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Maritime State Aids Towards and Assessment and Monitoring Framework

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Preface

This study is one of six convened under the auspices of the MTCP and was begun in mid-July 2004, following discussion on the terms of reference. It was reviewed by DG Tren in January 2005 and has subsequently been revised to meet as far as possible the points made in the review. For instance, a case study for the UK of the measures introduced between 1997 and 2004 in most EU countries, principally the tonnage tax, has been included. The date for submission was also extended to April by DG Tren. The study has been principally written by Michael Lloyd of AMRIE, but the contributions received from others – in print and via discussions have been considerable. Much support has been received from Giovanni Mendola of DG Tren and from Jerry Stanley of BMT from within the MTCP.

There have been a number of constraints faced by the author. There is, as usual in this type of study, a lack of appropriate data; the methodological issues are problematic, particularly given the terms of reference and the limitations of resource. Despite numerous attempts to secure appropriate statistical data this has not been possible. A further problem occurred in respect of the participation of the Flemish Waterways Administration. No sub-contract was signed by them and the WAZ has now ceased to exist following a reorganisation.

For the reasons elaborated in the text of the report, measurement of the impact of the various maritime state aid schemes across the EU in the past (i.e. form 1997 to 2004 has not been *formally* possible (this point was made at the outset to DG Tren). Simply to enumerate the evolution of seafarers' employment on the one hand and the assessed cost of national maritime state aid schemes (e.g. tonnage tax schemes) on the other will not provide any valid measurement of costs and benefits. (Even though this exercise has been done for the UK). Moreover, the validity of employment figures is extremely suspect (as the OECD has stated) and the national tonnage tax schemes have come in at various times between 1997 and 2004. Hence, their impact is impossible to measure without a series of maritime turnover figures that are simply not available. These defects could be remedied, but would require specific national multi-variate studies or a costly EU level study to achieve any valid results; even then such studies would themselves be challengeable on methodological grounds.

Notwithstanding the above constraints, and following discussion with DG Tren and colleagues in MTCP, an assessment – for the UK – of the evolution fleet development; companies registering;, and of employment over the period from 1997 to 2004, linked to the introduction of the UK tonnage tax regime. More importantly it is hoped that the discussion of the key maritime cluster and related issues examined; the proposed methodology, and the suggested future assessment and monitoring mechanism will provide a baseline from which DG Tren may move forward to ensuring a justifiable cost-benefit assessment of the value of the national maritime state aids schemes applied in the EU.. This may require further detailed work at national levels to enable the relatively simple approach recommended to be adopted at EU level to be applied.

Executive Summary

1. Introduction

Background. This study has been commissioned to remedy the situation described in section 2 below (see also Annex 1 -Terms of Reference).

Key Issues. The study examines – via a UK case study – the impact of some MSAs that have been operated during the period from 1997 to 2004. However, its primary purpose is to suggest a monitoring and assessment mechanism to improve the quality of the Commission's assessment of MSAs under the 2004 Guidelines. (This could then be used, if required, to conduct an historical analysis). In this manner it should then be possible to determine the on-going benefits of the MSA regime to the European maritime sector and the necessity (or otherwise) for its continuation after 2010.

Approach Adopted and Constraints. The approach adopted was determined by a variety of constraints and a number of key assumptions were made.

Theoretical Observations. A number of theoretical observations were made in relation to aspects of the study. These are reported in Annex 5.

Consultations. Consultations took place with a limited number of maritime administrations in key Member States and with some national and European-level industry and trade union organisations. A list of those consulted and of other sources of information is found in Annexes 3 and 5.

2. Current Position of Maritime State Aids

2004 Guidelines Revision. The 2004 revision of Maritime State Aids (MSAs) – based on the premise that there remain distortions in the international market for shipping which justify derogation from the strict prohibition of state aids under the competition policy of the Treaty – introduced changes in the previous 1997 Guidelines to remove ambiguities, to extend he coverage to domestic vessels used in international activities, and to establish improved monitoring and assessment procedures.

Commission Storage of Data of Member State's Schemes. The current position on maritime state aids (MSAs) is that information on the various schemes is held only in the form of the notification of the aid scheme(s) when they were introduced and notified to the European Commission (DG Tren) for approval. This notification information is held only in the language of the Member State concerned on the database of the General Secretariat of the Commission. It is of course also held, when formal approval of the scheme(s) is given by the Commission, on the O.J. database. For some reason this latter information seems not to be stored in a separate database by DG Tren.

Categorisation of State Aids by Type. A variety of MSAs is deployed by Member States and may be classified by type as follows a) direct aids to shipping, and b) indirect aids to shipping. This very broad classification is not of great use in attempting to assess the economic impact of the disparate schemes.

3. Intended Economic Impacts of Maritime State Aid

Overall Purpose. Under the 2004 Guidelines, and indeed under the 1997 Guidelines, the broad intended impacts of MSA schemes are to halt and if possible reverse the earlier decline in the EU merchant fleets and to promote the EU merchant seafarers profession and the employment of seafarers. The 2004 Guidelines introduced a further broad objective, namely to support the other maritime cluster industries linked to shipping (excepting shipbuilding and ship repairing).

Categories of State Aids by Impact. The categories by impact are: aids which promote, directly or indirectly, European flags; aids which promote the European seafaring profession, and aids which indirectly promote the maritime cluster.

4. The Maritime Cluster

Cluster Approach. The shipping industry is the specific target for most MSA schemes, as is the employment and welfare of seafarers . However, the economic benefits are, in practice, spread beyond the shipping industry, benefiting other industries in the so-called maritime cluster.

Review of E.U. Cluster Studies. Considerable research has been carried out during the past decade in defining the maritime clusters in a number of EU countries and across the EU, and in determining the economic linkages between either the shipbuilding or the shipping industry as the core / prime mover in the maritime industrial cluster and the other industries such as shipping services, ports and port services, etc.

Cluster Industries. The designation of maritime cluster industries can vary widely, running from ship-building and equipment industries to maritime academies and colleges. One problem with such a wide range of industrial coverage is that not all EU countries will have all of the industries concerned. Moreover, the larger the coverage then the larger the impact and the more likely that less relevant economic impacts will be included in the measurement of economic impact.

Cluster Definitions. In this study the cluster must be defined so as to exclude shipbuilding and ship-repair and some indirect commercial activities around ports, e.g. catering.. This exclusion is not for solely for economic reasons, but because state aid to the shipbuilding and ship-repairing industries is not governed by the MSA rules, but by separate Directives of DG Competition. For this reason these industries *were excluded a priori by the terms of reference of the study*. However, as indicated in 3.3 above, there is further economic justification for the exclusion and for selecting the shipping industry as the core cluster sector. A specific definition of the cluster for maritime state aid purposes was then made.

Cluster Impacts. Having defined the maritime cluster for the purposes of this study and, indeed, for the purposes of assessing MSA then it is necessary to indicate what economic assessment / measurement techniques will be used to determine the key relationship between the shipping industry and the other maritime cluster industries. In practice these will be based on the primary research carried out in a number of EU countries that have applied (admittedly in differing ways) cluster analysis to the maritime sector of their economies. Instead the Finnish maritime cluster was ‘deconstructed’ and used as an exemplar for the Assessment and Monitoring Framework tool.

5. Economic Impacts of Maritime State Aid

Impact Pathways and Assessment. Measuring the impacts of the multiplicity of MSA schemes is not a simple matter. There are both procedural problems and data sourcing and processing problems. Notwithstanding these problems it is possible in principle to estimate the economic impact attributable to MSA. This is done on the basis of deriving some of the relationships involved, e.g. that between the turnover of the maritime cluster and the shipping industry, and making adjustable assumptions about others, i.e. that between the cost of state aid and the shipping industry turnover. The Excel spreadsheet format used will enable analysis to be simplified.

Aids to Promote European Flags. The main corporate MSA schemes are of the tonnage tax variety, and these schemes are flag-neutral. Hence, these schemes do not directly promote European flagging. Nonetheless, the aid does appear to have a substantial indirect benefit to European flag fleets, plus those vessels which are managed and controlled from the EU countries concerned. Separating out these two impacts is not possible. There is also a correspondingly greater benefit to other maritime cluster industries, via the impact pathway from shipping turnover to these industries.

Aids to Promote EU Seafarers Profession. There are few MSA schemes which are specifically directed at seafarers themselves, either at their employment or at their employability (training aids). However, both aids to reduce payroll taxes and hose aimed at corporate tax reduction (tonnage taxes) will have a positive impact on seafarer's employment, via their impact on shipping turnover. It is also the case that, via these MSA schemes impact on the maritime cluster turnover, that *future* employment opportunities for seafarers will be enhanced.

Aids which Support Maritime Clusters. While none of the MSA schemes are specifically directed at the maritime cluster, the secondary impact through the multiplier impact on the cluster industries from the shipping industry turnover will support the development of the maritime cluster, even with the restrictive definition of the cluster for MSA purposes.

6. Monitoring and Assessment of State Aids

The Need. Currently, statistics relating to the increases in fleet size and to the employment of seafarers are reported to DG Tren each 3 years and at the end of the Guidelines period. An assessment is then made, on the basis of these figures, that MSA is justified. However, no attribution of the specific economic impact of MSA schemes is made at EU level. It does not appear that any such impact measurement is made at national level. As indicated above there are inherent difficulties in so doing. Nonetheless, it is crucial if Member States and the European Commission are to continue to provide and to authorize the provision of MSA that it should be properly justified.

Suggested Approach. The aim has been to provide a methodology which – while providing an accurate assessment of the impacts of the maritime state aid at a relatively sophisticated level – is also capable of providing an assessment procedure which is not unduly onerous in terms of the work to be done by national authorities and maritime industry organisations. This procedure can enable benefit / cost rations to be established which can be made more robust over time by further studies in Member States to improve the validity of the relationship parameters.

Assessment and Monitoring Framework. The Assessment and Monitoring Framework (AMF) mechanism will be in the form of an Excel spreadsheet which will be able to be completed by Member States.

Potential Difficulties. Notwithstanding the fact that – in the absence of a full econometric study – it has been necessary to make some 'heroic' assumptions, the AMF mechanism may still be regarded as relatively robust, and, importantly, capable both of manipulation for analytical purposes and of evolution into a more accurate measure of the attributable, economic impact of MSA.

7. Implementation Approach

Reporting Mechanism. Implementing the proposed assessment and monitoring mechanism (AMF) should be a relatively simple matter both for Member States who will have the responsibility for completing the Excel spreadsheet forms and for the Commission who will have the responsibility for using the AMF to assess and to monitor national MSA schemes in the context of the Guidelines. This is particularly important as certainly for a period of 3 years the suggested economic evaluation of MSA schemes will be **supplementary** to existing reporting requirements from Member States.

Periodicity. As the intention is to provide an on-going picture it is proposed that the submission of information via the new AMF mechanism is done annually.

DG Tren could have an annually updatable assessment profile of all maritime state aid schemes throughout the European Union. This will enable its 3-year review and its 6-year revision of the Guidelines to be accomplished more easily and more accurately.

8. Conclusions and Recommendations

Conclusions

The study conclusions reflect the view that - to ensure that maritime state aids are in line with the purposes and objectives set out in the 2004 Guidelines – there is a need to assess and continuously monitor (on a rolling annual basis) the benefit/cost ratios of the various approved aid schemes (and the assessment of proposed new MSAs). Hence, it is proposed that a new *supplementary economic* assessment and monitoring framework mechanism should be established, in addition to the current review and revision mechanism.

The study has established what appear to be broadly acceptable benefit/cost relationships. The inclusion of secondary maritime cluster benefits is correct, notwithstanding the fact that some the benefits (e.g. in terms of jobs created) may accrue to the financial services industries which are likely to be peripheral to seafarers' occupational roles.

However, there are modifications to some of the national schemes which would enhance the benefits seafarers secured from MSAs (one of the objectives of the 2004 Guidelines). In particular, to secure an enhanced benefit to the quality and total employment of EU seafarers, it would be useful to tie tonnage tax schemes (as is done in the UK) to cadet training and to extend this linkage to cover professional development throughout the working lifetime of EU seafarers. It is not, however, recommended that there should be any formal employment links built into MSA schemes.

On the question as to whether MSA schemes should qualify for EU approval only if they have a national flag linkage for all vessels, the study concludes that such a linkage would be unnecessarily restrictive and may militate against the number of ships and shipping operations controlled from within EU Member States.

Recommendations

The principal recommendation arising from the study is that it is necessary and possible, in principle, to introduce a new monitoring and assessment mechanism for maritime state aids.

R.1. It is proposed that the AMF mechanism should be operated in the form of an Excel spreadsheet, covering all MSAs and their primary and secondary economic impacts, assessed against the costs of the aid schemes. This will assist in ensuring that the various national MSA schemes represent a cost-effective approach to securing the objectives set out in the MSA Guidelines, revised in 2004.

R.2. It is proposed that – unless and until the suggested new system is proven and capable of being used by all EU maritime countries – the new scheme should not replace the current monitoring procedures, even if these are viewed as being less than perfect. The current and the new reporting systems should run side by side – on and experimental basis – for the time being, and at least until after the review in 2007.

R.3. **It is proposed** that the AMF mechanism should be operated on an annual basis as a monitoring mechanism, once it has been established in a robust form.

R.4. It is proposed that the European Commission should use – once validated – the AMF mechanism to establish a database and evaluation mechanism covering all national maritime state aids.

R.5. It is proposed that further work should be commissioned in all Member States that have not already done so to establish both maritime cluster relationships and to evaluate, via econometric studies, the economic impact of maritime state aids. The cost could be shared between the Member State and the European Commission.

1. INTRODUCTION

1.1 Background to Study

1.1.1 From the beginning of the 1980s there has been a decline in the number of ships flying the flags of the Member States and in the number of EU citizens employed as seafarers. In a highly competitive market, many of the traditional EU shipping countries have seen their ship-owners taking advantage of both the wide variety of ships registers around the world and of international capital and labour markets.

