

PSO contract management – achievements and challenges

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Abstract – Introducing competition in the railway passenger market is still a complex problem, especially with certain, insufficiently addressed aspects of PSO contract management. Considering this have a significant influence on the performance of the rail traffic, this paper reviews the practice in relevant EU countries and the Republic of Serbia in terms of PSO contract management.

Keywords – PSO, contract management, passenger traffic.

I. INTRODUCTION TO PSO

Through a series of directives and their implementation in national legislation, the European Union (EU) is trying to integrate state railways into a single transport system of Europe in which all modes of transport will be compatible and complementary, and not competitive. To a certain extent, Serbia is trying to implement such a system as well by, among other things, implementing the contract on Public Service Obligation. The single transport system should operate on the principles of transparency, non-discrimination, liberalization, intermodality, interoperability, uninterrupted mobility, standardization of service quality and creation of Trans-European networks. For the railway market and the laws that govern it to function in general, there needs to be competition between railway operators. It enables an increase in the quality of services, a reduction of costs and prices of services, more innovation, as well as a reduction in the negative impact on the environment. These effects of competition have a synergistic effect on achieving the goals of EU transport policy, i.e. meeting the needs of railway transport users.

In addition, the main goals of the European public transport policy are to provide safe, efficient and quality passenger transport services through regulated competition. Social, environmental and regional development factors need to be taken into account in order to guarantee their transparency, quality and satisfactory performance. Although rail transport is cost-effective only for large flows of passengers, i.e. when it comes to mass transport on medium distances, it is necessary to take into account these socio-economic factors as well as situations where the railway is the only efficient way of transporting passengers between regional and urban centres, regardless of cost-effectiveness. [1].

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In this regard, the European Community has adopted Regulation 1370/2007/EC, which introduced a new concept - Public Service Obligation (PSO). In EU legislation, which is also implemented in Serbian legislation, PSO is a contract that the competent authority (republic, region or local authority) awards to a railway operator through a tender, thus providing it with a monopoly for performing a certain public transport service during certain period of time. Regarding this service, the competent authority grants compensation to the railway operator, which is generally in the amount of the difference between the revenue generated on a particular route and the cost of providing the service. [2].

However, by taking advantage of the possibility of an exception to the tendering rules, (and yet) in a large number of cases, EU countries opted for direct award of contracts, which limits the possibility of new operators entering the market. Finally, with regulation of the so-called fourth package, 2016/2338 from 2016, it is possible that passenger operators registered in any EU country can provide services on the territory of any other, but it also introduced the principle of mandatory award of PSO contracts exclusively through tenders - with a transitional period relating to all contracts concluded until December 2023.

II. PSO CONTRACT MANAGEMENT INDICATORS

The largest part of the total volume of railway passenger transport is covered by PSO [3]. Consequently, large amounts of taxpayers' money are allocated from the budgets on an annual level, which, on the other hand, are not adequately managed, nor has it led to a significant increase in the quality of transport services or the share of railways in total passenger traffic. Given the possibility and tendency of states, by using the transitional period from Regulation 2016/2338, to conclude long-term contracts just before the expiration of this deadline, it is concluded that in the current circumstances, better planning of contractual services and more efficient monitoring and execution is crucial, but also improvement of supervision and control, quality standards, introduction of mechanisms of sanctions for non-fulfillment of obligations, etc. - in a word, improvement of the contract management process.

To analyze the way in which the PSO contracts are managed, based on a review of the available literature and the current EU regulatory framework, it is concluded that it is necessary to analyze 9 main factors. These are: contract award procedure (and method of negotiations), duration of contract, level of profit margin, percentage of service coverage by contract, service quality standards, existence of tariff obligation, provisions on sanctions, structure of costs included in PSO and mechanisms of supervision and control (Fig. 1).



Fig. 1. Elements of PSO contract management

Without going into a more detailed analysis, which may be the subject of a separate paper, it will be explained in short theses what each of the above factors indicates in the context of the management of the PSO contract.

Award procedure and negotiations

As already mentioned, the award of PSO contracts can be carried out in a tender procedure or by direct award. The award of a contract through a tender procedure potentially indicates the tendency of the competent authority to introduce (and develop) competition in the railway market and thus relieve public finances, which sometimes can seem harmful to the national railway operator (its unpopular decision from political standpoint). In contrast, direct award indicates that there is no readiness for this step, even at the cost of lower quality of service for the transport users (passengers) and permanent pressure on public finances.

