`INCREASING SHIPPING SKILLS IN THE UK: 'BURSTING' THE INDUSTRY 'MYTH' OF 'DIMINISHING INTEREST'

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Abstract

In recent decades, the UK has experienced a significant decline in the numbers of qualified officers which poses a threat to the British shipping industry and the wider maritime sector. Efforts by the state to change this situation, primarily through the introduction of a tonnage tax regime incorporating a training commitment, have brought little success as cadet intake levels remain low and drop-out rates increase. This paper examines the apparent failure of state intervention in relation to stated objectives to increase officer numbers. It considers the perspectives of employers/ training sponsors, staff working at training colleges, and cadets themselves, in an effort to understand why the training commitment associated with the tonnage tax has failed to significantly increase the pool of UK officers.

Introduction

Over the past three years I have been writing a thesis on some of the issues related to globalisation and state strategy in shipping. My big question in this thesis is how the state responds to some of the negative aspects of economic globalisation. I have been particularly looking at the loss of fleet and merchant navy officers, especially junior officers, in the UK and considering what the state has done to mitigate the negative impact of globalisation on the industry and the wider maritime sector.

In recent decades, there has been a drastic decline in shipping skills in the UK due to reduced training levels and increased officer 'wastage' rates. This has left a shrunken and ageing pool of British officers working at sea (BIMCO/ISF, 2005). The impact of this decline has been extensively analysed and discussed by many people (Pettit et al, 2004; Selkou and Roe, 2002; Leggate, 2004; Brownrigg et al, 2001), who have argued that the reduction in the available pool of officers poses a threat to the future of the British maritime sector as a whole, because seafarers supply essential skills to the shore-side maritime 'cluster' of firms (Gardner and Pettit, 1996, 1999).

In response to these concerns the UK government introduced a range of measures associated with a 'tonnage tax' regime aimed at increasing the pool of UK seafarer

officers. The strategies introduced by the government in 2000 for the recovery of UK shipping have not been as successful as originally projected however, particularly with regard to increasing the training and output of qualified UK junior officers. It was projected that within five years of the introduction of the tonnage tax, intake levels would have increased to 1200 cadets per year (Gardner and Pettit, 1996), but by 2005 the annual intake stood at about 600 with a cadet cohort wastage rate of between eight and ten percent (UK Seafarers Analysis, 2005).

In this paper, I mainly want to focus on questions relating to the diagnosis of the problem and the adequacy of the tonnage tax as the main strategy for the recovery of shipping skills in the UK. There is a sharp difference in opinion between shipping companies on one hand, and the training establishment on the other, regarding the reason for the failure to increase the number of qualified British junior officers. I will assess the various claims on both sides with the aim of determining the actual cause of the problem of low training and output levels in British cadet training colleges.

Methods

Over a period of twelve months, between January and October of 2006, I collected a large amount of data through semi-structured interviews, policy document analysis, and secondary data analysis as part of my PhD project. I Interviewed the Human Resources and Operations Managers of UK based Shipping companies; training agency managers and administrators; cadet college administrators and training staff; and ex-cadets. I also interviewed industry commercial and policy representatives as well as policy officials in relevant government departments and seafarers' union officials. I gathered important information through an extensive analysis of relevant government policy documents and analysed existing statistical data from various sources including the Department for Transport, *World Fleet Statistics*, and the Seafarers International Research Centre.

The data I am using in this paper is mainly interview data collected as follows:

- 25 Human Resources or Operations Managers from 25 UK-based shipping Companies
- Training administrators from 2 cadet colleges
- 4 training company managers
- 15 ex-cadets

The UK Tonnage Tax

The shipping industry in the UK declined steadily between the 1970s and the late 1990s. The UK registered fleet fell from 33 million GT (3,822) in 1975 to 3.4 million GT (1,391 ships) in 1999 (*World Fleet Statistics*). The number of officers dropped from 28,000 in 1980 to 7,000 in 1998 as estimated by the UK Chamber of Shipping (CoS) and reproduced in *Charting a new course* (see also Brownrigg et al, 2001). Cadet intake levels also fell from around 4,500 in 1970 to less than 1000 in the late 90s.

By the mid 90s it was clear that this decline was threatening the entire maritime sector. The decline in the UK fleet combined with the decline in the number of qualified British officers threatened the shore-side maritime cluster of firms which rely on the flow of essential technical skills from the sea to the shore. Certain technical shore-side operations like ports and harbours, ship surveying and insurance, ship management and maritime law require people with seafaring skills and experience (Gardner and Pettit, 1996; 1999). The possibility that some of these firms would close down, and others shift their operations overseas, as a result of a skills shortage, was high hence urgent measures were needed.