By the end of the 1980s – and in the absence of European Community harmonisation measures – Member States began to protect their maritime interests by introducing a variety of state aids. For instance, by the middle of 2003, 9 Member States (plus the Biscaye region of Spain, separately to the Spanish national regime) had introduced and had approved Tonnage Tax regimes. The only significant pre-May EU Member States, with maritime industries of any consequence, which have not so far introduced tonnage taxes are Italy (though a scheme's adoption in this country seems imminent), Portugal, and Sweden.

The first Guidelines on State Aid to Maritime Transport were adopted by the European Commission in 1989. New Guidelines were adopted in 1997 and these have been reviewed; revised, and replaced by the Guidelines currently in force, published on January 17, 2004. These Guidelines will run for a further 6 years. It is under these Guidelines that the various Member State schemes are now authorised as being compatible with the Treaty, based on the existence of distortive third country commercial practices – influencing negatively the size of the European flagged fleet (see **Section 1.4.2** below)

Currently it is clear that the Member States' maritime state aids, introduced, against the background of a distorted international market, to improve the competitiveness of the European shipping industry have proved to have some positive impacts. The downward trend in the number of nationally-controlled / flagged vessels appears to have been reduced and even reversed and in some cases seafarers employment appears to have benefited. However, the present (generous) EU state aid regime needs to be justified in terms of is economic benefit to the shipping industry and its wider economic benefits via the 'maritime cluster'. It is unlikely that the next revision of the state aid regime, which should be carried out by the latest in 2011, will maintain its relaxed approach to maritime state aids, **unless** the financial support provided can be shown, unequivocally, to be justified via positive and verifiable economic benefits for the EU maritime sector.

To determine how this might best be done, this study was commissioned under the auspices of the Maritime Transport Coordination Platform (MTCP). The intention is that the study will deliver its findings, via this report, at the end of 2004. This should allow the European Commission time to propose and start to implement a mechanism to improve the monitoring and assessment of maritime aid schemes (MSAs) introduced and maintained by Member States.

Hence, while the study will provide a framework for assessing the impact of the MSAs that have been operated during the period from 1997 to 2004, *its primary purpose* is to determine *whether it is possible to devise* a monitoring and assessment mechanism to improve the quality of the Commission's future assessment of MSAs under the 2004 Guidelines. In this manner it should then be possible to determine the on-going economic benefits of the MSA regime to the European maritime sector and the necessity (or otherwise) for the continuation of the derogation after 2010.

The objectives of the Study are:

- To examine the compendium of Member State measures permitted under the 1997 Maritime State Aid Guidelines, over the period up till 2004
- To assess the above measures in relation to their objectives under three main headings:
    - Promotion of European Flags
    - Promotion of Sea Profession in the European Union
    - Promotion of European Maritime Industries and Clusters
- To provide an analysis of the economic impacts of the specific measures permitted under the 2004 Revised State Aid Guidelines in relation to the above three headings
- To draw conclusions and recommendations for the future measurement and monitoring of the impact of the measures permitted under the Guidelines, based on the findings of the study. The principal recommendation will be on a reporting, monitoring, and assessment mechanism which will enable the European Commission and Member States to assess the impact of the various aid measures / schemes throughout the period until 2010.

N.B. Though any mechanism devised would be useful in measuring some of the newer types of aid schemes, e.g. those providing support for the launching of short sea shipping routes in France, no assessment of these schemes has been attempted as DG Tren took the view that they had not been in operation long enough to warrant investigation as to their impacts.

1.2 The Key Issues Addressed

1.2.1 There are a number of key issues which need to be addressed. These relate both to the analysis of maritime state aids and their impacts, and also in the designing of a monitoring and assessment system to provide the European Commission and Member States with an on-going measurement of the size of the economic impacts of the aids on the EU maritime sector, including the defined set of maritime cluster industries.

Among the first set of issues, are:

- To categorize the various aids in relation to their intended effects, related to the stated objectives of the Guidelines
- To determine a methodology for assessing the impact of the various MSAs on the EU shipping industries and, beyond, on the wider maritime cluster (appropriately defined)
- To assess the benefit / cost ratios of the MSAs on shipping and on the maritime cluster
- To devise a suitable mechanism / framework for assessing and monitoring the MSA benefit / cost ratios over the next seven years, up to and including the point in time when the next examination and revision of the Guidelines is due

Among the second set of issues, are:

- To examine whether or not the lack of a flag-linkage in tonnage tax and other MSA schemes is detrimental to the achievement of the objectives of the Guidelines
- To examine whether or not the absence of an employment linkage in MSA schemes is detrimental to the achievement of the objectives of the Guidelines

1.3 Analytical Approach Adopted and Constraints

1.3.1 Three main analytical approaches will be used in the study.

Taxonomy will be used to determine the various categories of state aid – for instance those directly applied to companies in the shipping industry and those whose which apply to seafarers in the form of social cost abatements.

'Economic reach' will be used to determine the extent of the economic impact through the primary and secondary impacts on maritime clusters, including shipping. This will necessitate choosing an appropriate of the maritime cluster for state aid purposes This work will involve secondary research only, utilising the considerable work which has been done on maritime clusters around Europe and, indeed, on a European maritime cluster.

'Representative assessment' will be used to ensure that the selection of variables used in the assessment and monitoring mechanism meets two essential criteria:

- the underlying data on which the assessment will be based should be readily obtainable within Member States
- the set of variables should provide a relatively *unbiased* judgement of the economic impact across the Member States

Constraints. In adopting the approach outlined above a number of analytical constraints have been recognised.

Strictly, what is required to fully examine and assess the attributable impact of state aid on the shipping industry and secondarily the maritime cluster impact is a multi-variate analysis taking account of all influences on the industries in proportion to their estimated effects. As this is not possible then some 'heroic' assumptions are made: specifically to attribute only 50% of the benefits assessed to state aid. The ruling out of some of these factors, and in particular the external, international market economic situation, may be held by some to invalidate the approach taken.

There is a difficulty of setting a baseline from which the benefits of aid are measured. The baseline for assessing benefits is assumed to be the year of introduction of tonnage taxes or some other significant state aid in lieu of a tonnage tax introduction. A further assumption is made that the costs of aid in one year will be translated into benefits in the following year. The benefits are assumed also to be exhausted in that year

There is formally no way one can estimate, one way or the other, whether the impact on the shipping sector would be greater or lesser if tonnage tax schemes were to be flag-linked. What can be, and is, explored in this study is the ability to measure the impact of such flag-neutral schemes on the companies managing and controlling vessels from the EU countries concerned and the impact on the wider maritime cluster.

The methodologies for assessing the benefits adopted in the cluster studies used as the primary research basis for this study may vary – hence, too much credence should not be placed, at this early stage, on any estimate of overall EU benefit / cost ratios.

1.4 Theoretical Observations.

There are a number of theoretical observations on some of the key issues for the study. These are set out in **Annex 5** together with other general comments on MSAs.

1.5 Consultations Undertaken

Differing claims as to the need for; effects of, and the design of MSA schemes, are made by interest groups and by governments. Discussions have taken place to discuss the issues involved with affected stakeholder groups involved in the maritime transport sector.

Discussions have taken place with a few key national administrations: in particular to elicit the *practicality* of the proposed approach to monitoring and assessment suggested in this study.

Consultations have also taken place with European level maritime sector organisations, in particular ECSA and ETF. However, other organisations involved in the maritime sector and the employment of seafarers have also been consulted, including some involved in maritime clusters. Information and views have also been sought from education and training institutes involved in the education and training of officers and ratings.

Finally, a discussion of the preliminary findings of the study has occurred with the relevant MTCP partners. **Annex 4** contains a listing of the national administrations and other relevant organisations from whom information has been sought or with whom consultation has taken place.

2. CURRENT POSITION ON STATE AIDS

2.1 2004 Revision of Guidelines by European Commission

2.1.1 The latest revision of the Guidelines came into effect in January 2004 and will run for 6 years to 2010. A review of state aids in EU Member States will take place in 2007 and again, prior to the next revision, in 2010. The position of the Member States acceding in 2004 (*seven* of which have maritime state aid regimes in place) is that providing these aids were notified to the European Commission by August 31st, 2004 then these will be recognised as existing aids. If not notified by the deadline the aids will be examined as entirely *new* state aids.

The principal differences between the 2004 Guidelines and the previously applied 1997 guidelines are:

- An attempt has been made to remove ambiguities which existed in the 1997 Guidelines
- An attempt has been made to provide a focus on specific objectives
- Dredging and other coastal seas activities have been brought into the scope of the Guidelines
- The grants now available to short sea shipping activities have been brought into the scope of the Guidelines
- The commitment is made within the Guidelines to improve the monitoring and assessment of national MSA schemes to ensure that these meet the objectives of the Guidelines and that a quantitative assessment of the cost-effectiveness and necessity of maritime state aid may be demonstrated at the mid-point and the close of the duration of the Guidelines.

2.2 Ability of European Commission to Monitor and Assess Aids

One of the new objectives of the revised Guidelines was to allow the European Commission to improve its monitoring of the intended effects of national MSA schemes to ensure that they meet the objectives of the new Guidelines. Certainly the current position only permits the Commission to make judgements when the MSA schemes are initially submitted or revisions are presented by Member States, or when the periodic revisions of the Guidelines take place. In relation to making appropriate judgements as to whether approved MSA schemes are fulfilling the purposes for which they have been introduced and approved, the current position is unsatisfactory. It is also the case that judgements may also be made following the submission of Member State reports after 3 years.

It would clearly be preferable for regular monitoring and assessment of their impacts of schemes to be made. Though it should be recognised that this should not mean annual revision of such schemes as this would lead to damaging uncertainty for the shipping industries of the EU. Nonetheless it would be useful when the next reporting on national MSA schemes is to take place, in 2007, that the current reporting procedures should be **supplemented** by an **economic** assessment. This supplementary reporting should be done as simply as possible from the viewpoint of all the parties involved in the Member States. The principal objective of this study is to attempt to provide such a mechanism.

2.3 Member States' Reporting on Maritime State Aid

Member States vary in their enthusiasm for providing maritime state aid and the purposes for which they believe that such aids are justified. Inevitably the cost of aid schemes and the reluctance to subsidise a particularly industry is another. Indeed the shipping industry itself in most EU countries is reluctant to accept subsidies.

A further concern to Member States – which the outcome of this study attempts to address – is not knowing the precise benefit arising from the specific schemes. Some Member States have attempted to assess the impact of certain MSA schemes, notably the Dutch government. (The Dutch assessment has been reviewed in relation to this study).

In some of the EU countries not even the costs of the schemes are known with certainty, let alone the benefits.

In a number of cases there is an attempt to monitor the stated outcomes of the schemes in terms of increases in ships registered or of officers and ratings employed. However, these statistics do not necessarily separate out the specific impact of the MSA schemes from other factors, such as the increase in global freight rates in recent years.

It seems clear therefore that not only will the Commission benefit if a suitable and satisfactory economic assessment and monitoring mechanism can be devised, but that it would be of benefit also to member States, and to maritime sector organisations and to the maritime business communities in all Member States.

2.4 Categorisation of State Aids by Type

Aside from the broad categorisation of aids indicated in the terms of reference of this study, i.e. Aids to Promote European Flags; Aids to Promote the EU Seafaring Profession, and Aids which Support the Maritime Cluster – the MSA schemes may be classified by type in two broad categories and sub-categories within them.

Direct Aids to Shipping. These are those aids which are paid directly to shipping companies, either in the form of tax allowances (e.g. the tonnage tax) or in the form of grants (grants to launch short sea shipping services). A list of these schemes is provided in **Annex 6.**

Indirect Aids to Shipping – Aids to Seafarers. These are those indirect aids to the shipping industry which are provided in the form of a). the abatement of seafarer's payroll costs and b). in the form of aids to training. A list of these schemes is provided in **Annex 6.**

All of these aids to a greater or lesser degree will also benefit the other industries in the maritime clusters as well as shipping itself. In **Section 4** below we examine the work done in defining and analysing maritime clusters.

3. INTENDED ECONOMIC IMPACTS OF STATE AID

3.1 Overall Motivation for Aid to Shipping and its Measurement

The justification for the existence of maritime state aids – and hence the targets of their impacts – is the establishment of countervailing aid regimes to promote the development of the EU shipping industries against the background of distorted international competition. The measures involved must be proportionate in respect of the threat to the EU industries and must not develop one EU country's maritime industry at the expense of another EU country's industry.

One issue which the 2004 MSA Guidelines are intended generally to address - and which this study is specifically directed to answer - is the need for an improved monitoring and assessment procedure which can ensure - in as quantifiable manner as possible – that the national maritime state aid measures adopted meet the broad objectives of the MSA Guidelines. In particular, it is required to be known whether it is possible to demonstrate an economic benefit attributable to the MSA s over the remaining period of the applicability of the current Guidelines.

Clearly it is believed by the Member States concerned – on the basis mainly of an apparent *correlation* between the introduction of MSAs and subsequent increases in fleet size and seafarers employment – that there is benefit and therefore justification for the state aid provided to their shipping industries *and* to their wider maritime sectors / clusters. However, demonstration of on-going, *attributable* economic benefits from MSAs to the maritime sector has not been achieved.

3.2 1997 to 2004 – An Attempt at Measurement of Impact: A UK Analysis

For the moment, ignoring the last point made in the above paragraph, it may be instructive to attempt to correlate the certain MSA schemes, i.e. tonnage tax schemes, and the employment of seafarers. This will be done using the UK as a case study. The UK is chosen because the tonnage tax was introduced at a useful time between 1997 and 2004, i.e. in 2000; because the fleet and employment statistics are reasonably accurate and because of the size and nature (substantially international) of the shipping industry. Firs, it may be useful to indicate the introductions of tonnage taxes across the EU and to correlate his with changes in the employment of seafarers. However, as the OECD footnote indicates, not too much reliance should be place on the employment figures.

