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Ship Management : Contemporary Developments and Implications

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Contents

Abstract

Ship management, aiming to the safe and efficient ship operation, has evolved in the way it is conducted and the means it uses to achieve its purpose. This is primarily a response to environmental forces which impact on it through various avenues, like economic, institutional, commercial and social ones. This paper aims to reflect on a number of recent developments with a view to provide a critical discussion of their implications for ship management. The paper hopes to subsequently raise awareness to topical issues with regard to ship management in need of (further) examination.

Key Words : Ship Management, Contemporary Developments, Implications

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I. Introduction

Shipping has come a long way since the time when masters, being often part owners or full owners of their vessel and frequently of their cargo, enjoyed an absolute control over their specific ventures. The deep-rooted tradition of an empirical way of running a shipping business has evolved to include sophisticated ways of ship management. Concepts and practice of ship management change to reflect the tasks engaged in managing ships but also external forces. Developments external and/or internal to the industry can have a number of implications for the efficient operational, commercial and strategic managing of vessels. Shipping companies need to be able to follow and successfully respond to such pressures. The objective has always been to control costs and engage in appropriate budgeting and long range planning in order to achieve maximum profit in consistency with reliable operation.[1)]

Shipping is a vehicle for economic growth in more than one ways and at more than one level of economic activity. As a business venture, it is specialised, capital intensive and subject to considerable variations in earnings. To some traditional ship owning companies, it is very personal, i.e. a way of life, but it can also be regarded as an effective platform for asset playing. As an investment field, shipping is a high-risk area due to extremely volatile pricing swings in both freight rates and asset values and the wide existence of the 'corporate veil'.[2)] On the other hand, shipping has the advantage of being a real asset industry and, under certain conditions, it can be an industry combining high returns with relative security.[3)] In a national context, the sector can be a tool of macro-economic policy, encompassing issues of employment, political power, taxation and contribution to the national balance of payments. Most importantly, shipping plays a vital role in serving, fostering and facilitating efficient international trade. There are numerous publications which quote that shipping carries the greatest proportion of global trade, ranging from 90%[4)] to 77%,[5)] mainly depending on whether intra-EU trade flows are included in the estimations. As a result, there is a wide variety of stakeholders that shipping has to deal with and a number of different areas that impact on it, such as economic situation, institutional

1) Elden(1962).
2) Mitroussi et al.(2012).
3) Petropoulos(2009)
4) IMO(2009).
5) Lloyd's(2007).

control, safety, commercial pressures, technology, environmental, security and social concerns.

This paper aims to reflect on a number of recent developments with a view to provide a critical discussion of their implications for ship management. Issues considered do not claim to be exhaustive of the range of matters that affect and concern the shipping industry, but indicative of the contemporary environment which presents opportunities and challenges to the business of ship operation. The next section reviews some topical key topics for the sector, followed by an examination of their implications for ship management. Economic, regulatory and human element issues are chosen to be considered in this context. There are a number of other strands of potential influence on ship management, like social, political and commercial. Technological improvements have of course an everlasting impact on ship management practice. Reference to technological advances which may either lead to or result from changes in other areas in the industry (e.g. regulatory) is given in the paper, although the role of technological evolution on ship management is not the detailed subject of this paper. Future research suggestions are given in the conclusion of the paper.

II. The Current Environment: Recent Developments

1. The Economic Situation

The business of shipping has a highly complex economic structure primarily attributed to two apparently contradictory characteristics of the industry, its international character and its fragmentation. Its main assets, the vessels, are very capital intensive, of diverse size and type and vastly dependent on technological advances. Vessels can be financed, owned, built, flagged, operated, managed, 'fixed', crewed, maintained, regulated by different entities; they can be new or second-hand, and; they can have different life-spans based on operating, regulatory and market conditions. The 'product' of merchant shipping is the offer of transport. Various transport services are provided from different ship types, specialised every time according to the particular needs of trading parties or of the actual cargoes. Remuneration for the carriage of goods by sea is paid to ship owners as a hire or as freight rate

and the freight market is the main source of cash inflow for the industry. Yet, the freight market is only one of the components of the shipping industry. The activities taking place in this market, i.e. the buying and selling of transport, are closely interrelated to three other markets, the sale and purchase market, the new-building and the demolition market. The general economic climate but also seasonal and regional occurrences, the inherent characteristics of the cargoes, changes in the parties' behaviour and in trading patterns impact on the economics of the industry.

