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## INSTRUMENTS OF SELLING SERVICES IN RAILWAY CARGO TRANSPORT

### ABSTRACT

*Tariffs are considered the basic instrument of selling services in railway cargo transport.*

*The work identifies prices of transport services from the aspect of interactive elements by redesigning the tariff system or by intervention into the tariff system through certain conditions for tariff implementation in the cargo transport in local and international transport through various existing models by: determining the starting (tariff) price, determining the expenses and determining the selling price.*

*Then the tariff system is modified according to the conditions which are present in the environment and accordingly regarding stimulation of rational usage of the capacities and correction of the horizontal and vertical digression in tariff tables.*

*Since international federal tariffs feature no adequate functionality, their phaseout would eliminate substantial expenses, and the orientation is turning increasingly towards instruments of selling transport services in international transport.*

### KEY WORDS

*tariffs, selling services, cargo transport, transportation price*

### 1. INTRODUCTION

Selling services in railway transport is encompassed by a range of interconnected components which thus become complementary, and complementarity refers first of all to the technical and technological, organisational and economic, legislative, legal and other elements. From the range of these interactive elements the prices of transport services may be identified. In a narrower sense, the prices of transport services have been defined by tariffs. Therefore, tariff instruments are considered as basic elements of service sales.

Apart from being primarily price lists of various services, tariffs represent and determine rules and conditions for classifying certain services into a particular tariff category. As such, they are one of the most

sensitive segments significantly influencing the behaviour of participants in the transport market and beyond.

Besides their significance on the macro-plan (determining of transport prices and increase in the price of the product that was transported) their significance on the micro-plan is constantly growing, that is, the content or way of using and the calculation rate of the transport service selling price. This work focuses precisely on this segment. All considerations will refer to examples taken from the Croatian Railways.

Considering very high basic or tariff prices of transport, which the goods often cannot afford, there is a need to redesign the tariff system or interventions in the tariff system through the commercial policy. Commercial policy allows very quick determination of the transport service selling price in local transport, but the problems arise when international transport is considered, as well as in case when the railway management does not have sufficient authority to determine the selling price of transport.

Although the level and structure of tariffs differ greatly among individual railways, there is still a common feature in all the cases, and that is that as a rule, the basic or tariff price is far greater than the selling price. The solution to the problem of fast action on the transport service market may be found in modelling the instruments of service offer for certain transports.

The term "instrument" in the respective sense, means a special template for calculating of the transport selling price which takes into consideration all its specific features.

### 2. CONDITIONS FOR APPLICATION OF CERTAIN TARIFFS

Current tariffs at the Hrvatske željeznice - HŽ (Croatian Railways) are the product of the tariff sys-

tem which generated from the previous non-market environment. Such tariff system, though having been modified a bit, is still the basis for determining the implementation of a certain tariff and defining of the selling price of the railway transport service.

### 2.1. Tariff for transport of goods in local and international connecting transport

Tariff for the transport of goods is the basic starting point for determining the transport service price, and it consists of eight parts:

- transport conditions and method of freight charging,
- harmonised goods nomenclature,
- list of railway stations,
- map with mileage chart for transport of goods,
- guidance,
- price-list of services in national railway transport,
- price-list of services in international railway transport (import-export),
- price-list of services in international railway transport (transit).

Based on this tariff, the transport price in local and international connecting transport is determined.

### 2.2. International federal tariffs

For determining transport prices in international transport, primarily the international federal tariffs are used, and the Croatian Railways is a member of the following unions:

- CROATIA - SLOVENIA,
- CROATIA - HUNGARY - SLOVENIA,
- CROATIA - SLOVENIA - ITALY,
- CROATIA - SLOVENIA - AUSTRIA,
- CROATIA - SLOVENIA - AUSTRIA - GERMANY,
- CROATIA - HUNGARY / (SLOVENIA - AUSTRIA) - SLOVAKIA,
- CROATIA - HUNGARY / (SLOVENIA - AUSTRIA) - CZECH REPUBLIC,
- CROATIA - HUNGARY - SLOVAKIA / (SLOVENIA - AUSTRIA) - CZECH REPUBLIC - POLAND,
- ITALY - SLOVENIA - CROATIA - HUNGARY - (SLOVAKIA).

The mentioned tariff unions result from the expected or already existing strengthened flows of goods and they allow monitoring and selling of transport services on the entire transport route.

According to all tariff unions, except for the one with Austria, the transport services are sold on the DOMINO principle, that is, the transport price is obtained by adding up partial prices for each railway par-

ticipant in the given transport. The union with Austria uses a completely opposite principle.

The characteristic of these unions is that individual members have the authority up to a certain level to determine the transport price also on behalf of other members without previous consultation, and for determining transport prices that exceed a certain level, the member country needs to consult other involved countries.