EU Tonnage Tax Regimes

Tonnage tax regimes have been introduced in Member States in the European Union, in particular Greece (1975), the Netherlands (1996), Germany (1998), **UK (2000)**, Denmark (2002), Spain (2002), Finland (2002), Ireland (2002), Belgium (2003) and Italy (2004).

EU Seafarer Numbers

The Availability And Training Of Seafarers - Future Impact, OECD Project by Precious Associates Limited, in association with Knightsmart Limited, p46, Jan 2003.

Countries that didn't have a Tonnage tax regime before 2000 are shaded grey

Year of Approval	Country	1995 Officer Supply	1995 Ratings Supply	2000 Officer Supply	2000 Ratings Supply
1975	Greece	22,000	18,000	17,000	15,500
1996	Netherlands	6,097	1,686	5,707	5,937
1998	Germany	8,391	6,589	6,021	8,462
2000	UK	11,000	12,500	13,285	10,860
2002	Denmark	5,600	5,700	5,353	4,522
2002	Finland	2,020	2,850	4,000	6,000

2002	Ireland	1,452	2,089	1,452	2,089
2002	Spain	4,310	7,264	4,000	6,000
2003	Belgium	876	419	546	133
2004	Italy	14,500	17,800	9,500	14,000

N.B. The report contains the following footnote: ***"The biggest obstacle to international / OECD analysis of seafarer numbers is the paucity of reliable national statistics", p7.***

UK Case Study

Seafarers Employment

In just over twenty years the number of UK seafaring ratings has declined from 30,000 to 10,000. Currently the tonnage tax employment requirements are limited. Companies have to train one UK cadet per fifteen officers on board vessels entered into the tonnage tax scheme, but there is no *guarantee* of future employment after training. For UK seafaring ratings, therefore, there is no specific employment obligation on shipping companies, they simply have to review current ratings opportunities and consider whether training and employment opportunities for UK ratings could be increased. This does not mean that employment will not be created, but the unions would, perhaps understandably, prefer an explicit link.

With the exception of ratings to officers training schemes, employment and training for UK ratings has not been large. The total number of positions for UK seafaring ratings continues to decline despite the substantial support from the Exchequer.

The maritime unions believe that the tonnage tax as currently constituted is insufficient and does not address the decline of UK maritime skills.

"The tonnage tax has resulted in many ships entering the UK Register, but hardly any of these vessels train or employ UK seafaring ratings". (*RMT – Model letter to MP's April 2004*)

The Chamber of Shipping has said that an assessment of the impact on UK shipping turnover and the balance of payments was not yet possible as up-to-date figures were not yet available. However, there has been benefit in the form of enhanced shore-based establishments of existing UK shipping companies and new offices opened up by shipping companies coming into the UK. (*Select Committee on Transport Second Report, Feb 2005*)

David Jamieson MP, Parliamentary Under-Secretary of State for Transport, the Department for Transport. (DfT), also emphasised the benefits of having shipping companies based in the UK, but was unable to put a specific value on the benefit:

"Those companies will then have a predisposition generally to buy British, if you like, to be buying the other services within the United Kingdom, but that is very difficult to put a yardstick against. The general feeling is that in fact in cost terms it has been very beneficial."

The consensus is that the tonnage tax has helped shipping companies: what is less clear is how far the wider benefits in terms of positive 'cluster' impacts.

The training link with tonnage tax has increased cadet recruitment since the scheme was launched, but perhaps more might have been expected. The intake rose to 622 in 2002-03 and a provisional estimate of 620 in 2003-04. This number is barely half of the figure of 1,200, reported in 1996 in a University of Wales study (commissioned by the Department of Transport, the UK Chamber of Shipping and the Marine Society) determined necessary just to stand still. A 2003 update of the study revised downward the earlier estimate of the numbers needed because, the authors argued, they had previously overestimated the attrition rate of cadets in training. The 2003 study proposes a 6% annual loss, compared with their 1996 estimate of 10% per annum.

UK trade unions are less sanguine about the figures. NUMAST believes that there is insufficient substantial evidence in relation to attrition rates. "Emerging evidence from an ongoing SIRC cohort study of UK cadets employed by the three companies with the largest cadet intakes suggests that attrition rates actually vary considerably from one employer to the other and that the safest assumption of the overall rate of loss is between 40% and 50% over the three-year period, ie an averaged annual rate of between 14% and 17%. On the basis of these figures, and using the University of Wales 1996 study's formula for calculating the required output, annual cadet recruitment should be 1,680 using the lower figure of 14% per annum loss, or 2,040 using the higher figure of 17%. Current recruitment (as in 2003) at just over 600 cadets pa falls short of the 1996 estimate of 1,200". (*Select Committee on Transport Written Evidence Memorandum by NUMAST (TT 01) Feb 2005).*

Even on a more optimistic scenario the 600 pa figure is still some 20% short of the 2003 revised downward estimate of 750.

Although the training commitment is monitored, there is no equivalent monitoring of employment of seafarers *after* they have completed training. This is something that something that the Shipping Task Force will be considering over the next few months. The Department, as a result of work commissioned by the Shipping Task Force, plans to publish a comprehensive annual assessment of the number of UK active seafarers. This will include, although not separately, cadets recruited as part of the training commitment under tonnage tax, after they have completed training. The first annual UK seafarers report is expected to be published next year.

The best available estimates of the number of UK seafarers are produced by London Metropolitan University (LMU) and their results for 2003 have just been published. **(See Annexe 6)** They report that the number of UK active seafarers declined from around 30,000 in 1997 to 25,000 in 2001, but has increased thereafter to 28,000 in 2003. Of these, around 25,000 are employed at sea. At least part of this increase, however, may have resulted from changes in statistical coverage following implementation of STCW 95, rather than real increases. LMU report that there were approximately 17,000 UK officers in 2003, 10,000 ratings and 1,000 cadets in training. In 2003, cadet numbers rose to an annual intake of over 600, a 20% increase in annual intake compared with the intake before tonnage tax was introduced. They also estimate that a cadet intake of around 1,000 per year is needed if the number of officers is to stabilise at current levels. *Memorandum by the Department for Transport, TT 0, Feb 2005)*

Participation in the UK Tonnage Tax Scheme

The latest figures show that 76 businesses have elected to join the Tonnage Tax regime. In 2003-4 there were 71 businesses active in the regime (some had merged) operating 758 ships.

Table I: When businesses elected into the scheme

Year to 31 March	Number of businesses electing in	Approximate number of ships operated by those businesses at time of entry
2000	10	134
2001	22	282
2002	21	288
2003	15	76
2004	7	25
2005 (31/9/04)	1	11
Totals	**76**	**816**

Source: Inland Revenue, Post Implementation Review of Tonnage Tax, Dec 2004

Between the end of 1999 and the middle of 2004, the tonnage of the total UK registered fleet increased nearly threefold. The number of vessels increased by almost 25%.

Table II: UK Registered Fleet (All Vessels)

	Number of Ships	Deadweight (Thousand Tonnes)
1997	1,498	3,511
1998	1,498	4,150
1999	1,456	4,297
2000	1,518	5,263
2001	1,527	5,522
2002	1,675	8,219
2003	1,799	11,453
2004	1,798	12,260

Source: Inland Revenue, Post Implementation Review of Tonnage Tax, Dec 2004.

N.B. Of the ships operating in the UK tonnage tax, 57 percent are flagged in the UK or another state of the European Union.

Costs to the Exchequer

Table III:The latest estimates of the Exchequer costs of the Tonnage Tax

	£m
2000-2001 (Actual)	4.5
2001-2002 (Actual)	37.8
2002-2003 (Actual)	9.1
2003-2004 (Forecast)	10.0

Source: Inland Revenue, Post Implementation Review of Tonnage Tax, Dec 2004.

The low cost in the first year reflects the stages at which businesses elected into the regime. In recent years, the reduction in costs reflects the extent to which tax losses would have reduced the overall corporation tax yield.

N.B. In 2003-04, the intake of cadets rose to over 620, a 29% increase compared with that before the introduction of tonnage tax.

Though the above case study provides some insights into the operation of tonnage tax schemes and the associated trends in employment; fleet changes, and companies registering, it falls far short of any acceptable attribution analysis of the costs of state aid and its economic impact. What is shown are correlated events, but with no formal causal analysis.

3.3 Categories of Aid and Intended Economic Impact

Promotion of European Flags. The main aid under this heading is the tonnage tax. One particular issue is whether or not a flag link should be insisted upon rather than the current flag neutral character of the current tonnage tax regimes adopted in the EU. Insofar as the current regimes can be demonstrated to promote the incremental development of EU flagged shipping fleets then this question may be partly answered positively. If it can be shown that a flag link might reduce the incremental impact then this would further strengthen the argument for the present regime. In terms of the study's attempt to measure the impact of MSAs then the assumption may be made that the corporate tax aids promote EU flagged shipping and, via the maritime cluster, the managed and controlled EU fleet produces an economic benefit (strictly, including the benefit to that proportion of the shipping industry which is not EU flagged.

In addition to tonnage tax schemes other forms of corporate tax relief is provided to shipping companies. For the purposes of this study we may neglect this form of aid as it is: restricted to only a few countries; it is low in cost terms, and there are no cluster studies that can provide an estimate of its benefit.

Promotion of Sea Profession in the European Union. Clearly some aids are directed at supporting the sea profession in the EU and others will have an indirect impact on the size and quality of the EU seafaring profession.

N.B. A separate, but related issue – a specific concern of maritime sector trade unions – *and one referred to in the UK Case Study above* – is whether there should be an *employment* link as part of tonnage tax or other fiscal regimes used to support shipping companies. As indicated above in Section 1.4 there is a general theoretical economic objection to any employment linkage in relation to MSA schemes. The direct aim of any business or economic activity is the generation of revenue; not of employment. Hence, any resulting increase of employment should be regarded as an indirect benefit. In so far as this is the case then any direct linkage between MSA schemes, such as a tonnage tax, and employment/jobs created is not justified. (*This is not to say that the employment indirectly created by the MSA schemes should not be ascertained, but it will always be an indirect benefit flowing from the increased turnover of the shipping companies involved. Moreover, the secondary employment impacts, i.e. in the maritime cluster industries, would appear to be equally countable as a general employment benefit, even though a number of them will not be of interest or value to seafarers. What it may be true to assert is that if state aid is retained for profit and onward distribution to shareholders in shipping companies then there may be no employment benefit. In this case neither will there be any increase in turnover, as opposed to value-added*). In addition, there are practical difficulties inherent in attempting to link directly MSA schemes to employment generation. To identify sufficiently well that a particular job has been created directly as a result of the aid scheme is extremely problematic and bureaucratically cumbersome to even attempt within such an aid scheme.

The MSAs which directly or indirectly reduce the social or payroll costs of shipping companies, whether provided to companies or to seafarers themselves, will have an impact on the promotion of the seafarer's profession in Europe in so far as it increases seafarer's employment in the shipping sector, and in some linked sectors, e.g. dredging. For instance, it is claimed in Sweden that the exemption of shipping companies from the employers' deduction from social charges has been accompanied by an increase in the employment *of* Swedish officers on board vessels.

Those aids which support training will have a positive impact on the *employability* of seafarers; perhaps also even beyond the seafaring profession per se. (This is likely to occur in so far as the training involved provides coverage of skill sets that are in demand in the other maritime cluster industries).

In attempting to measure the economic impact of these types of aid in this study it will not be possible to indicate the extent of the impact on "promoting the sea profession in Europe" beyond its indirect impact on employment through increased turnover in the shipping industry. All that may be argued is that aids to training and professional development will impact positively on the *employability* of seafarers.

Promotion of European Maritime Industries and Clusters. There are no specific maritime state aids targeted at supporting the maritime clusters *per se*, beyond those *directly* supporting the shipping industry itself (with the exception, potentially of aids to support the establishment of short sea shipping services, which are outside the scope of this study). Indeed, one prime purpose of this study is to establish some mechanism for monitoring and assessing the *indirect* impact on the industries in the maritime cluster, *in addition* to the shipping industry. In relation to the devising of a monitoring and assessment mechanism this study will focus on these indirect benefits arising form aids to shipping and measured by their impact on the maritime cluster industries (as defined) other than the shipping industry. **Section 6** below discusses the nature and relationship of the maritime cluster industries; the research into maritime clusters in Europe, and the relevance of the impact of MSAs on maritime cluster industries.

4. THE MARITIME CLUSTER

4.1 Cluster Research and Definitions

4.1.1 There have been a number of attempts in recent years to define and delineate the various maritime industries which may be said to form the 'maritime cluster. Initial work on a **Dutch** maritime cluster was done by Professor Chris Peeters of the University of Antwerp. This study led to the creation of the Dutch Maritime Cluster (part funded by the Dutch government) which promoted the idea of policy and business support for the cluster of Dutch maritime industries.

Work was done on the so-called ***EU maritime cluster*** in a study funded by DG Enterprise and undertaken by the Policy Research Corporation N.V. and ISL in 2001. This study has been used as an initial reference text for this current study exercise in relation to analysing the size of maritime clusters and the assessment of the economic impact of maritime state aids on the maritime cluster.

There are, however, limitations of the 2001 study, relating to the data sourcing and methodological problems faced by that study. Moreover, it is now relatively out of date as its statistics are for 1997. However, notwithstanding a number of problems the 2001 study does provide some useful insights in relation to the rather different tasks of the current study and in its estimate of the appropriate definition of the maritime cluster. Some of the methodological problems of the 2001 study have been reviewed by succeeding studies, particularly the **Finnish study done in 2003**, which identified a number of maritime clusters around the coastal regions of Finland. The Finnish study was also useful in that it reviewed the studies that had been made before 2003. However, a number of other maritime cluster studies have been made, the latest of which, covering **London was completed in July 2004 for the Corporation of London.** In the UK two other studies have been done covering the Southern region and the Merseyside sub-region. These various studies, covering a number of maritime countries in the European Union, have been reviewed by the author of this current study to ensure that the various approaches to delineating the maritime cluster and measuring the economic impacts arising have informed the approach taken in this study.

