

Making Waves

Newsletter for Maritime Studies Students and Graduates

Academic excellence for business and the professions

No. 10. August 2019

Tightening the Knots at 93 and 125!

This year marks the 125th anniversary of the City, University of London which was <u>founded</u> in 1894 as the Northampton Institute. The Company of Master Mariners was formed in 1926 and the title of 'Honourable' was bestowed in 1928. At 93 the Honourable Company of Master Mariners (<u>HCMM</u>) is a 'young' livery company.

The ties between the two organisations go back to 2002 when the HCMM was instrumental in advocating for a industry/profession facing MSc course in maritime operations and management. We are delighted to report these ties are being tightened to support the next generations of maritime students at City, University of London.

HCMM Student of the Year Prize

Eleni Koulianou was awarded the HCMM student of the year prize for 2017/18 academic year at a Court Luncheon on-board the Wellington in March 2019. To be



Eleni Koulianou with the dissertation prize presented by Captain R.B. Booth MNI , Master (2018-19)

considered for the award, the student has to achieve a distinction for the dissertation project and the MSc overall. Four students were put forward by the programme team. Eleni's dissertation entitled 'Electric and Hybrid Propulsion The Future Potential for Shipping' (see p. 10), is an exceptional achievement as Eleni is not from an engineering background. Eleni says she was inspired by the technology module and driven by curiosity to both climb the learning curve and make a contribution to this important topic.

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HCMM Scholarship

The HCMM has confirmed that, starting in October 2019, they will offer a full scholarship for one UK student to undertake the MSc in Maritime Operations and Management. The student must have a Class 1 licence and some years experience serving as master on board a deep seagoing vessel. The sponsorship value is £20k.

This is timely as in January 2019, government launched <u>Maritime 2050</u>. Education, research, maritime leadership and management are critical components in this landmark strategy setting out a vision for the future of the British maritime sector.



Celebrating the Past & Looking to the Future Symposium 'Challenges for the Greek Shipping Industry post 2020'

On the 18th of June 2019 at 6.30pm, City, University of London celebrated two special anniversaries in Piraeus. The 125th anniversary of the City, University of London which was founded in 1894 as the Northampton Institute and



Her Excellency Ms. Kate



Professor John Carlton FREng

the 10th anniversary of the University's presence in Greece. In 2009 the first intake of the LLM in Maritime Law attended classes at the Laskaridou Library in Piraeus. Five years later, in 2014, when the MSc in Maritime Operations and Management was launched the larger classes moved to Hellenic Lloyd's Register in Piraeus.

The celebration event took place at the Laskaridou Library to honour our fruitful collaboration between City, University of London and Laskaridis Foundation. The British ambassador in Athens, - Her Excellency Ms. Kate Smith welcomed the guests and opened the symposium. Mrs. Smith underlined the importance of the British Universities' presence in Greece and congratulated City for its dedication to the Greek shipping community and its local collaborations.

Professor John Carlton, FREng moderated the symposium entitled: "Challenges for the Greek Shipping Industry post 2020". There speakers were:

Mr Panos Laskaridis (President of the Aikaterini Laskaridis Foundation, President of the European Community Ship owners' Associations) talked about past and future collaboration with City. He presented the future challenges for the shipping industry drawing on his experiential knowledge, as well as his close cooperation with international bodies and organisations.

Mr. Emmanuel Vergetis (Lloyd's Register, Senior Consultant, Marine & Offshore South Europe) gave a very focused presentation on the topic from the engineering and technological point of view.

Mr. Simon Ward FICS (Director, Ursa Shipbrokers) presented an analysis of the challenges around the position of the Greek ship owners in the past, present and future.

Professor Chris Ryan (Deputy Dean, The City Law School, City, University of London) presented a retrospective of City's presence in Greece before moving onto an analysis of the future implications on shipping from a legal perspective.



Mr Panos Laskaridis



Mr. Emmanuel Vergetis



Mr. Simon Ward FICS



Professor Chris Ryan





A lively question and answer session followed.

The evening ended with a wine and canapés reception in the Laskaridou Library garden.





