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THE INVESTIGATION OF MARITIME SECTOR LABOUR MARKET NEEDS AS BASE FOR CONCEPTION OF MET IN ESTONIA

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Abstract. The political solutions and attitudes of authorities in some European countries are not always in favour of the marine industries and main actors on shipping market. That may lead to ships "escaping" from under flags of these countries and to imbalance between economic and social needs and opportunities or, in other words, between objective and subjective demands on maritime sector labour market. Estonian maritime sector during long time was not the best sample in this sense and undoubtedly needs taking the effective measures for solution of these problems.

One of the main goals designated in "Estonian Marine Policy 2012-2020" is to bring positive trends to developments in maritime sector of economy. Working out the strategy for development of maritime education and training in Estonia for at least next 10 years is significant objective of that. The comprehensive investigation of maritime sector labour market needs was carried out amongst the Estonian enterprises and other subjects of maritime sector (e.g. governmental bodies, craft unions) in 2015. The results of this study work should be the main sources and to give the basic data for working out of abovementioned strategy in MET.

The final result of this activity shall be the conception of maritime education and training in Estonia. The main features of it must be complexity and credibility. That may be achieved by taking into account the impact of all the main factors of both internal and external maritime labour markets as well as subjective and objective demand for maritime education during next 10 years. Not only enterprises and other institutions are subjects to investigation for forming the strategy of MET but very important to involve the alumni and even school youngsters as well. One of main goals is to range the impacting factors by the importance of them for stabile development of national MET and to work out the effective measures for focus on them.

One of well-known and disturbing trends in seafaring during last few decades is the sustained drop-off of MET attractiveness mainly in so-called "old Europe countries" that undoubtedly is one of the most significant reasons for chronic lack of ship officers on management level for EU merchant and passenger fleets. In authors' opinion, in spite of local character of Estonian MET conception the problems and trends focused in that mostly are typical for EU in whole and may give a good opportunity for using the "Estonian lessons" more widely.

Key words: labour market needs, objective demand, subjective demand, MET conception, complexity

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1 INTRODUCTION

The merchant shipping with its transnational nature and high level of globalization is a field of strong competition amongst not only shipping companies around world. Today actually maritime countries themselves are competitors on marine transportation markets [1]. It is why the governments and societies of maritime nations are bound to apply a number of various measures for providing the better conditions for companies and other maritime sector players in own country so that they are able to be competitive on worldwide shipping market. The main features of improvement of situation are ships' "coming back" under flag of country and the stabile positive demand on labour market of maritime sector.

Speaking about attitude of Estonian governmental and political establishment in last decade of XX and most part of first decade of XXI century Estonia might be defined as the "sleeping" maritime nation [1]. Fortunately, some important documents came into force during last 5-7 years and hopefully situation in maritime sector will have trend for improving in current and next decades. One of the most important documents in this field is the "Estonian Marine Policy 2012-2020" (EMP) [2] the main goal of that is stopping the negative trends in Estonian maritime sector, especially in shipping and to achieve a positive breakthrough in the developments during going decade.

According to EMP vision the maritime sector in Estonia must be attractive and sustainable sector of Estonian economics and shall create the high quality surplus value. For achieving of this goal five priorities were formulated whereby the forth priority states: the Estonian maritime education and research and development activity are on up to day level. In frame of this priority achieving of two goals is envisaged: 1) the maritime education giving in Estonia ensures up-to-day education in balanced capacity for specialists in all fields of maritime sector as necessary; 2) the quantity and quality of research works in Estonian maritime sector are growing up [2]. According to plan of activities 2014-2016 the conception of maritime education shall be worked out and planning of maritime education should be guided by it during at least next 10 years. It means in turn that the comprehensive investigation of labour market needs in Estonian maritime sector should be conducted; the results of that are the absolutely necessary input for abovementioned conception.

2 LABOUR MARKET NEEDS IN ESTONIAN MARITIME SECTOR

In simple words the main goal of this work was to estimate how many people with maritime education Estonian maritime sector needs during next 10 years.

For obtaining of creditable results two main principles were put in basis of methodology when planning the study work: first one is the principle of objectivity what was provided by conducting of research by independent research worker found by tender; secondly, the principle of scientific methodological approach was applied, i.e. figuratively speaking everyone independent researcher who wants to repeat this research work using the same methodology and the same initial input should have inevitably more or less the same results. One necessary presuppose for that the objectivity of initial data that must be obtained only from official and widely recognised sources.