The introduction of the UK tonnage tax was, therefore, a response to this general decline and was meant to represent a long-term recovery strategy for both UK registered tonnage and the seafarer skills base. It was designed to achieve three main objectives: To encourage the growth of the UK registered fleet; to encourage cadet training with the aim of increasing maritime skills; and to promote the growth of the shore-side cluster of maritime related industries.

In order to encourage the growth of the UK fleet the tonnage tax was offered as an alternative and more attractive method of calculating corporation tax based on a company's actual operating tonnage per day rather than the company's total profits and chargeable gains. In this way it was meant to attract ship-owners because they would end up paying much less tax, it would be more user-friendly; it would create an investment friendly atmosphere for ship-owners, and offered more predictability than the normal corporation tax.

To encourage cadet training and boost the maritime skills base, a unique minimum training commitment was included in the UK tonnage tax system whereby all participating companies are required to undertake to train at least one UK cadet for every fifteen officer positions on board each of their tonnage tax vessels every year. An 'opt-out' window was provided which allows companies to make a payment of £550 per un-provided cadet position per month instead of undertaking the actual training. This money goes into funding career promotional activities jointly sponsored by the government and industry. As a result of this commitment, it was projected that within the first five years of the introduction of the tonnage tax, annual cadet intake levels would have increased to 1200 which represents the minimum level required to maintain the maritime skills base (British Shipping: Charting a New Course, 1998).

A third element built into the tonnage tax and meant to boost growth in the shore-side maritime cluster was the requirement that all participating vessels be 'strategically and commercially' managed in the United Kingdom. This would mean that, with every company entering the regime, there would be some growth in the UK's shore-side maritime cluster of maritime related firms.

Performance evaluation of the strategy, by the Department of Transport and the Inland Revenue four years after its introduction, showed positive scores on all but one of the three main targets. With regard to increasing the fleet and the shore-side maritime cluster the strategy was shown to be successful. According to the Department of Transport (DfT) data, the number of vessels participating in the tonnage tax steadily increased from 134 in 2000 to 816 in 2005 and, because of the 'strategic and commercial management location' requirement, many British and foreign companies participating in the tonnage tax regime had relocated a significant amount of their ship management operations to the UK. It must however be remembered that until the 1st of April 2006, this increase in tonnage tax vessels did not necessarily mean an increase in UK flagged tonnage since the regime allowed companies the option of retaining vessels on foreign registers while operating under the tonnage tax. With the enactment of a law requiring that all new tonnage entering the scheme must be EU registered (EC, 2004; Leggate and McCoville, 2005), it is expected that the UK national register will grow quickly. Already, by June 2004, there had been a big positive response in this direction

with the UK registered fleet increasing from 5,531GT in 2000 to 11,122 GT in 2004 (*World Fleet Statistics*).

Unfortunately, with regard to increasing the number of qualified British junior officers, the strategy has not been as successful as initially expected. This is in spite of the fact that, according to my research data, all the tonnage tax participating companies are either directly recruiting and training UK cadets or making the required payment in lieu of training under the minimum training commitment. Cadet training levels are still far less that initially projected and the number of qualified British officers has continued to decline. According to the UK Seafarers Analysis (2005), the number of all UK officers rose from 15,190 in 2002 to 16,850 in 2003 but then declined to 16,150 by 2005 while future projections show that, at the current rate, by 2021, the number of officers will have dropped to 6,190. Furthermore, although annual cadet intake rose by about twenty percent, from 450 in 1997 to 540 in 2005, the general output for qualified junior officers remains low.

Low Officer Output Levels

One of the main objectives of my thesis is to determine why the government strategies have failed to increase the output of qualified British junior officers and, during my research, I came across a number of views from different interest groups including the corporate industry, largely made up of shipping companies and training agencies, the training establishment comprising mainly of training colleges and the cadet view.