Next week we will start filming for the Discovery Channel. They have commissioned a series of television programmes on engineering with an emphasis on innovation and failure. In the marine episodes the focus will be on the Titanic, Herald of Free Enterprise and the Costa Concordia . The ten part series is due to be screened in the Autumn.

Re-accreditation* by the Institute of Marine Engineering, Science and Technology (IMarEST)

*MSc Maritime Operations and Management (MOaM) in London has been reaccredited, and the MSc MOaM in Piraeus has been newly accredited.



IMarEST profile: "Our vision is a world where marine resources and activities are sustained, managed and developed for the benefit of humanity." **The Institute Marine Engineering, Science and Technology** (IMarEST) is the International professional body and learned society for all marine professionals.

On 9th April 2019 a panel of experts from IMarEST conducted an in-depth review of the MSc in Maritime Operations and Management. Mr Tom Franthorpe Professional Development Manager and Registrar from IMarEST, the academic assessor Dr John McGrath, and industry representative Mr Malek Pourzanjani; examined the curriculum, assessment processes, quality assurance measures, governance, networking support, the overall student experience and the facilities. They held closed meetings with students in London on the day of visit, and students in Piraeus (by Skype) on 24th May 1019.

The accreditation visit report noted areas of excellence in particular "the employment rate of the programme is excellent" and that "the students are provided with excellent networking opportunities at organisations such as the IMO and the Baltic Exchange."

The Institute's Professional Affairs and Education Committee reviewed the accreditation visit report and has approved the accreditation of the MSc Maritime Operations and Management (MOaM), in London and Piraeus, as meeting the further learning requirements for registration as Chartered Marine Technologist (CMarTech) for a period of 5 years from the 2018 student cohort.

This means that graduates of MOaM can become Chartered Marine Technologists (CMarTech) upon graduation and after a couple of years of practical experience. For mature and part-time students who already have experience in industry graduating from the MSc in Maritime Operations and Management will fulfil all the academic requirements. The IMarEST web site is valuable portal for maritime research, analysis, education, CPD and news.



IMarEST RESOURCES

<u>Marine Professional</u> is the IMarEST's membership magazine and is available in print and online. With a strong news analysis focus, each issue looks at the trends emerging within the marine sector and aims to enhance understanding of the complex technical intersections between the maritime, offshore and science agendas. Newsroom Peer-Reviewed Journals Virtual Library Online CPD Tool Marine Careers Marine Organisations Marine Jobs Scholarships and Funding



<u>Coastlink Conference</u>, Southampton, 12-13 June 2019.

A Report by Dr. Merv Rowlinson, Lecturer in Maritime Economics on the London and Greece MOaM Programmes

The Coastlink organisation is dedicated to the promotion of short sea shipping in the UK, Ireland and Mainland Europe. Driven by environmental concerns, Coastlink champions the role of shipping around the European coastlines and also on its navigable



Dr. Merv Rowlinson at Coastlink, 2019

rivers and canals. The environmental problems associated with road haulage have brought about a search for alternative freight transport modes. Rail-freight is an obvious candidate as a more sustainable mode but shipping can also have an increased part to play.

The Conference was attended by delegates and speakers from the shipping, ports, haulage, rail-freight and freight-forwarding industries. Additionally, technologists seeking greener, more fuel efficient, transport were evident. A civil servant from the UK Department of Industry outlined government support for enterprise and innovation in the field.

A note of logistics caution and attention to contingency planning was palpable in the atmosphere given the "unknowns" of Brexit!

Contributions from the leading European ports, Rotterdam and Antwerp detailed "cutting edge" technologies in logistics media, supporting efforts in promoting European coastal and inland shipping.

Universities were represented by the University of Southampton, Plymouth and City, University of London.

The Welcome Address was provided by <u>Mr.Clive Thomas</u> of Associated British Ports (ABP), who outlined the developments and investments in the Port of Southampton. Hosting the UK largest oil refinery, as well being the UK's leading port in deep-sea automobile handling, cruise passengers and second largest container port, the logistics challenges facing Southampton were outlined. Managing environmental risk was identified as paramount to the continued success of the port.

