

## ECONOMIC CRISIS IMPACT ON THE MARITIME CADETS TRAINING

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### ABSTRACT

In the last 10 years, The Constanta Maritime University (CMU) had to surpass great difficulties in order to ensure places for the compulsory 12/6 month sea training period for its students. Year after year, one of the most difficult tasks for the rector and the deans was to find and convince Romanian and mainly foreign owners to accept our cadets on their ships.

In the last two years, things had changed dramatically regarding the ship owners' policy to recruit young cadets. Our paper will underline the economic crisis impact upon the training of maritime cadets and the medium term effects on the qualified man power demand for the world merchant fleet. We also intend to make some comments regarding the tendencies of demand/supply for merchant officers in Europe and the changes that seems that are made in the on-board training programs.

**Keywords:** *On board training, practical training, economic crisis, maritime education, STCW.*

### 1. INTRODUCTION

Considering the specificity of maritime transports, technological and computerized development in shipping and the fact that the carriage of cargo represents an economical activity, the correct and efficient management of human resources, of the personnel working in the maritime field, represents one of the main ways towards a successful fulfilment of the targeted objectives.

Having qualified personnel on board ships becoming larger and larger, faster and better equipped with last generation devices, becomes a necessity, dictated by the reality on board ships, by electronic and computerized equipments, by the development of the administrative system and high standards requirements concerning maritime safety, security and environment protection.

Cadets, future maritime officers, deck or engineers, are not just simple mariners on the world's oceans and seas, but also important resources for operations developed on land or on board offshore ships.

Professional performance and competence standards are established through international conventions, especially STCW 78/95 Convention with 2010 amendments, convention which clearly states conditions concerning education and training of the maritime personnel.

Cadets' activity on board a ship represents the practical part of the educational process, developed in maritime education institution, institutions with a partly common curriculum, according to international requirements and provisions. Shipping companies, according to QMS policy, have well defined directory lines concerning cadets' activity on board, as well as the programme and educational content which should be studied during the embarked training period.

It may seem surprising that up to 1990 no study was elaborated concerning the determination of the number

of people involved in the maritime transport activity worldwide. The necessity of such a study became more obvious as the work force internalization developed and the first trial on this regard was made by BIMCO and ISF in 1990 by publishing a study which was reviewed in 1995 and 2000 and the results of this revision are extremely interesting [1].

Reports issued by specialists in the field [2] reached the conclusion that there is deficit of officers and a surplus of ratings and estimations were made regarding the future evolution of offer and demand considering certain hypothesis.

An empiric analysis leads to the conclusion that the number of members of a crew was not reduced by more than one third and that efforts in training new cadets were not increased by more than one third, and this is why most probably the difference between offer and demand is going to increase.

Besides the number of seafarers, it is important to analyse the quality of their training too.

The international maritime market passes through a period dominated by substantial modifications, due to the worldwide economical crisis [3].

This global situation determined maritime universities to rethink most of their curricula in order to train mostly capable graduates for the officer position on specialized ships with a high degree of technology.

If 20-30 years ago the high degree in technology could only be talked about on board special purpose ships, such as oceanographic research vessels, today specialized vessels, such as container ships, oil tankers, passenger ships, offshore vessels knew an unprecedented development.

Having in mind the continuous evolution of computerized equipments, shortly all maritime ships will have the same hi-tech endowments, no matter the type and/or the size of the ship [4]. For these ships crewing and training requests, both theoretical and practical are considerably superior compared with those from 10-15 years ago.

**2. THE ECONOMIC CRISIS & THE CREW MANNING POLICY**

At the end of 2008 the entire world economy entered a decreasing phase which couldn't be solved up till now in a favourable manner.

The economic system, on all levels, either macroeconomic or microeconomic was troubled, economic exchanges among the states of the world reached a nonplus, hundreds even thousands of factories closed their doors and million people became unemployed [5].

Of course, the crisis did not avoid the maritime

concerning navigating personnel, a policy which also concerns cadets [7].

Providing conditions for practical training stages of cadets on board ships is a very difficult task, especially if there is a financial pressure on the ship owner brought about by the economical crisis.

