

## ANALYSIS OF THE TRANSPORT COSTS IN THE ROAD TRAFFIC SUBSYSTEM IN CROATIA

### ANALIZA TRANSPORTNIH TROŠKOVA U PODSUSTAVU CESTOVNOG PROMETA U HRVATSKOJ

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Review

Pregledni članak

#### Summary

The research of the transport costs participation in the price of the goods points to a significant number of facts which may be sanitised by the suggested system solutions, ensuring thus an optimal efficiency regarding the road traffic subsystem in Croatia.

In the course of the research, all significant facts, present within the road traffic transport process in Croatia, have been analyzed. The measures of the traffic and economy policies which may, if realized, ensure the optimal functioning of the road traffic subsystem in Croatia, have been pointed out.

Key words: transport costs, road traffic subsystem, analysis

#### Sažetak

Istraživanja udjela transportnih troškova u cijeni roba ukazuju na značajan broj čimbenika koje je moguće predloženim sustavnim rješenjima sanirati, čime će se osigurati optimalno djelovanje podsustava cestovnog prometa u Hrvatskoj.

Tijekom istraživanja analizirani su svi značajniji čimbenici prisutni u procesu prijevoza cestovnog prometa Hrvatske i ukazano je na mjere prometne i gospodarske politike koje, ukoliko se realiziraju, mogu osigurati optimalno funkcioniranje podsustava cestovnog prometa u Hrvatskoj.

#### Introduction

##### Uvod

When we consider a developed market economy, the location of the production plants, in most cases, does not correspond to the place of its consumption. The use value of the goods may be realized only after placing these material goods to the location of its consumption. The production process of the material goods may be regarded as completed only after the goods have reached its end-consumer.

Accordingly, the transport of goods appears as an indispensable segment within the process of the public production. During the transport process of the goods there appears a consumption of the live work dealing therewith, so that the value of the transporting service consists and is formed by the same elements as the value of the remaining economy goods.

Taking the fact into consideration that the transportation of goods appears as the extension of the production process to the traffic region, the transport costs are, when viewed in accordance with their characteristics, actually production costs, while they appear, at the same time, in the forming of the value, as the additional traffic costs, that is, the costs enlarging the production costs of the transported goods.

In this sense, it is inevitable to take it into closer consideration when considering its rationalization.

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## 1. Characteristics transport costs in the road traffic subsystem

### *Karakteristike transportnih troškova u podsustavu cestovnog prometa*

The transport service value in the road traffic subsystem consists of the transferred part of the value (the part of the in-calculated value of the basic means - depreciation), the value of live work and work surplus which is formed by the mediation in the market mechanism. The surplus amount depends on the following factors: (1) degree of the technical and technological equipment for the transport capacities and the capacities for the additional transport activities, (2) exploiting costs; (3) transport service quality level; (4) the supply and demand regarding this type of transportation services; (5) the way of forming the prices thereto - under the conditions of a total competition, monopole or oligopoly. The factors regarding the treatment of the traffic activities are present here as well, such as: (1) economic activities, based on the principles of the market economy or (2) public services where the traffic service appears only as a segment in the realization of the economy policy.

Within the economy market system the prices have their support in the principles of economy. This means that the forming thereof consists of the same elements as in other activities within the economy system. Since the transport costs appear as the adhesional traffic costs in the final goods' value within the material production thereof, they are of a considerable influence regarding the forming of its final price. Its participation in the goods' value points to the following factors in the transport: (1) inadequate technical and technological organization relating to the coordination with the road traffic subsystem; (2) a non-rational organization of the working process in the road traffic; (3) very high exploiting costs; (4) non-rational investments (investments which do not contribute to the business rationalization); (5) high participation of costs relating to the additional transport activities (loading, unloading, organisation of work and sim.); (6) uneconomical disposition of<sup>1)</sup> work regarding some traffic subsystems in Croatia etc.

The costs relating to the additional transport activities in the Croatian road traffic subsystem participate significantly in the transport service price and are one of the factors connected to the increased prices for the transported goods. This burdens additionally the final price of the transported goods and is to be considered as one of the decreasing factors regarding the competitiveness, presuming that the production of the goods in question is always on the level which enables these goods to be present and competitive on a certain market.

The costs of the additional transport activities as

well as the costs of the goods transport in the sense of additional traffic costs have a different movement intensity when considering the transport of goods only. Thus, the segment of the starting-final activities in the transport chain, behaves in a fixed way from the transport distance point of view while the goods transport segment forms its price in proportional accordance with the distance thereof. The mutual name for these two segments is the traffic costs dynamics and it differs from the goods and the passengers transport dynamics. This difference is based on the starting-final costs which participate in the passenger's transport in a significantly smaller amount regarding the total transport costs than in the case of the goods transport. Further, some of the subsystems have a larger participation of additional costs, as for instance, the railroad subsystem participates on a significantly larger scale in the starting-final activities than the road traffic etc.

The minimalization of the transport costs is a very important factor regarding the presentation of touristic arrangements, where the user is presented the price of the arrangement for a certain destination as a package arrangement. The transport costs rationalization is in the interest of the touristic organizations.<sup>2)</sup> In this research context, it is inevitable to point out the measures for the receiving a subsidy regarding the transport costs. This may be found within the sphere of the interventionalistic traffic policy, which treats the traffic services as a part of a total economy policy for the obtaining of a certain aim. In our case, this means an evaluation of already constricted touristic potentials. The receiving of subsidy regarding the transportation costs is of a correctional meaning with, at the same time, a limited effect in time. In any case, the means must be taken out of the cost estimate in order to direct the non-paid part of the price from the user to the transportation organizations for the service executed but not paid in full.