Demand for ocean shipping – a derived demand – is volatile and inelastic due to the absence of alternative transport mode especially for deep sea transport. The supply of shipping services is slow to change and has a convex shape: it is elastic at low freight-rate levels – due to available excess tonnage – and very inelastic when freight rates are at very high levels – due to the limitation of supply when such is fully utilized.

In the last decade, i.e. 2002-2012, the experience of both the peak and the trough of a shipping cycle exacerbated the impact of the supply and demand factors and have put more pressure on all parties involved in the business of shipping. Between 2003 and 2007, strong global economic growth and favorable geographical distribution more than doubled the tonnage demand growth rate from the 1990s to 2000s, i.e. from 3% to 6.5%.[6)] During this longest unbroken period of high economic growth for 35 years an extreme sensitivity to the growth of tonnage demand was revealed at high levels of economic growth. The shipping industry was taken aback as the tight supply of vessels could not meet the surplus of demand, especially driven by China's – and other developing countries' – economic growth and its augmented import needs, particularly of iron ore and coal. High freight rates induce positive sentiments in the industry and effect significant revenue ejections to ship owners' balance of sheets, enhancing their financial liquidity. Ship owners rushed to increase their access to shipping capacity in order to take advantage of highly profitable freight rates by turning their attention to the sale and purchase (S & P) market. Adjusting further their position, ship owners heavily invested in new-build vessels at historically high levels in the booming period in the mid-2000s. High prices of second-hand ships also triggered investment in new-builds, effecting a change in the supply of transport. Soon, a substantial oversupply of shipbuilding capacity and of new

6) Platou(2008).

vessels overheated the industry.

Heavy investment in new-build vessels at historically high levels in the booming period in the mid-2000s was followed by a sudden and great bust in 2008, which contracted severely the ship owners' income, had a detrimental impact on the liquidity of the sector and halted financing and investment. The shipping market kept rising from 2003 to early 2008 and shipbuilding output price reached a peak in mid 2008. The global financial crisis hit the world in 2008, initially caused by the United States sub-prime crisis and the world economy and the freight rate market plummeted. The contract volume of booked new ships dropped dramatically after August 2008, and not a single contract was received by worldwide ship builders the month of May 2009. Ship investors and ship manufacturers found themselves in a difficult situation; freight income fell sharply and was not enough to cover the vessels' running expenses, let alone the loan repayments. Individual seaborne commodity sectors may exhibit a somehow differentiated economic behavior in the short run, but as they are all affected by the factors exogenous to shipping, like the world economy, and as they all form parts of a single industry, whatever happens in one shipping sector eventually ripples through the others. Currently such pressures are still on as the global recovery is uneven, slower compared to the recoveries that followed previous recent recessions, and challenged by the fragile conditions prevailing in most advanced economies.[7] Multiple risks threaten to undermine the prospects of a sustained recovery and a stable world economy, including sovereign debt problems in many developed regions, fiscal austerity and extraordinary shocks, such as natural disasters, political unrest, and rising and volatile energy and commodity prices.[8]

2. Regulatory and Institutional Pressures

Although the shipping sector was late in becoming internationally regulated (e.g. in relation to its long history and other transport industries, like the aviation), it has evolved to be one of the most regulated global industries. The complexity of the sector, high concentration of maritime power and resistance to change left the shipping industry largely free of a formal institutional control until the second half of the 20th century. In 1958 the International

7) UNCTAD(2010).
8) UNCTAD(2011).

