel: 0044 (0) 7829709708
Fax: 0044 (0) 1752 232583
Email: heidi.cottam@plymouth.ac.uk

Appendix 06: Application for ethical approval of research

UNIVERSITY OF PLYMOUTH
FACULTY OF SOCIAL SCIENCE AND BUSINESS
FACULTY OF ARTS
FACULTY OF UNIVERSITY OF PLYMOUTH COLLEGES

Faculty Research Ethics Committee (FREC)
APPLICATION FOR ETHICAL APPROVAL OF RESEARCH

(1) Title of Research: 'An analysis of Eastern European liner shipping during the period of transition'

(2) Investigators/Supervisors
Name, Contact Address & Telephone Number:
Professor Michael Roe (Director of Studies)
International Shipping and Logistics Group
Faculty of Social Science and Business
University of Plymouth
Room 405F
Cookworthy Building
Drake Circus
Plymouth, PL4 8AA
Tel: (01752) 585628
Email: mroe@plymouth.ac.uk

(3) Aims and Objectives of Research Project/Programme:
The research attempts to analyse the impact of economic, political and social transition on the emerging liner shipping sector of post-Soviet Europe. Transition in Europe and the former Soviet Union is one of the most important transformations in modern history (Aligica and Evans 2009). The process comprises of a movement from an authoritarian system to a multiparty system of democracy (Lavigne 2007), and a conversion from an economy based on state-ownership to a market economy based on private ownership (Mickiewicz 2008), free competition (Aslund 2009), a universal financial system (Breitzmann 1999), and direct ties with world markets (Gros and Steinherr 2009). Former socialist shipping corporations have begun to offer services under market conditions and left behind the rigid leeway of central planning (Von Seck 2001). Extensive adjustments in ownership have transpired, and services and markets, as well as the operations within have changed dramatically (Polak and Heertje 1999). Research makes clear that successful transformation of the Eastern European maritime sector has had, and will continue to have, a major influence upon the speed and route of economic development in transitional states (Cottam and Roe 2004).

The broad objective of this thesis is to provide an analysis of the level of adaptation to the demands of the free market placed upon the Eastern European state-run liner shipping corporations by the post-1989 economic, political and social transformations.
Specifically, the research has been refined:

(1) To analyse the condition of Eastern European liner shipping before and after the changes which have taken place between 1989 and 2012.
(2) To assess the impact of transition upon Eastern European liner shipping and to develop models to distinguish areas of change and the relationship of changes to the liner industries.
(3) To evaluate through model maturity the significance of change in Eastern European liner shipping when related to competitors operational in the European Union.
(4) To assess the adaptation of Eastern European liner shipping industries to the European Union system as an element of transition.

(4) Brief Description of Research Methods and Procedures:
The structure developed for the analysis reflects the profound complexity of the research approach. After constituting the aims for market economic transformation, and surveying the situation at the time of the disintegration of the Soviet Union, central aspects of restructuring

and privatisation are portrayed before the background of changed policy frameworks for liner shipping. General findings will be supported by detailing the research results for the policies selected, factors that enabled Eastern European liner corporations to pursue strategies for structural reforms, the economic performance of new planning procedures, and the economic implications of Soviet disintegration and European Union enlargement.

To justify the rationale for the relationship between Eastern European economic and political transition and Eastern European liner shipping change, a research literature review is carried out (Ackerson 2007). The literature review aims to identify the major relationship transition constructs that may be utilised within the Eastern European liner shipping context of the study. The literature review affords a synthesis of the results of the secondary data pertinent for the assessment of the impact of Eastern European transition upon Eastern European liner shipping and thus facilitates the development of transition models to distinguish key areas of change and the relationship of changes to the liner industries. Content analysis is utilised as a research technique for the objective, systematic and quantitative description of constructs from transition literature that may be hypothesised as influential in the processes of Eastern European liner change (Krippendorff 2009). Utilising the identified constructs, a three-dimensional conceptual model is developed to provide a typology of the relationship between transition and Eastern European liner shipping. The model is a representation of the most important elements of transition processes (Wallace and Wray 2006) used to facilitate liner shipping in the European free market.

To assess the model empirically, the six conceptual constructs identified in the literature review help form a set of conceptual assumptions created to test the original research hypothesis. The conceptual assumptions aid the development of eighteen hypotheses, which are unproven statements of a relationship between two or more variables that carry clear implications for testing statements (Bryman 2008). The empirical work will be investigated with the utility of these hypotheses, and thus tested in order to support or reject them and ultimately answer the objective of the enquiry (Marshall and Rossman 2006).

The study has selected Delphi methodology to gather the primary data required to address the original hypothesis. A Delphi survey is a series of questionnaires that allow experts or people with specific knowledge to build ideas about potential future development around an issue (Denscombe 2002). The questionnaires are developed throughout the process in relation to the responses given by participants (Lapan and Quartaroli 2009). The method gives credence to the qualitative of linguistics used by participants rather than the statistical generalisation sometimes associated with quantitative methodology (Creswell 2008).

In terms of this research, the Delphi technique has been applied to discover a casual relationship (the influence of Eastern European transition upon Eastern European liner shipping industries) in complex social and economical phenomena. The Delphi survey will consist of three rounds (surveys) in which participants will be invited to comment on the main conceptual categories and hypotheses relating to Eastern European transition and Eastern European liner shipping. Experts will be asked to state whether they ‘agree’, ‘disagree’ or were ‘unable to comment’ to the eighteen hypotheses created from the literature review. In either case of the comment being ‘agree’ or ‘disagree’ the participants will be asked to explain their comment. Once the panel’s responses to the first round are collected and analysed, any comments provided are to be refined to eliminate duplications and used to amend statements which do not reach consensus or majority consensus, thus formatting the next round of statements. When the third round is complete, consensus or stability on statements must be reached and feedback shared to participants.

The sample frame for the investigation of the study includes those individuals or groups the researcher is reasonably able to obtain (Treiman 2009). Thus, wherever possible the investigator will draw upon the collaborative links already established between academic institutes, governing bodies and shipping corporations and the University of Plymouth, Group of International Shipping and Logistics. The research considers three main groups when acquiring primary data from the Delphi survey, categorised as: (1) industry users,

specifically encompassing the opinions and industry experience of Eastern European liner shipping operators and other non-Eastern European liner competitors operational in the European Union; (2) policy makers, embracing the positions and experience of major organisations involved in regulation and governance of Eastern European liner shipping; and (3) academics, encompassing the opinions and expertise of scholars researching Eastern European liner shipping, and/or the single European transport market. Participants will not be required to disclose any sensitive (personal) information, as this is not deemed necessary in terms of the original research objectives. However, all participants will be required to sign a declaration stating that they give consent for data to be used in the stipulated research context. Participants will be informed that any data/information given will not be identified to specific participants. All participants will remain anonymous, with particular attention to protect the participant's identity, and the integrity and strategic positioning of the company.