The Key Note Address was provided by <u>Ms. Sarah Kenny, Vice Chairman of Maritime UK</u>: "implications and opportunities in the rapidly changing UK maritime political, sociological, environmental and technological landscape." Ms. Tienne Oates, Logistics Project Manager for the third-party operator, Wincanton, detailed the vital importance of the green and sustainable agenda to major retail client, B&Q.

Important research in coastal shipping Energy Saving Technologies (EST) collaborations between technology groupings, BMT and Black & Veach were outlined by <u>Mr. Tim Hardy of BMT</u>.

The looming impact of China's "Belt and Road Initiative" (BRI) was identified by <u>Mr. Krzysztof Zalewski of the Port of Gdansk</u>. The focus was upon Poland's important geographic position in east-west trading relations. Inter-modal specialist, Mr. David Cross gave a fascinating insight into rapidly growing rail-freight services from China to key European, including, destinations. With improving transit times, now down to 18 days, BRI rail services were seen to be rapidly emerging as a time saving alternative to deep-sea container routes and a lower cost option compared to air-freight services. Rail-freight-Coastal shipping integration was one possible outcome of the growth in BRI traffics.

My paper was "The future of short-sea shipping: cases in roads-to-water initiatives." The aim was to consider the evidence of four initiatives in increasing shipping's market share of domestic and near European considered. These were formed of:

Southampton-Greenock container feeder services;

- Rosyth-Zeebrugge RoRo connections;
- West Highlands and Islands of Scotland Timber-Link;
- Barge operations on the Manchester Ship Canal.

The general consensus of the conference was one of the paramount nature of environmental performance in the integrated supply-chain; the development of supply-chain focused coastal shipping was incrementally moving forward.



Titanic the legacy

Article by Professor John Carlton

The tragic events of the morning of the 15th April 1912 brought about a significant change in maritime safety standards: similar in some respects to the introduction of the Plimsoll Line 36 years earlier but in this case considerably more far reaching. Indeed, the Titanic disaster was the most influential event in the formulation of international standards for safety at sea.

The most significant initiative following the sinking of the Titanic was the International Convention on the Safety of Life at Sea which was finalised in London on the 20th January 1914. The Convention, attended by representatives of 16 Heads of State, comprised some 74 *Articles* with supporting *Regulations*, which had the same authority as the Convention itself. It was recognised that a single convention would not suffice in the



The *Titanic* sits at the dock in Southampton, England soon before setting off. April 10, 1912. context of the developments in design that might take place in the future or, indeed, to fully embrace all the lessons learnt from the Titanic incident. Consequently, it was noted that future meetings might be needed for taking the matter further.

Under the Convention the Government of the United States was invited to undertake the management of three services directed towards enhancing the safety of navigation in the North Atlantic Ocean namely:

(1) dangerous derelict destruction in the northern part of the Atlantic Ocean;

(2) to effectively study and observe ice conditions, in particular from the beginning of February until the start of the ice season;

(3) to institute an ice patrol during the whole of the ice season.

The fourteen countries represented at the Convention were invited to contribute to the cost in varying proportions with the United Kingdom, France, Germany and the United States of America accounting for 75% of the total costs. Attention was also drawn to the routing of steamship services across the Atlantic and while this was principally left to the operating companies, requirements were placed on these organisations to publish their chosen routings.

Construction of Ships

An important part of the Convention dealt with the construction of ships: indeed, in these requirements it is possible to detect embryonic forms of goal based standards which are at the forefront of IMO and classification society attention today for ship construction and safety. The Convention addressed the issues of sub-division of ships and defined a method within the *Regulations* to determine the permissible length of compartments based on their floodable length; prescribed a limit to the length of the compartments as well as giving consideration to special cases. In addition there were requirements for peak tank and machinery space bulkheads as well as for fireproofing.



(Continued from page 5)

The Convention also addressed the issues of openings in the watertight bulkheads as well as in the ships' sides in the context of their construction, inspection and testing. In particular, it was required that the opening and closing of watertight doors together with the relevant inspection and familiarisation drills were entered in the ship's log book.