Maritime Organization (IMO) was established to regulate the maritime industry, e.g. marine pollution and ship safety.[9] Since then, increased international seaborne trade and passenger traffic, high profile shipping accidents and enhanced public awareness have placed social and institutional pressures on shipping to act responsibly in a demonstrable way. The institutional pressures in shipping are multi-level. Shipping today experiences multi-level governance, ranging from international conventions (more than 50 in number originating mainly from United Nations agencies, i.e. the IMO or the International Labour Organisation), to supra-national intervention (like European Directives), to regional initiatives (like the Paris Memorandum of Understanding and the Tokyo Memorandum of Understanding) and of course national legislation stemming from both flag and coastal states.

Pressure stems from both the outcome of policy – i.e. more diverse and more stringent regulation – but also from the way that policy-making is conducted. The latter refers mainly to the problems that regionalism creates for an international industry like shipping. Shipping is a global industry operating under global rules. However, the industry at times has to deal with unilateral regulatory and policy initiatives which potentially undermine the standing of international conventions and jeopardize free competition by putting groups of ship operators at a disadvantage. Recently, for example, the European Parliament (EP) Environment Committee proposed for the EU to impose a tax on merchant ships of all flags calling at EU ports, in order to fund ship recycling facilities in the European Union. It also proposed other measures, such as sanctions against non-EU ship owners who do not comply, and the creation of a unilateral list of recycling facilities that meet EU requirements. It was forcefully opposed by the industry as completely counterproductive. The proposed measures, if taken forward, would seriously damage the effort to develop a binding global solution through the entry into force of the International Convention for Safe and Environmentally Sound Recycling of Ships (Hong Kong) adopted by the IMO in 2009 with full industry support. It would also create significant cost and management variations and constraints among global ship operators. The recycling tax was rejected in the plenary sitting of the EU Parliament on 18 April 2013. The EP Plenary also adopted an amendment which invites the Commission to come back by the end of 2015 with a new legislative proposal for an incentive-based system that would

9) IMO(2013a).

facilitate safe and sound ship recycling.

Apart from instances of inapt policy approach, the existent governing regime creates a number of challenges for ship management. Introduction of new legislation always requires a degree of adjustment of management / operational practice and this understanding is not new. However, today's regulatory environment is not only increasingly more demanding but also multi-faceted. It is directed at several operational areas, and ahead of technological advances essential for the application of the new legal requirements. The 2008 amendments of Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL) is a good example of a recent legislation bound to bring changes to an array of areas in ship operation and management. They set a lower global sulphur cap requirement of 3.50% effective from 1 January 2012 and progressively a cap of 0.50 %, effective from 1 January 2020 with even lower oil sulphur limits for special emission control areas (ECAs). The 2008 amendments (which entered into force on 1/7/2010) include also progressive reductions in nitrogen oxide (NOx) emissions from marine engines involving a three-tier structure for new engines, depending on the date of their installation. Ship owners / operators try to adopt the most suitable strategies in order to comply with such regulations, avoid fines and other costs from non-compliance and at the same time provide more eco-friendly services or generally safe and timely sea transport.

3. The Human Element

Shipping is traditionally capital intensive but relies heavily on its people for profitable ship operation. Inherent, unique characteristics of the business underline the significance of effective human resource (HR) management. Such features relate to the distinction between shore-based and ship-based personnel in the companies, the inherent complexity of ship operation which places capital intensive assets in the hands of very few – e.g. 15 to 20 – people, the multinational aspect and immensely high turnover of the crew and the social aspect of the staff's time on board.[10] A variety of contemporary trends which have been seen to affect the human resource aspect of management[11] are also observed in shipping. These include globalization,

10) Mitroussi and Chang(2008).
11) Huczynski and Buchanan(2007).

intensified competition, an increasingly diverse and ageing workforce, skill shortages, technological innovation, need for responsiveness and quality of service. The multi-dimensionality of human resource pressures which are at force in shipping pose serious challenges to ship management.

