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# FEEDER SERVICE - LOGISTIC SUPPORT TO THE PORT OF RIJEKA

#### ABSTRACT

The shipping trade has also got caught up in the worldwide globalization trend. Today there are some ten strong ship operators in the world (so called mega shipowners) who are working either on their own or are mutually connected to cover a specific market. In an effort to meet the requirements of the end users, the shipping companies tend to organize strong feeder services. Feeder services can also be initiated by terminal operator or port authority which is most often reflected in the subvention of empty feeder ship cargo space (formerly 100 to 300 TEU, now 500 to 1000 even 1500 TEU).

Thus, the Feeder Service Rijeka/Ploče - Gioa Tauro/Malta started up at some time past by Lošinjska plovidba, organized by Rijeka Port Authority and subsidized by the Ministry of Maritime Affairs, Transport and Communications of the Republic of Croatia 1999, is the beginning of the container transport revitalization process in the Republic of Croatia. The service turned out to have been reliable and accurate and attracted many users. Having logistic support of 22 Croatian companies through competetive prices and high-quality service on the one hand and three time bigger shore capacity on the other hand, container terminal in the port of Rijeka has attracted two commercial weekly feeder services ( CMA-CGM and UFS), even the spectacular callings (twice a week) of so called Mother ships ( ZIM and Lloyd Triestino). As their logistics support, the Croatian railways have started off a direct container block-train Rijeka - Budapest. The annual growth achieved in the container feeder transport stands at about 60% and with the coming of other shipowners Rijeka container terminal has increased its turnover from 6.000 TEU in 1999 to 30.000 TEU in

# KEY WORDS

containers, feeder, transport, organization, competitiveness

### 1. INTRODUCTION

In any analysis of the transportation activity special attention should be paid to the container traffic as one

of the most dynamic forms of the modern traffic technologies. In fact, the level of containerization, its basic features and forms, have great impact on the development and reputation of particular sea ports and transportation routes and through that on the entire economic potential.

Feeder service as a modern way of organizing container transport and linking two or more container terminals as well as supplying larger container ships, represents a higher form of the marine transport containerization. Smaller container ships and the role feeder service is playing in the upgrading of the marine transport are matters of permanent attention and research aiming at achieving a timely and effective follow—up of large container ships (hereinafter MO-THER SHIPS).

Both the current conditions and the prospect of the containerization and feeder service development are worthy of the attention paid by the Croatian research workers and men of practice, the more so as such forms of container transport are very important for successful functioning and development of the leading Croatian ports, particularly the Port of Rijeka.

Also, the question of feeder service run by some Croatian shipowners in the Croatian ports, question of contribution and stimulation of the Croatian ships to the development of national economy within a given period have been topical issues these last few years.

# 2. BASIC FEATURES OF FEEDER SERVICE

At the very beginning of the marine transport containerization four decades ago, its basic elements were containers, container ships, container terminals with specialized reloading devices and specific auxiliary equipments. It was the development and specialization of these basic elements that have articulated the modern containerization system in the marine trade and made it possible for the regular shipping service to operate and develop on the new foundations.

The introduction of the container feeder service helped the main advantages of the container transportation such as its speed, safety, job improvement and efficiency to achieve added recognition. Speaking of the structure and functioning of container fleet and individual ships in particular, it is not possible to leave out the significance and growth of the contemporary feeder service. Namely, the construction and introduction of larger container ships on the main international sea routes, among major sea ports, gave rise to the need for containers to be stored up and distributed in a specific area [1].

In conceptual terms, the feeder service is meant to collect containers and feed large container mother-ships as to avoid their calling at too many ports. It was the feeder service that made the entire container service economically rational, efficient and more profitable, consequently cheaper and timely for end users.

As regards the size of the ships to fit the feeder service, there has been a considerable change in the last twenty years. From the vessels featuring 100-300 TEU at the early stage, those that have been mostly in use lately have a capacity of about 400 – 1000 TEU.

In performing their feeder service, ships are to call at several smaller ports within one cycle, spending only a few hours in each of them, most often, in the landlocked seas. The feeder service itself has to be dynamic and flexible and based on a smaller container or RO-RO ship with low daily fixed costs.

As regards the areas suitable for feeder service implementation, they are usually those of the landlocked seas where, besides a large internationally significant port, there also exists a number of smaller ports. It happens lately that the large terminals and main feeder destination sites have become strategic points along important sea-traffic routes, very often situated in the major sea-passages.