In spite of all these, all crewing companies require previous professional experience before recruitment, on different types of ships. The situation seems totally inappropriate as long as a future „junior officer” did not succeed to go on enough voyages, therefore he did not have the physical possibility to acquire such an experience [8]. Times when cadets were taken in a large

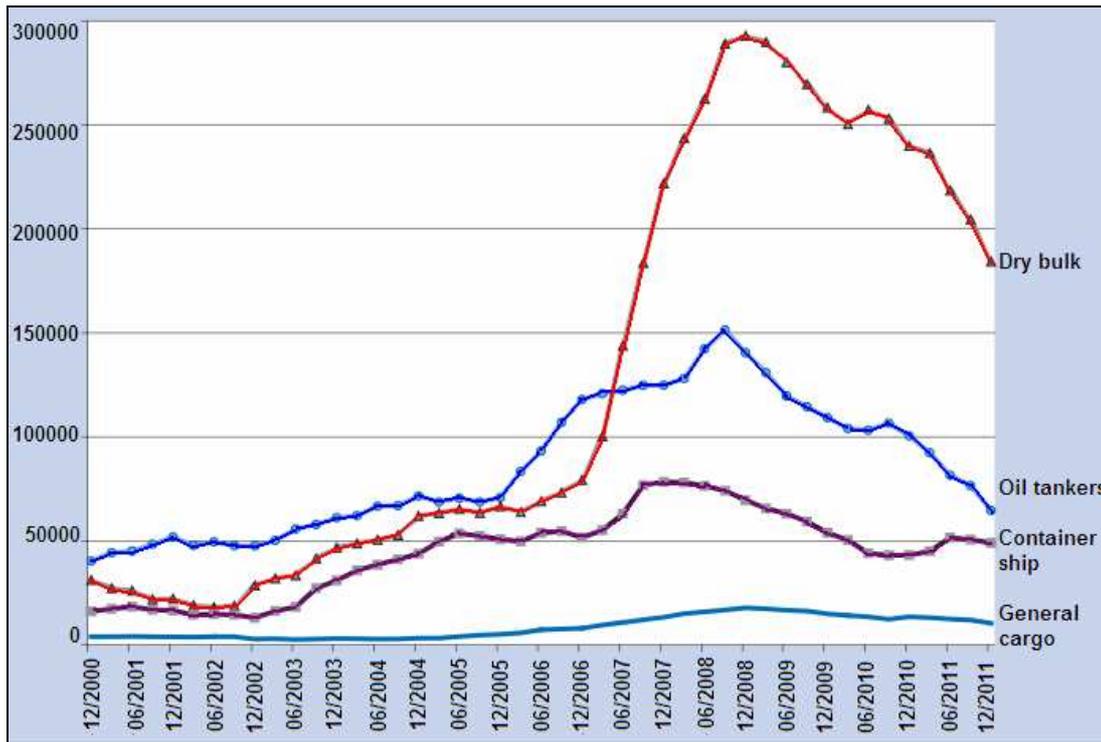


Figure 1 World tonnage on order, 2000–2011 (Thousands of dwt)

domain. Ship owners had to reduce expenses, given that the freight market had substantially decreased and implicitly the operators' or ship owners' incomes were considerably reduced. One of the most usual forms of reducing expenses was represented by letting go the personnel and/or hiring cheaper labour [6].

Many ships have been put out of operation and part of the navigating personnel was left out of work.

In such situation, having cadets on board ships became for the majority of ship owners an unjustified expense which was eliminated since the first period of the economical crisis.

Most states attend the on board training programme according to recommendations of the International Shipping Federation, recommendations made according to STCW Code requirements.

The enforcement of the International Convention concerning work over seas – 2006, requirements and obligations stated by ILO, and the last provisions of the STCW Manila 2010 Convention, shall determine ship owners, in spite of the economical crisis, to take a series of positive decisions and to improve their policy

number by ship owners are long passed and nowadays very few young people manage to get over with the compulsory training on board period of 12 months.

It was believed that 2011 was going to be the final year of the world economical crisis based on some small economical increases in some industrial sectors, this fact leading to an increase of the optimism degree among ship owners. Unfortunately there were simple speculation based on minimal information and the following years, 2012 and 2013, remained at the same stagnation level of transportation demand [9].

The number of ships taken out of operation in different ports of the world, left under the care of a minimum safety crew, has reached 30%. Some ship owners had to surrender, especially those who weren't strong enough, considering the "preservation" of ships as the best solution. The graph from figure 1 clearly demonstrates the impact of the global economic crisis upon all types of maritime transport capacities [10].