In both cases, it is important to consider the manner of negotiations, primarily in terms of the level of costs and compensation, but also the scope and service quality, where it is crucial to assess the level of "bargaining power" of the railway operator. It is often the case (especially in cases of direct award) that the railway undertaking is not on an equal ground with the competent authority, which potentially can lead to compensation and scope of services being determined in a way detrimental to the railway operator.

Of special importance is the way of determining the services that are the subject of the contract, in terms of whether the initiative (service proposal) comes from the railway operator or is determined by the competent authority (as it should according to regulation), their compliance with the principles of "public interest", groundedness on market analysis, etc.

Duration of the contract

As with the previous factor, the longer duration of contract potentially indicates the desire of the competent authority to "protect" the national railway undertaking from competition, which in turn may be to the detriment of service quality and

efficiency. On the other hand, they provide financial certainty to the carrier. Short-term contracts, however, pose a kind of "threat", as they put the operator in a situation of uncertain operation and revenue planning.

Level of profit margin

By definition, the profit margin is a "reward" for the railway operator, i.e. the amount of funds that exceeds the net coverage of service costs. It becomes of special importance in the conditions of competition, considering that it is a "bait" for companies to have any interest in entering the market at first place¹.

Percentage of service coverage by contract

This factor is especially important in conditions when there is only one (national) railway undertaking in a certain country. When this percentage is lower than 100 it indicates that either there is a part of the services that are profitable or simply a part of the non-profitable ones did not fall under the contract. The reason for the latter may be in cases where there are limited budget funds available, and on the other hand, no willingness to implement the reduction of unprofitable lines or optimize the railway operator operations.

Service quality standards

Extremely significant factor. The way in which service quality standards are defined shows the focus and aspiration of the competent authority (but also the operator) to raise the quality of services that are the subject of the contract. It is important to note that the current regulation do not prescribe these standards in detail, but the decision is left to the competent authorities. They get full meaning only when a financial (or different) sanction is provided for deviation from the required quality levels.

Existence of tariff obligation

It can legitimately be said to be an instrument of social policy of the competent authority. In fact, it is an obligation of the railway operator to perform transport of all or certain categories of passengers (students, pensioners, etc.) at prices lower than the market ones. In these cases, when the railway operator is not able to change the prices of its services on its own, it is of special importance to be transparent and adequately compensate these losses.

Provisions on sanctions

Sanctions, whether financial or otherwise (for example, the possibility for the competent authority to pre-assign part of the services to another operator), are the basic "weapon" in the hands of the competent authority when it comes to contract management. The absence of sanctions, in the opinion of the authors, represents a practical meaninglessness of quality standards, and thus, in a way, the very essence of the contract.

¹ When awarding a PSO contract, it is not about competition on the market, but about competition for the market

Structure of costs included in the PSO

In accordance with the current regulation, only the costs incurred in connection with PSO service (they are clearly defined by Regulation 1370/2007) may be subject to the compensation of PSO services. The reason for this is to ensure a "financial balance", i.e. to prevent overcompensation that would distort the market. However, some countries have defined these costs somewhat differently, which provides a good insight into how the contract is managed and knowledge of both the market and the way the operator operates.

Supervision and control over implementation

Another factor of great importance. Mechanisms for monitoring and control of implementation of the contract need to be well developed and efficient in order to achieve the purpose of the contract itself.

III. COMPARATIVE ANALYSIS OF SELECTED COUNTRIES

In connection with all the above factors, the question arises where Serbia is in relation to the surrounding countries and the EU. In order to provide an answer to this question, this paper will perform a comparative analysis with selected countries that have relatively similar characteristics as Serbia (demographic, economic, traffic, etc.). Based on that, the efficiency of management of the PSO contract between the Government of the Republic of Serbia and the railway operator JSC "Srbija Voz" can be relatively reliably assessed.

In the following sections, an overview of the key characteristics of PSO contract management in Bulgaria, Romania, Slovakia, Czech Republic and Serbia is given, based on data for 2016 [4]. Comprehensive data for more recent years was not available, but authors believe that the data for 2016 is relevant enough taking into account the multi-annual nature of contracts and the sluggishness of the changes on the railway passenger services market.