Shipping companies compete with each other for quality and competitive workforce in the context of a demand/supply gap of an expected 2% global shortfall of officers.[12] The enhanced unattractiveness of the seafaring occupation – primarily due to the availability of shore alternatives,[13] a high demand of specialized skills and qualifications, a declining number of graduates from marine academies,[14] and an ageing workforce, particularly officers[15] – make the human resource management a strenuous task of contemporary ship management. Other macro-factors contributing to the same effect include the extensive flagging-out and variations in the performance of governments with respect to regulation enforcement, and seafarers' training and qualifications.[16] Concerns have been expressed about the quality of seafarers,[17] especially with regard to fraudulent certificates and seagoing service testimonials.[18] International manning, on the other hand, i.e. sourcing seafarers from diverse, low cost crew supply areas, has a number of consequences for HR practices, including onboard management. This creates greater complexities in the human resource management process but also greater opportunities as the labour market for ships becomes effectively the whole world. Issues of accessibility to crew supply areas become important and strategies need to be developed to respond to HR challenges. The shortage of seafarers and quality issues is very much a concern for recruiting office personnel in shipping companies, too. This is because many land-based maritime-related industries have relied traditionally on ex-seafarers as a source of skilled labour and indeed many seafarers, when they leave their working life at sea, move on to a career ashore.[19]

12) BIMCO/ISF(2010).
13) Wu and Sampson(2005).
14) McConville and Glen(1997) ; Guo, Liang and Ye(2006).
15) Wu and Morris(2006).
16) Donaldson(1996) ; Mitroussi (2004) ; Winchester, Sampson and Shelly (2006) ; Bloor and Sampson(2007).
17) Leggate(2004).
18) Obando-Rojas, Badigannavar, Lane, Bloor and Maguire(2001).
19) Pettit et al.(2005).

III. Implications for Ship Management

1. Economic Aspects

Developments in business sectors often have resource implications for companies. In the case of new regulation introduction, for example, these will entail both cost aspects and expertise needs. At times of economic downturn the scarcity of financial resources will make such requirements even more problematic and will require management adjustments on behalf of firms for survival. Access to finance, income flow and cost management are primary economic aspects for any business and can be seriously affected by external (and internal) to the company forces.

Shipping companies seek profit maximization mostly through a cost-orientation strategy. This is because the industry is inherently characterized by capital intensiveness, high volatility in freight rates and prices, cyclicality, seasonality, strong business cycles and exposure to direct fluctuations of regional and global economies.[20] Shipping companies are faced with substantial operational business risks which result from large swings in freight rates and voyage and operating costs. Ship management uses different strategies to deal with such instability, for example, differing ways of trading sea transport. Voyage, time, trip, bareboat, trip chartering, contract of affreightment, hedging opportunities, all correspond to different asset employment strategies of shipping companies, different ways of remuneration and different cost structure. A number of factors affect returns and risks and the predictability of earnings in shipping. For instance, the volatility of freight rates is experienced differently by different sub-segments. For example, larger vessels have a higher volatility of freight rates compared to smaller ones and this appears to be true both for dry bulk vessels[21] as well as tankers.[22] Ship management must be aware and able to address effectively such variations. What is more, when the freight market is in backwardation, volatility is higher compared to periods when the market is in contango.[23]

The recent freight rate bust has had acute repercussions for ship operators who found that they could not fulfil many of their contractual agreements, like new-building orders. It has therefore had direct impact on strategic ship

20) Kavussanos and Visvikis(2006) ; Xu et al.(2011).
21) Kavussanos(1996).
22) Glen and Rogers(1997).
23) Alizadeh and Nomikos(2011).

management as retrenchment strategies had to suddenly replace the previously formulated growth strategies of many shipping companies. Obviously, however, low new-building and second-hand ship prices may present also opportunities for expansion, with the existence of a strong balance sheet. In fact some – but few – shipping firms, like Evergreen, followed this approach and restrained themselves from ordering big during the booming times and invested more prudently when the market was low obtaining premium ship prices.