Other ship owners, whose fleet was large enough in number of ships, have "preserved" only part of the ships considered to be non-performing, continuing to exploit

the other ships trying this way to cover expenses generated also by ships out of operation.

Part of the ship builders were surprised to find out that finished ships and ready to be delivered could not be paid for by those who ordered them and against their will they became owners, entering the shipping market at a not very promising time.

States having ships under their national flag provide on a certain level cadets' access on board ships for training but their number is way beyond expectations.

At "European Manning & Training Conference" in 2012 from Sopot, Poland, besides problems related to shipping and maritime industry, there were discussions concerning the crewing activity on a European level [11,12]. More representatives of different participating states brought up the lack of qualified personnel for specialized ships and the lack of offers for cadets. Moreover attention has been drawn over the fact that this lack of interest for future officers, not having the opportunity to train as cadets on maritime ships, will create a huge void in the future concerning „junior officers”.

Continuation of the economical crisis period will certainly generate a surplus of theoretically well trained personnel (graduates of maritime education institutions) with no work experience [13].

For now, it may be considered that the influence of the economical crisis annulled the deficit of certified personnel at the world fleet level. But, in reality, an aging of the navigating personnel phenomenon will appear, a stagnation in promotions, which will determine an important number of officers (no matter their specialization) to give up this profession and to look up for work on shore [14]. At the time when maritime traffic will start reinvigorating and settling (on the level of 2005-2006) there will be proof that the deficit of certified personnel will be even higher than it was at the beginning of the economical crisis [15].

At "European Manning & Training Conference" in 2013, which took place in May, at Dubrovnik, besides different themes approached, there were some of the previous topics of the Sopot conference related to finding some solutions for awakening the ship owners' interest in taking cadets on board. Unfortunately possible identified solutions are only punctual and can only be applied by a restricted number of ship owners.

Sure thing: the economical crisis has strongly affected and influenced cadets' access on board ships, no matter if they belonged to the European or Asian area [16].

### 3. CMU AND THE ONBOARD TRAINING EXPERIENCE

Constantza Maritime University (CMU) always struggled to obtain as many as possible on board training places for its cadets. During the last twenty years we experienced different stages regarding the cooperation and collaboration between our university and the shipping companies.

In the first place was the 90' period when there were no STCW constrains regarding cadets on board training. At that time CMU had his own training ship

and was performing 3-5 training voyages per year for the students after their 3<sup>rd</sup> year of study.

STCW 95 amendments stipulating the 12 month compulsory on board training period for deck cadets and 6 month for engineer cadets entered in force in 1997.

Due to the dissolution of the Romanian merchant fleet and the emerging crew manning companies on the Romanian seafarers labour market, the Romanian Naval Authority (RNA) accepted until the year 2000 that the most part of the on board training for our cadets to be done on board CMU training ship.

After the year 2000 the RNA requirements became in accordance with the STCW 95 provisions so the 12/6 month on board training stages for all CMU graduates

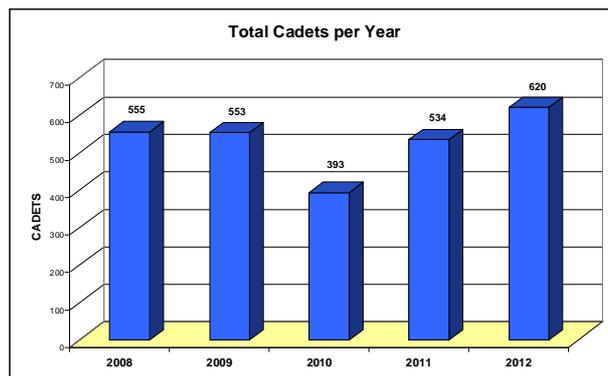


Figure 2 CMU – total number of cadets/year

became compulsory. Consequently 2000 – 2005 was a very harsh period for our students because there were very few shipping companies available for taking on board our cadets.

In the following graphs we would like to show the CMU experience regarding the on board training process dynamics between years 2008 and 2012.