Bulgaria

The PSO contract in Bulgaria was concluded on the basis of a tender procedure between the Ministry of Transport (Council of Ministers) and "BDŽ passenger services", with an important note that this company was the only registered passenger operator in Bulgaria. The contract was concluded for a period of 15 years, with a profit margin of 3%, and refers to 95% of the total volume of passenger traffic. When determining the amount of compensation, the operator is obliged to periodically submit to the competent authority a three-year cost projection. The contract provides framework for the quality that operator must meet in the context of regularity, punctuality, cleanliness of trains, supervision, capacity, qualifications of employees and the system of handling passenger complaints. The existence of sanctions for non-fulfillment of contractual obligations is envisaged as follows: deviation of up to 5% from basic indicators is tolerated (train-km, number of seats, driving hours), and for each deviation of 0.1% over these 5%, compensation is decreased by 0.05%. The compensation can be

reduced by 2% in case the hygiene requirements are not met, while for train delays of more than 60 min compensation is not paid. The cost structure includes costs of staff, energy, infrastructure access, vehicle maintenance and repair, rolling stock, payment of historical debts and other fixed costs. Supervision and control are, among other, performed by regular quality checks and processing of passenger complaints and giving recommendations for elimination of identified deficiencies. The contract also defines the tariff obligation for the operator, which is paid on a monthly basis, in accordance with the services actually provided.

Romania

In Romania, a four-year PSO contract, covering 100% of services, was awarded directly, with prior negotiations between the contracting authority and the operator. The main qualitative criteria set out in the contract are commercial speed, services in trains and comfort. More detailed standards are set by normative documents that are the subject of negotiations between the competent authority and the operator. The compensation is calculated on the basis of determined train-km and pass-km for each type of the service. The operator determines the scope of services for each year and, together with the cost estimates, submits it to the competent authority, with whom it negotiates the amount of compensation. Costs include costs of staff, energy, infrastructure access, maintenance and repairs, rolling stock, installations necessary to provide services, payment of historical debts, depreciation and other fixed costs. Profit margin is 3%. The tariff obligation related to the price and discounts for certain categories of passengers is an integral part of the contract. Audits are conducted annually in order to control the accuracy and justification of the level of incurred costs and revenues, and the national railway supervisory body, among other, monitors the railway services market.

Slovakia

There were concluded contracts with two different operators in Slovakia, covering 94% of services. However, they were not awarded in the tender procedure, given that, at the time, two mentioned operators were not interested for same contract (however, direct award is necessarily preceded by negotiations - in practice limited by budgetary constraints). The contract with the national railway operator was concluded for a period of 10 years. Quality standards include reliability and punctuality of trains, safety, cleanliness, functionality of certain technical functions (heating, windows, etc.), train composition and other requirements (internet, space for bicycles, etc.). As far as the penalty provisions are concerned, the competent authority has the right to take away part of the services from the operator and assign it to another or put them on tender. Each quality standard defined by the contract has a defined minimum that must be met, otherwise a sanction is prescribed. One of these requirements is the percentage of the realization of the timetable, ie the number of departures, in connection with which the ministry annually reduces the compensation in case of cancellations caused by the fault of the operator. Costs include the costs of energy, material, direct earnings, direct

depreciation, direct maintenance and repairs, levies, tickets, infrastructure access, other direct costs, overheads, and financial compensation costs. Profit margin is not provided for in the contract, while the operator also bears certain tariff obligations. Control and supervision are carried out so that the accuracy and justification of the amount of costs and revenues are subject to independent audit. The ministry also conducts regular inspections of train services.

Czech Republic

There were in total 8 passenger operators in the Czech Republic in 2016, of which 5 operated under a PSO contract, while 3 received compensation only for certain tariff obligations. Some of these contracts were awarded directly, through negotiations, and some within the tender procedure. They cover a total of 92% of the total volume of services. Only about one third of the services are covered by a national contract, and as many as two thirds by the regional ones. Quality standards refer to the fulfillment of the timetable (the norm is 95%), connected services (also 95%), reliability, equipment and convenience of the rolling stock, washing and cleanliness. The penalty provisions of individual contracts provide for the possibility of the contracting authority that a certain part of the services (limited to a maximum of 75%) may be gradually awarded to another operator before the contract expires. Also, the operator is obliged to pay the competent authority a certain amount in case of non-compliance with defined quality levels. The validity period of the contracts is different, but goes up to a maximum 10 years. In practice, the obligation is determined by the operator submitting its business plan with the scope of planned services, assessment of costs, revenues and profit margin, to the competent authority. Costs covered by the contract include energy costs, direct material costs of towing vehicles, staff costs (train drivers and other), fleet costs (depreciation and interest), shunting services, assistance to passengers with reduced mobility, service controls, infrastructure access, fixed costs, variable costs and other costs related to passengers. The contracts also contain tariff obligations for certain categories of passengers, such as pupils and students. Control and supervision are carried out by unannounced financial checks, standard quality checks in trains and regular submission of reports related to punctuality, train composition, access charges, etc.