The textbook rate of return for a Delphi survey is approximately 7.4% of the target audience, however by increasing the outreach sample size of potential participants the author hopes to secure a higher response rate, and thus increase the accuracy of the research findings. The author aims to secure a panel of 30 experts for the three rounds of Delphi survey. The Delphi survey will be operationalised utilising 'Perseus' web-based software for survey development and analysis, which will: help reduce the difficulties associated with the Eastern European communication infrastructure; encourage participant response due to ease of use and reduced time of completion (Silverman 2006); and enable three rounds of Delphi survey to be completed in a reduced timescale (Collis and Hussey 2009).

Once the primary data has been collected, analytical techniques will be applied to provide an insight into the data collected. In particular, Average Percentage of Majority Opinion (APMO) will be utilised to establish consensus of individual statements by panel members as a whole. Where consensus cannot be established by the group, chi-squared theory and non-parametric testing of paired samples will be applied in order to find out whether the objectives of the study of transitional liner shipping in Eastern Europe have been met.

(5) Ethical Protocol:
Please indicate how you will ensure this research conforms with each clause of the University of Plymouth's *Principles for Research Involving Human Participants.* Please attach a statement which addresses each of the ethical principles set out below.

(a) Informed Consent:
When recruiting for the Delphi survey, all potential participants will be informed from the start about the nature and purpose of the research, the expected duration of the subject's participation, and a description of the three round Delphi methodology (Israel and Hay 2006). Potential participants will be informed that the Delphi survey is entirely voluntary. A statement will also be included regarding confidentiality of sensitive personal or company data. Participants will be not be required to give details on their: gender, age, ethnicity, disability or sexual orientation, and will at all times have anonymity (Oliver 2003). All potential participants will be informed of the expected benefits to industry, policy and research. An explanation of whom to contact for answers to questions about the research and research subjects rights will also be included before the Delphi survey commences. Potential participants will be given this information in plain English. A written and electronic copy will be sent to all potential participants. In addition, the researcher will also ensure that from the start, the development and consideration of proposals is informed by a commitment to research that is accountable and of the highest quality.

(b) Openness and Honesty:
The researcher aims to be extremely open and honest with regard to the nature of the research (Shamoo and Resnik 2009). In particular, potential participants will be informed about the purpose, methods and intended possible uses of the research (i.e. dissemination via academic journal publication). Potential participants will be informed fully about what their participation in the research entails and what risks, if any, are involved. The researcher

will ensure that any sensitive company information (data that may harm company integrity or strategic positioning), or personal information (which may lead to the identification of the participant) will not be used in any capacity. The researcher will also be open and honest with potential participants with regard to the reality of commitment involved in the three rounds of Delphi survey (Loue 2000). This is seen as advantageous for both the researcher and potential participant as it will help to reduce the withdrawal rate between rounds.

(c) Right to Withdraw:
All potential participants will be informed at the outset of the study that they have the right to refuse to participate or withdraw from the Delphi investigation whenever and for whatever reason they wish (Mauthner *et al* 2002). There will be no coercion of research subjects to participate in the research. Consent has to be freely given in order for the research to be valid (Sales and Folkman 2000). A statement that participation is entirely voluntary will be included, and refusal to participate in further rounds of Delphi survey will involve no penalty or loss of benefits to which the subject is otherwise entitled (Israel and Hay 2006). An explanation of whom to contact for answers to questions about the research and the right to withdraw will also be included in writing before the Delphi survey commences

(d) Protection From Harm:
The principle of 'protection from harm' requires that social science research should be conducted in such a way that it minimises harm or risk to social groups or individuals (ESRC 2009). Thus, the researcher will endeavour to at all times protect participants from physical and psychological harm that may result from participation of the survey. The researcher will also seek to avoid harm not only to an immediate population of subjects, but to their wider family and community (Samoo and Resnik 2009). Furthermore, in addition to this, the research design will also consider potential harm to participants organisations or businesses as a result of the work. The researcher recognises three areas of potential risk: (1) company/organisation, whereby the researcher will at all times seek to preserve the integrity of the company and not disseminate information deemed sensitive in terms of competitive positioning; (2) participant, whereby the researcher will at all times seek to preserve the anonymity of the individual and any personal details which may lead to the identification of the participant; (3) non-participant colleagues, whereby the researcher will at all times seek to preserve the anonymity of any other individuals named in the data collection and any personal details, which may lead to the identification of non-participants. By carrying out these methods the researcher aims to protect company and participant integrity.

(e) Debriefing:
The researcher will ensure a final debriefing of the research outcome. The purpose is to make sure that participants are fully informed about, and not harmed in any way by their participation in the Delphi survey (Israel and Hay 2006). The researcher notes the methodological advantages of a debriefing, to include the ability of participants who were able to guess the original hypothesis. If the data have been comprised in this way, then those participants will be excluded from the analysis. However, as the Delphi survey comprises of three rounds participants will be sent new hypotheses reformed from their own words in the subsequent Delphi rounds, and asked whether they 'agree' or 'disagree' with hypotheses in order to obtain an accurate representative of participants responses to the new hypotheses (Cameron and Price 2009). Participants will have the opportunity to change any meanings or give further evidence to support meanings throughout the three rounds of Delphi survey. At the end of the study, once data has been analysed and collated, all participants will be sent the research findings, potential dissemination route (academic journals) and thanked for their commitment and time to the research (Abdel-Fattah 1997).

(f) Confidentiality:
Confidentiality requires that researcher take steps to ensure that research data and its sources remain confidential, unless participants have consented to their disclosure (Oliver 2003). Hence, this research seeks to only use data/information that participants have consented to disclose, and at all times prioritise the non-disclosure of any information deemed to be sensitive and consequently should remain confidential. In particular, the

the researcher will ensure confidentiality of the participant's identity (both name and any other information which may lead to the identification of the participant) (Israel and Hay 2006), and confidentiality of sensitive company (business) data, which may lead to the questioning of company integrity or compromise of corporation strategic positioning. All information deemed confidential will remain private throughout the conduct and reporting of the research. As records and information gained from the survey will be held electronically, the Data Protection Act will also be applied. Any data voluntarily obtained that is deemed too sensitive (to both the participant and/or the corporation) will be immediately removed and destroyed and not included in the research findings (Frederick and Preston 1990).

(g) Professional Bodies Whose Ethical Policies Apply to this Research:
Whilst there are no specific professional bodies whose ethical policies apply directly, all research ethical considerations will be carried out within the guidelines of:
(1) University of Plymouth: 'Ethical Principles for Research Involving Human Participants'
(2) Economic and Social Research Council (ESRC): 'Research Ethics Framework' (REF)
(3) The Social Research Association (SRA) (http://www.the-sra.org.uk/ethical.htm).
This is to ensure key principles of ethical research are addressed at all times.

NB: This research is not funded by the ESRC but will nonetheless follow the ESRC's 'Research Ethics Framework', in addition to the University of Plymouth's 'Ethical Principles for Research', to ensure integrity, quality and consistency of the research throughout.