This approach allows the members to keep their autonomy within the union, and this is favourable to the individual member on the short run, but often causes unfavourable effects for the union as a whole, since no competitive transport price can be achieved.

### 2.3. Austrian model

The tariff union with Austria or the "Austrian model" makes it possible to determine a unique price for the transportation service based on one wagon, on the whole transport route. This tariff union according to a certain model strictly determines the position of each railway in the union and does not allow presence on the market outside this model.

Apart from the mentioned, the characteristic of this model compared to the previous one is that it distinguishes prices according to the types of used wagons and does not allow payment of the freight charge up to a certain tariff intersection (border) but the freight charge has to be paid for the whole relation.

### 2.4. Other models

Apart from classical connecting and federal tariffs, Croatian Railways take part also in other agreements that define transport selling prices. Thus, e.g., based on the "BAREME PECO" agreement, HŽ may offer transport prices for the whole relation from Croatia to France and other countries in transit although between these two railways authorities there has been no official federal tariff which would be available to the service users.

This is a special way of price determination in the international traffic by means of a selling instrument.

The basic characteristics of this selling instrument is that the price is determined according to:

- tonnes,
- type of vehicle depending on the number of axles per wagon,
- type of wagon regarding ownership,
- wagon load, and
- distance.

The transport price includes always the calculated secondary taxes for customs activities.

### 3. DETERMINING TRANSPORTATION PRICE

The final transportation price is obtained gradually, in several steps, that is:

- determining of the initial or tariff price,
- determining of the expenses, and
- determining of the selling price.

#### 3.1. Determining of the initial (tariff) price

The initial or tariff price is determined on the basis of general and specific provisions defined by the tariff.

According to general tariff provisions the transport expenses include the freight charge, extra costs, secondary fees and other expenses.

The freight charge is determined on the basis of the shipment mass categorised in one of the four existing transport weight items, i.e. 10, 15, 20 and 25-tonne transport item (horizontal digression), distances in km (vertical digression) and transport types regarding origin and purpose of the goods i.e. internal transport, import-export and transit.

Extra costs include those which originate due to incorrect designation of mass or type of goods, and the amount depends on whether the traffic safety has been endangered or not.

Secondary fees are a component of the transportation cost, and they result from special requirements of the transport users (weighing, delivery of wagons to industrial or special tracks, fee for using covers, charging for handling machinery, etc.), then due to non-compliance with the provisions of the transport contract by the transport user (wagon loss of time, cargo repair, etc.) and secondary fees as components of expenses which do not depend on the wish and behaviour of the transport user (customs, etc.).

The category of other expenses includes various carrier's expenses in cash, required by the government bodies, etc.

Special tariff conditions regulate the transport price in specific cases such as:

- self-wheeled rail vehicles not included in the rolling stock of any railways,
- use of protective or inserted wagons,
- transport of explosive and radioactive materials and items,
- transport of packing material, cargo accessories, and other items accompanying the goods and their return transport,
- transport of loaded and empty private and leased wagons,
- transport of goods on pallets or in small containers,
- transport of special shipments,
- transport of goods in wagon groups and routes.

#### 3.2. Determining the expenses

The expense price or expense is considered in accordance with the Model of Controlling Expenses and Revenues on HŽ Lines and Trains, that is, they are considered per unit of work (gross km and train/km), as fixed, variable, and total, and regarding types of trains (feeder, direct, international) and types of traction (diesel, electric traction), and presented as follows:

- total expenses;
- expenses regarding transport organisation and railway station operation;
- manoeuvring expenses;
- convoy expenses;
- expenses for cleaning, inspection, and maintenance of cargo wagons;
- expenses for traction and maintenance of traction means;
- expenses for the fuel (energy) according to type of traction and other traction expenses;
- expenses per railway tracks.

#### 3.3. Determining the selling price

Determining the selling price is the final phase in determining the transport service price. Taking into consideration the logical assumption that the price should not exceed the official prices published in the tariff which includes total costs increased by a certain accumulation, and that it should not be less than the expenses (variable) of the given transport, the limit amounts of the selling price have been obtained by setting the previous prices i.e. tariffs and expenses.

Apart from the mentioned, when defining a selling price, the competition of other transportation branches needs to be taken into consideration as well as the possible competition from other transport routes leading to final definition of the selling price.

### 4. MODIFICATION OF THE TARIFF SYSTEM ACCORDING TO RESPECTIVE CONDITIONS

Railway tariffs represent an element of an extremely complex and dynamic process of transport services production. As such, they are subjected to frequent changes and their quality, among other things, depends significantly also on their flexibility, i.e. the possibility of following the conditions on the transportation market.

Historically, railway tariffs have been based on the theories of national economy, which means the following tariff principles:

- value of the goods,

- government policy directives,
- preventing irrational transportation,
- uniformity of tariffs,
- harmony among traffic branches.