The definition of any cluster has both a geographical dimension and a sectoral dimension. To attempt to define an EU maritime cluster in relation to the geographical aspect obviously presents problems. If we wish to retain a geographical dimension it can only be preserved by defining an EU cluster in aggregate terms, i.e. as an aggregation of the totality of individual national or strictly regional clusters. It is doubtful whether this limitation is serious for the purposes for which this study is commissioned. The sectoral dimension is more important for assessing the impact of maritime state aids on the 'EU maritime cluster' than the geographical aspect. (*It is probably the case that Michael Porter's original cluster concept, in any event, exaggerates the importance of the spatial dimension relative to the sectoral, supply chain, aspect. Indeed Porter went on to use his cluster approach to trade and economic development to attempt to explain the comparative performances of national economies; thus, effectively, abandoning any meaningful spatial cluster delineation*).

Clearly the further away – in economic space - the industries are from the core industry the smaller the economic impact of support to the core industry will be on the other maritime industries clustered around the core industry. The issue for this study, therefore, is to establish criteria to enable a boundary to be drawn, beyond which limit economic impacts will be ignored. Moreover, the impacts within the boundary will need to be able to be measured relatively easily for the purposes of monitoring and assessment.

4.2 Summary Analysis of European Work on European Maritime Clusters

In all *nine* maritime cluster studies have been reviewed in the course of preparation of the current study. These include those studies examining clusters in Finland, Italy, Germany, Sweden, Netherlands, the UK, and the EU itself (and, outside the EU, but adjacent to it, the Norwegian maritime cluster).

What is clear from all of the studies is that the development of the core cluster industry itself does stimulate the development of the other 'peripheral' maritime cluster industries. However, the relationships are complex and are not uni-directional. The networks of business economic relationships involved ensure that positive feedback loops enhance the growth of the whole cluster.

There is some discussion in the literature of the difficulty of identifying 'value-added'. However, in relation to measurement of the economic impact of cluster development this is irrelevant. So long as the industries are viable it is there contribution to economic activity via the turnover and employment generated that matters.

The spatial issues concerning clusters, whether exaggerated or not, matter little in determining the contribution to national or supra-national economies. Agglomeration (i.e. spatial contiguity) economies clearly do occur, and will enhance the business networks at the heart of clusters. Nonetheless, it is the end-products, i.e. the increased turnover and employment of the industries which form the maritime cluster, from which benefit derives. In this sense the spatial element of clusters may be regarded as a 'driving mechanism' contributing to the success of the cluster rather than providing any measure of impact, though the impact will, of course, be delivered at specific locations.

There is little doubt that the impact of maritime state aids provided to the shipping industry, in so far as such aids assist the development of that industry, will also generate increased turnover and employment in the other cluster industries. Moreover, the various cluster studies have attempted to measure the impact on the maritime industries clustered around shipping. Broadly the same methodologies have been used (generally input-output analysis); and the same difficulties (e.g. in the definitions of industries in order to deliver adequate data) have been encountered.

This study does not attempt to produce its own estimate of economic impacts. Instead the aim is to review the estimates which have been made and to see whether a simple formula can be devised which is sufficiently representative to assess the total (i.e. on the whole maritime cluster) impacts of the state aid provided to the sector. This would cover all aids, whether fiscal or specific grant aided, which assist shipping. The system established will be one which could be used in a 'formulistic' manner by Member States and the European Commission to assess the benefit / cost ratios of maritime aid schemes, at national level and at EU level.

In Section 6.5 below the potential impacts on the industries selected to represent the maritime cluster (required to be monitored and assessed for maritime state aids) are indicated. Obviously the size and nature of the maritime cluster will vary from country to country. However, the relationship between the turnover of the shipping industry (*assuming this industry and not shipbuilding is taken as the core maritime cluster industry*) and the turnovers of the clustered maritime industries should be approximately the same. It is also likely that the external, other EU impacts will also be broadly similar. These relationships are derivable from inspection of the work done over the past seven years in the various studies of maritime clusters. Any aberrant or extreme statistics will be ignored and a modal value approach will be taken in the establishment of the relationships. Hence, the intention is to provide a multiplier effect for a given size of shipping industry.

The next procedure – which is more problematic and on which little primary research has been done – will be to estimate the impact of the various maritime state aid measures on the shipping industry. This will also have to take account of some aids which while intended to have an impact on the shipping industry are less directly targeted than say the tonnage tax. Here the technique will be to examine the statistics collected in the various countries. Discussion has also taken place with some national administrations to gauge their assessment of the impact of the aid measures. *The issue of estimating the impact of MSA schemes on the shipping industry, as the necessary initial stage of a full assessment of the impacts on all of the maritime cluster industries is discussed in* ***Section 6*** *below.*

The various calculations indicated above in respect of the cluster impacts are set out in Section 6.5 below, with more detailed information provided in Annex 3. The aid - impact relationships are discussed in Section 5 below and again, in more detail in Annex 3. These relationships are then built in to the Excel spreadsheet (see **Sections 6 and 7**).

However, before moving on the attempt to explain how to measure the impact of maritime state aids on the maritime cluster industries we need to define the industries concerned and then to justify the selection of the sub-set chosen in relation to the measurement of the impacts of maritime state aids.

4.3 Cluster Industries

The main cluster industry in terms of turnover size and employment which is *usually* included in cluster studies, e.g. the Finnish study, is the *shipbuilding* industry (plus the ship-repairing industry).

Some indication of the maritime cluster industries in Finland are shown in the Table and Diagram below – excluding the shipbuilding and ship-repairing industries – as we will do later in this section to achieve a more limited definition of the maritime cluster appropriate to maritime state aid purposes.

Table 4.1 and Diagram 4.2 Finnish Maritime Cluster

Turnover	Shipping	2123 million euro
Employment	Shipping	9558 persons
Turnover	Ports	182 million euro
Employment	Ports	1067 persons
Turnover	Shipping and Port Related Industries	3743 million euro
Employment	Shipping and Port Related Industries	6603 persons
Total of Above	Turnover	6048 million euro
Total of Above	Employment	6603 persons

Sometimes, e.g. the Dutch cluster study the shipbuilding industry is taken to be the 'core' industry, i.e. the industry that 'drives' the cluster. However, the inclusion of these two industries distorts the assessment of cluster benefits, particularly in terms of employment. More importantly as will be indicated later it is assumed that the impacts of maritime state aids are shifted *forward*, to the associated and downstream maritime cluster activities such as maritime services and ports and port services, rather than backwards to shipbuilding. It will be argued that this is not an unreasonable assumption in economic terms. Moreover, a number of EU countries now have either no shipbuilding industry or a relatively small sector and though it may be argued that there may be a benefit to other European shipyards the likelihood is hat any leakage in this direction may be to shipyards outside the EU, e.g. South Korea.

In the case of the overall EU cluster study of 2001 the intention appeared to be to be as *eclectic* as possible and the list of industries included the *full range* of maritime industries: shipping, shipbuilding, offshore supply, inland shipping, maritime works, ports and related services, fishing, recreation, maritime services and maritime equipment. This is a very broad definition of a maritime cluster and follows broadly the Dutch cluster definition.

Other industries, included in a number of cluster studies are industries that, though downstream, are remote from shipping as a possible core industry, e.g. restaurants or other leisure industries or activities around ports. The inclusion of some of these industries may be regarded as anomalous by virtue of their 'economic distance' from the shipping industry if this is selected as the core cluster industry.

A good example of what constitutes a *narrow* maritime cluster – *limited to the maritime services sector* - may be taken from the most recent study carried out for the Corporation of London. This cluster includes: shipping, industry associations, intermediate services, support services, and regulators.

From the above selection it may be seen that there is a wide range of industries are included in different cluster studies, with over-lapping definitions. Moreover, the core industry may be chosen to be either the shipbuilding industry or the shipping industry. If the former industry is selected then the maritime cluster becomes extensive in coverage. If the choice of core industry is shipping then the maritime cluster tends to exclude backwards integration covering shipbuilding and provides a more limited size and coverage of the maritime cluster. This more limited cluster definition has the advantage of avoiding data collection and measurement problems.

We must now examine which type of cluster definition is suitable for the purposes of this study. Clearly, one of the characteristics is likely to be related to the issues of manageable data collection.

4.4 Appropriate Cluster Definition for Maritime State Aid Assessment Purposes

The maritime cluster studies all identify a core industrial sector in their maritime clusters. In relation to the current study it seems likely that this should be the *shipping industry* rather than the shipbuilding industry, as say in the case of the Dutch cluster.

One relevant factor – discussed with DG Tren at the outset of this study – is that the regime governing maritime state aids does not cover the activities of the shipbuilding or shiprepairing industries. These are covered by separate aid regimes administered by DG Competition. This leads, not unreasonably, to the choice of *shipping* as the core maritime cluster industry for maritime state aid purposes.

However, aside from this legal and administrative reason for selecting shipping rather than shipbuilding as the core cluster industry, there are also sound economic reasons. Hence, though it will be correct to say that there will be some backwards 'leakage' of any aid provided to shipping to shipbuilding the majority of the aid is likely to be retained by shipping companies, initially as an enhancement of revenue and trading profit, and used be to purchase services from maritime services and ports and port services suppliers. To be definitive on this issue one would require a specific study, but a priori one would expect the forward 'leakage' of aid to be the more substantial.

Assuming that the shipping industry is selected as the core maritime cluster industry, the task is to identify, *within the constraints imposed by the study terms of reference, e.g. the exclusion from consideration of certain port services industries such as port city restaurants*, an appropriate selection of other industries 'clustered' around the shipping industry in the form of interlocking networks, that may potentially benefit from maritime state aids, via the expenditure of the shipping industry.

Given the above review of maritime cluster research, but noting the terms of reference of the study, it is clear that only the sub-set of the cluster industries discussed above (in Section 3.3) will qualify for inclusion in the maritime cluster defined for the purposes of this study. The definition should include maritime services and port services, but probably not other industries, and certainly not shipbuilding and ship-repairing.

Hence, for the purposes of this study the maritime cluster will best be defined by a pragmatic delineation based on the likely strength of the economic impact – taking into account both the work done in recent years around the EU on various maritime clusters, including the European cluster (for the EU 15). However, it has also been necessary - for this study - to take account of the quasi-legal constraints on the industries to be included in the cluster, as determined by DG Tren.. (For instance in most maritime cluster studies the shipbuilding and associated industries forms a substantial part of the cluster and contributes a considerable amount of turnover (if not value-added) and employment to the maritime clusters involved). In this study, at the request of DG Tren and for the other economic reasons discussed briefly above, we will ignore the shipbuilding and ship-repairing sectors. We will then indicate – industry by industry – the reasons for inclusion in the cluster to be used for maritime state aid purposes.

The closest definition to the one required for the purposes of this study – from the above studies – is that from the latest study – the London 2004 study – which provides a definition of the "maritime services cluster". This includes the "shipping sector"; "regulators" (though this misleadingly includes classification societies);" support services" (e.g. maritime education and training);" industry associations", and "intermediate services" (e.g. banking and legal services). This rather narrow definition was dictated by the client base for the study, i.e. the Corporation of London whose interests are essentially those of the City of London.

However, it will be necessary – for the purposes of this study – to add to this narrow sub-set of cluster industries a port and 'port services' sub-set. It will also be necessary to tidy up the individual industry definitions, by inspection of other cluster studies to arrive at a better-defined cluster set.

The industries clustered around the shipping industry – taken as the 'core' cluster industry - may thus be said to comprise, essentially, the 'maritime services' sector, plus the ports and the 'port services' sector. It is this set of industries that appears most appropriately to meet the criteria required to define the maritime cluster for the purposes of measuring the impact of maritime state aids extensively, i.e. beyond the shipping industry per se.

The main general criterion is that the sectors / industries / services concerned should be sufficiently close in economic space to the shipping industry itself that economic benefit is likely to accrue to them from their functional proximity to shipping, as its turnover and subsequent expenditure increments, resulting from state aid, are passed forward, in part, to these industries.

It is also the case that spatial contiguity to shipping industries / companies will be an enhancing factor in a number of cases. Further benefits will come from the interaction between the industries / companies within the maritime cluster, excluding the more direct interaction with the shippin industries / companies. These qualitative criteria (the individual cluster studies – analysed and referenced in this study) – can provide quantitative evidence in support of this contention) will help to define the sectors / industries to be included in the cluster definition to be used.

Hence, the industries / sectors included / considered in this study are as follows:

- **Shipping (including ship-owners, ship managers, ship charterers, liner agency services)**
- **Maritime Intermediate Services (including insurance services, legal services, financial services, technical services, e.g. classification societies, industry associations)**
- **Maritime Support Services (including ship brokering, freight forwarding, maritime education and training, manning agencies, ICT services, research, consultancy, media services, public sector, e.g. maritime administrations, maritime regional governments)**
- **Ports (including port authorities, terminal operators)**
- **Port Services (including stevedoring/cargo-handling, dredging, towage services, bunkering, pilotage, warehousing)**

The specific justifications for the inclusion of each of these broad sectors and their component industries may now be outlined:

- **Shipping** – there is obviously no need to justify the inclusion of shipping per se in the cluster, - but its constituent parts, as defined above, may require some justification. It is clearly not enough to simply include shipowners in the shipping industry category. Many shipowners are solely ‘beneficial owners, whose vessels are managed by ship management companies. Many of these latter companies will be located within EU national or regional maritime clusters. Moreover, as many ships are chartered then these chartering companies should also be included, as should liner shipping agent companies.