Please answer either YES or NO to ALL questions below:

Do You Plan To Do:

- Research involving vulnerable groups – for example, children and young people, those with a learning disability or cognitive impairment, or individuals in a dependent or unequal relationship

Answer: No

- Research involving sensitive topics – for example participants' sexual behaviour, their illegal or political behaviour, their experience of violence, their abuse or exploitation, their mental health, or their gender or ethnic status

Answer: No

- Research involving groups where permission of a gatekeeper is normally required for initial access to members – for example, ethnic or cultural groups, native peoples or indigenous communities

Answer: No

- Research involving deception or which is conducted without participants' full and informed consent at the time the study is carried out

Answer: No

- Research involving access to records of personal or confidential information, including genetic or other biological information, concerning identifiable individuals

Answer: No

- Research which would induce psychological stress, anxiety or humiliation or cause more than minimal pain

Answer: No

Date: 18.09.2009

Appendix 07: Delphi round one questionnaire

Delphi round one
'An analysis of Eastern European liner shipping during the period of transition'

Please indicate your opinion on the following statements by ticking one of the choices available (i.e. agree, disagree, unable to comment). If your opinion is 'agree' or 'disagree', you are asked to motivate your opinion by including your comments in the designated space. If you have any other comments on the statement please feel free to include them.

Please indicate your area of activity:

☐ Industry experts (shipping corporations) ☐ Academic/research

☐ Transport governance ☐ Other, please specify……

Part one: Liner shipping under communism

1.1.1 'Up until mid-1989, the majority of Eastern European liner shipping companies were owned, financed and managed by a series of state monopolies.'

☐ Agree ☐ Disagree ☐ Unable to comment

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1.1.2 'Two main types of socialist influence over Eastern European liner shipping related activities may be identified. Firstly, socialist domination of political and macroeconomic shipping goals. Secondly, centralisation of national fleet structures to implement national shipping policy and foreign trade targets.'

☐ Agree ☐ Disagree ☐ Unable to comment

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1.1.3 'The main functions of liner shipping under communism were to transport goods for national foreign trade economically (i.e. run fleets, ports, agencies etc.), to provide some form of security, and to earn hard currency wherever possible.'

☐ Agree ☐ Disagree ☐ Unable to comment

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1.1.4 'The outcome of centralised administration was a tendency to neglect the whole of the under-funded Eastern European liner shipping industry, thus ensuring poor quality fleets and infrastructure, and congestion and bottlenecks'.

☐ Agree ☐ Disagree ☐ Unable to comment

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1.1.5. ‘By 1989, the majority of Eastern European liner shipping companies lacked the skills to compete, the investment to fund new activities, the infrastructure to survive, and the organisation to provide a competitive framework.’

☐ Agree ☐ Disagree ☐ Unable to comment

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……

Part two: Liner shipping and systematic transition

2.1.1 ‘Eastern European liner companies have not been able to rely on an established transition theory in their course of restructuring into profitable entities operational in competitive market economies.’

☐ Agree ☐ Disagree ☐ Unable to comment

……
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……

2.1.2 ‘Transition decisions have been dictated by specific national framing conditions. They have often been irregular reactions to short-term changes, influenced by mechanisms of supply and demand, and/or private interests.’

☐ Agree ☐ Disagree ☐ Unable to comment

……
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……

2.1.3 ‘Changes in the political framework of Eastern European liner shipping and the market transition of the Eastern European shipping companies concerned did not match each other, nor did they run synchronously.’

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.4 ‘Although liberalisation and deregulation led to strong competition and to the abolition of state protection, the installation and successful operation of new shipping political frameworks was pending.’

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.5. ‘Liner shipping during the period of transition had to undergo changes under circumstances if widely absent state support, otherwise common in the shipping sector in market economies.’

☐ Agree ☐ Disagree ☐ Unable to comment

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Part three: Formation of evolutionary restructuring in liner shipping

3.1.1 ‘Transitional changes in Eastern European liner shipping has been carried out within the framework of the macroeconomic stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, legal, economic and social changes.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.2 ‘Some forms of Eastern European liner shipping restructuring are deeply customised for the unique function and technical operation of Eastern European liner companies, such as structural functional, technical and spatial changes.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.3 ‘During the period of transition, Eastern European liner shipping abandoned components in the industry that were: incompatible with the market economic system, aggravating efficiency, technically outdated, and/or incompatible with European Union regulations and policy, and international standards of practice.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.4 ‘During the period of transition, Eastern European liner shipping companies retained components in the industry that featured: internationally competitive solutions, high value infrastructure and superstructure, employee expertise, and specialised tonnage suitable for further service under market conditions.’

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.5 ‘During the period of transition, Eastern European liner shipping companies introduced new components in the industry to: stimulate the establishment of new enterprises, encourage competition on the markets, attract foreign investment and private enterprise, and increase efficiency and service quality.’

☐ Agree ☐ Disagree ☐ Unable to comment

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Part four: Privatisation and strategic restructuring

4.1.1 ‘From a systemic point of view privatisation is the most decisive factor for successful transition in Eastern European liner shipping.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.2 ‘Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.3 ‘Privatisation will support Eastern European liner shipping companies with the acceptance of the laws and principles of operation characteristics of the European Union and international transport market.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.4 ‘Privatisation of Eastern European liner shipping cannot be removed from a succession of fundamental restructuring needs. Core changes are essential in the fields of: ownership and management; fleets and tonnage; markets and service offerings, and company organisation and cooperation.’

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.5 ‘Poor financial conditions, economic and political instability, slow rates in the increase in production and inherent socialist foundations, continue to hamper privatisation processes of Eastern European liner shipping companies.’

☐ Agree ☐ Disagree ☐ Unable to comment

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Part five: Adaptation to the single European transport system

5.1.1 ‘Accession to the European Union may be seen as a fundamental element of transition in Eastern European liner shipping, bringing about an acceleration in the modernisation of fleets and a quality improvement in shipping services.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.2 ‘The objectives of shipping policy in Eastern European countries should in principle be the same: fair competition, privatisation encouragement, modernisation of fleets and infrastructure, removal of barriers to trade, improvement of the quality of service, and environmental protection.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.3 ‘The integration of Eastern European liner shipping to the single European transport market has been expressed in the endorsement of new legislation of transport directives. It is also expressed in the technical transformation of company structure, organisation and operations.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.4 ‘Integration with the European Union transport policy will bring benefits to liner shipping through: increased efficiency by elimination of formalities at ports, acceleration of the modernisation of fleets as a result of the range of financing, and quality improvement in services due to deeper organisational integration.’

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.5 ‘It is likely that the level of adjustment to European Union transport policy in Eastern European liner shipping will actively affect the rate and the scope of adaptation processes in other sectors of the economy.’

☐ Agree ☐ Disagree ☐ Unable to comment

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……
……

Thank you for your expertise and time it is much appreciated.