The same market conditions shattered traditionally held suppositions about financial and loan security. For example, time charters have been used as securities since 1992 when Norwegians began to build up their tanker fleet.[24] A long time-charter to a quality charterer, in "the good old days" would provide one solid means of security for banks.[25] The recent shipping crisis, however, was marked by the frequent default of time charterers or the renegotiation of time charter parties to significantly lower hires. Ship management has had to revisit previously successful trading strategies, i.e. long term time charters, in the light of a situation where the revenue streams from them proved to be inadequate to offer any financial protection to the company. During the same time ship management has had to deal with access to finance and difficulties in raising necessary funds. Despite the fact that the industry increasingly uses capital markets for equity and debt finance, securing funds through bank loans is the main form of ship financing.[26] The virtual end to inter-bank lending in the credit crisis of 2008 led to high street banks collapsing or governments buying banks, such as the Royal Bank of Scotland – a leading shipping bank –, to prevent total collapse and made access to finance and credit scarce. Alternative sources of finance, such as the high yield bond market, require changes in the corporate profile of the industry.[27] Therefore, strategic responses for shipping firms to gain and maintain access to capital may include adoption of a formal corporate profile, change of ownership structure (e.g. becoming publicly listed), mergers and / or acquisitions, development of areas which allude to a more positive financial rating, and other.

Restrictions on the economic capability of shipping companies and therefore

24) Stopford(2009).
25) Wilson(2009).
26) Kavussanos and Tsouknidis(2011).
27) Grammenos and Arkoulis(2003).

on ship management arise increasingly today from the augmented cost involved in the implementation of new international regulations. In June 2013, the Chairman of the International Chamber of Shipping (ICS) said that new environmental legislation potentially presents an additional industry-wide cost of more than half a trillion US dollars between 2015 and 2025.[28] This is cost to be borne by shipping companies, as it mainly results from the switch to low sulphur distillate fuel and from installing new ballast water treatment equipment. To take the example of MARPOL Annex VI, apart from the use of lower sulphur fuel in the place of heavy fuel oil (which is the most feasible alternative), shipping companies have largely two other possible means of achieving the required standards: retrofit scrubbing systems and retrofit conversion to Liquefied Natural Gas (LNG). All three solutions have advantages and constraints and pose different challenges for ship management: bunker cost increase; capital investments related to sulphur abatement system (scrubbers); investments in emission monitoring systems; potential loss of competitiveness to other transport modes; penalties/fines; additional administration costs; lack of availability of suitable fuels; loss of operational flexibility, and other. For example, the costs of retrofitting existing ships to use LNG bunkers as maritime fuel are considered prohibitively expensive for existing ships, ranging between €12- €16 million for retrofit of ship with one main engine and four auxiliary engines, while the currently available abatement technology is not sufficiently proven for ship owners to switch with confidence and demonstrate compliance within the time period required.[29]

2. Human Resource Aspects

Ship management resource challenge lies also at the front of human resources. Concerns about the shortage, the quality and the sourcing of the seafarers in particular but also of office personnel in certain key positions requiring seafaring experience create a number of contemporary implications for ship managers. For instance, shipping companies may consider developing a brand image which could help recruitment. Shipping companies may have to adjust their management practice and resort to the use of marketing tools to portray themselves as employers of choice, if they are to successfully

28) ICS(2013a).
29) UK Chamber of Shipping(2013).