Starting from 2005 the shipping companies came to our university asking for cadets and officers. At first we were surprised by such a change in attitude. After a while it became clear that the new approach of the owners was dictated by the already existing lack of officers and the prognosis confirming shortage of well trained officers for the merchant fleet during the next 10 years. In accordance with the figures mentioned in the BIMCO report, the actual shortage is around 27,000 officers and in our opinion will increase with another 15-18% by 2015.

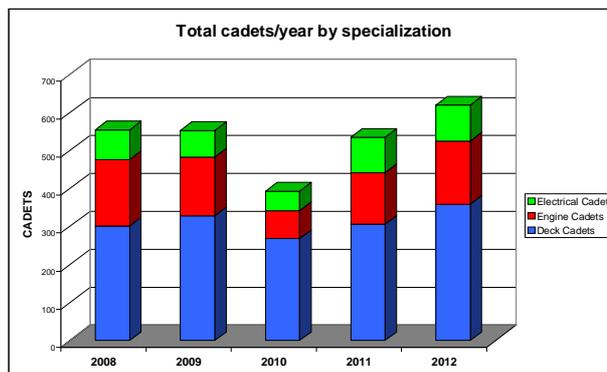


Figure 3 CMU – total number of cadets/year by specialization

## New Technological Alternatives for Enhancing Economic Efficiency

As a direct consequence, many owners changed their strategies regarding the recruiting of personnel and established new policies in order to develop or extend

to the STCW 2010 amendments we estimate that the request for electro-technical cadets will increase in the next years because this category of officers has for the

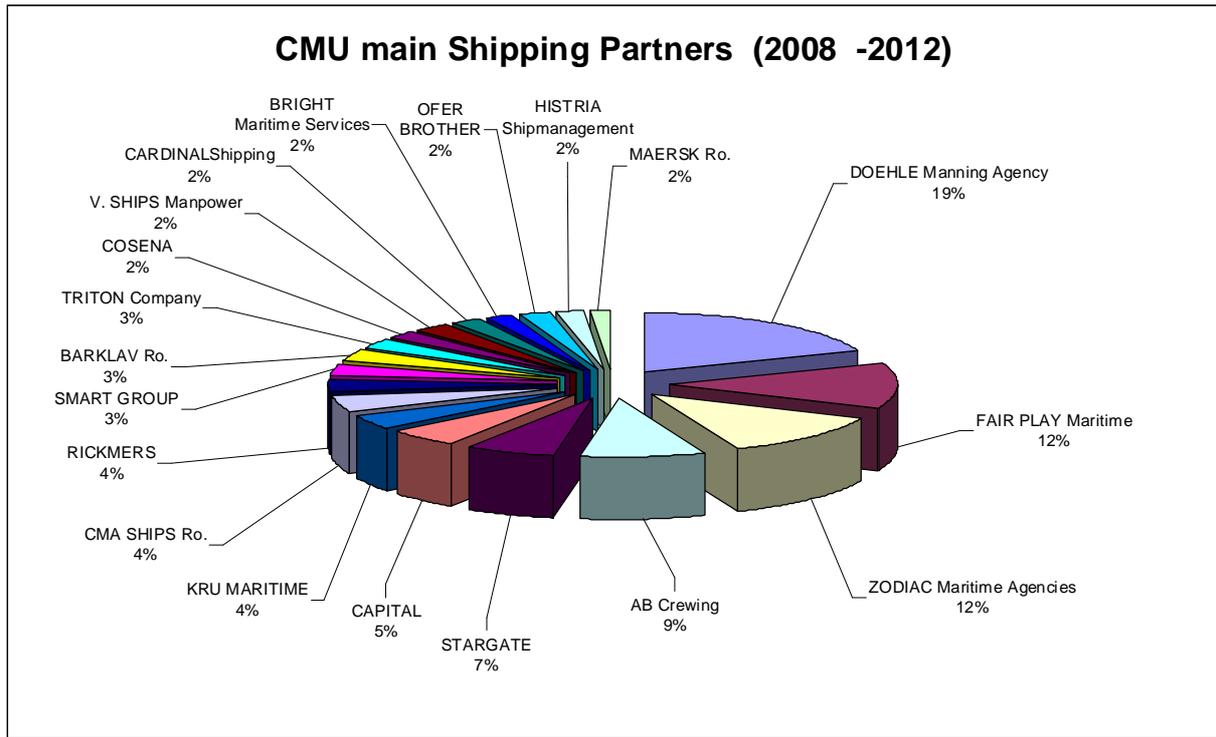


Figure 4 CMU – main shipping partners

their cadets' training programs. We had shipping companies that offered scholarships for 15% of our students, from both faculties (navigation and electro-mechanics), including scholarships for the students in the junior years of studies.