Please return this questionnaire in the envelope provided.

If you would like any further information please contact myself at:

Heidi Rebecca Cottam / Dr Phil Culverhouse
University of Plymouth
Portland Square A323
Drake Circus
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England, PL4 8AA
Tel: 0044 (0) 7829709708
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Email: heidi.cottam@plymouth.ac.uk

Appendix 08: Reminder letter Delphi round one

Heidi Rebecca Cottam
International Shipping and Logistics Group (ISL)
University of Plymouth,
A323 Portland Square,
Drake Circus, Plymouth,
England, PL4 8AA
Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

3rd May 2010

Dear Dr Smith (*personally addressed*)

Reference: Reminder to participate in a PhD study entitled: 'an analysis of Eastern European liner shipping during the period of transition'

Two weeks ago, I wrote to you to request your participation in a Delphi survey to consider the relationship between Eastern European transition and Eastern European liner change. As an expert in the field I sincerely need your help with this special survey.

Completing the questionnaire will take some time, but the information you provide is vitally needed to allow confident future decision-making about the process of transitional restructuring in Eastern European liner shipping. I hope you will view the effort as important, and a chance to give your input and opinions with regard to evolutionary change in liner shipping and its adaptation to the single European transport market.

You are part of a scientifically chosen sample of professionals working in the area of Eastern European shipping. For the Delphi technique to be successful your answers in relation to: (1) liner shipping under communism; (2) liner shipping and systematic transition; (3) formation of evolutionary restructuring in liner shipping; (4) privatisation and strategic restructuring; and (5) adaptation to the single European transport system, are important because they represent the views of other professionals like yourself. Please be as thorough and complete as you can when you consider each hypothesis, as incomplete questionnaires detract from the value of the data.

Full instructions in how to take part in the study are provided at the top of questionnaire. Here you are asked to indicate your opinion on a number of statements reflecting the situation of Eastern European liner shipping during the period of economic political and social transition, by ticking one of the choices available (i.e. agree, disagree, unable to comment). If your opinion is 'agree' or 'disagree', you are asked to motivate your opinion by including your comments in the designated space. If you have any other comments on the statement please feel free to include them.

Please return your completed Delphi questionnaire in the enclosed postage-paid envelope. Everything you stipulate in the questionnaire will remain confidential and anonymous. If you have any further questions, or require more information please contact me at the above email and/or telephone number.

Thank you in advance for your time and effort in taking part in this Delphi survey. Your help is genuinely appreciated.

Yours faithfully

Heidi Rebecca Cottam

Appendix 09: Explanatory cover letter Delphi round two

International Shipping and Logistics Group (ISL)
University of Plymouth,
A323 Portland Square,
Drake Circus, Plymouth,
England, PL4 8AA
Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

17th May 2010

Dear Dr Smith (*personally addressed*)

Reference: Delphi round two - participation in a PhD study entitled: 'an analysis of Eastern European liner shipping during the period of transition'

Thank you for agreeing to participate in the study of transitional liner shipping. The Delphi panel of which you are a member has been carefully and rigorously put together based on their experience and knowledge of Eastern European liner shipping and the single European transport market.

As previously stated, by design the Delphi study is an iterative process comprising of a series of three consecutive questionnaires. The questionnaires examine the relationship between Eastern European transition and Eastern European liner shipping change by dividing the subject matter into the following topics: (1) liner shipping under communism: (2) liner shipping and systematic transition; (3) formation of evolutionary restructuring in liner shipping; (4) privatisation and strategic restructuring; and (5) adaptation to the single European transport system.

Delphi round two is now enclosed. This round allows you to reconsider your opinion on any statement which has not previously reached group consensus. You are at liberty to change your opinion completely, or stick to your original argument if you feel it is appropriate. Please indicate your opinion on each statement by selecting one of the following: 'agree', 'disagree', or 'unable to comment'. Once again there is an opportunity to comment should you wish to do so. All the questions in each section must be answered. It should not take longer than 20 minutes to complete this questionnaire. If you have any questions regarding the study please do not hesitate to contact me using the above contact details.

All information will be treated confidentially. Responses are given anonymously, (the identity of the respondents is not known to the other experts in the study) and will only be known by the researcher.

Thank you for your cooperation. Please return this questionnaire at your earliest convenience in the pre-paid envelope provided.

Yours faithfully

Heidi Rebecca Cottam

Appendix 10: Terminology framework Delphi round two

Terminology

Dear Delphi panellist, as the experts selected for this study represent a broad spectrum of professions and nationalities I have taken the liberty of including a list of definitions which are applicable to Delphi round two, in the expectation that they be of value to you.

(a) Accession: The process whereby European Union member states and the applicant country come to an agreement on the conditions for accession and adaptation of the treaties and institutions which are entailed by accession.

(b) Adaptation: The process of adapting or adjusting from a business strategy dominated by socialism to a business strategy dominated by profit-orientated markets.

(c) Deregulation: The removal of government controls from an industry or sector, to allow for a free and efficient marketplace.

(d) Evolutionary: The adjustment or changes in behaviour and structure of a company to become more suited to an environment.

(e) Governance: The process of decision-making and the process by which decisions are implemented (or not implemented). Governance can be used in several contexts such as corporate governance, international governance, national governance and local governance.

(f) Integration: The general process of attaining close and seamless coordination between several departments, groups, organisations, systems etc.

(g) National framing conditions: The internal operating conditions of a country that affect national businesses; these may be economic, political or social.

(h) Privatisation: The transfer of government services or assets to the private sector. State-owned assets may be sold to private owners, or statutory restrictions on competition between privately and publicly owned enterprises may be lifted. Services formerly provided by government may be contracted out. The objective is to increase efficiency and profitability.

(i) Restructuring: The process of reorganising where the composition and operations of an organisation can be completely changed. Restructuring may result in the elimination or replacement of departments and divisions of a company.

(j) Single European transport market: Proposed by the European Commission to develop a transport system capable of shifting the balance between modes of transport. Revitalising the railways, promoting transport by sea.

(k) Transition: A transition from an authoritarian system to a multiparty system of parliamentary democracy, and a transition from a system of planned economy based on state-owned domination to a market economy based on private ownership, free competition, a universal financial economy and direct ties with the world markets.

Appendix 11: Delphi round two questionnaire

Delphi round two
'An analysis of Eastern European liner shipping during the period of transition'

Please indicate your opinion on the following statements by ticking one of the choices available (i.e. agree, disagree, unable to comment). If your opinion is 'agree' or 'disagree', you are asked to motivate your opinion by including your comments in the designated space. If you have any other comments on the statement please feel free to include them.

Please indicate your area of activity:

☐ Industry experts (shipping corporations) ☐ Academic/research

☐ Transport governance ☐ Other, please specify……

Part one: Liner shipping under communism

1.1.2 Original statement:
'Two main types of socialist influence over Eastern European liner shipping related activities may be identified. Firstly, socialist domination of political and macroeconomic shipping goals. Secondly, centralisation of national fleet structures to implement national shipping policy and foreign trade targets.'