- **Maritime Intermediate Services** may require some justification for both the title and the inclusion of the listed industries to be included. Essentially these activities, and the companies that perform them are need to ensure that shipping can operate. Without insurance no ship can sail. Technical services, including those performed by classification societies are also necessary for the validation of vessels. Hence, the title of intermediate services indicates the intrinsic nature of the services provided, without which shipping operations would not be feasible.

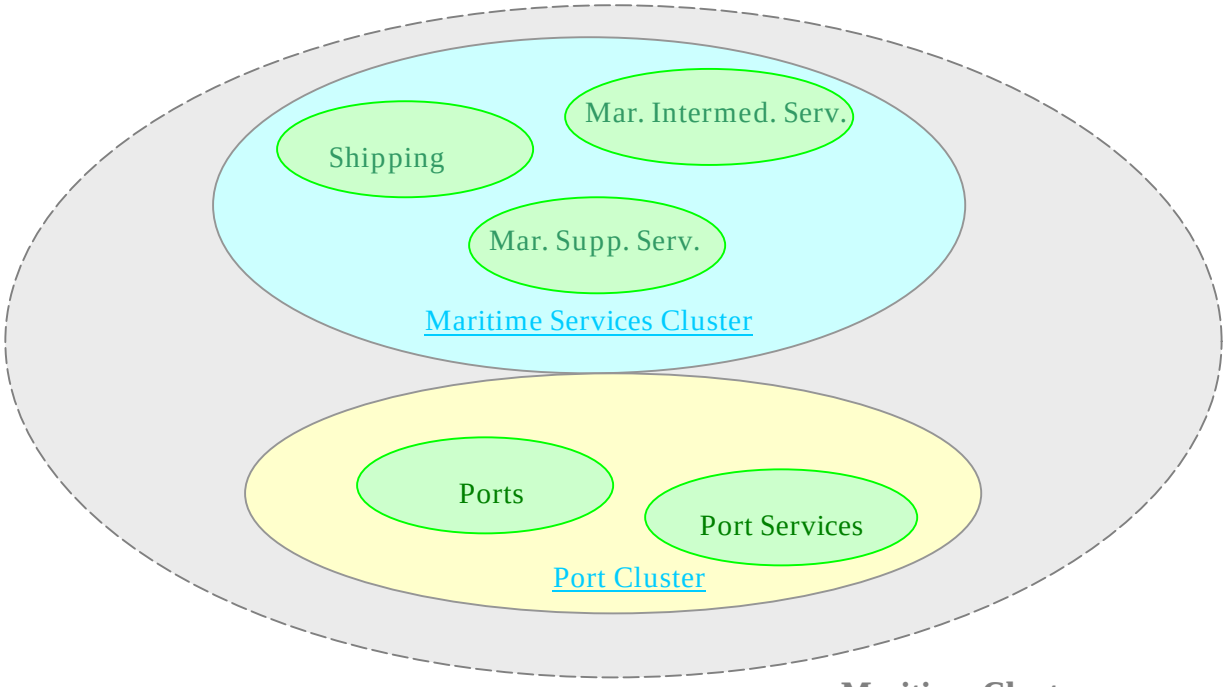
- **Maritime Support Services** – these services are extremely important in their own right. Some facilitate freight transport operations, e.g. freight forwarders, ship brokers. Others provide essential support services such as maritime education and training, maritime administrations and others provide economic service support, e.g. research and consultancy companies. Any benefit to the organisations involved, deriving from an increment of extra shipping industry expenditure as a result of continuing maritime state aid to the shipping industry, may be an important further stimulus to greater efficiency in maritime and multimodal transport and to the more effective development of the maritime sector.

- **Ports** – these industry/service categories probably need no justification. However, it is certainly the case that any incremental increase in port and terminal turnover as a result of the passing on of such aid via shipping industry expenditure may enable beneficial investment to take place at ports and terminals.

- **Port Services** – the linkage of these various services with shipping activities around ports should clearly be included in any cluster definition. Ports would be unable to operate without the provision of some of these services, e.g. dredging. Hoever, all of these port service activities plays an important part in the operation of ports and seaways. The interaction between them is also important in cluster terms. (See Peter Langen, ibid in Bibliography)

Finally, it should be noted that though the above analysis has suggested benefits in terms of turnover, expenditure, and investment there will also be positive *employment* impacts arising from the increments in the turnover, expenditure, and investment in the cluster industries, including shipping.

Diagram 4.3 Maritime Cluster Representation for Maritime State Aid Assessment Purposes (see legend for details)



Maritime Cluster

Shipbuilding

Ship-reparing

Not Included

Shipping (including ship-owners, ship managers, ship charterers, liner agency services)

Maritime Intermediate Services (including insurance services, legal services, financial services, technical services, e.g. classification societies, industry associations)

Maritime Support Services (including ship brokering, freight forwarding, maritime education and training, manning agencies, ICT services, research, consultancy, media services, public sector, e.g. maritime administrations, maritime regional governments)

Ports (including port authorities, terminal operators)

Port Services (including stevedoring/cargo-handling, dredging, t services, bunkering, pilotage, warehousing)

4.5 Cluster Economic Impacts - Measurement Methodology

Notwithstanding some of the problems discussed earlier it should be possible to provide a rationale for deciding on the economic multiplier relationship between the shipping industry and the remaining cluster industries taken together. Strictly this would require a survey of the industries concerned. As this is not possible within this study then it will be necessary to examine the work done in the existing cluster studies to provide *approximate* estimates of the 'multiplier' relationships in the various EU countries.

The aim is to indicate to the Commission how it may sensibly judge maritime state aids in relation to the specific aid regimes applied at national levels in the various Member States. If it can be shown that the judgements of the benefit/cost ratios for individual aid measures can be made sufficiently robust then it will be possible to restrict national aid measures to those which have a positive ratio and which would then ensure that, in aggregate, there would be a positive benefit/cost ratio for the EU as a whole.

The estimates derived will be for *one* of the EU countries, i.e. for which an appropriate multiplier relationship has been derived from their cluster analysis. The only study that provides a sufficient statistical basis for estimating the multiplier between the shipping industry and the industries, defined in cluster terms as above, is the Finnish study. From this national cluster study the following 'rounded' estimate may be made: for **Finland this is: 1.84**.

(It should be stressed that because the maritime cluster as defined above is not exactly the same as any of the national cluster definitions examined – *though an attempt has been made to 'deconstruct' the Finnish national cluster to produce a close approximation* – care should be taken over the interpretation of the figure suggested).

This relationships should be a not unreasonable figure to be used for all EU countries,. Though there are likely to be some variations from the figure, dependent on the precise national cluster definitions and methodologies used.

If all countries – or a number of countries – are able to derive multiplier relationships then it will be possible to estimate a 'representative' multiplier relationship for the EU, based on an average of the individual countries' relationships. This relationship could be used to derive an approximate estimate of the secondary cluster benefits of MSA at EU level.

This Finnish relationship of 1.84 means that – if generalised across the EU – the economic benefit to the EU maritime cluster industries from an increase in 'n' euro of turnover of the EU shipping industries is probably in the region of '2n' euro. (*The lack of statistical data means that this relationship is average and not marginal. However, it is likely that these two relationships will not be far apart in value*). It is not an unreasonable assumption that the average relationship can be used to suggest that an increment or decrement in shipping turnover produces a known increment or decrement in cluster turnover.

It may be argued that the procedures adopted could provide unreliable estimates both to the impact of the various aids and of the total impact via the cluster impact estimation procedure. However, this is to ignore the fact that currently there is no established procedure or methodology for determining the benefit/cost ratios. It is argued that *the methodology adopted is correct in general approach* and the obvious deficiencies in estimation due to lack of research or of data inadequacies can be remedied over time. The procedure should not provide anomalous results across countries, though the assessment of the aid impact on shipping may be on the generous side it is unlikely to be inordinately so. Moreover, currently the judgement of aid schemes by the European Commission is more often than not based more on a priori reasoning than on an evidence-based approach. The procedure devised and recommended by this study is evidence-based, albeit on the basis of a number of assumptions which may be relaxed as research evidence comes to light.

Further caveats may apply due to the differing methodologies and data collection used in the various country studies. In any future work it will be important to attempt to produce an homogenous approach to these methodological issues.

5. ECONOMIC IMPACTS OF MARITIME STATE AID

5.1 Impact Pathways/Economic Reach

In those cases where the aid scheme is addressed *directly* to the shipping industry – generally now tonnage tax schemes – there is a need to estimate the benefit/cost ratios. The primary ratio will be that between the shipping industry turnover and the cost of the aid provided.

The most recent attempt to explore the economic benefits of public support for the maritime cluster industries has been carried out for the Dutch Ministry of Transport - Sea Transport Directorate. The results of this exercise have not been used to assist this present study in the search as it is not clear that the key initial relationship – the impact of the aid on the shipping industry – has been explicitly established.

In so far as the majority of MSA schemes – though this may not mean that the majority of aid is channelled via this route****** – are targeted on providing direct aid to the shipping industry, the *impact pathway* is to the shipping industry and then via economic supply chains to the various other maritime cluster industries.

******N.B. There is a problem, however, with estimating the impact of tonnage tax. The cost of tonnage tax may initially be calculated by assessing the loss of tax revenue from the previous tax regime. In subsequent years however new companies – attracted to establish in the country concerned by the existence of the low tonnage tax rate – will pay tax which otherwise would not have been brought into the country's tax net. Effectively this 'reduces' the 'cost' of the tonnage tax, and hence the amount assumed to be state aid. How this may be handled in analytical terms was explained in **Section 3.1.7** above.

However, even where the aid is provide in the form of *the abatement of seafarers' social costs* then the impact pathway may be seen, in most cases, as via the impacts on the turnover of shipping (i.e. the beneficial impact on labour costs in the industry is passed on, in substantial part, to the shipping companies) and then on to the turnover of other cluster industry companies. This is not to state categorically that there is no direct impact of such schemes on employment, but that ii is difficult to establish any completely satisfactory methodology for determining what, if any, direct employment impact occurs.

It is now necessary to attempt to get around some of the constraints mentioned earlier by making three separate assumptions.

The *first* – is the estimate for MSA when in the form of *corporate tax relief*, principally tonnage tax – is the assumption that the estimated impact on shipping turnover, the *attribution factor*, is 50%. This means that the change / increase in shipping industry turnover will be reduced by 50% when attempting to calculate this MSA impact. In so far as 'leakage' into company dividends then this percentage may be lower. (*The figure of 50% may be loosely linked to studies on the incidence – as opposed to the initial impact of corporate taxes. It is argued in these studies that a high degree of forward shifting of corporate taxes occurs: though this argument is complex if company size; the precise nature of the taxes, and the openness or otherwise of the markets are taken into account. However, it seems likely that – in the absence of the resources to establish any definitive impact incidence relationship for tonnage tax or other corporate tax relief – it is reasonable to assume some substantial, e.g. 50% forward shifting in the case of shipping companies. Analogous arguments may be made in relation to the next two assumptions*)

The *second assumption* – is the estimate for MSA when provided in the form of *reductions in payroll taxes.* This *attribution factor* here will be assumed to be 25% when attempting to calculate its impact. In other words this means that the change / increase in shipping industry turnover will be reduced by 75% when attempting to calculate this MSA impact. (*If both types of state aid are in use then if the costs of both are the same an attribution/reduction factor of 62.5.% should be used. Differing costs can be weighted to produce a suitable attribution/reduction factor*). The reason for assuming a lower figure than in the case of corporate tax / turnover tax aid is because of the likelihood of some 'leakage' of payroll tax abatement into wages, either into wage levels or into bonuses. This is not a necessary aspect, but there is a prima facie case that it is likely to occur to some degree or another via the wage bargaining mechanism.

The *third assumption* – is the estimate for MSA when in the form of *training aid.* Here the assumption is that there will be only a 10% impact on shipping turnover.

The above factors are, of course, illustrative, though they not necessarily unlikely in the real world. *It is important to recognise that the percentages can be varied via the formulae established in the AMF mechanism discussed in* ***Sections 6 and 7*** *below.*

In discussing the categories of aid and their impacts, the next section splits these aids into three categories, defined by intended impact: 1). aids to promote European flags; 2). aids to promote the EU seafaring profession, and 3). aids which support the maritime cluster. Under these three headings that correspond to those given in the terms of reference the impacts are further categorised as national economic impacts; employment impacts, and European economic and employment impacts. There is some overlap among these impact categories, but their classification in this manner enables a clear view to be taken of how they interact.

N.B. In many of the cluster studies the importance of the 'backflow' of taxes to national governments is stressed. It is clearly correct to argue that such a return of taxes is a valid benefit from maritime cluster economic activity. However, such a fiscal backflow, notwithstanding its benefit to national tax authorities will not engender any economic benefit to the maritime sector. Of itself tax revenue is simply a transfer payment to the government. It may, of course, be translated into economic benefit subsequently through government expenditure.

5.2 Aids to Promote European Flags

5.2.1 National Impacts

As argued earlier it is not formally possible to assess any specific aids to promote European national flags as all tonnage tax schemes – which form the majority of national corporate tax abatement maritime state aid – are flag-neutral. Nonetheless, under this heading account should be taken of these flag-neutral schemes –which aim to increase, as well as national flagged tonnage, the tonnage that is managed and controlled in the EU Member States concerned. Moreover, in those countries where work has been done on assessing the impacts of MSA schemes on the other maritime cluster industries, as well as the shipping industry, there appears to be a substantial secondary national benefit via the positive turnover benefit to these cluster industries. In this study though the definition of the maritime cluster is rather narrower than in many country studies the benefit should still be substantial.

The aid to the shipping companies provided through the flag-neutral tonnage tax schemes benefits all companies equally whether or not they are sailing under European flags or not. It is also the case that the 60% rule means that a high proportion of all fleets will be European-flagged. This aspect of the Guidelines is an excellent guarantee of a high proportion of the benefit of the MSA going to European flagged vessels while not deterring those owners who do not wish to register under EU flags, but where the maritime cluster benefit will still be secured.