In figure 2 we have a compressive image of the total number of CMU students that had annually

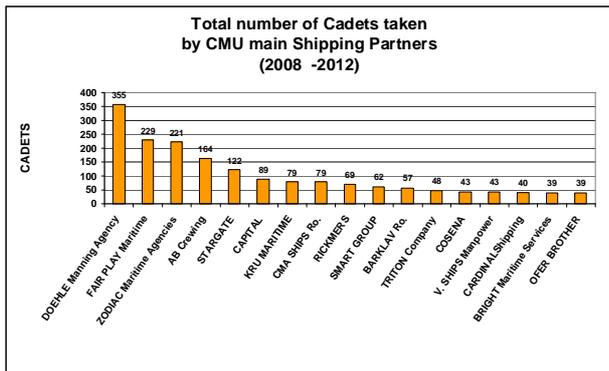


Figure 5 Total number of cadets by shipping companies

undertaken the on board training. Excepting the year 2010, the average number of students that are going on board merchant vessels are around 565 per year. In 2010 this number dropped at 393 cadets, meaning a reduction of the average number with almost 31%. Figure 3 shows the distribution of our cadets making annually training stages in accordance with their specialization. The average annual proportion is: 57.2% deck cadets, 30.0% engineer cadets and 14.7% electro-technical cadets. Due

first time an recognized international legal training status. From the two graphs we can conclude that in year 2010 the global economic crisis had a maximum financial and psychological impact over the ship owners.

At that time CMU signed more than 20 institutional contracts [17] with ship-owners or crewing companies for providing them a large enough number of cadets. Graph from figure 4 depicts the importance of the Constantza Maritime University main shipping partners (ship owners or crewing companies). The percent figures represent the number of cadets taken by each company from the total number of students that had on board training stages between 2008 and 2012. Actually the same figures are presented also in figure 5. Here we can better see the top of the seventeen most "helpful" shipping companies for CMU. In this five years period

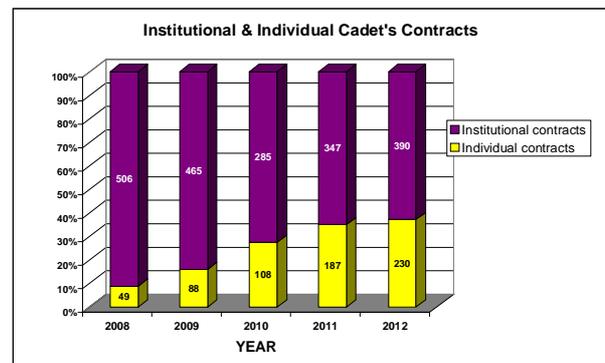


Figure 6 Cadets with institutional and non-institutional training contracts

“Doehle Manning Agency” was the most valuable partner taking a total of 355 students (19.3%) from the total number of students (2665) that done on board practical training. On 2<sup>nd</sup> and 3<sup>rd</sup> place we have “Fair Play Maritime” and “Zodiac Maritime Agencies” with almost the same number of students taken on board (around 225 students). Next we have “AB Crewing” that is the representative in Romania of Nippon Yusen Kaisha (NYK Line) and “Stargate Crewing Agency” who is working with various German shipowners. These two crewing agencies took an average of 240 cadets in 5

available crewing companies and smaller ship owners in a desperate effort to make at least a few months on board training.

Now is time to see how the economic crisis influenced the cadet recruitment policy of the main shipping partners of CMU. For this matter we think that the graphic presented in figure 7 is very eloquent.

