

The analysis and assessment of the current reality and the future needs of the maritime education and training system, as well as the certification system in the international maritime society.

Hisashi Yamamoto, Senior Lecturer  
Istanbul Technical University, Maritime Faculty  
Tuzla Capmus, 81716 Istanbul, Turkey  
[hydeniz@attglobal.net](mailto:hydeniz@attglobal.net)

## ABSTRACT

The heart of the current reality is the deterioration of the “quality” of the international shipping services, which is a merchandise provided by the shipping industry to the international shipping market. We have witnessed in the past three decades the process that the quality of the shipping services as a merchandise have severely deteriorated. While this deterioration of quality of shipping services in the international shipping market has developed on the one hand, the process of transformation, or even a collapse, of the reproduction system of the quality shipping services within the boundary of an individual traditional developed maritime countries has also simultaneously progressed. The challenge of today is, therefore, firstly to ascertain the dynamism behind such process, and secondly to establish a perspective into the task of how to reconstruct the reliable and efficient reproduction system of quality shipping services in the totally different environment called globalization.

### 1. Introduction

The highest values for the world community today, whether maritime or otherwise, are “safety”, “quality” and “environmental friendliness”. It is commonly understood that the production system based on the advanced technology, skills, and management technique, all of which are based on the most advanced scientific research, analysis and theory, produces reliable merchandises to the domestic and the international markets. The relationship between the end users of a merchandise and the general public as a third party in good faith and the producers is based on this mutual trust. The frequent claims against the deterioration of quality of international shipping services comes from almost all corners of the world today, therefore, should be interpreted that the reliability on shipping services have actually been seriously deteriorated, and that the very mutual trust between users and suppliers has also been critically eroded. It is essential to ascertain the dynamism behind this deterioration of the quality of international shipping services, thence to establish a perspective into the direction to overcome this vicious process.

### 2. The Current Reality

“Safety”, “quality” and “environmental friendliness” are basically the values of the users of the merchandise, and of the general public. In shipping, they are shippers and the people in general. The highest value for the producer of the merchandise is “profitability”. It is usually impossible for users and the general public to see or to have an access directly to the production system of any merchandise. Their behavior is based on the empirical wisdom that if a merchandise is safe, of a good quality, and is environmentally friendly, the production system of the merchandise can safely be assumed to be of high standard and reliable. Once this sense of trust is damaged, the direct eyes will reach to the production system, and the reality of the production system of the industry will be revealed openly to the public.

The international shipping industry was no exception when it was dominated by the national fleets of the traditional developed maritime countries (hereinafter TDMC) where the efficient vertically integrated production system consisted of all the elements necessary for the production of quality shipping services had been established in all the major shipping companies. The government of TDMC administered the domestic shipping industry, which consisted of these efficient shipping companies, through various policy tools from relevant legal and regulatory measures including the area of education and training of seafarers which is vital for high quality reproduction system of shipping services. The system itself thus established was the pride of the nation. A

maritime casualty was regarded as a shame not only of a company, but also of the nation, because it was regarded to damage the trust on the production system of the nation. An accident was also regarded as an indelible disgrace for seafarers on board the ship not only in terms of damaging the credibility of their country, but also in terms of tarnishing their professional pride as seafarers. The government had promoted the maritime education and training backed by the policy tools based on the judgment that the well educated and disciplined seafarers were the very foundation of the reliable and efficient production system of the shipping services, of the sound professional and vocational ethics, hence of the ethos of the national pride.

The reality of today is that we are standing in the ruin of such vertically integrated system which had once so steadfastly been built in TDMC. The deterioration of the quality of the shipping services as the result of the deterioration in the suppliers' capabilities are the common reality of today. The familiar terms to describe the shipping industry are unsafe, sub-standard, environment damaging, etc. The collapse of an industry generally accompanies the collapse of the ethics and of the moral discipline, both of which once had been another features in the sound production system. They also had been the intangible spiritual asset of the industry. The very collapse of this kind has been experienced in the TDMC.

The dramatic transformation in the international shipping is usually called "globalization", but when the word is used, the definition is usually not given. In this paper, the word "globalization" is defined as the new environment for the shipping industry/society which allows the relevant parties to seek more and more transnational solutions, deviating from the traditional exclusive choices of the national alternatives, especially with regard to the area of the production system of the shipping services. The production system includes the maritime education and training institutions which constitute the vitally important function.