European Impacts

In this case the European impact will be a summation of the national impacts. It worth reiterating here an earlier point that there is a mix of countries within the EU – between those countries who are predominately global players and those whose main concentration is on domestic shipping. It is the global shipping countries which may lose from a rigid flag-linked approach to tonnage tax regimes. This mix strengthens the case for a flexible attitude towards flag-linkage.

5.3 Aids to Promote the EU Seafaring Profession

National Impacts

Under this heading fall all schemes that impact on the education and training of seafarers and hence their employability (the 'quality' impact) and those which impact on the employment of seafarers (the 'quantity' impact), including all payroll abatement schemes. However, it is also the case that the corporate tax aid schemes (including tonnage tax schemes) though not specifically linked to employment do have a substantial employment effect. (*N.B. it should be noted that improving the quality of seafarers will improve their employability, and hence is likely also to maintain/increase their employment, either currently or in the future*).

As noted above in relation to corporate tax MSA schemes, there is, generally, no formal, direct linkage of the maritime state aid provided under payroll tax abatement schemes and the employment of seafarers. However, this is not to say that – for instance, in the case of the Swedish scheme (and the Portuguese scheme more directly) – that increases of employment of EU seafarers will not result from particular types of aid schemes.

As these types of MSA schemes are indirectly targeted on the employability and employment of EU seafarers, they are more directly linked to the promotion of EU seafaring objective of the 2004 Guidelines than in the case of MSA schemes which provide financial support to shipping companies through the corporate tax system.

The quantification of the employment effects of these non-corporate tax MSA schemes – via the employment multiplier related to the shipping industry turnover figures - is discussed below. The impact may be lower because of some 'leakage' into wages. In some cases it may be possible to check whether or not the estimated (from turnover figures) amount of employment of seafarers is too large, from national figures (assuming these are accurate), but not whether the estimate is too small. In this particular case the direct seafarer employment will be restricted to the examination of the employment multiplier applied to the shipping industry only. However, it may be plausibly argued that the future employment of those with seafaring experience and expertise in the wider maritime cluster industries is a guarantee of longer term employment. .It may also be argued that this aspect should be valued highly by the profession and by the trade unions representing seafarers, some of whom in any event represent also shore-based employees in the wider maritime sector.

It is likely that the employment impact from the corporate tax schemes – due to their higher value – will be higher than payroll tax abatement schemes (always providing that the impact is principally on turnover and not on dividends).

The employment impacts can be derived in two ways. Either directly by inspection of the employment of seafarers. But this direct method will not be possible in the case of other maritime cluster industries as the employment in these industries is determined only partly by the maritime state aid impact coming through the shipping industry.

In fact, the same strictures will apply in relation to the direct employment of seafarers, as factors other than the specific impact of MSA schemes will influence the level of employment, e.g. IMO and ILO regulations and competitive pressures within the global shipping sector. It will require a more sophisticated approach to ascertain the employment impact of MSA schemes via the initial impact on turnover of such schemes. Moreover, currently, none of the MSA schemes – with the partial exception of the Portuguese scheme are specifically linked to employment targets. Though the *UK* tonnage tax scheme is *indirectly* linked via its voluntary commitment from ship-owners to the creation of a number of cadetships.

Hence, the employment impacts for seafarers will be a further derived figure from the benefit / cost ratios and the relationship between turnover and manning levels. There is a further problem here in that the relationships will be average and not marginal relationships. Hence, it is possible that a small increment in turnover could create more jobs if the marginal relationship is higher than the average relationship..

The employment figures for employment created in the maritime cluster industries will, in the same manner, be derived from the turnover impact resulting from a given shipping turnover impact, i.e. the cluster / shipping ratio, derivable from the various studies.

European Impact

Similar comments apply to this objective in relation to the measurement of European employment impacts as to the fiscal (corporate) schemes in **Section 5.2** above. In this case however, it may be possible to provide a clearer indication of the outcome in terms of employment – at least in terms of the movements annually in total EU seafarer employment, as currently assessed by the European Commission and via various studies and projects, including some under the auspices of the MTCP. Nonetheless, though these figures, assuming their relative accuracy (and there appear to be various estimates), will only provide a check on whether the employment estimates derived from the aggregated turnover or representative turnover figures are too large. For instance, as suggested above, if the latter turnover-derived figures are greater than the ‘actual’ EU-level employment figures then the estimates are likely to have exaggerated the employment impact of the MSA schemes across the EU.

5.4 Aids which Support the Maritime Cluster

National Impacts

This classification subsumes all national schemes in so far as they support the shipping industry. These are held, via their impact on the shipping industry, to support the other maritime cluster industries as defined for the purposes of this study. (N.B. Under this heading will also be classified the new MSA schemes aimed at supporting short sea shipping. However, assessment of these schemes is not made nor is that of the Marco Polo programme as this is an EU scheme and is treated as *sui generis*). The methodology and quantification of the relationship between the shipping industries and the national maritime clusters has already been discussed in **Section 4.5** above and is not repeated here.

Employment Impacts

The employment impacts from the maritime cluster industries are dealt with via the employment multiplier estimates derived from primary research in the various EU countries that have conducted maritime cluster studies, and particularly in Finland.

European Impact

As a first approximation to estimating the maritime cluster economic cluster impact at European level it is possible to calculate a simple summation of the impact benefits of the various national clusters. However, notwithstanding the comments made in **Section 4** above concerning the question as to whether the concept of a European maritime cluster in a meaningful one (*the author's preference – to avoid confusing the spatially limited cluster concept – is to define this as a sectoral supply chain*), the network and market linkages between the various cluster industries across Europe means that such a simple summation may underestimate the cluster benefits at European level.

In the context of this study it is not possible to establish a methodology for estimating the European level benefits beyond the approximate summation estimate. However, it may be an issue for the European Commission to consider in relation to future work, particularly as in April 2004 a new European maritime cluster organisation has been formed.

6. MONITORING AND ASSESSMENT OF STATE AIDS

6.1 The Need for Monitoring and Assessment

It is clear from the discussions with the various interest groups and national administrations contacted that an independent, objective mechanism is required to ensure that the various State aid measures are properly targeted at the principal objective underlying the derogation regime (as expressed in the Guidelines), i.e. *to adopt countervailing measures in the distorted international shipping market to ensure the continued, sustainable development of the EU shipping industry and employment opportunities for EU seafarers.* (It is important to recognise, in this context, the unique nature of the shipping industry in relation to state aids provision, i.e. its almost unequalled ability to move country location extremely rapidly).

It will also be necessary for the mechanism to assess – at an appropriate level and to an appropriate extent – the socio-economic impact on the maritime sector as a whole, including the so-called *maritime cluster*. In this way the state aids provided can be justified on the basis of promoting the competitive development of the EU maritime industries, including shipping (but not exclusively so) in a global context.

Failure to achieve a satisfactory assessment and monitoring framework will lead to the use of non-evidence based judgements as to the cost-effectiveness and, indeed, the desirability of permitting maritime state aid, at least at the levels currently prevailing. The aim is, therefore, to provide a measure of the economic benefits in terms of increased turnover and employment in the shipping industry and the other maritime cluster industries(as defined in Section 6 above) which can properly be attributed to the provision of maritime state aid in its various forms.

6.2 Suggested Approach

The aim is to provide a methodology which – while providing an assessment of the impacts of the maritime state aid at a relatively sophisticated level – is also capable of providing an assessment procedure which is not unduly onerous in terms of the work to be done by national authorities and maritime industry organisations.

As indicated above it should be possible to measure the impacts of the aid systems in place in EU countries via the impact pathway approach. Initially this will mean an assessment of the impact of MSA, by category of MSA scheme, in terms of increases in the turnover and value-added of the shipping industry, and via the output/labour ratio a calculation of the employment generated from the increase in turnover/value-added. This will result in the establishment of a revenue and employment benefit/cost ratios for the categories of MSA scheme.

Once the above relationships have been established – see **Section 5** above – and incorporated in an Excel spreadsheet all that will be entailed is the provision of a number of MSA cost statements which may be provided relatively easily by Member States. The cost statistics provided may then be translated by each of the Member States and by the European Commission into a '*broad brush*' quantitative evaluation of the economic impact of the various aids in each country and at EU level. This will result in the calculation of a simple benefit / cost ratio - achieved, nationally and at EU level, and by type of aid measure. (This may eventually mean that certain types of aid may be preferred as their economic benefit / cost ratio impact is greater than for other types of aid).

To assess the full economic impact of the aid measures will also require, as argued earlier, an assessment of the impact on the full maritime cluster rather than simply on the intended, specific target industry, shipping. To measure this impact will require the relationship between the shipping turnover / value-added and the turnover / value-added of the designated maritime cluster industries.

For the illustrative purposes of this study it will be assumed that there is one, representative, relationship (based on the Finnish example) which holds for all of the EU countries. This relationship will need, over time, to be tested in each of the countries, particularly those who have not yet completed a maritime cluster study.

Once established this 'multiplier' relationship (or, if and when obtained, national relationships) will provide the 'amplified' benefit from the maritime cluster automatically via the spreadsheet-based, ***Assessment and Monitoring Framework (AMF)*** mechanism and no further information will be required from Member States.

The employment figures will be derived from the turnover figures via an assumed employment multiplier. Hence, the employment benefit in the shipping industry and in the maritime cluster industries can be estimated, via the AMF mechanism.

6.3 The Assessment and Monitoring Framework

The assessment framework (AMF) discussed above – which also serves as a monitoring framework – is relatively simple to devise and it may readily be translated into a form which should be easy to complete by Member State administrations. If this were not the case then it will be as difficult as in the past to ensure that all Member States will provide adequate information to enable the European Commission to judge whether, and to what extent, the various maritime aid schemes compliance with the overall objectives of the European Commission as set out in the Guidelines.

The AMF mechanism has been designed in an Excel spreadsheet format to ensure both ease of completion and transmission from Member States to the European Commission and because all Member State administrations and the Commission are familiar with this format.

A further advantage is that if more copious data is held in an Access database format it should be readily transformable from Access or Word to Excel, though minor problems can sometimes occur.

6.4 Potential Difficulties

It has to be admitted that the weakest aspect of the 'tool' is the 'attribution factor'. It is here where more work is clearly required and where critics may take most issue. Nonetheless, as argued above the assumptions of the value of the factors may be varied and used to assess scenarios. It will also be the case that even with an econometric study the results are likely to be challengeable. The number of 'unknowns' is considerable and the stochastic variable is likely to be large.

The European economic impact could be arrived at in two ways. The first will provide a crude approximation to the aggregated costs and benefits of MSA at the EU level, covering those countries for which the estimates can be made. (This figure may be compared with the figures derived from the DG Enterprise study).Though the figures produced are of some value they will not necessarily be of use in judging the value, i.e. cost-effectiveness of the various national aid schemes. These latter figures may be arrived at by using similar procedures in all Member States as those employed in the research studies examined in this study. However, another possibility presents itself. We may take the median value of the national benefit/cost ratios already examined as a *representative* ratio to be used in measuring the impacts of all national aid schemes, under this category heading and under the other two headings below.

It is worthwhile indicating that though the procedure (whichever of the average values is chosen) is liable to error, it has *three* advantages. First, in the absence of further detailed national studies it provides, *at this point in time*, some evidential basis for the assessment and monitoring of MSA schemes at EU level; and, of course, further work could be carried out to improve the accuracy of the results. Second, the *median figure in particular is likely to be as close to a representative ratio* as is possible to achieve, given the selection of countries involved. Third, *it is more meaningful* than either the aggregate figure for the EU as a whole (or at least for the substantial part of the EU covered by the figures) or the DG Enterprise study figures, which are, in any case, as observed earlier, rather dated.

7. IMPLEMENTATION APPROACH

7.1 Reporting Mechanism

7.1.1 The AMF will represent a reporting mechanism that will enable regular up-dating of information on all maritime state aid schemes relating to the efficacy of the schemes as measured by the benefit/cost ratios. This will enable the European Commission to regularly assess quantitatively the impacts of the MSA schemes implemented by Member States and build a cumulative picture of how the MSDA schemes are achieving the objectives set out in the 2004 Guidelines.

The AMF, *as indicated in the illustrative example*, set out in an Excel spreadsheet form in Annex 2, should be relatively easy to complete for Member States. The individual Member State forms/returns will be able to be stored and compared annually by the European Commission. The Commission should also be able to aggregate the returns via the formula indicated. Essentially, this formula aggregates first the costs of the totality of individual country schemes and then the benefits of the individual schemes. These aggregate totals of benefits and costs provide an aggregate EU estimate of the economic impact of the total sum of aid provided by Member States. Of itself this aggregate figure is of no use for operational purposes in connection with the approval of maritime state aids, but it will provide some comfort in terms of the overall economic benefit to the EU maritime sector from the expenditures by Member States.

From the viewpoint of Member States the annual returns should provide some advantage to maritime administrations when negotiating with finance ministries for aid scheme funding.

7.2 Periodicity

It is suggested that with the establishment of the AMF annual reporting should be feasible, This will have a number of advantages:

- it will permit any new schemes to be recorded as they are introduced
- it will facilitate the 3-year periodic notification and examination of maritime state aid schemes
- it should enable a rapid assessment of Member States aid schemes, particularly important as some seven new Member States' schemes will require to be assessed
- As indicated above it will enable a cumulative and quantitative assessment of all MSA schemes to be achieved.

7.3 DG Tren Action

DG Tren will now have an annually updated assessment profile of all maritime sate aid schemes throughout the European Union. This will enable its 3-year review and its 6-year revision of the Guidelines to be accomplished more easily and more accurately.