For survey purposes, the countries represented at the Convention were required to either draw up detailed regulations or bring into line their own requirements to be in accordance with the general principles defined by the Convention.

Interestingly in the Convention we find the first mention of a requirement for astern power in that it specifically required that *"Ships shall have sufficient power for going astern to secure proper control of the ship in all circumstances."* We also find requirements for the installation of the relatively new capability of radiotelegraphy. It was required that all merchant ships belonging to the signatories of the Convention, irrespective of whether they were propelled by sails or machinery, were obliged to have radio telegraphic apparatus if the total number of persons on-board exceeded 50: irrespective of whether this number comprised solely crew or a combination of crew and passengers. In exceptional circumstances, which could be considered in the context of a *force majeure* incident such the carriage of people who had been shipwrecked, this requirement could be temporarily waived.

Lifeboats, lifesaving apparatus and human factors

The question of lifeboats, other lifesaving apparatus, passenger address facilities and fire protection featured prominently in the agreed Convention. It required that, for the first time, ships whose keels were laid after the 31st December 1914 were equipped with lifeboats that were capable of accommodating all persons on board and



Surviving disaster—The Titanic and SOLAS Click on the image or here to download <u>summary pdf</u>

that the lifeboat and davit arrangements were capable of launching fully loaded lifeboats when at sea with the ship listing up to 15 degrees. More importantly, it was stipulated that at no time during a voyage the number of people on board could exceed the number for which accommodation in lifeboats and life rafts the was available. Recognising that embarkation into or onto lifesaving facilities could be difficult in times of emergency; this was also specifically addressed within the Convention with requirements for evacuation plans and emergency lighting.

More broadly, it was required that the carriage of goods was expressly forbidden which were likely to endanger the lives of passengers or the safety of the ship.

Within the Convention, the importance of the human factor was recognised as being a vital part of effective safety requirements with requirements on the Master for navigation near ice conditions, certification of watch-keepers, muster requirements and maintaining an official log book.



(Continued from page 6)

Enforcement

To enforce these regulations it was required by the Convention, which was destined to come into force on the 1st July 1915, that a Safety Certificate be issued to the ship after a prescribed inspection routine had been successfully concluded.



FIG. 116-Fessenden Oscillator

Diagram of the early sonar Fessenden Oscillator (source) In 1921, Reginald Fessenden was awarded the Institute of Radio Engineers' Medal of Honour. The survey regime to maintain the Safety Certificate throughout the life of the ship was defined and forms the backbone of survey requirements found in today's government and classification society regulations. This Certificate was the forerunner of the document displayed on ships today by the Flag States.

In addition to stimulating the development of the Convention, which was the forerunner of SOLAS as we know it today, the Titanic inspired a number of applications of contemporary advanced technology for a range of safety enhancement reasons. One such application, for example, was the <u>Fessenden oscillator</u>. This oscillator was developed by R.A. Fessenden in 1912 and was an electrically driven device operating at a single frequency within the range 500 Hz to 1 kHz. It worked in much the same way as an electro-dynamic speaker and was capable of transmitting signals as well as receiving them. Inspired by the sinking of the Titanic,

Fessenden demonstrated the use of the oscillator as a means of echo-ranging icebergs at a distance of two miles and because of its simplicity his device remained in use as a source of underwater sinusoidal signal production for many years.

The collision of the Titanic with an iceberg and its eventual sinking with the consequent loss of life stirred an international response to the tragedy. This as we have seen endeavoured to embrace the very many lessons learnt and incorporated the advances in technology that were prevalent at the time. The development of Conventions to guard against future disasters of this kind are always done with the benefit of hindsight and seen from this perspective it can sometimes be difficult to see why the solutions were not obvious to the ship's designers and operators. However, the Titanic was the largest ship then built and the modern techniques of risk management and failure modes and effect analysis that we take for granted today were embryonic in their development. Yet today, even using the latest technologies and developments, we still on occasions experience maritime disasters involving the loss of life and property. (Sources below)

Carlton, J. (2013) Reflections on the causes of engineering failure and poor performance, 1st FIGS Events Lecture. <u>Technical</u> Report. Lecture <u>Video</u> (Accessed: 8 July 2019).