Conceptually and in terms of geography and space, the feeder service makes it possible for large container ships to stick to the circular or rectangular form of their basic routes, which is of utmost importance for optimal exploitation of such big and expensive ships. In the international worldwide shipping industry the container feeder service has become particularly important after construction of large container ships ranging between 4000 and 6000 TEU. The container ships of such a capacity require the feeder service implementation, since the number of large container terminals able to accommodate those ships has been constantly decreasing. In the Mediterranean, there are a number of container transshipment ports looking for the feeder service and

achieving recognition such as Algericas with the important geo-strategic position in Gibraltar and the port of Marsaxlokk in Malta. The leading container transshipment ports in the central and eastern part of the Mediterranean which is important for the Croatian ports, are G. Tauro, Taranto, Limassol, Cagliari, Larnaca, Damietta and Alexandria.

Analysis of the container services, run by various world-shipping companies, lead to the conclusion that some of the leading shipping companies in the world either make arrangements for their own feeder service or use the service offered by other companies. The greatest number of the feeder service takes place in the zone of landlocked seas or large sea gulfs. Besides, the feeder service can also cover both navigation and container collecting in the lower streams of big European and world rivers.

Basic positive features of the feeder service which facilitate the optimization of either container or total seaborne transport can be defined as follows:

- it is the feeder service that makes the entire container service rational, well-balanced, symmetrical and dynamic,
- feeder service helps toward achieving a better turnover of large container ships being of utmost importance for the large and expensive container ships,
- container delivery time to the final destinations is much shorter and, owing to the frequency of ship calls and delivery of goods just on time, the service in general is upgraded,
- the number of ships in the existing global container service of a particular shipping company along a given sea-route has decreased,
- smaller container terminals in ports and landbased cargo-distribution centres are improving their operation and becoming recognized,
- feeder service also helps toward achieving better turnover of containers and therefore decreasing total costs of the container system,
- the experiences gained in one feeder service may be very useful for the successful operation of the container transport on any other route.

As result of the above-said, the feeder service is of utmost importance for the overall operation and optimization of any container transport and seaborne traffic.

Owing to their specific qualities not all of the advantages extended by the feeder service could be adequately identified right in the beginning. However, as the feeder service starts getting under way, the total container service gains in dynamics and quality thus making substantial contribution to the optimization of the maritime traffic.

# 3. FEEDER SERVICE RIJEKA – PLOČE – GIOIA TAURO – MALTA

Large container ships of more than 6000 TEU with the speed rating above 22 knots have their origin in the globalized international trade and efficiency drive tendencies in the shipping industry. The vessels of such size have no possibility to enter many ports - in the first place because of their own fixed costs which are very high and inadequately equipped ports, in the second place. They are therefore navigating along the main international sea routes across the Atlantic and Pacific oceans or around the world, making only a few major but efficient ports. Thus, at some time past, two such major ports, able to accommodate large container ships - MOTHER ships, had developed in the Mediterranean. They are Malta and Gioia Tauro, whereas the numerous traditional ports, including those in the Adriatic, are basically feeder ship ports.

The system is suited to exporters and importers and that is its advantage. Namely, when a feeder ship enters one of the major ports, the goods-container can very quickly reach any destination in the world. In the old classical and more expensive system it was necessary in the first place to find a shipowner whose ship was going from a particular port to the required destination. There, the main problem was lack of regularity. The present-day worldwide standards require departures to meet the weekly production schedule and feeder ships are therefore to leave the ports on precisely fixed dates in order to arrive in time to the major port because, irrespective of the destination, containers cannot wait more than six days to be loaded and directed towards their destination places.

Such system of worldwide containerized transport has considerably decreased the shipowner's costs, hence a considerably lower nominal value of freights than some ten years ago. It has resulted in minimal stocks at all levels having a positive impact on the growth of the production and distribution efficacy.

The matter of greatest importance for a national economy is to have the shortest feeder connection between its domestic ports and main international ports as is the case with the Ports of Rijeka and Ploče, in order to cut down the land transport costs, considering that they substantially increase total transport costs.