1.1.2 Reformulated statement:
'Liner shipping under communism was controlled through central administration of shipping policy and state implementation of national fleet structures.'

☐ Agree ☐ Disagree ☐ Unable to comment

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1.1.4 Original statement:
'The outcome of centralised administration was a tendency to neglect the whole of the under-funded Eastern European liner shipping industry, thus ensuring poor quality fleets and infrastructure, and congestion and bottlenecks'.

1.1.4 Reformulated statement:
'By 1989, the majority of socialist shipping fleets showed signs of insufficient investment, and vessels were often old and obsolete. Competitive transport qualities became deficient as regards frequency, transit time and punctuality.

☐ Agree ☐ Disagree ☐ Unable to comment

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Part two: Liner shipping and systematic transition

2.1.2 Original statement:
'Transition decisions have been dictated by specific national framing conditions. They have often been irregular reactions to short-term changes, influenced by mechanisms of supply and demand, and/or private interests.'

Appendix 11: Delphi round two continued.

2.1.2 Reformulated statement:
'National framing conditions influenced the process and speed of transitional restructuring in Eastern European liner shipping more than any other factor.'

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.3 Original statement:
'Changes in the political framework of Eastern European liner shipping and the market transition of the Eastern European shipping companies concerned did not match each other, nor did they run synchronously.'

2.1.3 Reformulated statement:
'National framing conditions and European Union influence, dictated the development of shipping policy and political frameworks governing Eastern European liner shipping.'

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.4 Original statement:
'Although liberalisation and deregulation led to strong competition and to the abolition of state protection, the installation and successful operation of new shipping political frameworks was pending.'

2.1.4 Reformulated statement:
'At the start of the period of transition, the shipping policy and political frameworks which existed did not match the new economic, political and social situation of Eastern Europe.'

☐ Agree ☐ Disagree ☐ Unable to comment

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Part three: Formation of evolutionary restructuring in liner shipping

3.1.1 Original statement:
'Transitional changes in Eastern European liner shipping has been carried out within the framework of the macroeconomic stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, legal, economic and social changes.'

3.1.1 Reformulated statement:
'The reorientation of policies on a macroeconomic scale has a clear influence on the strategic restructuring processes in Eastern European liner shipping during the period of transition.'

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.2 Original statement:
'Some forms of Eastern European liner shipping restructuring are deeply customised for the unique function and technical operation of Eastern European liner companies, such as structural functional, technical and spatial changes.'

3.1.2 Reformulated statement:
'The complex nature of strategic restructuring in Eastern European liner shipping denotes the requirement for customised solutions as part of transitional change.'

☐ Agree ☐ Disagree ☐ Unable to comment

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3.1.4 Original statement:
'During the period of transition, Eastern European liner shipping companies retained components in the industry that featured: internationally competitive solutions, high value infrastructure and superstructure, employee expertise, and specialised tonnage suitable for further service under market conditions.'

3.1.4 Reformulated statement:
'Although no arrangement is perpetually indispensable, during transition Eastern European liner companies preserved a number of components that were compatible with the market system or had remained internationally competitive.'

☐ Agree ☐ Disagree ☐ Unable to comment

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Part four: Privatisation and strategic restructuring

4.1.2 Original statement:
'Newly structured ownership and possession rights and the incentives arising from that, can lead to: commercialisation, company restructuring, increased efficiency and performance, and ultimately greater profitability.'

4.1.2 Reformulated statement:
'Privatisation as part of transition in Eastern European liner shipping is most comprehensive, implying new ownership structures and efficiency criteria's, leading to greater management know-how and company restructuring.'

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.3 Original statement:
'Privatisation will support Eastern European liner shipping companies with the acceptance of the laws and principles of operation characteristics of the European Union and international transport market.'

4.1.3 Reformulated statement:
'Privatisation is seen as a meaningful way to minimise the state's influence on economic decision-making, while supporting integration into international economic networks, such as the European Union.'

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.4 Original statement:
'Privatisation of Eastern European liner shipping cannot be removed from a succession of fundamental restructuring needs. Core changes are essential in the fields of: ownership and management; fleets and tonnage; markets and service offerings, and company organisation and cooperation.'

4.1.4 Reformulated statement:
'Privatisation of transitional liner shipping cannot be separated from a series of internal restructuring needs. However, substantial difference of opinion exists about the sequencing of privatisation and restructuring in the shipping industry.'

☐ Agree ☐ Disagree ☐ Unable to comment

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4.1.5 Original statement:
'Poor financial conditions, economic and political instability, slow rates in the increase in production and inherent socialist foundations, continue to hamper privatisation processes of Eastern European liner shipping companies.'

4.1.5 Reformulated:
'Privatisation processes in Eastern European liner shipping continues to be hindered by poor financial conditions and a lack of public acceptance.'

☐ Agree ☐ Disagree ☐ Unable to comment

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Part five: Adaptation to the single European transport system

5.1.1 Original statement:
'Accession to the European Union may be seen as a fundamental element of transition in Eastern European liner shipping, bringing about an acceleration in the modernisation of fleets and a quality improvement in shipping services.'

5.1.1 Reformulated statement:
'Privatisation processes in Eastern European liner shipping continues to be hindered by poor financial conditions and a lack of public acceptance.'

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.2 Original statement:
'The objectives of shipping policy in Eastern European countries should in principle be the same: fair competition, privatisation encouragement, modernisation of fleets and infrastructure, removal of barriers to trade, improvement of the quality of service, and environmental protection.'

5.1.2 Reformulated statement:
'Eastern European liner companies have similar obstacles to overcome as part of European Union accession. Priorities include: setting the principles of market regulation, modernising fleets, and adapting to the European transport system.'

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.3 Original statement:
'The integration of Eastern European liner shipping to the single European transport market has been expressed in the endorsement of new legislation of transport directives. It is also expressed in the technical transformation of company structure, organisation and operations.'

5.1.3 Reformulated statement:
'Since joining the European Union, Eastern European liner shipping has seen a dramatic improvement in managerial know-how, service quality, niche specialisation, and adherence to safety and environmental legislation.'

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.5 Original statement:
'It is likely that the level of adjustment to European Union transport policy in Eastern European liner shipping will actively affect the rate and the scope of adaptation processes in other sectors of the economy.'

5.1.5 Reformulated statement:
'The integration of Eastern European liner shipping to the single European transport market is in the interest of the whole of Europe, and will actively assist in the adaptation processes in other sectors of the economy.'

☐ Agree ☐ Disagree ☐ Unable to comment

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Appendix 11: Delphi round two continued.

Thank you for your expertise and time it is much appreciated.

Please return this questionnaire in the envelope provided.