The globalization of the international shipping is almost synonymous with the environment which accommodates FOC as a legitimate international system. It is clear by now that globalization has led to the reorganization and realignment of the national flag shipping, especially of the shipping industry of TDMC, which can be featured as "restructuring...[a]t the heart of [which] is a new division of labor in shipping, not only between countries but between a variety of firms engaged in different aspects of shipping". "Such division of labor both by region and by function facilitates the development of truly 'least cost system'." (1) The result is the collapse of that very production system which had once been the norm in TDMC characterized by the vertically integrated system on corporate basis as well as national basis. Many functions once vertically integrated had been "sliced" to the newly established subsidiaries abroad, or to the sub-contractors in the foreign countries through transnational contracts, on cost efficiency standard. The shipping companies in TDMC had even lost their national identity as enterprises as the result of this process which has prevailed in the international shipping in the past three decades. The practical ground for the governments of TDMC to establish a national shipping policy has been lost. The national shipping policy is on the verge of disappearance in some TDMC, and has already disappeared in some others. The "globalised" national shipping companies now consider that the national shipping policy is not as their guardian, but as an unwelcome or harmful intervention by the national government.

The current reality in the process of globalization is that the reconstruction of the new production system of the reliable international shipping services is devoted in the invisible hands. There is no established authority nor organization that effectively administers or leads the globalised shipping industry toward the direction of achieving the new production system of reliable shipping services as the replacement of those which once had firmly been established in TDMC.

### **3. The challenge to the international maritime society**

An argument on whether it is feasible to expect that the invisible hands will automatically bring about the reliable new production system in the globalised environment, and if so, on how such process will be, is very much necessary.

What makes the matter really challenging to us is (a) the conflict between the globalization with its by-products, which usually shun the traditional national factors, and the remnants of the traditional national institutional system, including the complications of the established interests among the domestic groups, and (b) the lack of parties who administer such conflict, or even the lack of very intention to do so. It is a matter of fact that the national shipping policy is powerless against the commercial decisions at the private corporate level to

run the business on FOC environment which is a legitimate institution based on the OECD Code.(2)

The transformation of the traditional system of TDMC relentlessly progresses on the principle of cost efficiency toward FOC. Safety, quality and environmental consideration are always secondary or tertiary priority in this process. It is important to note that some of the functional elements of the vertically integrated system can not be sliced and remains within the national boundary, while the other functional elements can be sliced and outsourced beyond the national border. An integrated national shipping policy by any government to administer the whole production system of shipping services, whose key elements of production are divided so globally, will not be worked out under such situation as FOC exuberance. It could mean the end of the national shipping industry.

The homogenization of shipping services has also rapidly progressed in the past three decades. It seems to have spurred the orientation for absolute cost competitiveness in the international shipping market. This is containerization, the core feature of which is homogenization of liner shipping services. The differentiation of the shipping services as the merchandise has become extremely difficult. The economic theory teaches us that in a market where the same merchandise of similar quality by different manufacturers are traded, price is the only effective measure for differentiation. The freight rate per container has become the only meaningful competitive edge. The freight rates in the liner market have thus started to suffer constant downward pressure. The market controlling power of freight conferences has significantly weakened. The shipping industry has increased its effort to reduce their costs to cope with the pressure from the pricing side. This is one of the key factor for the shipping companies of TDMC to globalise themselves. The homogenization of the quality of shipping services seems to have worked to weaken the awareness on the quality of shipping services itself. A container is a container. Only the freight rate matters to the end users. The users have become more apathetic to the matters such as the flag of a ship, the competence, skill level, and nationalities of the crew on board the ship who is carrying their cargo. The substantial difference between container business and bulk carrier business has significantly been reduced.

The process of the development of division of labor in shipping industry has involved the slicing of ship-owning function from the traditional vertically integrated shipping company organization. It is well known that the shipping crisis of the 1980's had rapidly increased the number of the ships whose ownership had been transferred from the original owners to the banks and financiers who did not have any expertise in shipping business. It is natural that such banks and financiers had no knowledge on the crucial importance of the quality and competence of seafarers serving on board their newly acquired ships, nor on the crucial importance of day-to-day maintenance of the ships. Both are also two of the important elements for safety and quality of shipping services. To these new type of owners, the elements of crewing and maintenance, both of which are crucially important for safety and quality, were none of their business, but of the business of ship-managers whom they contracted out with. What once had been firmly shared as the universal value of the highest priority in the international shipping industry has lost its universality, having sunk down to the local norm of the ship-managers.