The fact that the annual growth of the container traffic in the Mediterranean has been assessed at 60% by 2015 (1998 the annual traffic in the Mediterranean amounted to 19 mil. TEU while the estimation for 2004 was 27 mil. that is, 400 mil TEU for 2012 – the "World Container Port Markets to 2012" – Ocean Shipping Consultants Ltd.) [2], benefited the feeder service introduction as it was predictable enough that such a growth would inevitably lead to the overcapacity of the container ports. The foreseen growth of the

container traffic, realized indeed in the years that followed, provide the smaller "feeder" ports with an opportunity to become, given further development and strategic partners involvement, ports of call/ departure i. e. the "hub " ports for the European destinations. The first step in the realization of the above said was to establish the weekly feeder service Rijeka/Ploče – Malta/Gioia which became operational on March 1, 1999 with the ship "LIPA" owned by LOŠINJSKA PLOVIDBA – BRODARSTVO RIJEKA.

We are talking here about a public feeder service not directly adapted to any major shipowner, as often happens. Consequently, the feeder is open to every shipowner having the necessary equipment, containers on the territory of the Republic of Croatia. Such an approach has resulted in an extended number of the shipowners, feeder service users, and was therefore favourable for the development of "sound" competition manifested as a continual reduction of total freights.

The real precondition for the successful operation of this service were the rail and road transport prices being more acceptable than those in other North-Adriatic ports (e. g. container rail transport from Rijeka to Budapest is about 18% cheaper than the Koper-Budapest route, that is, about 35% lower than Trieste – Budapest). The same goes for transshipment and freight charges. In comparison with the North-Sea European ports, the journey is 5 days shorter.

When established, the first weekly feeder service Rijeka – Gioia Tauro/Malta was expected not only to have influence on the total container traffic increase, but to yield profit to the traffic routes involved and all prospective, direct or indirect users. The expectations proved to be justified. From the very establishment of the feeder service there has been recorded a steady increase in the number of transported containers, new shipowners have been coming in and new services have been established.

# 4. IMPORTANCE OF FEEDER SERVICE FOR THE CROATIAN TRAFFIC SYSTEM

The Croatian feeder service by ship "LIPA" of Lošinjska plovidba- brodarstvo Rijeka turned out to have been the best and the most accurate weekly container service in this part of the Mediterranean. It facilitates:

- incorporation of the Croatian ports into the Mediterranean container system it is estimated that the container traffic in the Mediterranean would increase from 19 mil TEU in 1998 to 40 mil. TEU in 2012.
- step forward of the Port of Rijeka from an up to now regional port to a "hub" port (central port of

call) of the North Adriatic for the cargo from/to Far East countries to the European ports of destination,

- step forward of the port of Ploče to a feeder port with no specialized container terminal,
- return of liner services to the Croatian sea routes, revitalization of the Croatian shipping trade, participation of the world leading container operators,
- feeder service has also led to an increased interest of terminal operators as prospective concessionaires on the container terminal,
- Croatian businessmen doing business with the overseas markets are given possibility to take advantage of a cheaper transport route with respect to the competition, by avoiding additional costs of border crossings,
- the granted subsidies are fully reimbursable through Croatian subjects participating in the feeder service (agents, forwarders, stevedores, rail, road carriers, participants in ship dispatch...). For every TEU supported by this project through the Croatian ports, the Croatian economy is realizing about 700 US\$,
- since 2000 the average annual growth of the feeder service traffic has amounted to 68%,
- since 2000 the average annual growth of the feeder service traffic in the port of Rijeka has amounted to 66%. However, in 2003, compared to 2002, the traffic increased by 100%,
- with inclusion of the Port of Bar in Montenegro, which on November 27, 1999 became one of the call ports, the project is extended to one more state.

The project has entirely met all the expectations and as such represents a good base for further development of the port and traffic system in Croatia according to the Ten-year Plan for the port system development in the Republic of Croatia being the component part of the Traffic Development Strategy of the Republic of Croatia.

# 5. NEW FORMS OF LOGISTIC SUP-PORT TO THE PORT OF RIJEKA

In the course of 2003 there arose new important circumstances in the revitalization of the container traffic in the Republic of Croatia. It was the reliability of the existing weekly feeder service in the port of Rijeka which, together with a good performance and competitive ability of the entire traffic route led to the interest of foreign shipping companies in the commercial calls. The result was additional weekly feeder connections of companies CMA-CGM from Marseille

France and UFS from Limmasol Cyprus to the container terminal Brajdica in the port of Rijeka.