IMO (2019) History of SOLAS (The International Convention for the Safety of Life at Sea). Online . (Accessed: 8 July 2019).

Keefe, P. (2014) Disasters at sea and their impact on shipping regulation, Marine Link. Analysis Report (Accessed: 8 July 2019).

Schröder-Hinrichs J-U, Hollnagel E, Baldauf M (2012) 'From Titanic to Costa Concordia—a century of lessons not learned.' WMU Journal of Maritime Affairs 11 (2):151-167. <u>Summary</u>



Programme dinner on the HQS Wellington on the Thames

We look back at the midpoint of the Programme with photos from the annual programme dinner on board the HQS Wellington the livery hall of the Honourable Company of Master Mariners.









On the deck and in the Court Room that was the engine room

We look back at the midpoint of the Programme with photos from the annual programme dinner on board the HQS Wellington the livery hall of the Honourable Company of Master Mariners.









Dissertation Showcase MSc in Maritime Operations and Management

Electric and Hybrid Propulsion The Future Potential for Shipping by Eleni Koulianou

Shipping is vital to the international import and export markets and therefore the world economy. At the same time the global demand to reduce exhaust emissions requires effort from the shipping industry which currently emits 15% of nitrogen oxides,

13% of sulphur oxide, 3% of carbon dioxide and 2.5% of greenhouse gas, percentages that are predicted to increase due to the growth of world trade.

The investigation in this dissertation focused on electric and hybrid ship propulsion systems and conducted a wide-ranging evaluation of electric and hybrid technology systems. Through environmental, economic and technical assessment, case studies, and by examining the role of government and ship owners it was possible to consider the applicability and future potential for these propulsion systems to accomplish emission targets.

It is concluded that in theory ships powered by fuel cells is technically feasible and offers great potential for emissions reduction. More specifically, if hydrogen from a renewable source is used as a fuel, fuel cells cut exhaust emissions by 100%. The fuel cells' silent operation and their relatively low mass offers significant advantage. Yet, it requires time for fuel cells to become a realistic option. The main barriers are

large investment costs and design research. Furthermore, hydrogen storage and supply issues comprise further constraints for the development of hydrogen fuel cell powered vessels. Batteries used for hybrid or all-electric propulsion are promising since they achieve marked decreases in the exhaust emissions of ships. However, challenges arise due to the relatively low energy density of the batteries in gravimetric and volumetric terms. Even if the removal of the diesel propulsion chain frees a lot of space, it remains insufficient for the batteries to provide reasonable power and speeds. Additionally, although battery cost is expected to decrease, the economic viability of battery powered ships remains a controversial. Regarding the battery charging, shore-based infrastructures need to be further developed so that the grid for the power supply will become reliable and supplied by renewable energy sources in all ports.

What is clear is that ships with a lower propulsion power requirement and shorter sailing distance are more suitable for fuel cell and battery power at the current time. However, once large electric ships become technically and economically feasible, and shipping companies secure financing from Governments, the industry will be ready to implement the new technologies and achieve the new environmental targets. The underlying challenge is to quantify the damage to the plant during this transition.

Environmental Aspects of Ship Recycling in Europe – UK Case Study by Spyridon Ioannidis

The focus of this investigation is in the area of ship recycling and its environmental impacts. Such a study is vital in order to



Spyridon loannidis

illustrate the main environmental effects of the global ship dismantling industry and examine how European ship breaking yards with recycling facilities deal with the increasing environmental importance and the consequences of their operations. The approach includes a comprehensive analysis of the leading European ship recycling practices along with an in-depth case analysis of the UK ship recycling yards. The data came from questionnaires and information in the public domain. Evidence from the finding indicate that in Europe and particularly in the UK great care is being taken to mitigate the negative effects of ship scrapping, and the latest environmental regulations are being systematically practiced. Additionally, three main UK ship recycling yards were examined and analysed in detail to articulate how the UK is taking ship recycling process one step further by, not only complying with the up-to-date European legislation on ship recycling standards, but also, by

applying even stricter and more detailed plans to ensure 'greener' ship scrapping measures are in place. The compelling urge for continuous improvement through regular reviewing and monitoring are apparent in the UK yards. These practices constitute a beneficial and sensitising example that could provide useful examples to ship scrapping companies all over the world.