If you would like any further information please contact myself at:

Heidi Rebecca Cottam / Dr Phil Culverhouse
University of Plymouth
Portland Square A323
Drake Circus
Plymouth, Devon
England, PL4 8AA
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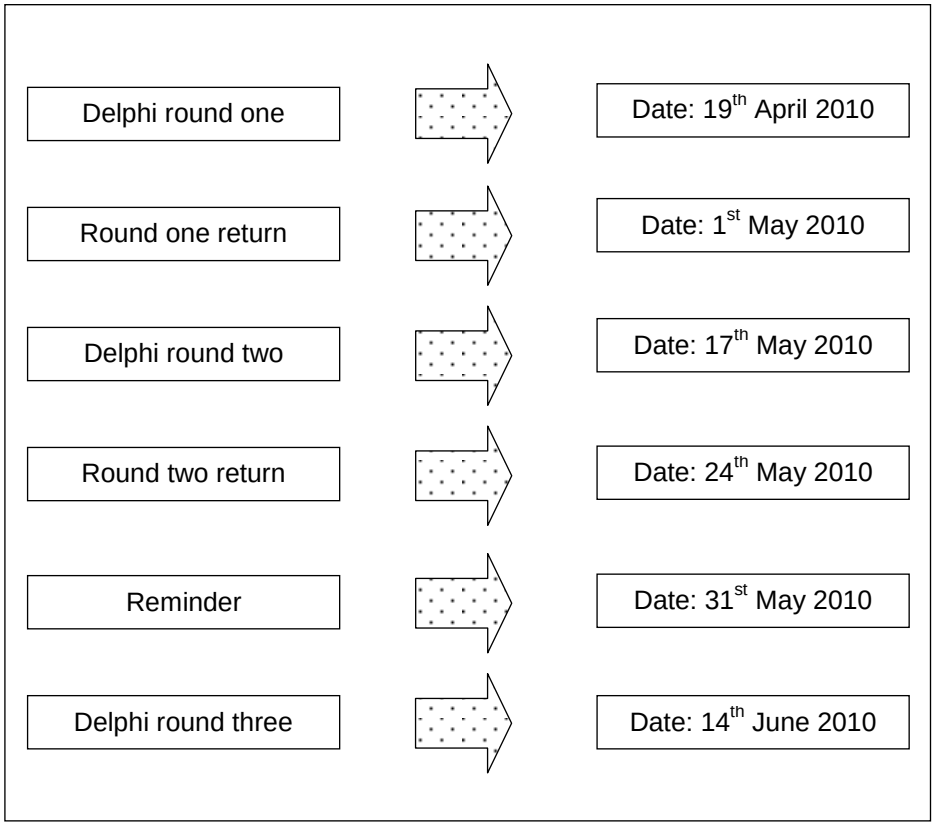
Email: heidi.cottam@plymouth.ac.uk

Appendix 12: Timeline data collection Delphi round two

Timeline Delphi round two
'An analysis of Eastern European liner shipping during the period of transition'



Heidi Rebecca Cottam
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Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

Appendix 13: Reminder letter Delphi round two

Heidi Rebecca Cottam
International Shipping and Logistics Group (ISL)
University of Plymouth,
A323 Portland Square,
Drake Circus, Plymouth,
England, PL4 8AA
Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

31st May 2010

Dear Dr Smith (*personally addressed*)

Reference: Reminder to participate in a PhD study entitled: 'an analysis of Eastern European liner shipping during the period of transition'

Two weeks ago, I wrote to you to request your participation in a Delphi survey to consider the relationship between Eastern European transition and Eastern European liner change. As an expert in the field I sincerely need your help with this special survey.

Completing the questionnaire will take some time, but the information you provide is vitally needed to allow future decision-making about the process of transitional restructuring in Eastern European liner shipping. I hope you will view the effort as important, and a chance to give your input and opinions with regard to evolutionary change in liner shipping and its adaptation to the single European transport market.

You are part of a scientifically chosen sample of professionals working in the area of Eastern European shipping. For the Delphi technique to be successful your answers in relation to: (1) liner shipping under communism; (2) liner shipping and systematic transition; (3) formation of evolutionary restructuring in liner shipping; (4) privatisation and strategic restructuring; and (5) adaptation to the single European transport system, are important because they represent the views of other professionals like yourself. Please be as thorough and complete as you can when you consider each hypothesis, as incomplete questionnaires detract from the value of the data.

Full instructions in how to take part in the study are provided at the top of questionnaire. Here you are asked to indicate your opinion on a number of statements reflecting the situation of Eastern European liner shipping during the period of economic political and social transition, by ticking one of the choices available (i.e. agree, disagree, unable to comment). If your opinion is 'agree' or 'disagree', you are asked to motivate your opinion by including your comments in the designated space. If you have any other comments on the statement please feel free to include them.

Please return your completed Delphi questionnaire in the enclosed postage-paid envelope. Everything you stipulate in the questionnaire will remain confidential and anonymous. If you have any further questions, or require more information please contact me at the above email and/or telephone number.

Thank you in advance for your time and effort in taking part in this Delphi survey. Your help is genuinely appreciated.

Yours faithfully

Heidi Rebecca Cottam

Appendix 14: Explanatory cover letter Delphi round three

International Shipping and Logistics Group (ISL)
University of Plymouth,
A323 Portland Square,
Drake Circus, Plymouth,
England, PL4 8AA
Email: hcottam@plymouth.ac.uk
Tel: 0044 (0) 7829 709708

14th June 2010

Dear Dr Smith (*personally addressed*)

Reference: Delphi round three - participation in a PhD study entitled: 'an analysis of Eastern European liner shipping during the period of transition'

Thank you for agreeing to participate in the study of transitional liner shipping. The Delphi panel of which you are a member has been carefully and rigorously put together based on their experience and knowledge of Eastern European liner shipping and the single European transport market.

As previously stated, by design the Delphi study is an iterative process comprising of a series of three consecutive questionnaires. The questionnaires examine the relationship between Eastern European transition and Eastern European liner shipping change by dividing the subject matter into the following topics: (1) liner shipping under communism: (2) liner shipping and systematic transition; (3) formation of evolutionary restructuring in liner shipping; (4) privatisation and strategic restructuring; and (5) adaptation to the single European transport system.

Delphi round three is now enclosed. This round allows you to reconsider your opinion on any statement which has not previously reached group consensus. You are at liberty to change your opinion completely, or stick to your original argument if you feel it is appropriate. Please indicate your opinion on each statement by selecting one of the following: 'agree', 'disagree', or 'unable to comment'. Once again there is an opportunity to comment should you wish to do so. All the questions in each section must be answered. It should not take longer than 15 minutes to complete this questionnaire. If you have any questions regarding the study please do not hesitate to contact me.

All information will be treated confidentially. Responses are given anonymously, (the identity of the respondents is not known to the other experts in the study) and will only be known by the researcher.

Thank you for your cooperation. Please return this questionnaire at your earliest convenience in the pre-paid envelope provided.