compete and attract the much sought-after, scarce qualified shipping expertise.[30] Ship management may consider more actively the candidacy of women for shipping posts in order to deal with the problem of seafarers' shortage. Women represent approximately one or two percent of the 1.25 million seafarers in the world[31] and they are still treated in the industry as a special or unusual case.[32] Leaving out such an under-utilized, untapped labour source, especially at times of need of strong and broad skills base for the sector is an obvious disadvantage in recruitment. This may then be the time when ship management should become more "women-friendly" and make sure that it considers seriously the ways in which women's employment and standing in the industry can be encouraged and accommodated both at policy and practical, business level. This may require important changes in the masculine culture of both ships and shipping offices and systematic efforts for elimination of any barriers in the occupational and hierarchical crossing of women in shipping.[33]

Widespread flagging-out and international manning has meant that two-thirds of the world's total active seafarer population are global seafarers, that is, seafarers whose employers are based in different nations.[34] Approximately 65% of the world merchant fleet has adopted multi-national crewing strategies.[35] The diversity of source areas brings flexibility but also complexity to ship management. Mixed nationality crew is consciously composed based on language compatibility, availability of skills, perceptions of stratification on nationality, competence and training quality, widely held assumptions for nationalities, cultural familiarity, interregional and intraregional preferences. In the context of extensive multi-national crewing, ship management must deal with an array of challenges: cultural and national differences have to be coordinated and accommodated; policies and practices may have to be adjusted to take into account differences in cultures and social norms; effective communication needs to be maintained in different languages and for different backgrounds and frames of reference.[36] The practice of mixed nationality crews and the seafarers' agency controlled supply market[37]

30) Kokoszko and Cahoon(2007).
31) IMO(1992) ; Belcher et al.(2003).
32) Kitada(2010), p. 13.
33) Mitroussi et al.(2012).
34) Wu and Sampson(2005).
35) Kahveci et al.(2002).
36) Mitroussi and Marlow(2010).
37) ILO(2001).

has implications for ship management also with regard to recruitment ashore. This is because it offers limited potential application of succession plans and affects the likely supply of internal candidates to satisfy future staffing needs. Internal recruiting in shipping can be implemented at several levels: internally onboard (e.g. officers advancing from lower ranks); internally ashore (e.g. lateral moves or promotions), and; between office and vessel and customarily from vessel to office (e.g. ex-master becoming marine superintendent). However, it is not easy to build up a pool of dedicated skilled labour which can potentially be used at the office. This is due to the high turnover and the practicalities of attracting and employing staff of different nationalities. Nor is it easy to plan succession schemes for onboard posts when the rationale of crew employment is on an "as needed basis".[38)]

3. Management Practice

Contemporary forces require for a formal, structured, all-embracing, more 'documented' ship management. Today the requirement is for 'measurable' ship management. Ship management is under the scrutiny of a number of stakeholders, charterers, insurers, financiers, Flag States, Port States and other. Implementation of international and national laws, self-regulation and benchmarking are among the common approaches that ship management has used to respond to such an environment. The process of systemization of ship management, which formally began with the introduction of the International Safety Management (ISM) Code, and included concepts like continuous improvement, risk management and recorded application, has expanded to include the aspect of *demonstrable* safety. Today one of the main concerns of ship management is not just safety but the *quantification of safety*. This alludes to the requirement and preoccupation with establishing, monitoring and publishing key performance indicators and achievement of various targets along an array of areas.

Core problems of ship management have always been safety and cost-control. The management approach centered, within tight budgetary limits, around safety principles, the minimization of incidents / accidents and their detrimental consequences. Such consequences include human injuries and even loss of life, damages to the ship, its machinery and equipment, cargo

38) Mitroussi and Marlow(2010).