(i) *The Corporate View*

Many of the managers in the corporate shipping industry presented the view that declining interest in seafaring careers among British youth was the reason for the low training output and the failure to increase the number of officers in the UK. The majority of shipping company Human Resource Managers and training agency personnel I interviewed strongly argued that British people no longer wanted to go to sea because seafaring no longer had anything to offer them, as a career, as the following interview extract reveals:

> I can't see very much to attract British people to go to sea; the wages are not that good, and that is not going to get any better any time in future because

> shipping companies can't afford it. I see nowadays that there are many, much better career options for British youth ashore…. What we want them to do is a very difficult job under difficult conditions… [Company Interview 6]

Some supported this argument with accounts of difficulties in attracting young people to their training programmes and argued that young British people preferred careers ashore. This, according to many was greatly frustrating their efforts to fulfil their training obligations under the tonnage tax system. One Manager explained:

> It is difficult, I tell you, and it is frustrating. Getting people who want to join the merchant navy is proving to be very difficult. It seems that most of our youth would prefer careers ashore rather than go to sea and maybe one can understand but it is hurting our efforts to recruit British cadets [Company Interview 17]

In addition to this problem of attracting the youth to cadetships, the shipping companies and training agencies explained that they were facing problems arising from, what they described as, a lack of physical and academic capacity in cadets. Many of the managers participating in the study said that "the people who apply for cadet training nowadays are both too young and lack the academic aptitude necessary to successfully complete officer training" [Company Interview 10]. This, they argued, presented two problems: first, it made the selection process difficult because, as one training agency manager explained, "there are not enough good quality applicants to pick and choose from" [Agency Interview 13] and, second, they lack both the physical and academic capacity to withstand the strenuous and demanding training. One training agency manager explained:

> The people we are taking now are very young and because there has been a gradual lowering of university entry points, we are forced to lower ours so that many of the candidates are hardly equipped physically and/or academically to manage the strain of the course [Agency Interview 9].

The general argument from the corporate industry, therefore, seems to be that the number of people interested in sea careers has decreased drastically so that it is not easy to recruit enough cadets to meet companies' minimum training obligations and, moreover, the few that are available are not of the right quality and are therefore likely to drop out of training before completion.

Not all shipping companies and training agencies, however, supported this argument. Some explained that they were able to get enough cadets through active advertisement

and promotion of their training schemes to the youth. One company manager, for example, dismissed the 'lack of interest' argument and explained that:

> Everything needs hard work, a lot of hard work. So, you can not sit and expect good cadets to come to you. We go out, work hard and get the cadets and we don't complain [Company Interview 5]

Also disagreeing with the argument, the Managing Director of one of UK's major training agencies pointed out that:

> There is no evidence to suggest that young people are not interested in these cadetships, I must say that each year we are inundated with applications; we are receiving an average of 3000 enquiries each year, I don't see that as a sign that young people are not interested [Training company manager]

This divergent corporate view seemed to support that of the training establishment described below.

(ii) *The training establishment view*

According to staff in training colleges, the problem is not in attracting people. My training college staff interviewees explained that, judging from intake levels in recent years, many people in the UK are still interested in sea careers: One college staff explained:

> There are many people in Britain still interested in seafaring careers….the traditional seafaring areas like Liverpool, Glasgow and Southampton still continue to generate a lot of interest in the profession….Numbers wise, in the last three to four years, we have had no problems, we have done very well [College Interview 28].

Another college administrator explained:

> We have not failed to bring people in, I don't think that is where the problem is; I think that there needs to be measures to ensure greater retention; to ensure that most of the cadets actually complete their training [College Interview 15].

Some of the other problems identified by college staff and administrators included declining awareness of seafaring careers, declining academic quality of applicants, and the age of most cadets, which they thought was too young. According to these interviewees, such issues have a considerable impact on overall cadet output because

they contribute to high rates of cadet wastage. With regard to academic aptitude one training administrator said:

> This is a big problem; many of the cadets simply do not have the academic capability for the course and it is something that has to be considered seriously because it inevitably affects output and the general quality of officers that come out of the system [College Interview 15]

Concerning age, the main problem as identified by employees of training colleges, seemed to be one of difficulty adjusting to the training environment on the part of cadets, but also difficulty with some of the training content, especially practical training at sea. In contrast to the corporate view where these issues were presented as indicative of a characteristic of society which makes it difficult to recruit and train cadets, training college staff viewed them as issues which could be easily overcome with the right amount of support from sponsoring companies and their training agents. One college cadet officer explained:

> Age becomes a problem when there is no proper support for the cadets. Some are clearly too young and it shows from their physical build and their behaviour… In college we can handle the discipline part but out there at sea some senior officers do not have the patience… These are the ones who cannot complete the course, it [age] is not such a big problem, I don't think [College Interview 15]