Due to page dimensions constrains we selected only the first eight shipping/crewing companies that over the years sent on board the largest number of our students (50.4% from the total number of cadets embarked). In

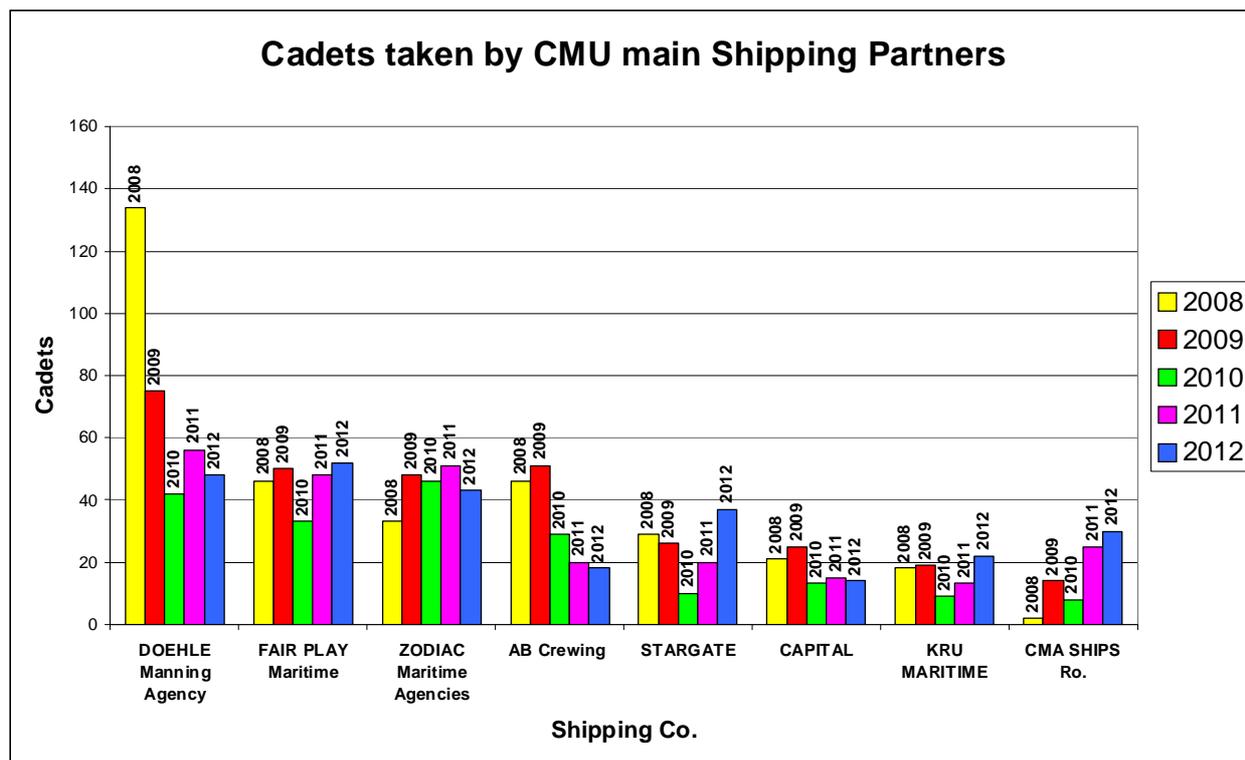


Figure 7 Cadets taken each year by CMU main Shipping Partners

years. The next twelve shipping companies (presented in our graphs) took an average number of 10 students/year. This rate is not very impressive but in total their contribution was very important because they manage to maintain the same offer over the years.

Another 15-20 crewing agencies tried all their best to secure more cadets for other international ship-owners, many times making better job offers than the companies that had signed contracts with our university. Figure 6 shows the report between the number of cadets that manage to make the on board training stages having institutional contracts and the cadets that had to find by their own places on board maritime ships (individual contracts).

If you look closely at this graph (figure 6) you can see that the number of individual contracts increased steadily year after year. This trend could appear to be illogical in a period of economic crisis. The reality between this tendency is that when the main CMU shipping partners decrease their ability to offer positions for CMU cadets, our students take the effort to find opportunities to go on board ships on their own hands. Consequently their applied for cadets’ positions to all the

figure 7 we can see the number of cadets enrolled by these eight companies each year from 2008 to 2012. Surprisingly there is not a common behavior for all the companies over this period, with only one exception. The exception is the year 2010 when all our main shipping partners significantly reduced the number of cadets employed. Compared with the previous year (2009) and expressed in %, this reduction was as follows:

- Doehle Manning Agency - 44%,
- Fairplay Maritime - 34%,
- Zodiac Maritime Agencies - 4,2%,
- AB Crewing (NYK) - 43,1%,
- Stargate Crewing Agency - 61,5%,
- Capital Shipping & Trading - 48,0%,
- KRU Maritime - 52,6%,
- CMA Ships Romania - 42,9%

As we can see, with the exception of Zodiac Maritime (drop only 4.2%) the rest of seven companies had reduced the number of Romanian employed cadets

with an average of 40% compared with previous year 2009.