Example of an on-board battery room Source: Seacliff Partners International



Dissertation Showcase MSc in Maritime Operations and Management

25,000 TEU Container Ships are on the drawing board, but will they ever be built? By Georgios Saflianis



Georgios Saflianis

Container ships were introduced in 1956, and since then, have undergone six major changes in terms of their size. Economies of scale should be regarded as the primary driving force behind this size development. Shipping lines have been incited by the substantial unit cost savings offered by vessel upsizing. As a result, the trend towards container ship size growth still takes place in a volatile and unpredictable container market which is characterised by its overcapacity issues.

The 2020s is expected to be the era of mega vessels on Europe-Far East trade. Thus, this investigation focuses on whether the introduction of 25,000 TEU vessels would be advantageous or would rather lead to diseconomies of scale in the future. First, the study discusses the history of containerisation and provides comprehensive information regarding the evolving vessel size trend.

Additionally, the literature analysis covers the background to, and features of the container sector, and the era of mega vessels. On the basis of this research, conducted interviews with maritime professionals were essential in obtaining complementary expert opinions regarding the implications arising from 25,000 TEU ships.

The findings suggest that the container sector has developed one-dimensional thinking by entirely focusing on the costs savings achieved by the operation of mega ships at sea. However, the advent of 25,000 TEU vessels is expected to put extreme pressure on the other vital parts of the transport network which are unable to develop at the same pace as the rapidly evolving vessels. This situation could thus lead to diseconomies of scale and diminishing returns for the sector.

An Investigation into Enhancing Performance in the Maritime Operations of the Saudi Arabian Offshore Oil and Gas Fields by Motaz A. Nejaim

This study investigates how to enhance performance in the maritime operations of the Saudi Arabian offshore oil and gas fields.



Motaz A. Nejaim

The study began with an analysis of the offshore operations located between the Saudi Arabian city of Dammam-Khobar to the south and Kuwait to the north. This purposely built Tanajib complex is a typical example of how off-shore operations are supported. The analysis then assemble secondary research and an extensive literature review to confirm the gap in the existing body of research and the validity of the approach. The review was also crucial in the development of informed and meaningful interview questions that were out to a select group of professionals in the field.

Drawing on this body of evidence the dissertation sets out potentially transformational recommendation on how to enhance the performance of the organisation. The essence of the recommendation is to implement a hub-and-spoke structure for the supply of the fields whereby

the hub is a semi-permanently fixed structure in the middle of the field which stocks immense quantities of cargo but also, importantly, manufactures a substance commonly referred to as mud that is needed by rigs in the field. The hub-and-spoke structure enables a "milk run" process to be implemented.

The operational performance of the organisation will enhance because of a more efficient means of delivering supply, a better -integrated approach to operations, a shift in decision-making power from rig supervisors to professional planners and schedulers, all of which will also drive culture change. This envisioned game change suggests the effect will be a 25% reduction in the current fleet of two hundred vessels.

Follow the link

Scientists create first UK map of shipping 'noise' Researchers from the Centre for Environment, Fisheries and Aquaculture Science (Cefas) in Suffolk used data captured from microphones placed on the seabed to identify "hotspots".

<u>Sentinel tracks ships' dirty emissions from orbit</u> Sentinel-5P was launched in October last year and this week completed its in-orbit commissioning phase. It is already clear the satellite's data will be transformative



Dissertation Showcase MSc in Maritime Operations and Management

Feasibility/ Techno-economical Study for the LNG Bunkering Station in DP World London Gateway by Panagiotis Mentzelopoulos



Panagiotis Mentzelopoulos

The use of Liquid Natural Gas (LNG) as a maritime fuel complies with the International Environmental Regulations. However a wider adoption of LNG as a maritime fuel requires the development of appropriate infrastructure and a sustainable supply chain.