This should enable any action taken by DG Tren in connection with individual national aid schemes or in relation to any future revision of the Guidelines to be justified by an accepted and quantified approach.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

This study has to provide a structured approach to monitoring and measuring the *economic* impact of EU maritime state aid schemes, in a cost-effective manner, which will enable maritime industries; Member States, and the European Commission to see the benefit/cost ratios of individual schemes and their impacts at national and at European Levels. It has also set out the correlations between the various state aid schemes and the increases in fleet size and in seafarers employment from 1997 to 2004. Though this may be useful as a baseline indication, such an approach cannot indicate how much of the past increases in fleet size and in seafarers employment are attributable to the maritime state aid schemes deployed during the period. For this to be possible on a basis which can be afforded and will improve on the present Member State reporting system will require the approach suggested in this report to be adopted.

This Assessment and Monitoring Framework (AMF) will enable both the European Commission and Member States (and, indeed, the maritime industries) to have an approximate measurement of the economic impact of state aid on an objective, on-going basis. This should prove a cost-effective methodology to assess the impacts of the various aid measures on both the shipping industry and the associated clustered industries.

However, it is necessary to recognise that the current system – whereby Member States in effect are responsible for assessing and reporting on their national schemes, which have received approval from the European Commission – does provide 'hard data 'on vessels registrations under the first and second registers and seafarers employment figures, and on the estimated cost of the various aid schemes. Nonetheless, there are three problems with this approach: a) it is reliant on Member States estimates alone; b) reporting by Member States has not always been consistent or complete; c) importantly the data provided does not provide *a direct, attributed economic relationship* between the volume / cost of aid given and an assessed economic benefit to the shipping and maritime cluster industries.

The study has been able to indicate a taxonomy of aid schemes *linked to their economic impacts on the shipping industry and the cluster of maritime industries surrounding shipping as the core of the cluster.* It has also established the *possibility* of determining representative relationships, within individual countries, and, more circumspectly, at EU level, between the cost of aid and the economic benefits, first to shipping and then to the remainder of the maritime cluster industries.

Though currently not all Member States have determined these relationships, and none actually use the relationships even internally, it is possible to use an 'averaged set of relationships' that the European Commission may use as a surrogate for well-determined national relationships and to use these in a simple mechanism to gain an estimate of the benefit / cost relationships between the various broad categories of aid schemes. This approach can then be tested at EU level and Member States encouraged to establish more accurate national relationships.

The approach, based, inter alia, on primary research work from around the EU on maritime clusters, and other research, has also enabled the study to shed some light on a number of questions relating to aid schemes which have been of concern to the Commission and to the maritime sector industries. In particular, two issues of particular concern have been:

- whether the absence of a flag link weakens the validity and the fleet impact of tonnage tax schemes and other fiscal aid measures to support shipping

- whether the absence of a direct link between fiscal aid measures, including tonnage taxes, and employment reduces the measurable impact on employment in the maritime sector.

On these two issues, the study has concluded that in the case of *the lack of a flag link* ('the' flag neutrality' of schemes) in fiscal measures to promote EU shipping *there is no evidence that flag-linked schemes would perform better in terms of the promotion of EU-based fleets*, as there are no flag-linked schemes in existence (in fact since the study began Italy is introducing a flag-linked scheme) with which flag-neutral schemes can be compared over a period. This argument appears to be endorsed by the statistics showing that the advent of tonnage taxes has resulted in a substantial increase in vessels managed and controlled from within the Member State concerned. However, the buoyant levels of freight rates in recent years, stimulated by increased trading resulting from the economic development of China and to a lesser extent India. Finally, it should be noted – and Italy is a case in point – that countries with a preponderance of short-sea/domestic shipping companies may not be greatly interested in flag-neutral schemes as they are unlikely to benefit from shipping companies relocating from non-EU countries.

This position is supported by the fact that insofar as second registries and the increase in EU country managed and controlled vessels provide economic impact via the maritime clusters that exist in all EU maritime countries then there will be extra benefit. Moreover, it is persuasively argued, on a priori grounds and some anecdotal evidence, that a flag link is not only unnecessary, but such a linkage would, in the case of some EU countries at least, lead to a smaller positive economic impact as management companies currently locating in the EU countries concerned – to benefit from the tonnage tax advantages – would be *dissuaded* from locating their management companies in the EU.

The study has further concluded that the arguments in favour of establishing a *direct employment link* within MSA schemes, such as tonnage tax schemes, are not conclusive. *There is no prima facie case for such a direct linkage*. This position is based on three arguments.

First, it is not the objective of business economic activity to create employment. The aim is to generate revenue. How much employment will be generated will depend initially, in the shipping enterprises concerned, on the capital/labour and output/capital ratios. Further employment will be generated indirectly via 'employment multiplier' effects, i.e. via the maritime industrial cluster.

Second, the introduction of such a link would remove the flexibility from the employers and, in any event, the attribution of the employment supposedly created would be very difficult to establish.

In addition, when the overall employment impact of state aid is assessed, taking into account the employment impact on the whole maritime cluster, as well as on simply the shipping industry, there is a *wider employment gain*. Though this gain does not involve current seafarers it should be considered as a benefit from maritime state aid and a potential future benefit to seafarers finding employment in other maritime cluster industries.

8.2 Recommendations

The following recommendations are made.

The principal recommendation arising from the study is that it is necessary and possible, in principle, to ensure that the various maritime aid schemes in existence – and any future aid schemes – are able to be monitored and assessed by a common methodology applied uniformly across the EU.

This will assist in ensuring that the various national MSA schemes represent a cost-effective approach to securing the objectives set out in the MSA Guidelines, revised in 2004. This Assessment and Monitoring Form (AMF) will enable both the European Commission and Member States (and, indeed, the maritime industries) to have a measurement of **attributable economic** impact on an objective, on-going basis. This should prove a cost-effective methodology to assess the impacts of the various aid measures on both the shipping industry and the associated clustered industries, as defined in this report.

R.1. It is proposed that the AMF mechanism should be operated in the form of an Excel spreadsheet, covering all MSAs and their primary and secondary economic impacts, assessed against the costs of the aid schemes. This will assist in ensuring that the various national MSA schemes represent a cost-effective approach to securing the objectives set out in the MSA Guidelines, revised in 2004.

R.2. It is proposed that – unless and until the suggested new system is proven and capable of being used by all EU maritime countries – the new scheme should not replace the current monitoring procedures, even if these are viewed as being less than perfect. The current and the new reporting systems should run side by side – on an experimental basis – for the time being, and at least until after the review in 2007.

R.3. **It is proposed** that the AMF mechanism should, eventually, be operated on an annual basis as a monitoring mechanism, once it has been established in a robust form.

R.4. It is proposed that the European Commission should use – once validated – the AMF mechanism to establish a database and evaluation mechanism covering all national maritime state aids.

R.5. It is proposed that further work should be commissioned in all Member States that have not already done so to establish both maritime cluster relationships and to evaluate, via econometric studies, the economic impact of maritime state aids. The cost could be shared between the Member State and the European Commission.

10. ANNEXES

Annex 1. Terms of Reference

1. OBJECTIVES RELATING TO CLIENT NEEDS

The *objectives* of the Study are:

- To examine critically the compendium of Member State measures permitted under the 1997 Maritime State Aid Guidelines, over the period up till 2004
- To assess the above measures in relation to their objectives under three main headings:
    - Promotion of European Flags
    - Promotion of Sea Profession in the European Union
    - Promotion of European Maritime industries and clusters
- To draw conclusions and recommendations for the future measurement and monitoring of the impact of the measures permitted under the Guidelines, based on the findings of the study. The principal recommendation will be on a reporting mechanism which will enable the European Commission and Member States to assess the impact of the various aid measures/schemes throughout the period until 2010

2. APPROACH TO THE STUDY – Outline Work Programme

2.1 Information Survey

It will be useful first to examine the baseline position in 1997 in relation to the three impact areas to be assessed. The latest 2004 'edition' of the Guidelines C(204)43 published (2004/C13/03) contains extensive summary information on the impact of the actions taken in line with the 1997 Guidelines and obtained from Member States.

However, the report on the 1997 Guidelines produced for the European Commission services in 2002 by Clifford Chance will form a more detailed basis for commencing the work of this study. Advantage will also be taken of the existence of a database on maritime state aids held by DG TREN and of the Study on the "Economic Impact of Maritime Industries in Europe" carried out for DG ENTR by "Policy Research Corporation NV & ISL". Finally there may be public reports on maritime aid schemes, e.g. tonnage tax, carried out in member States, and which will assist this study.

Work Technique. This work package will be accomplished by desk research and discussion with DG Tren on the database of maritime aids.

2.2 Position on Maritime State Aids

It will be important to recognise that, in the maritime sector, any provisions on State Aids are essentially derogations, from a general prohibition of such aids, to deal with damage being caused to European Union industries or commercial activity by non-EU industrial or commercial activities. The impact of distortive third country commercial practices – influencing negatively the size of the European flagged fleet - was the reason for the initial introduction in 1989 of the Guidelines for maritime state aids, continued in modified form in 1997. This position will be clearly set out in the Introduction to the study.

2.3 Work Technique.

This work package will again be based on desk research and the knowledge already possessed by the study author.

3. ECONOMIC ASSESSMENT

The study will deal, particularly, with the economic issues relating to the impacts of the various national aid measures involved and permitted under the Guidelines, specifically in relation to the three headings in 1.1 above (2nd bullet point).

The economic impact assessment will address a number of specific issues relating to the three headings. These are:

- Whether there is evidence of a significant economic impact of State aid, and, in particular, 'flag-neutral' State aid, going beyond the shipping industry to the associated maritime industries cluster.

- Whether there is evidence of a significant economic impact of tonnage taxes, in particular 'flag-neutral' ones, on the EU seafaring profession (promotion of employment for EU nationals as officers and as ratings)

- Whether there is evidence of a significant impact of tax/social security contributions exemptions/reductions for seafarers on the EU seafaring profession (promotion of employment for EU nationals as officers and as ratings on EU ships)

As a result of this analysis a framework for monitoring and assessing the impact of the state aids permitted under the revised state aid guidelines will be provided in the form of an Assessment Framework Document. This will enable both Member States and the European Commission to have an on-going indication of the effectiveness of the various forms of maritime state aid provided.

Work Technique. This work package will entail desk research; face to face interviews; telephone interviews, and expertise from study partner (Flemish Maritime Administration). All appropriate European level representative organisations will be interviewed, e.g. ECSA, ETF.

4. INNOVATION

A number of previously undefined aspects relating to the assessment of maritime state aids will be explored in the study. These will include: a broad economic impact assessment of the types of aid measures employed by Member States; a definition of the extent of the maritime cluster to be considered for economic assessment purposes; a definition of the EU sea profession which takes account of employment outside the EU, but which may be regarded as benefiting the EU, and the development of a framework for assessment (the *Assessment Framework Document*) to be used by Member States and the European Commission for the on-going monitoring and measurement of the economic benefits of maritime state aid schemes.

Annex 2. Outline of Draft Assessment and Monitoring Form

The aim of this AM Form is to set out, in an Excel format, a standardised approach to measuring the impact of EU Member State maritime state aids on shipping industry turnover and then on to the turnover of the relevant linked maritime cluster industries. In addition employment multipliers are used to indicate the employment impact of the aid, via the impact on turnover, in the shipping industry and the other maritime cluster industries.

The various parameters have been derived from the Finnish situation, but reference to other countries, e.g. Denmark, suggest that the factors may not be unduly optimistic. Hence, the remainder of the EU maritime industries are likely to be subject to similar parameters.

The Form will need to be elaborated and designed properly before it could be used, but the aim here is merely to suggest a methodology and a rough format.

SEE ATTACHED EXCEL FILE

Annex 3. List of Face to Face Consultations

Maritime Administrations

1. Discussions with the Dutch Sea Transport Division – Mr Henk Merkus et al
2. Discussions with UK Ministry of Transport – M/s Theresa Crossley; Mr David Rowe; Mr Donald Stark.
3. Discussions with UK Treasury – Mr Philip Donlan
4. Discussions with Flemish Maritime Administration (AWZ) – Mr Yvo Peeters

Stakeholders

1. Discussions with European Shipowners Association (ECSA) – Mr Alfons Guinier and Mr Christophe Tytgat (Danish Shipowners)
2. Discussions with British Chamber of Shipping – Mr Mark and Mr David Asprey
3. Discussions with Swedish Shipowners Association
4. Discussion with German Shipowners Association
5. Discussions with European Transport Workers Federation (ETF) – Edourda Chargas
6. NUMAST (UK Merchant Navy Officers Trade Union) – Peter McEwen and Alan Graveson
7. Various EU Regional Governments and Maritime Administrations
8. AMRIE Members - various

Annex 4. Theoretical Observations and Other Comments

Theoretical Observations

Given the scope of the study it is *assumed* that there are already established *prima facie* grounds in the structure and functioning of the international maritime sector which justify EU action to counter unfair or discriminatory practices in international shipping markets. This assumption will be necessary to keep the main focus of the study on the attempt to develop a mechanism for measuring the impact of MSAs, assumed to be the principal determinant of the enhancement of the shipping industries in the various EU countries.

It should be noted that strictly the assessment should require a multi-variate analysis, taking account of all factors affecting the development of the shipping industries. Neither the resources made available nor the terms of reference of the study permit should an exercise. Instead a number of ex ante assumptions have been made – including assuming the state of the international shipping market as a parameter rather than as a variable. It is not believed that these assumptions will invalidate the main results and conclusions of the study.

International versus Domestic Shipping. It is possible to categorise Member States into those whose fleets have a substantial international trading focus and those whose primary activity lies in regional shipping activity. It is to be expected that the former will be more supportive of tonnage tax regimes and other forms of maritime state aid than the latter who are less exposed to international competition. The corollary of this difference in focus is that the impact on EU-controlled fleet development will be greater in those Member States that are more internationally oriented in their activity. Indeed it could be argued that the shipping industry could be segmented into domestic shipping and international shipping activities. However, it should be appreciated that some large EU companies cover both domestic and international shipping activities. Moreover, domestic, i.e. short sea shipping, is also subject to competition from ships and shipping companies based outside the EU.