Such a significant shift in favor of Rijeka traffic route has resulted in almost spectacular contract on the weekly service of mother-ship awarded by the Israeli company ZIM Navigation from Haifa. It was the first call of this mother-ship that put Rijeka port on the world navigation chart as a port having direct service line with the Far East..

Another contract on the mother-ship weekly service was concluded shortly afterward with Lloyd Triestina and CMA. As a logical logistic support to the mother-ships, a weekly container rail service Rijeka-Budapest was introduced for the first time in cooperation with the Croatian Railways.

## 6. CONCLUSION

It was in the late nineties that the container traffic in the Republic of Croatia reached its lowest level ever since it had been introduced in the Adriatic.

There are many reasons for such a decline. Yet, one of the fundamental one was the collapse of Croatia Line, the regular service shipping company, whose fleet of liner ships, most of them, had been for years maintaining the line traffic with the Croatian ports and it was its collapse that made one of the links in the transport chain break. There is no revitalization of any traffic route without seaborne transport. The introduction of the feeder service was therefore a logical prerequisite for setting up the new line service. However, this being only one link, the other links of the chain should have also been made efficacious and able to compete with other Adriatic ports.

In terms of logistics, the feeder service set-up was supported by 22 Croatian companies taking part in the traffic route and making of the total transport price which has to be at a level with the competition for an adequate quality of service.

Evidently, the feeder service supported by complete logistics of 22 Croatian companies, organized by the Port of Rijeka Authority, has given rise to the beginning of container traffic revitalization in the Republic of Croatia.

The process initiated so far suggests that port of Rijeka has entered a new stage of becoming a HUB port for Bar and Ploče and a number of North Adriatic ports. This is a logical implication of the feeder service introduction which is to collect containers from Brajdica terminal for further distribution to the said ports.

Analysis of the above leads to the conclusion that various forms of and approaches to the feeder service in the Adriatic ports over the last ten years have aimed at finding and identifying the best way to link container terminals in the Adriatic ports with the strategic hub terminals in the Mediterranean.

The development of the container feeder service between the container terminal in Rijeka and those in the Mediterranean, over the last five years, is in fact the period of true revival of the container traffic in the Rijeka gateway and particularly in the container terminal in Rijeka.

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### SAŽETAK

# FEEDER SERVIS U FUNKCIJI REVITALIZACIJE KONTEJNERSKOG PROMETA U JADRANSKIM LUKAMA

Svjetski prisutni trend globalizacije zahvatio je i brodarsku djelatnost. U svijetu danas postoji desetak jakih brodarskih tvrtki (tzv. mega brodara) koje djeluju samostalno ili su međusobno povezane u pokrivanju određenog tržišta. Da bi se zadovoljio krajnji korisnik, brodarske tvrtke organiziraju postojanje jake feeder mreže u cilju pokrivanja tržišta. Moguće je da feeder servis pokrene operator terminala ili lučka uprava, a to se najčešće ogleda u subvenciji praznog brodskog prostora feeder brodova (nekad 100 do 300 TEUa, danas 500 do 1000 pa i do 1500 TEUa). Svojevremeno pokrenuti feeder servis Rijeka/Ploče - Gioa Tauro/Malta od strane Lošinjske plovidbe, a pod

organizacijom Lučke uprave Rijeka kroz subvenciju od strane Ministarstva pomorstva, prometa i veza RH 1999 godine, početak je procesa revitalizacije kontejnerskog prometa u Republici Hrvatskoj. Isti je servis pokazao postojanost i točnost, te privukao mnogo korisnika. Uz logističku podršku 22 hrvatske tvrtke kroz konkurentne cijene i kvalitetu usluga na prometnom pravcu te povećanjem obalnog kapaciteta za 3 puta kontejnerski terminal u riječkoj privukao je i dva komercijalna tjedna feeder servisa (CMA-CGM i UFS) pa i spektakularna dva tjedno ticanja tzv. brodova Matica (ZIM i Lloyd Triestino). Kao logistička podrška Hrvatske željeznice su pokrenule direktni kontejnerski blok vlak na relaciji Rijeka-Budimpešta. Kontejnerski promet feederima bilježi rast godišnje za oko 60 %, a pojavom i ostalih brodara riječki kontejnerski terminal je povećao kontejnerski promet sa 6.000 TEUa 1999. godine na 30.000 TEUa 2003. godine.

# KLJUČNE RIJEČI

kontejneri, feeder, promet, organizacija, konkurentnost

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