The slicing of the crewing function from the traditional production systems by outsourcing to the manning company abroad is the most important of all in the furtherance of division of labor in the shipping industry. The once firmly shared ethics, hence the ethos of professionalism as an integral element of the corporate culture had been lost. The heart of the matter is that the actual controlling power over the foreign seafarers working aboard the fleet of the company has shifted from the shipping company to the out-sourced crewing company located in the distant foreign country. It is practically impossible to administer all aspect of their activities. The power of life and death over the safety and quality of the national shipping industry has gone beyond the reach of the shipping company.

The success experience of the days of national shipping industry on the vertically integrated production system has been remaining so vividly in the minds of the industry. The shipping industry seems to be still innocently enjoying the luxury of taking it for granted that competent seafarers, and even the safety itself could be freely available like air or water. A comfortable notion long remains in our minds, as is usual for human. If a shipping company considers that the quality and competence of seafarers with equivalent license irrespective of the issuing authorities are more or less the same, the cheaper the wage, the better for the employer. And this has been the reality of the international shipping society up to this moment, despite of the hard reality that the fundamental transformation of the industry through division of labor in global scale has already passed the point of no return.

The division of labor in shipping industry has meant that many of the key elements of the industry have been outsourced beyond the national border. The outsourcing admitted the introduction of new profit-motivations to each of the divided element. Outsourcing of five elements means the admission of five new profit-motivations into the single production system now expanded globally. The danger, which alas is very likely, is that the first priority of such companies who win the contract of outsourcing is the absolute amount of their own profit out of the new business opportunities. The provision of the high quality goods and services to the clients is secondary. It is especially so in the case of crewing services. The crewing service is the business of number rather than of quality, because the remuneration is usually based not on the quality of the seafarers introduced, but on the number of seafarers introduced. As maximizing the absolute amount of the profit is the highest priority of their activities, a crewing company has all the reason to concentrate their effort to maximize the number of seafarers they introduce to their clients. Quality of individual seafarers is usually far way down on their list of priorities. How to educate, train, and discipline is not crewing agents' problem, but clients' (=ship-owners' or managers') problem. The power of controlling the seafarers is yet in the hands of the crewing company.

Outsourcing of seafarers has been concentrated to so called seafarer supply countries. The common feature of these countries is the lack of the domestic experience of the vertically integrated production system of the international shipping services in their history. They are usually heavily populated countries with immature domestic secondary and tertiary industries, hence with low per capita income. The level of the primary and secondary education is at modest level. The wage level of international seafarer labor market is very attractive for young people to decide to go to sea. The economies of such countries are benefited from the revenue of the seafarers, hence the countries find economic reason to encourage and support the export the labor force of seafarers into the international seafarer labor market backed up by the national industrial policy. The ethics of professionalism in seafaring human resource is not considered as prerequisite for the export of seafarers. The clearance of the minimum levels of various skills, experience and competency is sufficient. The vocational pride, loyalty to the clients, and the sense of professionalism to serve his own country through his seafaring career are not seriously questioned.

Conclusively, (a) the traditional vertically integrated production system in the TDMC has disappeared, (b) the production system based on the division of labor on global basis has replaced the traditional system, (c) the shipping industry of TDMC has surrendered its power to control seafarers to the crewing company abroad, thus they lost the power to control the quality of seafarers, (d) as the education, training, discipline, and certification are the area of the national sovereignty of the seafarer supply countries, the shipping industry of TDMC can exercise extremely limited influence over these areas, (e) as the ultimate priority of the crewing companies is to maximize the absolute level of profit, their highest interest is quantitative, rather qualitative, hence quality orientation tends to be supplementary, (f) the administration of the seafarer exporting countries has the best interest in quantity rather than quality, hence the motivation to invest for the purpose of enhancing the quality of seafarers is weak (to keep the cost of production of export products minimum), (g) the division of labor system tends to increase the number of external profit-motivation, hence involves the risk of weakening the cost competitiveness, unless shrewdly managed, (h) the national government has lost the reasonable ground to administer and to establish the coherent national shipping policy, (i) hence the concept of the national shipping industry itself in TDMC could be at its twilight, and (j) all of these are the reality of the underlying mechanism of FOC system.