## 2. Analysis of the transport costs in the road traffic system

### *Analiza transportnih troškova u podsustavu cestovnog prometa*

In order to explain and explore the participation of the transport costs in the price of goods in a way as realistic as possible it is inevitable to apply a row of scientifically objectivist methodologic proceedings. In the course of the research we have applied the quantitative, qualitative and statistical method, in order to, as impartially as possible, without losing a certain grade of reliability, establish analyze and explore the influence of transport costs on the price of the goods.

By the quantitative, qualitative and statistical method we comprised, in the course of the research,

the goods which, are mostly being transported by the Croatian road traffic subsystem and came, on the ground thereof, to the following conclusions:<sup>3)</sup>

(1) The participation of the transport costs is significantly higher with the goods which have not the character of the products for the final consumption. This fact points to an inevitable process of restructuring within the economic system. Within smaller distances it is inevitably necessary to locate the industrial plants for the final consumption, decreasing thus the participation of the transporting costs within the process of the final product - the goods.

(2) By a rational policy of distribution the production and processing activities, the average journey of one ton of goods may decrease in a rather significant amount. This will be of influence on the rationalization regarding the use of the road subsystem means.

(3) The application of the contemporary transportation technique and technology in the total transportation system, will enable a larger passing capability for the vehicle units and a more rational functioning of the traffic system as well as its subsystems in Croatia.

(4) The organizational rationalization of the transportation process in the road traffic, next to an adequate privatization process and a more organized presentation on the transportation market, would realize all principles of the market economy as a whole.

At the moment, the privatization process within the road traffic subsystem in Croatia meets, repeatedly, as the subjective, so the objective difficulties.

(5) The present frequency of construction and modernization regarding the traffic infrastructure in Croatia is a presupposition for a rational connecting of the production and consumption centres within the economic system. The high level of technical and technological development regarding the traffic infrastructure in all types of traffic, is one of the basic presuppositions for the inclusion with the European traffic and economy system. The present level of the technical and technological equipment for the construction objects with the traffic infrastructure in Croatia is not satisfactory. In order to achieve such a level, certain amount of time as well as the financial means of the foreign investors are needed, together with, at the same time, care not to overstep the Croatian state debit which may result in the inability to repay the debt, specially if the means lent have been directed to the objects of the traffic infrastructure used in a minimal way, being thus unable to return the credit obligations.

(6) The costs of the additional activities in the goods transportation process are possible to rationalize by the aid of a higher organizational level and by the application of the contemporary transport

technology and technique on the loading points. This is one of the most important factors in the rationalization of the road traffic subsystem business activities in Croatia. The final price of the transportation service will decrease, in such a way, the participation of the additional transport activities.

(7) Within the process of the definition and the realization of the traffic policy in Croatia, it is inevitable to desire the establishing of a technical, technological, organizational, economical and legal cooperation between some types of traffic, where there exists, in reality, objective and possible realization thereto. Within this context it is inevitable to evaluate, in a scientific and professional way, the traffic policy, in order to coordinate the mutual development of the traffic system and its subsystems with all its segments and organizations of the economic system and subsystem and to state the measures for the realization of the established traffic policy which may be realized, together with clearly established carriers regarding some single traffic policy parts.

(8) The introduction of a uniform distribution, situated within the encirclement of a distributive logistic system is inevitable. Together with the realization of the "JUST IN TIME" (JIT) principle and the use of the electronic computers, it would significantly contribute to the "integral transportation chain". This would, at the same time, simplify the communication system of all participants in the distribution and save the time, decreasing the reserves, inevitable for a regular production cycle. The principles of logistics initiated the appearance of new "door-to-door" transportation systems, meaning the systems which secure the direct transport from the transmitter to the addressee of the goods. The realization of the "integral transportation chain" is established as well as an efficient and successful logistics, participating significantly in the use of the electronic computers, simplifying thus the communication system of the participants in the distribution of the goods flow.

In a conceptual way, this represents a continuous transportation chain with the sharing of a larger number of logistic links - from the transmitter to the receiver of the goods. In accordance with the hitherto experience, as well as in accordance with our evaluations, this process will influence significantly the decrease of the transportation costs in the price of the goods. Accordingly, the business activities of the road traffic organizations in Croatia would be rationalized as well.

(9) In the road traffic business activities rationalization system the application of the electronic data exchange EDIFACT and EDITRANS is imperative, those being the base for the connection of all participants within the logistic goods transportation system as well as all other activities in the goods manipulation process.<sup>4)</sup>

Starting from the results obtained by the research

based on the quantitative, qualitative and statistic method, we are offered the conclusion that the participation in the decrease of the transport costs regarding the price of the goods, should be one of the basic goals for the Croatian traffic and economy policy within the next time period. The realization of such a goal is only possible by undertaking the measures of the traffic and economy policies in Croatia, pointed at by the final part of the research.<sup>5)</sup>

## Conclusion

### Zaključak

The research of the transportation costs influence on the price of the goods in Croatia points to the fact that the transportation costs are considered as the production costs and are dependent on: (1) correct policy regarding the location of the production, processing and consumption centres; (2) application of the contemporary transportation technique and technology; (3) adequate privatization process in the road traffic subsystem; (4) high technical and technological level of the traffic infrastructure objects; (5) rationalization with the application of the adequate technique and technology regarding the additional activities in the goods transportation and the scientifically established and mutually adjusted traffic policy in relation to the social and economic system of Croatia. On the ground of the research results realization it is possible to expect a

minimalization of the transport costs participation in the transported goods price. Besides, it would be inevitable to realize, in a consistent way, the established goals and the measures of the macroeconomical policy in Croatia which must be in the function of the transition to the market system economy conditions.

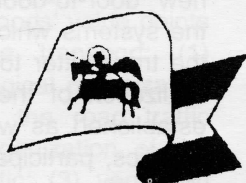
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