The Spread of Tonnage Tax Schemes. There is evidence that the adoption of tonnage tax regimes is spreading not only within the EU, but also internationally, e.g. India and pressure in the USA for tonnage tax introduction. In the longer run this may lead *either* to a negation or a reduction of the positive impact on the fleets of EU member States who have adopted or who are adopting tonnage tax regimes *or* to self-defeating tonnage tax competition internationally. On the other hand it may be argued (as do ECSA) that as the main distortions in the international market arise from competition from so-called 'flags of convenience' states then the EU permitted maritime state aids are aimed merely at establishing a 'level playing field'. Hence, once this is achieved it is up to the individual EU-based shipping companies and industries to compete internationally.

'Flag Neutrality'. Both of these points may be reflected in the issue of whether or not tonnage taxes and other forms of maritime state aid should be *tied to EU flag registration*. The strongest resistance to flag linking comes from those Member States who are internationally oriented. It is strongly argued by those in the shipping industry that it is not the flag link which matters, but the impact on whether or not *EU fleets are controlled and managed within EU countries*, whether or not there is an EU country flag registration. This proposition will be examined.

Employment Linkage. There is an analogous issue relating to the suggestion by the seafaring trade unions that the tonnage tax should be *linked to employment creation*. Insofar as one of the objectives of EU policy is the expansion of employment such a linkage may seem superficially attractive. However, against this two points can be made.

First, it is not the objective of business economic activity to create employment. The aim is to generate revenue. How much employment will be generated will depend initially, in the shipping enterprises concerned, on the capital/labour and output/capital ratios. Further employment will be generated indirectly via 'employment multiplier' effects, i.e. via the maritime industrial cluster.

Second, the introduction of such a link would remove the flexibility from the employers and, in any event, the attribution of the employment supposedly created would be very difficult to establish.

However, this issue will also be examined in the study insofar as employment creation for EU seafarers is an intended objective of the maritime state aid schemes and, hence, of their assessment.

Definition of the Maritime Cluster. Any definition of the extent of the maritime cluster will be to a degree arbitrary, but this does not mean that a delimitation should not be attempted. The revenue and employment impacts of an increment in shipping activity revenue will eventually diminish to zero. The limit will be set partly on a quasi-legal basis in line with the DG Tren limitations imposed (e.g. excluding shipbuilding and associated industries) and partly on an assessment of where the economic impacts will be minimal (or even undetectable with conventional economic analysis).

It is also important to ensure that any definition of the maritime cluster should ensure that the industry grouping included in the cluster definition is comparable across the EU countries involved. The exclusion of shipbuilding and ship-repairing effectively achieves this objective and restricts the cluster to industries more 'directly economically contiguous' with the shipping industry.

Other Comments

Before going on the discuss briefly the categories of aid and their intended impact in relation to the objectives of the 2004 Guidelines and the terms of reference of this study, it is important to recognise the problems in the way of attempting to attribute benefit to the shipping industry and the wider maritime sector/cluster from state aids. (Some of the points made below in summary form are discussed in more depth in ***Annex 4****).*

First, there is the point that other factors / variables will influence the development of the shipping sector and its turnover, e.g. the prevailing levels of freight rates in the various markets. This will mean that only part of any increase in turnover can strictly be apportioned to the impact of maritime state aids. In the absence of an econometric, multi-variate analysis it will only be possible to select a percentage figure, say 50% as the attribution factor. Though in the mechanism suggested later in this report this percentage could be varied as a control factor.

Second, the initial impact of the introduction of state aid is likely to be greater than its subsequent impact. Hence, measurement of the on-going impact of MSAs is likely to be problematic.

Third, some state aids such as tonnage tax, where there is a significant reduction in the corporate tax burden on shipping companies is difficult to handle in analytical terms because it results in new companies coming into the country's tax field which otherwise would not be paying tax at all.

N.B. The measurement of the tonnage tax is therefore best estimated by calculating the annual tax revenue which would have been collected from the companies paying tax at the time of its introduction had the previous tax regime been in force; subtracting from that figure the turnover tax paid by these companies *and* that by the *new* companies paying turnover tax. This net figure is the annual cost of turnover tax.

Fourth, the problem of where to set the *baseline* year for measurement. A baseline is necessary because otherwise it will not be possible to establish the association between the allocation of state aid to the shipping companies and the subsequent change in shipping industry turnover. The most suitable baseline will be the introduction of a significant amount of state aid, e.g. the introduction of the UK tonnage tax or the Swedish exemption from payroll tax.

Fifth, some assumption will have to made as to when the impact of the state aid occurs and when it is exhausted. In the suggested mechanism it is suggested for simplicity (but again the assumption could be varied – pending any full-blown econometric analysis – in the mechanism) that the impact of aid in year n takes place in year n+1 and is exhausted in that year.

Sixth, a relationship will have to be established between any change in turnover of the shipping industry and that of the maritime cluster (as defined). This aspect is discussed in **Section 4** below. Strictly, the relationship should be the *marginal* relationship, though here it may be that there is no substantial difference between the marginal and the *average* relationship which can be more easily estimated.

Seventh, multiplier relationships are also required between turnover in the shipping industry and in the maritime cluster industries and employment in the two industries. Again the point about average and marginal is relevant.

Summing up, we need to establish a number of coefficients to represent the relationships indicated above. These include: the % attribution factor for the cost of state aid related to the subsequent change of shipping turnover in the following year; the turnover multiplier between the shipping industry and the maritime cluster industries; the two employment multipliers for the shipping industry and for the cluster industries. In addition, a baseline year will have to be selected for each country. Finally some agreed methodology for dealing with tonnage tax cost calculation will need to be agreed (as suggested above).

There appears to be some perceived ambiguity concerning the Guidelines in some countries – principally relating to the fiscal authorities – as to whether there is to be flag linkage or not in tonnage tax schemes. In fact, the position is clear that the choice of wheter to flag link or not rsts with the Member State. The Guidelines do not force a choice, though they do encourage flag linking and flag-neutral schemes are constrained by the 60% flag fleet criterion.

Though as indicated above there is no strong argument for employment linkage with MSA schemes consideration should certainly be given to linking training and particularly professional development to say tonnage tax schemes.

Insofar as the benefit of MSA schemes are shifted ‘forward’ on to maritime cluster industries such as ports and ports services as defined in this study then they should not be held to be shifted ‘backwards’ to any degree, i.e. to shipbuilding.

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Annex 6

Select Committee on Transport Written Evidence, Feb 2005

Memorandum by Dr Heather Leggate (TT 02)

TONNAGE TAX AND EMPLOYMENT UK SEAFARERS

Introduction

One of the fundamental objectives of the tonnage tax was to reverse the decline not only in the UK fleet but of the level of UK seafarers on board UK registered vessels. The tonnage tax has undoubtedly succeeded in attracting a considerable amount of new tonnage onto the UK register, but its achievement in relation to the employment of UK seafarers can be seriously questioned despite its link to recruitment. Under the legislation, for every 15 posts in the effective officer complement for the ships qualifying for the tax, the company shall provide training on a relevant course for not less than one eligible officer trainee each year. There is however, an "opt out" for the company by making a payment in lieu of training (PILOT) calculated by multiplying the number of months when they should have been training by £550. However, the number of UK cadets recruited and trained has been much less dramatic, rising from 480 in 2000 to 603 in 2002. This situation has been exacerbated by the fact that the training does not appear to lead to eventual employment on those vessels. Indeed this analysis demonstrates that the legislation has lead to a sustained proportionate increase in the employment of non-UK seafarers.

Table 1

TONNAGE TAX VESSELS 2000-04

Year	*No. of Tonnage Tax Vessels*	*Of which UK Register*	*% UK Register*
2000-01	187		0%
2001-02	522	300	57%
2002-03	718	337	47%
2003-04	490	263	54%

Note that the 2003-04 figures are based on returns from 49 out of the 64 companies registered in that year.

Since 1 August 2000 (when the tonnage tax came into force), the number of vessels electing for this form of tax assessment increased steadily in the first two years reaching a peak of 718 vessels in 2002-03. As can be seen in Table 1, not all of these vessels were flying the UK flag since the legislation allows a tonnage tax election based not on registration but on vessels "strategically and commercially managed in the United Kingdom". In other words, there is no guarantee that the vessel will register under the UK flag, or, having done so, remain within the register. The tonnage tax initiative has caused an influx of various foreign shipping companies establishing strategic and commercial control of on shore operation. They are often run by UK based ship mangers who assist foreign owners to set up their UK based operations. It should be stresses that this is part of the long-term trend, which began in 1970s but has been much accelerated by the introduction of the tonnage tax legislation. Registration does however fulfil that criterion and therefore the percentage of such vessels flying the UK flag has consistently been around 50% over the last three years.

Table 2

SEAFARERS EMPLOYED ON TONNAGE TAX VESSELS

Year	*Officers*	*UK*	*Other EEA*	*Other*	*Total*	*Ratings*	*UK*	*Other EEA*
Other	*Total*							
2000-01	896	40	187	1,123	449	19	455	923
2001-02	3,204	212	1,201	4,617	1,681	176	2,909	4,766
2002-03	2,858	533	1,444	4,835	1,977	632	3,578	6,187
2003-04	2,265	490	2,589	5,343	1,870	263	3,858	5,991

Note that the 2003-04 figures have been grossed up based on returns from 49 out of the 64 companies registered in that year.

Table 2 shows the number of seafarers employed on vessels electing for the tonnage tax categorised by nationality groups. It can be seen that the numbers increased dramatically in 2001-02 reflecting the increased number of vessels. The total levels of employment continued to increase steadily over the next two years. It is interesting to note that the combined number of non-UK seafarers exceeded that of UK residents in 2003-04 and that since 2001-02, the latter has been falling. Table 3 converts these figures into an index.

Table 3

INCREASES IN EMPLOYMENT (2000-01=100)

Year	*Officers*	*UK*	*Other EEA*	*Other*	*Total*	*Ratings*	*UK*	*Other EEA*
Other	*Total*							
2000-01	100	100	100	100	100	100	100	100
2001-02	358	530	642	411	374	926	639	516
2002-03	319	1,333	772	431	440	3,326	786	670
2003-04	253	1,224	1,384	476	417	1,382	848	649

The total employment of officers has increased by 4.76 over the period. However analysis by nationality group reveals that the most dramatic impact has been in the employment of Other seafarers which has increased by 1,384% compared to 1,224% in other EEA and 253% in UK officers. Employment of UK officers reached its peak in 2001-02 although the number of tonnage tax vessels continued to rise. This change in trend has meant a profound redistribution of the nationalities as shown by Table 4.

Table 4

DISTRIBUTION OF SEAFARERS BY NATIONALITY

Year	*Officers*	*UK*	*Other EEA*	*Other*	*Total*	*Ratings*	*UK*	*Other EEA*
Other	*Total*							

2000-01	80%	4%	17%	100%	49%	2%	49%	100%
2001-02	69%	5%	26%	100%	35%	4%	61%	100%
2002-03	59%	11%	30%	100%	32%	10%	58%	100%
2003-04	42%	9%	48%	100%	31%	4%	64%	100%

In 2000-01 80% of the total number of officers employed on tonnage tax vessels were UK resident. This proportion has declined significantly over a three year period to a mere 42% by 2003-04. The benefits of this have been felt by other non-EEA officers, which have increased from 17% to 48%. The proportion of other EEA has remained reasonably constant. Thus the benefit has been largely enjoyed by non-UK officer groups whose employment position has increased threefold. The distribution of ratings although exhibiting a similar trend has not been so dramatic. UK ratings now represent 31%, decreasing from 49%. The other non-EEA have increased to 64% from the same 49%.

Table 5

EMPLOYMENT PER TONNAGE TAX VESSEL

Year	*Officers*	*UK*	*Other EEA*	*Other*	*Total*	*Ratings*	*UK*	*Other EEA*
Other	*Total*							
2000-01	4.8	0.2	1.0	6.0	2.4	0.1	2.4	4.9
2001-02	6.1	0.4	2.3	8.8	3.2	0.3	5.6	9.1
2002-03	4.0	0.7	2.0	6.7	2.8	0.9	5.0	8.6
2003-04	3.5	0.8	4.0	8.3	2.9	0.4	6.0	9.4

It follows logically that employment of UK seafarers per tonnage tax vessel shows a decline from 4.8 in 2000-01 to 3.5 in 2003-04 following a peak of 6.1 in 2001-02. Conversely there has been a significant rise in the number of other non-EEA officers per vessel from 1.0 to 4.0.

The analysis highlights the relative reduction in the number of UK seafarers employed on qualifying ships under the tonnage tax legislation and a definite preference for seafarers of other non-EEA nationalities. Since part of the rationale for the establishment of the tonnage tax was to stem the decline in the number of UK seafarers, this is a disturbing state of affairs. As the Alexander Report states: "The Department of Environment, Transport and the Regions concludes on balance that the economic case for the tonnage tax is sound. The key to revival of the industry is seen as more UK direct ownership of shipping leading to more training of UK seafarers especially officers, with consequent substantial benefits to the shore-based relates industries. It is envisaged that there would be more registration of vessels here which is not part of the economic case but is likely in turn to increase the employment of both officers and ratings" (Report by Lord Alexander of Weedon QC paragraph viii).

The introduction of the tonnage tax legislation recognised the need to invest in UK seafarers as a method of ensuring a necessary level of maritime expertise within the UK economy. It is clear from this analysis that, although cadet numbers have marginally increased, employment of UK seafarers on the "Tonnage Tax Vessels" has declined. If the legislation is seriously aimed at the increase in UK based seafarers, there is clearly a case for establishing a method whereby these cadets are able to secure stable employment within the UK fleet.

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June 2004