#### **4. Maritime Education, Training and research – the basis of the vertically integrated production system**

The trade volume of a country correlate closely with the vicissitude of the national shipping industry of that country.(3) It is also widely acknowledged that the international transportation is a part of the world trade. The world trade generates ocean transportation needs, then the shipping industry is activated to supply transportation services to meet such transportation needs. The shipping industries of TDMC had developed to meet the transportation needs of the respective countries to serve their domestic clients for the carriage of their export/import cargoes. The national shipping industry had served the development of the trade of its own country. Thus, there had been a reasonable ground for the national government to administer the national shipping industry to develop soundly through the national shipping policy. The policy goal had often been established in the manner to maintain the competitive edge in the cost of production of the shipping services through such measures as various tax incentives, operations subsidies, shipbuilding subsidies, and so forth, all of which had strengthened the competitiveness of the national shipping industry in the international shipping market. But it is



important that the true policy aim is to facilitate other major domestic industries with the least cost of ocean transportation for their export/import cargoes so that their cost competitiveness in the international trade market could be best achieved.

Being one of the most important elements of the industry, education, training and discipline of the national seafarers had been the crucial part of the national shipping policy. Almost all the TDMC had established and administered this function by the national government. One or two maritime universities of 4 year education with boarding facilities and regiment system had been established for the clearly intended purpose of providing well educated seafaring officers to the national shipping industry. It was also aimed at enhancing the overall level of maritime education, training, discipline at the lower institutions through the synergy deriving from such maritime universities. The national policy as such had a logical and practical ground to use tax payers' money as a part of its industrial policy of the country. Maritime education, training, discipline, and research are costly. A significant amount of investment had been necessary especially to the maritime universities in terms of (a) facilities and equipments which often included training ships, (b) academic and training human resources, and (c) auxiliary necessities. Such maritime universities had been, and most of the case still is, put under the control of the Ministry of Transportation or of Maritime Affairs, and the Ministry of Education simultaneously. As the result, they have been firmly put in the bureaucratic webs and complications of the national government. Being controlled by the national budget and bureaucratic rules and regulations which covers almost all areas of their activities, including the personnel matters of academic as well as clerical staffs, the maritime universities have become one of the least flexible, sometimes organizationally the least dynamic institutions to transform themselves to meet the change of the environment timely. The national shipping industries in such nations have already transformed themselves to those of globalised entities through transnational division of labor. Their needs for educating, training and disciplining national seafarers domestically have dramatically been diminished. Thus, almost all the TDMC have seen the critical decline of the needs for such maritime universities. The governments have long lost the logical ground, which had been reasonable in the past, to maintain the maritime universities on the tax payers' money. Yet, due to the very practical reasons, it is impossible for the national government to cut the budgetary allocation to the national maritime universities. The only practical measures left for the governments are gradual decrease of budget to the maritime universities as well as MET institutions. The maritime universities tend to be deprived of the ability in many respects to make appropriate actions timely to adapt themselves to the fundamentally different production system of shipping services in the globalised FOC environment. The reality may be worse than this. The obligations under the national rules and regulations over the academic staffs and instructors extend to almost all area of their activities, such as curriculum, teaching methods, languages in the classroom, utilization of facilities and equipments, personnel deployment and assignment, various personal aspect of the personnel such as salaries, pension schemes, and so forth. The way of one's being usually rules his sense and mentality. It is practically the last thing to expect a revolutionary initiative to change the course of their traditional way of running the university spontaneously. It is quite likely to maintain their situation status quo, largely because it is much more comfortable to all. Maritime universities are probably the only key element of the production of shipping services kept within the national boundary.

What we observe today is either disappearance of maritime universities who once had enjoyed the reputation of excellence, or their substantial transformation away from the straightforward education, training, and discipline of seafaring human resources to more general academism and management oriented direction, fully utilizing the available academic resources. The academic and teaching staff of MET with tremendous amount of experience, know-how, and skills at the traditional maritime universities have been left behind or sideways, more and more isolated as the result of the transformation. So far, transnational or global solution to the rich MET-fitted human resource has seldom been observed, although it is logically the most desired thing under the globalised production system of maritime services.

On the other hand, the difficulty is deepening for the national government to find out the logical and practical reason to allocate tax payers' money to expensive maritime universities whose graduates are no longer expected to serve for their national fleet.

It is remarkable to see that there has not been any sensible and serious cries nor realistic actions in any part of the international maritime society urging to face this hard reality, and to find out realistic solutions to it. The internal barriers of bureaucracy surrounding maritime universities as national institution, and the external barrier of national sovereignty over the institutions of higher education seem to be offering euthanasia to the vitally important institutions for yielding high quality seafarers.

## 5. The certification system

The certification system is one of the key processes in the integral production system of shipping services of a country. It is the quality control mechanism within the system to check the quality and competence of seafarers as the vital element of the shipping services. As discussed in the preceding paragraphs, it also constitutes the part of the industry policy of the nation on the ground that the safe and reliable shipping services available for shippers and importers of the country is the very basis of the national trade policy. The high level of authentic licensing system had become a national institution of prestige under such circumstances.