What happened after 2010 is also very interesting. In seven from eight cases, shipping companies started to increase the number of cadets embarked. The only partner that steadily decreased year after year the number of cadets taken from Romania was Nippon Yusen Kaisha (NYK Line) represented by AB Crewing. More than that, in four cases (Fairplay, Stargate, KRU, CMA) the number of cadets employed in 2011 and 2012 were greater than in 2008 or 2009. Of course that the figures that we presented in this paper reflect only the interaction between Constantza Maritime University and the above mentioned shipping/crewing companies. We can not say if the trends presented in figure 7 replicate their general policy of these companies regarding cadets' enrolment or it is only the case with Romanian students. For example, we know for sure that NYK deliberately reduced the number of cadets recruited from EU countries but increased the recruitment of Indian and Philippine cadets.

Another event that is encouraging us to hope that in the next years the recruitment policy of cadets will regain the normal process is that in 2013, for the first time, Maersk Line took a large number of cadets (over 50) from our University and seems to became no. 1 shipping partner from this point of view.

At the end of the paper we would like to talk about a project that helped our students during their on board training period. It is an EU founded project type ERASMUS that is supporting students' mobility for practical training purposes. We need some time to explain to the Romanian ERASMUS head-office staff the particularities of the practical training that was done by the students of Constantza Maritime University and

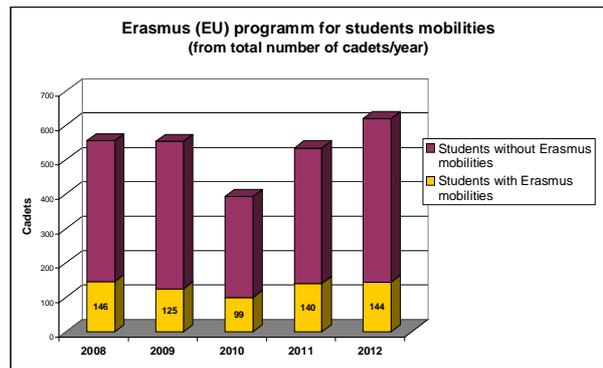


Figure 8 Cadets beneficiary of the Erasmus Mobility Program

that some of the ERASMUS project general rules could not apply for the on board training. It was necessary to change some financial procedures and reporting forms and also the monitoring process had to be reorganized. Finally we manage to make the program work and in a few words, each student that was starting his cadet training stage is receiving around 300 euro/month for a period of three months.

At the beginning of the project (year 2008, 2009), from the students point of view, all these money were practically extra pocket money because all the expenses were covered by the owners and also the cadets were receiving some wages during their on board embankments.

Starting with 2010 when owners drastically reduced the expenses for cadets training, CMU used this funds to encourage owners to still embark students on their ships. Instead of giving the same amount of money to the students we transfer the money to the shipowners for