Declining awareness of shipping and seafaring among many people in Britain was one of the main issues raised by training staff and administrators in colleges. They argued that because of the many years of decline in shipping and cadet training in the UK, knowledge about seafaring had diminished so that the new generation was unaware of shipping or the careers it offers:

> Not many of our young people know anything about shipping of seafaring, we occasionally run quizzes on line and in schools to try and find out how much young people know and to increase their awareness, but it is amazing how little of what goes on in shipping that even adults know nowadays [College Interview 28]

With regard to whether young people did not want seafaring careers the college administrator wondered "how do you become uninterested in what you do not know?" [College Interview 28]

What I found was, therefore, a situation whereby shipping companies, who are both the training sponsors and potential employers of British junior officers, and some of the

training agencies argued strongly that British youth are no longer interested in sea careers and presented this argument as the explanation for the fact that the tonnage tax has not been successful in increasing the output of qualified British junior officers. The training colleges on the other hand identified high cadet wastage rates as the main problem rather than recruitment. Evidence from the data overwhelmingly supports the latter argument. Statistics show that there has been a significantly positive response with regard to intake levels since the introduction of the tonnage tax, but there is also overwhelming evidence from other studies, like BIMCO/ISF Manpower survey and the UK Seafarers Analysis, to support the claim by college staff that cadet dropout rates have been on the increase. The important question, therefore, is why dropout rates are high?

Data from industry managers suggest that because most of the people being admitted into cadet programmes in recent years are both too young and lack essential capacity, they are unable to withstand the strain of training and therefore end up dropping out. The college training administrators and staff, on the other hand, argue that cadets withdraw from the programme prematurely because their sponsoring companies fail to give them the necessary support; both material and emotional.

Cadet data becomes important here because the cadets are in the unique position of being able to explain why they may choose to terminate their training prematurely. In order to shed further light on my findings, I therefore specifically sought out, and interviewed, ex-cadets.

(iii) *The Cadet View*

In my interviews with cadets I explored the various factors influencing their decision to withdraw from training. In their accounts many highlighted poor support, (financial and emotional) when confronted with difficulties with course content and the tough life at sea, a lack of adequate facilities in colleges, inadequate on-board training, abusive and insensitive senior officers during sea-time, and inappropriate deployment of cadets while training at sea.

Experiences on board were described as particularly influential in decisions to drop out of training. Many of the cadet accounts indicated an unsupportive and insensitive atmosphere on-board their training ships. They described cases where their training

officers and other senior personnel on-board treated them with impatience and lacked tolerance in their approach. One such account came from a cadet who was experiencing difficulties with some of the tasks he was required to do by his training officer:

> I did not enjoy the training, especially at sea… it was hard work and I did my best but the chief officer kept threatening to send me away…that I was lazy. When I complained to the training company they just did nothing, not even respond [Cadet Interview 3]

Some of the interviewees suggested that their companies took advantage of their presence on-board to cut down crewing costs because they treated them as a supply of extra free labour. About the nature of work on-board, one cadet explained:

> I expected that I would be assigned to various officers in different sections at different times to work with, practice skills and be assessed accordingly, but no. … I realised that I was there just as part of the crew; cleaning and scraping most of the time. When I approached the training officer about it he got very cross saying that I was arrogant [Cadet Interview 6].

There are similarities between these two accounts but, perhaps, the most important common element is the lack of support and concern which, would, probably, have left the cadets feeling 'cornered' and helpless. In both cases the cadets tried to seek support within the training structure but received none.

Accounts of lack of support and subsequent frustration, on the part of the cadet, were not only offered in relation to the nature of the work. Many cadets narrated incidents whereby they had personal or family related problems but received no emotional support from the training management structure. In the following extract such a situation culminated in a decision to quit training:

> I had many problems after I started the training but it was clear to me that no one cared; my father died while I was away at sea the first time…the captain complained that I had overstayed when I rejoined the ship… I was really unfortunate because during the next sea phase I was told that my girlfriend had miscarried. This time I was told I could not go…when I complained to the training company they said if I left I should not come back… [Cadet Interview 9]

Another problem highlighted in the cadet interviews was the nature of the training ship on which the cadets are placed. In some of the interviews the cadets gave accounts of their experiences on-board what one described as "old run-down" vessels with neither decent nor adequate living facilities. Cadets who were placed on such ships found it

hard to adjust and cope with life at sea, especially if it was their first experience at sea. The following interview extract shows this:

> My first sea-phase was on-board an old, run-down, ship with the worst conditions, honestly, the accommodation cabins were few and horrible and we had to share; there were basically no decent facilities of any sort on board that ship, no entertainment, no communication, nothing!..... It was very hard for me [Cadet Interview 1]

Unfortunately it seems as if it is not always the case that a choice of training berths are available for cadets. One training agency manager explained that, in cases where sponsoring companies do not have any training berths available in their fleet, training agencies have to allocate cadets to any ships available and not all are always suitable.