2.1 The Methodological Approach

There are a lot of several methods in use for making prognoses for labour market's needs. In very general they may be divided to quantitative, semi-quantitative and qualitative methods ore some combinations of them. In lots EU countries the enquiries amongst employers are used frequently because usually there are no the creditable statistical data about proposed or vacant job places. Actually such enquiries are oft the object for critique because they may be sometimes not very representative and give as rule the static picture of momentary situation, besides they may not reflect the situation objectively in full because the subjectivity of employers' viewpoints. The biggest value of such enquiries is the qualitative view for finding out the shortages in quality of labour forces (e.g. appraisal of skills) – such information may not be collected using the quantitative methods. [3]

The second frequently using method is the so-called statistical model. By that for example the demand and supply of labour forces may be compared. The strength of such model is in possibility for nationwide applying and in being applicable for more long periods (5 – 10 years). The weaknesses are the relative imprecision and excessive generalization, and some insufficiency of model in whole as well – it's principally impossible to find answers for some questions using this method. [3]

Taking into account all the above mentioned factors the combined methodology was chosen for this investigation work. It is combination of quantitative model that based on statistical approach and of qualitative analytical method based on appraisals of employers giving in course of interviews. So the practical work consisted of two parts: first one was the collection of statistical information about employees from enterprises using the questionnaires, second one was the obtaining of qualitative appraisals about situation in sector by use the face-to-face interviews. By dint of first kind information the structure of labour force in maritime sector as of 2014 was determined and the

possible development scenarios in next 10 years were composed and analysed. The employers had given qualitative appraisals to possible future developments in their own fields of activity, i.e. they expressed their opinion about quality, sufficiency and necessary competences of employees in next 10 years.

The prognosis model takes into account two main kind of demand affecting the developments: growth demand and replacement demand. The growth demand may be the positive one as well as the negative one and it depends on economic prognosis for investigating period. Whilst developments in economics are dependent on a lot of circumstances and unpredictable events such prognoses are relatively imprecise so the method of different scenarios is usually being in use; hence the three scenarios were used in this work as well: so named basic, conservative and optimistic scenarios.

The replacement demand is always positive because a number of employees in sector in the long run decreases inevitably by several reasons: mortality, retirement and moving of employees to other working places out of sector. The labour market needs in maritime sector are certainly affected by both growth and replacement demand factors.

The selection of employees' specialities and job positions for investigation purposes was done. The main principle of this selection was that people need maritime education for obtaining of these specialities and working on these workplaces. Selection by specialities and job positions is shown in Table 1 [3].

The selection of enterprises for enquiring and taking the interviews was done as following: using the database of Estonian Commercial Register the enterprises were chosen by main field of activity declared by them as acting in maritime sector during 2008-2013. The activities were determined according to Estonian Statistical Classification of Economic Activities EMTAK 2008 that is the national version of EU classification NACE. [4] Additionally the enterprises having declared maritime sector activity as ancillary one were included to selection as well in case if researcher had information about real acting of this enterprise in maritime sector during named period. In such way formed complete selection consisted of 464 maritime sector enterprises with 9 123 employees in sum.

Table 1 The specialities and job places handled in study work

Specialities	Job Places
Navigation	Captain
	Chief Mate
	Second Mate
	Third Mate
	Deck Cadet
	Boatswain
	Deck Rating (Sailor)
	Pilot
	VTS operator
Ship Engineering	Chief Engineer
	Second Engineer
	Third Engineer
	Fourth Engineer
	Engine Rating (Motorist)
Ship Refrigeration	Refrigerating Engineer
Ship Electro Mechanics	Electro-Technical Officer
Ship Electricity	Electrician
Shipbuilding	Ship Building and Repair
	Shipbuilding Manager
	Shipbuilding Planning and Design
Small Craft Building	Small Craft Building and Repair
Small Harbour Management	Small Harbour Specialist
Port and Shipping Management	Port or Shipping Manager
	Ship Agent
	Cargo Forwarder
	Stevedore
	Ship Broker
Seaways Operation and Maintenance	Hydrographer
Radio Electronics	Radio-Electronic Officer