Yours faithfully

Heidi Rebecca Cottam

Appendix 15: Terminology framework Delphi round three

Terminology

Dear Delphi panellist, as the experts selected for this study represent a broad spectrum of professions and nationalities I have taken the liberty of including a list of definitions which are applicable to Delphi round three, in the expectation that they be of value to you.

(a) Accession: The process whereby European Union member states and the applicant country come to an agreement on the conditions for accession and adaptation of the treaties and institutions which are entailed by accession.

(b) Adaptation: The process of adapting or adjusting from a business strategy dominated by socialism to a business strategy dominated by profit-orientated markets.

(c) Deregulation: The removal of government controls from an industry or sector, to allow for a free and efficient marketplace.

(d) Evolutionary: The adjustment or changes in behaviour and structure of a company to become more suited to an environment.

(e) Governance: The process of decision-making and the process by which decisions are implemented (or not implemented). Governance can be used in several contexts such as corporate governance, international governance, national governance and local governance.

(f) Integration: The general process of attaining close and seamless coordination between several departments, groups, organisations, systems etc.

(g) National framing conditions: The internal operating conditions of a country that affect national businesses; these may be economic, political or social.

(h) Privatisation: The transfer of government services or assets to the private sector. State-owned assets may be sold to private owners, or statutory restrictions on competition between privately and publicly owned enterprises may be lifted. Services formerly provided by government may be contracted out. The objective is to increase efficiency and profitability.

(i) Restructuring: The process of reorganising where the composition and operations of an organisation can be completely changed. Restructuring may result in the elimination or replacement of departments and divisions of a company.

(j) Single European transport market: Proposed by the European Commission to develop a transport system capable of shifting the balance between modes of transport. Revitalising the railways, promoting transport by sea.

(k) Transition: A transition from an authoritarian system to a multiparty system of parliamentary democracy, and a transition from a system of planned economy based on state-owned domination to a market economy based on private ownership, free competition, a universal financial economy and direct ties with the world markets.

Appendix 16: Delphi round three questionnaire

Delphi round three
'An analysis of Eastern European liner shipping during the period of transition'

Please indicate your opinion on the following statements by ticking one of the choices available (i.e. agree, disagree, unable to comment). If your opinion is 'agree' or 'disagree', you are asked to motivate your opinion by including your comments in the designated space. If you have any other comments on the statement please feel free to include them.

Please indicate your area of activity:

☐ Industry experts (shipping corporations) ☐ Academic/research

☐ Transport governance ☐ Other, please specify……

Part one: Liner shipping under communism

1.1.2 Original statement:
'Two main types of socialist influence over Eastern European liner shipping related activities may be identified. Firstly, socialist domination of political and macroeconomic shipping goals. Secondly, centralisation of national fleet structures to implement national shipping policy and foreign trade targets.'

1.1.2 Reformulated statement:
'The role of central administration was all pervasive and affected the structure of liner shipping organisation and operation throughout the period.'

☐ Agree ☐ Disagree ☐ Unable to comment

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Part two: Liner shipping and systematic transition

2.1.2 Original statement:
'Transition decisions have been dictated by specific national framing conditions. They have often been irregular reactions to short-term changes, influenced by mechanisms of supply and demand, and/or private interests.'

2.1.2 Reformulated statement:
'Regional factors will continue to interact and influence national framing conditions which generates shifting patterns of transitional restructuring processes in Eastern European liner shipping.'

☐ Agree ☐ Disagree ☐ Unable to comment

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2.1.3 Original statement:
'Changes in the political framework of Eastern European liner shipping and the market transition of the Eastern European shipping companies concerned did not match each other, nor did they run synchronously.'

1

Appendix 16: Delphi round three continued.

2.1.3 Reformulated statement:
'The political events which have taken place in Eastern European since 1989 have transformed the entire economic and spatial environment within which Eastern European liner shipping policy and political frameworks is formed.'

☐ Agree ☐ Disagree ☐ Unable to comment

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Part three: Formation of evolutionary restructuring in liner shipping

3.1.1 Original statement:
'Transitional changes in Eastern European liner shipping has been carried out within the framework of the macroeconomic stabilisation-cum-transformation programmes of the whole economy, such as ownership, fiscal, legal, economic and social changes.'

3.1.1 Reformulated statement:
'The two-way interaction between Eastern European liner shipping and regional economic development highly influenced the transitional restructuring processes in Eastern European liner shipping.

☐ Agree ☐ Disagree ☐ Unable to comment

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Part four: Privatisation and strategic restructuring

4.1.4 Original statement:
'Privatisation of Eastern European liner shipping cannot be removed from a succession of fundamental restructuring needs. Core changes are essential in the fields of: ownership and management; fleets and tonnage; markets and service offerings, and company organisation and cooperation.'

4.1.4 Reformulated statement:
'The breakdown of economic structures had led to a drastically changed situation in shipping markets. Privatisation by, after, or before restructuring became essential for transitional liner shipping companies.'

☐ Agree ☐ Disagree ☐ Unable to comment

……
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4.1.5 Original statement:
'Poor financial conditions, economic and political instability, slow rates in the increase in production and inherent socialist foundations, continue to hamper privatisation processes of Eastern European liner shipping companies.'

4.1.5 Reformulated:

Appendix 16: Delphi round three continued.

'The main difficulties Eastern European liner shipping companies face in the course of transitional privatisation is the weak legal and financial structures that dominate the decision-making process of foreign investors.'

☐ Agree ☐ Disagree ☐ Unable to comment

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Part five: Adaptation to the single European transport system

5.1.2 Original statement:
'The objectives of shipping policy in Eastern European countries should in principle be the same: fair competition, privatisation encouragement, modernisation of fleets and infrastructure, removal of barriers to trade, improvement of the quality of service, and environmental protection.'

5.1.2 Reformulated statement:
'The adaptation of Eastern European liner shipping to the European Union is a multi-dimensional process, requiring capital-consuming modernisation and transformation programmes.'

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.3 Original statement:
'The integration of Eastern European liner shipping to the single European transport market has been expressed in the endorsement of new legislation of transport directives. It is also expressed in the technical transformation of company structure, organisation and operations.'

5.1.3 Reformulated statement:
'It is not a foregone conclusion that joining the European Union will be beneficial. However, a rise in efficiency due to an increase in commercialisation, and an improvement in safety and environmental protection may be reported.'

☐ Agree ☐ Disagree ☐ Unable to comment

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5.1.5 Original statement:
'It is likely that the level of adjustment to European Union transport policy in Eastern European liner shipping will actively affect the rate and the scope of adaptation processes in other sectors of the economy.'

5.1.5 Reformulated statement:
'It is not a foregone conclusion that joining the European Union will be beneficial. However, a rise in efficiency due to an increase in commercialisation, and an improvement in safety and environmental protection may be reported.'

☐ Agree ☐ Disagree ☐ Unable to comment

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The Delphi methodology

It would be helpful if you could provide some general feedback about the study. Your comments would be greatly appreciated.