However, not all the cadets who were interviewed found their training experience at sea unbearable; a few cadets described their sponsors as being very supportive and encouraging with the result that their training experiences were pleasant. One such cadet explained:

> My sponsoring company was good to me; I received a lot of support. It was three of us with the same company and we had direct telephone contact with a personnel person in the company itself and we were treated very well….I had to quit for personal reasons…. the other guys are still in training, going to the third year now. I might go back later; who knows... the company said they would consider continuing the sponsorship [Cadet Interview 6]

Once again a training agency staff provided an explanation for this. He said that some shipping companies had an established training structure which included an elaborate support mechanism for their cadets whereby the cadets could contact a training liaison officer with their problems. He also explained that such companies normally designated specific and suitable training berths on-board their ships and had an elaborate training structure on-board those ships.

Apart from factors directly related to the training arrangement and life at sea, the cadet interview data reveal yet another problem; one of career anxiety and uncertainty. The data reveal that many cadets are anxious about their future career prospects because they are aware of the diminished employment opportunities for British junior officers. Although this is not a problem that was cited as a major reason for quitting by many cadets, some of them said that it was something that they seriously thought about. A few

went so far as to say that it was one of the major reasons for their decision to quit as shown in the following extracts:

> I started hearing stories from other crews that the company was really bad and one senior officer….they said the company only employed foreigners, said I was wasting time if I expected a job with them, he said. I could not take the risk (Cadet Interview 10).
>
> People are talking about lack of jobs and, of course, it is discouraging…. I did not want to sit around and take chances [Cadet Interview 11]
>
> They say that there are no jobs for British officers, not anymore; everybody is talking about it and it is discouraging….. Companies are employing foreigners…..they claim that the British want too much money…. Too expensive….it is very discouraging….better to find something more promising [Cadet Interview 3]

In any case, it appears that, a decision to quit was influenced by a combination of factors and, from the data, it seems that all the cadets, apart from those who were given job guarantees by their sponsors, did consider their career opportunities with anxiety.

It seems, from the analysis of the various views above that the major issue behind high drop-out rates seems to be a lack of commitment by sponsoring companies and their training agents in relation to the active support and encouragement of cadets. In the words of one college administrator; "the companies simply don't care, as long as they have met their recruitment quota, they just don't care what happens to the cadets" [College Interview 15]. But the next question would be why companies are not providing the necessary support to cadets when they are committed, under the tonnage tax, to recruit and train cadets?

A Question of Demand

There is overwhelming evidence, in this study, that many UK-based shipping companies are not genuinely committed to train UK cadets and that this is linked to a lack of genuine interest in the employment of British officers; particularly *junior officers*. This lack of genuine commitment to train emerged in my interviews with many industry Managers. The general view was that British junior officers are much more costly than other available nationalities and that shipping companies were unable to afford their services. The following interview extract from one such manager sums-up

this argument and reveals the predominant company attitude towards cadet training among UK based shipping companies:

> We train alright but that does not mean very much… With or without British officers, ships will still sail and cargo will still move …I don't want you to get me wrong, I have nothing against training British officers but who is going to employ them? If we train then we should employ but we can't…it is just too expensive… I don't want to give young people false hopes… It is a sad situation, I agree, but that is the way of open markets…we must live with it [Company interview]

Another manager explained:

> The other nationalities are so much cheaper than the British and do the same job. We employ the Eastern Europeans because they are cheaper and can do the job. It is the only way we can make a profit and remain in business (Company Interview).

These extracts suggest that because companies consider British junior officers too expensive, they are not willing to employ them and, by extension, they see no great benefit associated with training British cadets. Employment is a key missing element in the design of the tonnage tax which, seemingly, triggers a 'chain reaction' which, ultimately, results in a discouraging training atmosphere for cadets and, consequently, high cadet wastage.