loss or damage, damages done to other third parties, like other ships and port infrastructure, and environmental disasters. Ship management aims today more clearly towards improvement of business performance as a whole. New areas of focus have arisen which in the past did not receive distinct attention as separate issues. To an extent, this was the result of, particularly, industry-led management programmes, such as the Tanker Management Self-Assessment (TMSA) scheme, which brought to the fore issues like leadership, human resource management, management of change. The global organization exclusively dedicated to representing the ship management industry, i.e. InterManager, is concerned with ensuring that high standards are maintained throughout the ship management sector and has developed various schemes to support this aim. For instance, in 2005 InterManager and several leading – third party ship management, in particular – companies and other organisations started a project to establish a global shipping industry standard for defining, measuring and reporting information on operational performance using common Key Performance Indicators (KPIs) – the 'International Shipping KPI project'. 120 companies have so far registered with the Project, which is now managed by the independent KPI Association, and KPI data is being uploaded from more than 1,600 vessels into the web-based InterManager KPI Environment (IMKE) system. To date more than 5,000 sets of data have been submitted for each KPI category — enabling meaningful analysis to provide industry rankings for each measurement.[39)] Ship management has been further responsive to market and environmental conditions. It is embracing slowly but proactively a number of enlightened management approaches, such as Corporate Social Responsibility (CSR) and sustainability principles. Following the example of other shore industries, individual shipping companies invested in the application of CSR schemes for their ship management long before the industry collectively started taking to the concept. Ship management is now proving to be more far-reaching than what it is obliged to be by international and national laws.

39) InterManager(2013).

IV. Conclusion and Research Suggestions

Changing times call for and result in changing concerns and priorities for ship management. Although the concept and purpose of ship management has remained essentially the same through the centuries, one can observe an evolution in the way it is conducted and the means by which it can achieve safe and efficient ship operation. Changes to which ship management may need to respond and adjust include regulatory, commercial, technical, operational changes, changes in the human resource profile and changes necessitated from the company's gathered / new experience.[40] Not all areas are considered in detail here. The present paper sought to portray indicatively the varying face of modern ship management highlighting key issues rather than offering an exhaustive list of them. In any case developments with regard to the shipping industry are continuous and may be expected to trigger consequences and implications for ship management. Updated key shipping developments are discussed, for example, in the Annual Review of the International Chamber of Shipping published in June 2013.[41] The review addresses developments which can potentially affect drastically ship management. The particular areas which constitute the main focal points for the industry today, include: the need for policy makers to balance the importance of protecting the environment with shipping's economic sustainability; the ongoing debate about the regulation of CO_2 emissions; the entry into force of the ILO Maritime Labour Convention; developments with respect to piracy and hostage taking; and the safe and pollution free ship operations in the Arctic.

The paper hopes to subsequently raise awareness to topical issues with regard to ship management in need of (further) examination. It is clear that ship management can no longer rely on solely practical experience of ship operation but demands a more methodical approach incorporating the managerial knowledge and lessons of other sectors, and of industry and academic investigation. Academic research can help to that end by mapping, for example, first of all, the way ship management has been dealt with in recent literature, what key theories have been used to offer paradigms, and what is missing from the existing academic perspectives. In response to

40) Hatzigrigoris and Moustaka(2008).
41) ICS(2013b).

contemporary forces and developments, studies can be undertaken in specific relevant topics. The IMO, for instance, has recently drawn particular attention to the role of women in the industry promoting their employment,[42] an issue lacking clear academic debate in literature. Obviously also, the issue of sustainability in shipping is gaining ground in the industry disproportionately more than the attention it has received by academic work. The IMO devotes the 2013 World Maritime Day to sustainability,[43] while the ICS is openly preoccupied with the appropriate balance between its constituents[44] but sustainability has not been researched in any detailed manner by maritime researchers. The issue of governance in the context of rising regionalism and market pressures may also provide an interesting research platform.

Contemporary developments in the maritime world present modern ship management with opportunities and challenges and are in the position to alter assumptions and approach to it. Academic research is presented with a largely untapped field for investigation in need of systematic and firmly grounded research initiatives which would then be able to inform more appropriately the future of ship management.*

42) IMO(2013b).
43) IMO(2013c).
44) ICS(2013b).

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