(a) Overall how satisfied were you with the approach taken to develop ideas in relation to Eastern European liner shipping during the period of transition?

☐ Very satisfied ☐ satisfied ☐ dissatisfied ☐ very dissatisfied

(b) What do you see as the main advantages of this approach?

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(c) What do you see as the main disadvantages of this approach?

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(d) Did you experience any difficulties in completing the questionnaires?

☐ Yes

☐ No

(e) If yes, please explain any difficulties that you had.

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……
……

(f) Are there any further comments you would like to make?

……
……
……

Thank you for your expertise and time it is much appreciated.

If you would like any further information please contact myself at:

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Drake Circus, Plymouth, Devon
England, PL4 8AA
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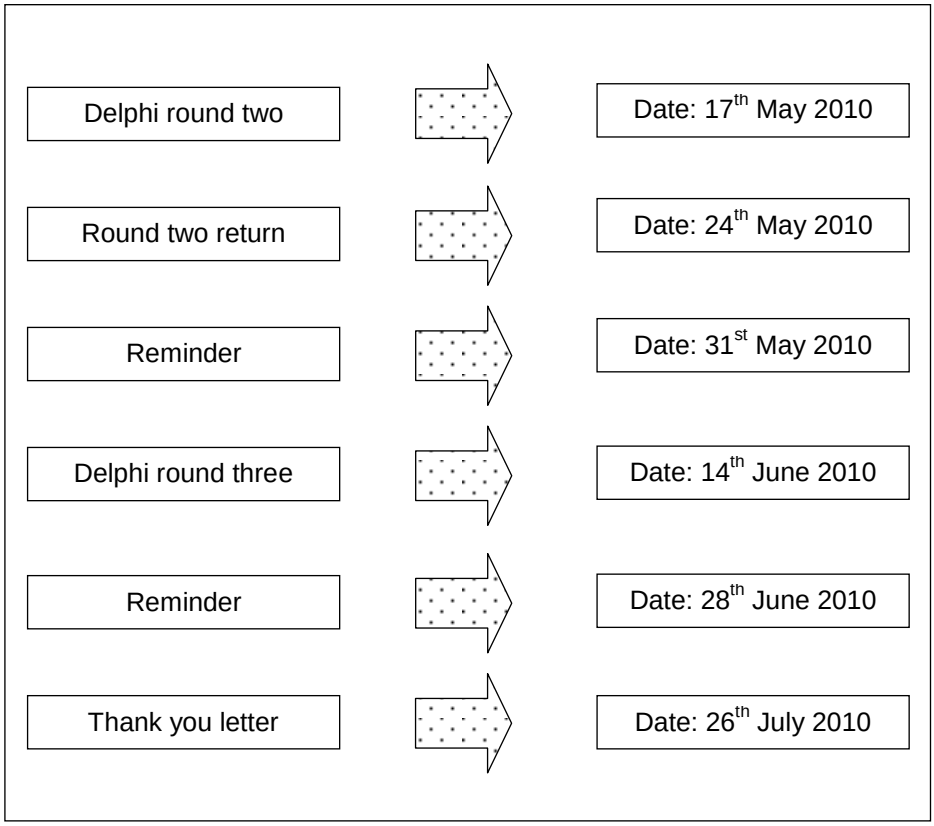
Appendix 17: Timeline data collection Delphi round three

Timeline Delphi round three
'An analysis of Eastern European liner shipping during the period of transition'



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Appendix 18: Reminder letter Delphi round three

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28th June 2010

Dear Dr Smith (*personally addressed*)

Reference: Reminder to participate in a PhD study entitled: 'an analysis of Eastern European liner shipping during the period of transition'

Two weeks ago, I wrote to you to request your participation in a Delphi survey to consider the relationship between Eastern European transition and Eastern European liner change. As an expert in the field I sincerely need your help with this special survey.

Completing the questionnaire will take some time, but the information you provide is vitally needed to allow future decision-making about the process of transitional restructuring in Eastern European liner shipping. I hope you will view the effort as important, and a chance to give your input and opinions with regard to evolutionary change in liner shipping and its adaptation to the single European transport market.

You are part of a scientifically chosen sample of professionals working in the area of Eastern European shipping. For the Delphi technique to be successful your answers in relation to: (1) liner shipping under communism; (2) liner shipping and systematic transition; (3) formation of evolutionary restructuring in liner shipping; (4) privatisation and strategic restructuring; and (5) adaptation to the single European transport system, are important because they represent the views of other professionals like yourself. Please be as thorough and complete as you can when you consider each hypothesis, as incomplete questionnaires detract from the value of the data.

Full instructions in how to take part in the study are provided at the top of questionnaire. Here you are asked to indicate your opinion on a number of statements reflecting the situation of Eastern European liner shipping during the period of economic political and social transition, by ticking one of the choices available (i.e. agree, disagree, unable to comment). If your opinion is 'agree' or 'disagree', you are asked to motivate your opinion by including your comments in the designated space. If you have any other comments on the statement please feel free to include them.

Please return your completed Delphi questionnaire in the enclosed postage-paid envelope. Everything you stipulate in the questionnaire will remain confidential and anonymous. If you have any further questions, or require more information please contact me at the above email and/or telephone number.

Thank you in advance for your time and effort in taking part in this Delphi survey. Your help is genuinely appreciated.

Yours faithfully

Heidi Rebecca Cottam

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Appendix 19: Delphi participation thank you letter

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26th July 2010

Dear Dr Smith (*personally addressed*)

Reference: Thank you letter for participation in a PhD study entitled: 'an analysis of Eastern European liner shipping during the period of transition'

Almost three months ago I wrote to you to request your participation in a Delphi survey to consider the relationship between Eastern European transition and Eastern European liner shipping change. As an expert in the field I sincerely needed your help with this special survey. Along with a final sum of 30 other experts, you vitally agreed to take part in the research which had an enormous influence on the viability of the study, therefore I wished to express my gratitude for taking part in the project.

A short feedback report will be available on demand from 1st September 2010. However in general the results of the study indicate that there is a strong correlation between Eastern European liner shipping change and Eastern European transition. Liner shipping under communism was poorly financed, badly managed and technically outdated. During the period of transition liner shipping was largely expected to undertake enormous restructuring changes largely alone. As a consequence there was no transition theory or model for liner shipping companies to follow. Transitional changes in Eastern European liner shipping were carried out within the framework of evolutionary changes relational to national framing conditions. All transitional processes in Eastern European liner shipping have been greatly influenced by state accession to the European Union. Yet, it is the transformation of the national attitude, such that there will be widespread acceptance of privatisation processes, foreign investment and free-competition in former socialist liner shipping fleets which is the next challenge to face this important industry.

I hope you enjoyed the opportunity to give your input and opinions with regard to evolutionary change in Eastern European liner shipping and its adaptation to the single European transport market. If you have any further questions or would like to get in touch for a copy of the short feedback report please contact my at the above address thank you.

Yours faithfully

Heidi Rebecca Cottam