Many of the company managers I interviewed made it clear that they are in no position to guarantee employment to cadets in the face of constantly changing fortunes and growing costs and competition. The following extracts from an interview with a company manager echoed this wide-spread view. On the commitment to employ British junior officers he explained:

> That is a promise we cannot guarantee to keep and so we do not make the mistake of giving one. I honestly don't know of any industry in which companies promise and guarantee employment to trainees in …. The British are just too expensive to employ. (Company manager)

Perhaps the best illustration of the general company approach towards training and the underlying economic argument for this approach is given by this next extract from an interview with yet another company manager:

> I don't need to tell you that we are in business for profit and the competition is high… We cannot employ British officers, or any others for that matter, if it is not profitable for us…. If we begin with this position then, you see,

> there is really no need for the training because, what good is it…? [Company interview]

It therefore seems as if the shipping skills problem in the UK is primarily driven by forces of demand and supply. Because UK-based employers prefer employing foreign officers who are relatively cheap, the demand for British junior officers is low which also affects training since the employers are also training sponsors. Unfortunately, the tonnage tax strategy has only focused on the supply side, i.e. increasing cadet recruitment and training, without addressing the problem of demand. Unless UK seafarer employers begin to rely on British junior officers they will have no motivation to train and therefore will continue to show little commitment to support the training programme. The tonnage tax will therefore remain inadequate as a strategy for the increase in the pool of UK seafarers.

Conclusions

The discussion in this paper has shown that the idea that British youth do not want to work at sea is a 'myth' which serves to legitimise an unwillingness to train and employ British junior officers. There is overwhelming evidence in the data, especially the cadet interview accounts, to suggest that the problem facing cadets in training and resulting in poor officer output, is due to a general lack of support and attention for cadets from their sponsoring companies during training. This makes the training experience for many cadets unpleasant and leads to high dropout rates.

There is no evidence to indicate that people are not interested in the seafaring career instead, training college and agency staff interview data indicates growing interest in cadetships over the past five years and provide figures which dispute the mantra of 'diminished interest'.

The interview accounts of industry managers have, on the other hand, clearly shown that because operators are concerned with the cost of UK junior officers and have access to cheaper alternatives elsewhere, they are not taking the training commitment, associated with the tonnage tax, seriously. They, as the main training sponsors, are not actively and positively underwriting cadet training and have often failed to provide the necessary support and encouragement that cadets need during the programme.

The general conclusion therefore is that for the government to effectively address the problem of declining officers and increase training and output levels, they need to find ways of boosting demand for British junior officers on-board UK ships. This will not only restore society's confidence in the profession but also, and most importantly, give companies the commercial motivation to train UK cadets.

References

BIMCO/ISF, Manpower Update 2005.
http://www.marisec.org/resources/Manpower2005Update.pdf

Brownrigg, M., Dawe, G., Mann, M., and Weston, P. 2001. Developments in UK Shipping: the Tonnage Tax. *Maritime Policy and Management, 28(3), pp. 213 – 223.*

DETR. 1998. British Shipping; charting a new course. London: HMSO. http://www.dft.gov.uk/stellent/groups/dft_shipping/documents

Department for Transport and Inland Revenue, *Post Implementation Review of Tonnage Tax*, December, 2004 http://www.hmrc.gov.uk/consult_new/pir_tt.pdf

European Commission. 2004. State Aid Guideline to Maritime Transport.

Gardner, B. and Pettit, S. 1996. UK Requirement for People with Experience of Working at Sea: The Cardiff University Study, http://www.british-shipping.org/british/index.htm

Gardner, B., Pettit, S. 1999. The Land-Based Jobs Market for Seafarers; consequences of market imbalance and policy implications. *Marine Policy, 23(2), pp. 161 – 175.*

Glen, D., and Dowden, J., and Wilson, R. 2005. *United Kingdom Seafarers Analysis.* London: Centre for International Transport Management; The London Guildhall Study, http://www.british-shipping.org/british/index.html

Leggate, H. 2004. The Future Shortage of Seafarers: Will it become a Reality? *Maritime Policy and Management, 31 (1), pp. 1 – 13.*

Leggate, H and McCoville, J. 2005. Tonnage Tax: Is it Working? *Maritime Policy and Management, 32 (2), pp. 177–186*

Pettit, S. J., Gardner, B. M., Marlow, P. B., Naim, M. M., and Nair, R. 2004. Ex-Seafarers Shore Based Employment: The Current UK Situation. *Marine Policy, 29, pp. 521 – 531.*

Selkou, E and Roe, M. 2002. UK Tonnage Tax: Subsidy or Special Case? *Maritime Policy and Management, 29 (4), pp. 393 – 404.*

Lloyd's Register Fairplay (2005) *World Fleet Statistics*. Redhill: Lloyd's Register – Fairplay Ltd.