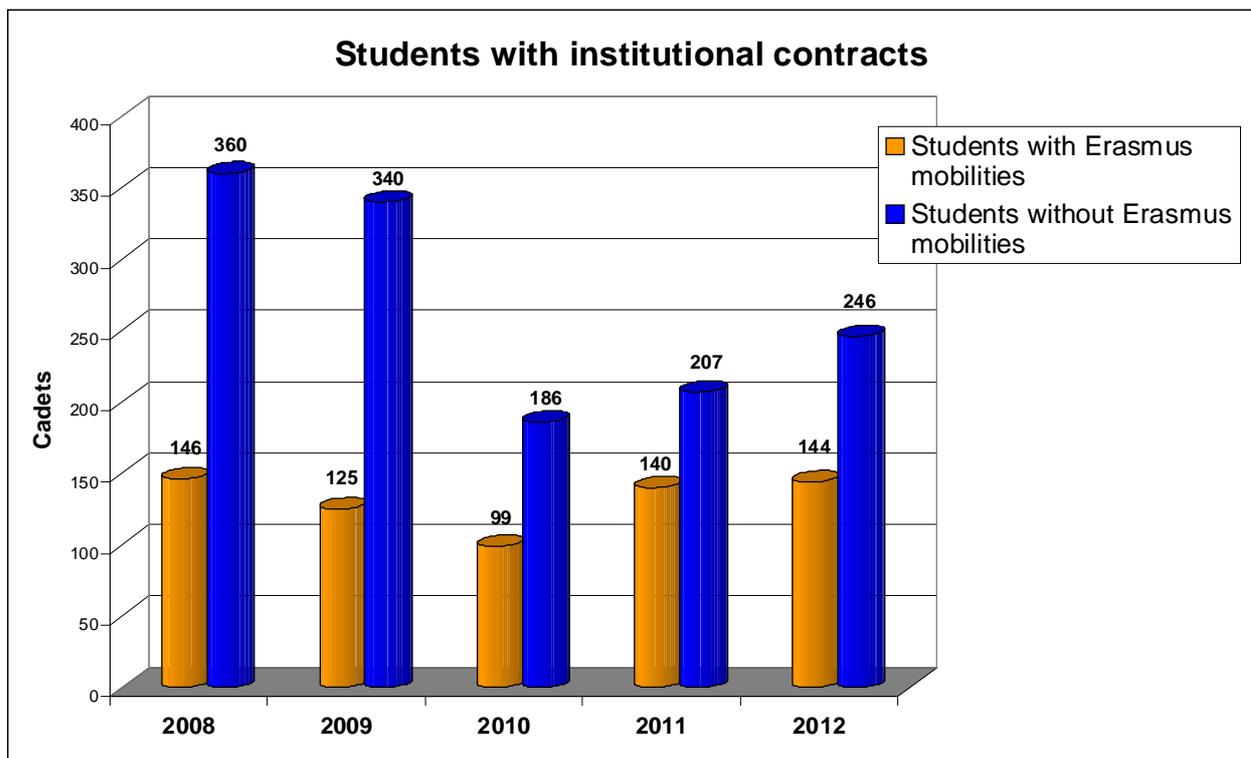


Figure 9 Erasmus Mobility Program for students with institutional contracts

covering part of the air travel costs involving the transfer of the student to/from the ship. This was the only opportunity found to us use the ERASMUS money and to comply also with the financial rules imposed by this EU program. In figure 8 we presented the proportion of cadets that were beneficiary of the ERASMUS mobility project compared with the total number of cadets embarked/year.

The students enrolled in the Erasmus project have to be only students recruited by the shipping companies that have contracts signed with CMU (institutional contracts). In the graph from figure 9 we can see the number of students that had institutional contracts divided between the students with and without ERASMUS financial support for training. As you can see after 2010 the number of ERASMUS students increased helping students and encouraging owners to continue their on board training stages for our students.

#### 4. CONCLUSIONS

Now we can say that the 2005-2008 period was the boom period regarding the possibilities offered to our students to go on board maritime ships and to perform their compulsory training stages.

In the last two years, due the world economic crisis things had changed dramatically regarding the ship-owners' policy to recruit young cadets. As we already show in chapter 2, one of the first reducing costs measure undertaken by owners was to drop out the cadets from their ships.

For Constantza Maritime University the year 2010 worst the worst year as number of students that manages to go on board ships for fulfilling the compulsory training stage. If you consider the year 2008 as a reference year (555 embarked cadets) the drop in year 2010 was of almost 30% (29.2%).

After 2010 it seems that the perspective for cadets had improved and year after year the number of students that found positions on board merchant ships as cadets increased. Because our main shipping partners did not retake the on board training policy as before 2010 we can not be very optimistic for the near future, but it can be a moment of owners re-orientation towards new fresh maritime officers markets. Maybe some of the major owners will try to increase the number of Chinese or Myanmar officers on board their ships. Meanwhile other owners that already experienced such officers will give a better chance to the eastern EU officers as Romanian and Bulgarians.

The level of training of the maritime graduates will be in all cases the main factor that will incline the balance toward a maritime training world area or another.

Using EU projects found for supporting students' mobility for training is a great advantage mainly for the students and especially in this very difficult economical period.

Once again we have to underline that for the Romanian maritime student the milestone is not to obtain the required standard of education but to accumulate de 12 months of onboard training.

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