DP World London Gateway is a fast-developing port and the UK's most integrated logistics hub which acts as a key transition station for merchandise purposes. Because of its key geographical location, the unrivalled facilities and the tri-modal connectivity, it can act as link with the nearby ports and as a hub for the efficient supply of goods for the UK. At this stage LNG fuel bunkering is not available at the port. This dissertation presents a feasibility and techno-economical investigation into the case for LNG Bunkering Station in DP World London Gateway. The analysis draws on the annual demand of LNG using a specific methodology based on the current profile of the marine industry.

The analysis indicates that the annual demand of LNG as a maritime fuel for the years 2020 and 2030 is calculated to be 34,248 m³ and 57,080m³, respectively at DP World London Gateway's port. For the same period of years, the number of refuelling processes is estimated to be around 96.93 and 161.55, in the annual base. This suggests that a realistic solution would be the construction of an onshore tank with a volume of 5,000 m³ which would be positioned 10 km away from the port and would be refilled by the LNG import terminal station on Isle of Grain. This analysis informed an investment proposal for the construction of this terminal station. According to the proposal the need for refuelling will be covered by a bunker vessel of 1,000m³. A financial evaluation of this proposal considered the added cost per ton LNG in relation to the pay-back period and found that for DP World London Gateway's Port a 10-year payback period (PBP), and a notable increment in the final delivery price is needed and the internal rate of return (IRR) will have to be around 18%. In conclusion, in order not to hinder the development of the LNG market as a marine fuel, the added cost to the import price from the refuelling station should fluctuate at low relative levels. For this reason, there should be subsidies from financial institutions, the EU and the UK government, and all the members of the European Union, should create incentives for investments by companies to develop onshore infrastructure for LNG supply.

Port Reform Evaluation: Lessons from Piraeus Port Authority Concession

by Spyridon Kalogirou



Spyridon Kalogirou

Directed by the globalisation the port reform has become a prequisite for a coastal country to participate in the global seaborne trade. The increasing demand by the supply chains for low cost, reliable and fast port services results in the growing private sector participation to former public port functions. Although the port reform through privatisation is a necessity for port development its success is not ensured as it is a complex and multi-step procedure.

Greek ports are part of this port reform trend due to their geographical position. Additionally, the pressure lever for extensive port reform in Greece is the economic crisis that has shocked the country since 2010. Already the Hellenic Republic has entered into master concession contracts with private parties for the two major port organisations in the country; that of Piraeus and Thessaloniki which took place in

2016 in 2018 respectively. The Hellenic Republic plans to privatise ten more port organisations through sub-concessions adopting a landlord model this time.

The study focuses on the port reform in Greece and aims to provide some considerations for the future port reform in the country. Examining the concession of Piraeus Port Authority (PPA) to COSCO, the study discusses "what works" and where problems arise from this concession so as to provide meaningful evidence about the effectiveness or not of the port reform in Greece. Given the scope of the dissertation the research was conducted by face-to-face interviews with current and ex-decision takers who have critical knowledge over the port reform. The qualitative data that was collected about the concession of the PPA is used in conjunction with quantitative data so a holistic approach of the concession is presented. The study concludes that the examined concession has contributed to the port's development and can be characterised as success. However, there are noticeable drawbacks due to the concession modality that is selected. It is suggested that the lessons that derive from the PPA concession have to be taken into account to the further port reform in Greece and may have application to countries that face similar difficulties as Greece.



A Tale of Heart Warming Outcomes

On arrival students for the MSc in Maritime Operations and Management are are asked to introduce themselves to staff and other students with a short online post explaining their background and motivations for studying for an MSc in Maritime Operations and Management. This is what Chrysoula Bismpiroula and Dimitrios Myonas wrote in **September 2016**:

Dimitrios Mylonas

My name is Dimitrios Mylonas. Back in 2006 I started my career as an Apprentice Officer for the Atlantic Bulck Carriers Ltd. Company. In 2009 I was promoted to second officer for Marmaras Navigation Ltd and in 2010 I was in the Hellenic Navy as an assistance secretary in Navy's General Staff. Since 2013 I have been a Chief Officer in Bulk Carriers of Marmaras. I am a qualified Rescue Diver and Emergency First Aid Responder on Primary and Secondary care.