Under the influence of external conditions affecting the railway profiling as a trade company, the following tariff principles are increasingly coming to the fore:

- operation profitability,
- transportation service value,
- rational utilisation of transportation capacities,
- partial or full coverage of transportation service expenses.

Based on these tariff principles, three aspects of the tariff system can be separated and they are:

- nature,
- value, and
- government.

In the present environment it would be almost impossible to favour only one of these principles, i.e. systems, and for optimal operation these have to be combined. The necessity to combine all the principles and systems results from the following facts:

- Substantial decrease of work which has made it impossible for the railways to cover the fixed costs;
- Fall in production and social standard, and consequently reduced transportation needs as well as possibilities of payment by the transport users;
- Substantial financial intervention by the state regarding coverage of fixed costs and payment of international debt servicing.

The previous modification of tariff system in this, tentatively speaking, transition period, refers primarily to the following:

- Classification of all the goods into a unique tariff class;
- Regarding calculation of transportation costs, equal treatment of regular wagons and wagons of special design (excluding wagons of the "U" series and wagons under the authority of the INTERCONTAINER-INTERFRIGO company, "I" series);
- Elimination of virtual tariff removes between individual official points;
- Determining of the tariff transportation path in compliance with the organisation of traffic according to the operation schedule for the given period i.e. according to the valid timetable;
- Categorisation of special and industrial tracks into five tariff categories (0.-IV.);
- Harmonisation of certain secondary fees according to certain tariffs and forming equal prices;
- Renaming of selling forms into regular forms (except for the bill of freight).

The transition period means the period from the beginning of HŽ independence until clear definition and profiling of the tariff system that will be in the function of implementing the commercial policy of modern railways organisation which operates on (clear and unambiguous) market principles.

Although HŽ has officially abandoned the principle of freight value (all the goods are classified into one unique tariff class), this principle still exists under cover, and is implemented by the actual commercial policy by allocating different commercial benefits for different goods on the same or similar distances. This occurs precisely because of the previously mentioned reasons, pointing out that not even in the optimal conditions will the goods of different value ever be able to afford identical transportation costs.

Further development of tariff system modification should be directed towards stimulation of a more rational usage of capacities, which has been underestimated in the current tariff system and commercial policy. This means that the horizontal digression of tariff tables should be expanded already in the start by new transportation items greater than the 25-tonne one. Since transportation conditions mainly allow loading of a 4-axle wagon with more than 40 tonnes, there is the need to introduce a 40-tonne transportation item (alternatively 35-tonnes).

It is then necessary, in the start, to stimulate transportation in complete train compositions, differentiating the transportation price according to the type of the used wagon, in compliance with the law of supply and demand.

## 5. CONCLUSION

Tariff, as a reflection of the tariff system, influences to a great extent by its structure and functionality the conditions, methods and quality of selling the transportation services.

Having in mind that (according to the estimate), over 80% of transportation is carried out with a certain commercial benefit, the question raised at the first glance is that of the credibility of the tariff and tariff system. Recognising the fact that the tariff and the tariff system have to use the transportation price to integrate the goods of different capabilities in affording transportation costs and in different transportation conditions, one comes to the conclusion that by changing the tariff system the number of transports under special commercial conditions cannot be eliminated to a greater extent.

The tariff system, in accordance with the environment, requires certain modifications regarding stimulation of a more rational usage of the capacities and by correction of the horizontal and vertical digression in tariff tables.

International federal tariffs are not adequately functional, since (except for the Austrian) they include only the copied price-lists and basic transportation conditions from the connecting tariffs. By abandoning federal tariffs, substantial material costs would be avoided, and instead, the orientation should be towards the instruments for selling transportation services in international traffic. In the beginning they could coexist with the international federal tariffs.

#### SAŽETAK

#### INSTRUMENTI PRODAJE USLUGA U ŽELJEZNIČKOM ROBNOM PRIJEVOZU

Osnovnim, temeljnim instrumentom prodaje usluga u željezničkom robnom prijevozu smatraju se tarife.

U radu se identificiraju cijene prijevoznih usluga iz spektra međusobno interaktivnih elemenata redizajnom tarifnog sustava ili intervencijama u tarifni sustav kroz pojedine uvjete za primjenu tarifa u prijevozu robe u lokalnom i međunarodnom prijevozu kroz razne prisutne modele i to: utvrđivanjem početne (tarifne) cijene, utvrđivanjem troška i utvrđivanjem prodajne cijene.

Zatim se tarifni sustav modificira prema uvjetima koji vladaju u okruženju i u skladu s njim u pogledu stimuliranja racionalnijeg korištenja kapaciteta te korekcijom vodoravne i okomite digresije u tarifnim tablicama.

*Budući da međunarodne savezne tarife nemaju svoju primjerenu funkcionalnost njihovim napuštanjem izbjegavaju se znatni troškovi, a sve više se orijentira na instrumente za prodaju prijevoznih usluga u međunarodnom prijevozu.*

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