The situation of the pure seafarer supply countries, which had started to play important role under FOC system, has shown a significantly different picture. The function of official certification of the quality and competence of seafarers under the administration of such countries seems to have succumbed to the power of the different motivations. Quantity orientation of exporting seafarers has prevailed over quality orientation.(4)

The certification system of respective countries has never questioned seriously in the past, because of the generous rules and regulations of the FOC flag countries. As the number of the seafarers from the pure seafarer supply countries has increased corresponding to the expansion of the ships under FOC flags, the credibility of the certification systems of the seafarer supply countries has been taken up more seriously. The recognition is quietly spreading that the defective certification system could be a serious flaw in the globalised production system of shipping services, therefore, it could be a serious vulnerability for the broader system of international trade system.

It is also remarkable to see here again that there has not been any sensible and serious cries nor realistic actions in any part of the international maritime society to face this hard reality for finding out the realistic solutions.

## 6. A perspective for breakthrough

The lack of coherence of the principal elements of the total production system of shipping services is the fundamental flaw of the international maritime society today. This is the clear reflection of the reality that there is no responsible party in the international maritime society who has been assigned to the task of reconstructing the integral production system of truly reliable shipping services based on new reality. This mission involves the task of finding the fundamental solution to mobilizing the key element for MET preserved at the most conservative institution of national maritime universities which are now on their steady way for disappearance or significant transformation to the new globalised production system. They are the indispensable resources for seafarer education, training and discipline.(5) The mission also includes the task of solving the shortfall of the present certification system administered under the national sovereignty into such a system which fits in properly to the globalised reality of today.

It seems clear now that there is no appropriate entity in the present international maritime society to take this responsibility. The closest to this seems to be EU who has been taking the initiative and leadership toward this direction on regional basis.(6) The initiative should, however, be taken not on regional basis, but on the international level.(7)

The possible clue may be the fact that FOC fleets are virtually the ships of TDMC.(8) Although FOC system is the most cost competitive system to the owners, it has become more and more apparent that the unfriendliness in safety and environmental protection inherent to FOC system is the Achilles' heels of the system. The fact that the port states, which are most often TDMC, have not complained of their accepting the financial and administrative burden in carrying out port state control against FOC ships is one of the clear illustration of this reality.(9) This means that the direct beneficiaries of reliably reconstructed integrated production system of international shipping services are TDMC. The conclusion from here is that it is fair and reasonable for the governments and the shipping companies of TDMC who effectively control FOC fleets to share at least the due financial burden of the work of reconstruction of the new system.

IAMU is the organization consisting of maritime universities of excellence from all corners of the world with the resources crucial to the highest level education, training, and discipline to seafarers, as well as research capability not only in MET related area, but also in the area of law and management. As such an organization of

global nature, IAMU itself is significantly free from the domestic rules and regulations attached to the national universities. There is presently no entity like IAMU in the international maritime society which is qualified and suitable in many respects to take up the role of leadership toward the reconstruction of the new production system of shipping services which is most suitable for the globalised international maritime society of today and of the future.

## References

- (1) Sletmo, G.K.(1987): The role of shipmanagement in the transformation of shipping, *Fairplay*, 8th January, 30-36
- (2) Yamamoto, H.(2000): On the reason and significance of the core concept of IAMU, *IAMU Proceedings, Inaugural General Assembly*, 96-102
- (3) Iwamatsu, S.(1995): Shipping Consulting and Management – New Organization in Shipping Industry, *Study of Shipping Economy*, No.29, 21-46
- (4) Yamamoto,H(2000): The Question of Quality: Asian Viewpoint, *IAME, The Maritime Industries into the Millennium-The Interaction of Theory and Practice*
- (5) Zade, G.(1997): The training, updating and upgrading of maritime lecturers, *Maritime Education and Training – A Practical Guide, The Nautical Institute*, 140-143
- (6) Zade, G.(2000): METHAR Harmonisation of European Maritime Education and Training Schemes, *IAMU Proceedings, Inaugural General Assembly*, 189-193
- (7) EU (1996): Toward a New Maritime Strategy, *Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions*, COM(96) 81 final, OJEC, 13.03.1996
- (8) Yamamoto, H.(2000): op.cit.
- (9) Bujo, M.(1995): The Mechanism of Off-shore Shipping, *Study of Shipping Economy*, op.cit. 61-80