I was motivated to do this course to enrich my sea life experience with academic knowledge and broaden my horizons in the shipping field. I am ambitious and would like to become a Captain the merchant marine and widen by professional options for the future.

Chrysoula Bismpiroula

My name is Chrysa Bismpíroula. I graduated with a BA in Political Science and International Relations from the University of Peloponnese, and then moved onto an internship at the Institute of International Relations in Athens. These experiences highlighted the contribution of international trade and corporations in tackling serious world problems such as famine, diseases and poverty. Almost 90% of world trade relies on the international shipping industry and needs people who are effective communicators and care about social and environmental responsibilities.

I am excited to accept a place on this course and looking forward to working in a position relating to the field which is in keeping with my values and passions.



Chrysoula Bismpiroula and Dimitrios Mylonas graduates MSc Maritime Operations and Management 2017

Dimitrios said: During the induction day, I met my fiancée, who was sitting behind me. By great coincidence she was also Greek and on the same Master Degree course.

Fast forward to 2019 and we asked them what they are doing now:

Dimitrios said : "Since graduating I have got my Master's Licence, and recently started working in the Operations Department of Marmaras Navigation in a shore-based position. Today, shipping companies face operational challenges such as rising costs, new environmental regulations and security risks. These challenges reveal the necessity for qualified personnel with effective organizational and leadership skills capable of being up-dated with the new developments in the shipping industry.

Chrysoula said: "After graduating I was employed as a marketing officer in S.S.R.S. (Shipping Spares, Repairs and Supplies) -an agency company with 40+ years of experience in the ship repair and conversion industry. I

continue to develop my interpersonal skills and can see everyday the profound influence of marketing on customer relations. Being an active listener and having a positive attitude are inspiring values when you work in customer service. "

They both agree that: "the course was a unique experience as we had the opportunity network with maritime professionals, to have unlimited access to the modern library and study various topics such as maritime technology, marketing strategies and environmental issues. It was a challenging year; that enabled us to evolve individually and professionally by opening new career paths in our home country, one of the most powerful maritime countries worldwide."



Current Student Voice

Capt. Jaime G. Chikhalikar AFNI, is a Master Mariner and a student on the MSc in Maritime Operations and Management. Here he writes about the challenges and rewards of taking every opportunity

The MSc Maritime Operations and Management course has been both a challenging and rewarding experience so far. It is indepth multi-disciplinary and covers a wide range of current, critical and foundational topics. Having been in the seagoing sector



Capt. Jaime G. Chikhalikar AFNI

throughout my career and sailed as a Master Mariner, this course provided me with valuable knowledge in the shore sector of the industry, particularly, of maritime law, maritime economics and accounting, maritime management, maritime technology, port operations and offshore engineering amongst others. This will most certainly prepare me for taking up a managerial position in the maritime industry in the future.

It takes energy and commitment to take every opportunity that is on offer. The port visits, covered a variety of types of operations and I could see that this was invaluable especially for those from non-maritime backgrounds. You have to experience the locations to get a sense of the complexity and scale of how ports and terminals operate. The guest lectures by experts from industry provided indepth understanding of the pertinent topics currently facing the maritime industry.

Attending the interviews conducted by the Institute of Marine Engineering, Science and Technology (IMarEST) accreditation panel, proved to be an invaluable experience. We, the students, gave our valuable and honest opinion of the entire course and its layout in general and the entire process was conducted in a fair and confidential manner.

The challenges of this particular course were the intensity of the modules and the coursework/exams along with the pressures of scheduling/time factors. At times the pace is overwhelming but there is a lot of support within the group and from the staff. I would advise future students to plan their study time for every module with respect to coursework and exam preparation and do this right from the early stages of the course. This is critical in order to ensure successful completion of all the modules. The same would also apply for the dissertation project, which is quite a challenge in itself.

The rewards for me, having faced all the various challenges and pressures of the course, would be to graduate and achieve a Master's degree with distinction. I feel in a good position to use my new knowledge and experience in facing the challenges of my future work environment and professional development.

Research and Programmes in Maritime Studies

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