2.2 The Results Of Study

The answers for questionnaires were received from enterprises that employ in total 3 543 people what is 39% of total selection for study work. For getting of expert opinions regarding to present situation and future trends the semi-structured interviews were carried out within 39 most important and biggest enterprises as well as craft unions and governmental bodies in field; the interviewees were mainly top managers or owners of these enterprises and organisations. The information obtained was analysed and used for giving the appraisal to situation in maritime sector having in mind the quality and sufficiency of labour force today and in future. For better systematisation all the answers were divided to three groups: 1) ship building and repair incl. small craft building and repair, 2) shipping together with crewing, towing and bunkering, 3) ports and port services together with stevedoring and agency.

For drawing up the labour market needs' prognoses three future developments' scenarios were composed on the base of statistical analysis, interviews and experts' assessments. They were basic, conservative and optimistic scenarios. According to that the needs for additional labour forces in maritime sector until year 2025 are shown in table 2 [3]. Under additional labour forces we understand people who need to have maritime education to be employed in maritime sector enterprises, governmental and supervising organisations.

Table 2 The needs for additional labour forces until 2025 in maritime sector and in governmental and supervising bodies concerned

Job position	Scenario		
	Conservative	Basic	Optimistic
Captain	42	59	71
Chief Mate	14	18	25
Second Mate	8	12	17
Third Mate	21	24	29
Boatswain	31	36	44
Pilot	10	12	15
Deck Rating (Sailor)	67	87	119
Chief Engineer	57	66	79
Second Engineer	13	15	20
Third or Fourth Engineer	64	73	89
Engine Rating (Motorist)	70	72	91
Refrigerating Engineer	8	10	13
Electro-Technical Officer	21	25	30
Radio-Electronic Officer	11	13	15
Electrician	21	28	36
Ship Electrician	20	22	26
Ship Builder	82	91	102
General Manager of Shipbuilding	20	23	27
Project Manager in Ship Building and Repair	18	22	28
Port or Shipping Manager	40	47	60
Harbour Specialist	21	23	28
Agency, Forwarding, Brokering	5	6	8
Other	4	5	6
Total	670	788	978

3 THE BASIC PINCIPLES ON CONCEPTION OF MET IN ESTONIA

The results of investigation work carried out are the very important input but not only for working out and coming into force the Conception of MET in Estonia. A lot of other factors and impactors should be taken into account. Actually the study of labour market needs has made to certain extent clear the so-called objective demand only in maritime sector in next 10 years. The first main goal of Conception will be to investigate the supply side as well as the subjective demand coming from community side. The proposals for measures and activities for bringing these maybe contradictory factors into balance are the second very important goal of it.

For example, very significant factors that strongly impact situation on labour market of Estonian seafarers are the international character of shipping and freedom of labour forces moving within EU thanking to that a lot of graduated ship officers find their job places under foreign flags. For Estonia proportion between seafarers-residents of Estonia and Estonian seafarers sailing under foreign flags (mainly flags of convenience) is nowhere near in the favour of Estonian residence. This may be easy explained by fact that number of ships fly Estonian flag is marginal now. The usual question of politicians is: does the country have obligation to waste money and educational potential for preparation of well-educated seafarers who leave country and go to foreign ships? Conception has to give answer to this question amongst other important things.

The labour market needs investigation gives us some imagination about output of maritime education and training institutions that should enter into market every year to satisfy the demand of that. But what is the real proportion between amount of entrances and number of graduates after 5 years in this speciality? In other words, if we want to have for example 10 graduates with definite qualification entering to maritime sector in 5 years, haw many school youngsters have to be enrolled to MET institution on appropriate speciality today? Giving the correct answers for this and other questions is not so easy because of a number of several impactors plus not always clear developments in future plus unstable and not very positive demographic situation in country and more other factors. But of course all these factors and trends shall be taken into account by working out of Conception.

4 CONCLUSION

A number of investigations and study works carrying out during last decades was dedicated to developments of MET and labour market problems in several EU countries and in EU in whole. Because the maritime sector, especially shipping is very dynamic sector of economy from one side and has clear an over-border character from other side the results of these jobs need to be regularly revised and renewed. Systematization of existing materials and actuating the new investigation jobs by working groups from different countries are essential and may take place under coordination of IAMU.

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