Republic of Serbia

In Serbia, the first PSO contract with JSC "Srbija Voz" was concluded in 2016 with a validity period of one year. The following year a new contract was concluded, on a period of 5 years and, it will be the subject of the analysis in this paper. This contract was awarded directly considering that JSC "Srbija Voz" was (and still is) the only registered passenger operator. Once a year, an annex to this contract is concluded, which defines the scope of the services and the amount of costs and compensation. Costs include transportation costs (towing and shunting costs, on board and other personnel costs, vehicle maintenance, infrastructure access) and indirect transportation costs (financial costs, other costs and depreciation) [5]. Regarding the coverage of services by the contract, considering

that the Report on the determined obligations of public transport of passengers in railway traffic for 2018 [7] states that the carrier is obliged to realize 6.79 mil. train-km, while the Report on the implementation of the business program states that in 2018, in internal traffic (without special transports), 7.92 mil. train-km was realized [6]. It follows that the percentage of service coverage was 85.7% in 2018. In the same way, it can be concluded that in 2019 the coverage was 95%, which indicates the gradual increase, but at the same time the reduction of total traffic is noticeable. The amount of the profit margin is not publicly available. Quality standards include ensuring the same level of quality of service to all passengers, adequacy and equipment of rolling stock, cleanliness, maintenance and punctuality (service is considered performed if the train arrives at the final station with less than 25 minutes delay) [7]. However, the contract does not foresee penalties [7]. Supervision and control are performed by the ministry in charge for traffic affairs, and reporting is performed by defined monthly, quarterly, semi-annual and annual reports that JSC "Srbija Voz" regularly submits to the Ministry [7]. Data on special tariff obligations are not publicly available, but in accordance with the Law on Public Enterprises and the Statute of a joint stock company, any change in tariffs requires the consent of the Government. Also, based on the business programs from previous years, it can be concluded that the amount of compensation paid to the operator is not at an adequate level, ie that it is not sufficient to cover the costs of providing services.

IV. STATE OF PLAY – REPUBLIC OF SERBIA

In order to analyze the PSO contract management in Serbia, but also to provide a basis for making recommendations for improving this process (which may also be the subject of a future paper), a comparative analysis of key factors for selected countries has been done. For a better insight into the results, a summary is given in the table in Annex I.

The key conclusion was that the process of PSO contract management in Serbia is at an initial level, ie below the level of selected EU countries. The reasons for this are numerous, but now only the few key ones will be mentioned: (1) quality standards take into account already existing traffic/safety parameters, which as such cannot stimulate the operator to raise the level of service quality; (2) the contract does not provide for sanctions for non-fulfillment of contractual obligations and quality standards. The absence of that kind of pressure on the operator also does not work in the direction of improving services; (3) the supervision and control mechanisms available to the competent authority are very modest, which further contributes to the above; (4) a significant problem is also a fact, which is not strange even in a number of EU countries, and that is that the PSO compensation is conditioned by budgetary constraints and it is not sufficient for efficient operation; (5) there is a part of the services whose profitability is questionable, which are not covered by the contract, and which can potentially have a negative impact on the operator's operations; and (6) the analysis of the cost structure points out to the conclusion that they are not managed according to the services (trains) but rather cumulatively, which makes it

difficult to plan traffic in PSO regime, and also to monitor and adjust the services during the validity of the contract.

Due to insufficient publicly available information, it was not possible to analyze in more detail the manner of determining the services that are the subject to the contract, the manner of negotiations and the position of operator within them, as well as the justifiability of the amount of costs and compensation.

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ANNEX I

	SERBIA	BULGARIA	ROMANIA	SLOVAKIA	CZECH REPUBLIC
<i>Contract award procedure and method of negotiation</i>	Direct award	Tender (only one operator)	Direct award, negotiations included (only one operator)	Direct award, limited negotiations included	Direct award, negotiations included, and within tender
<i>Duration of the contract</i>	5 years	15 years	4 years	Up to 10 years (case with national operator)	Up to 10 years
<i>Level of profit margin</i>	N/A	3%	3%	0% (case with national operator)	N/A
<i>Percentage of service coverage by contract</i>	85,7%	95%	100%	94%	92%
<i>Quality of service standards</i>	Undeveloped (mostly default), without sanctions (providing the same level of services to all passengers, adequacy and equipment of rolling stock, cleanliness, maintenance and regularity – without clearly defined norms)	Moderately developed, with sanctions (regularity, punctuality, cleanliness, supervision, capacities, qualification of employees and handling passenger complaints - clearly defined norms)	Moderately developed, without sanctions (commercial speed, train services and comfort. More detailed standards set by normative documents)	Well developed, with sanctions (reliability and punctuality, safety, cleanliness, functionality, train composition, realization of the timetable, other (internet, space for bicycles, etc. - clearly defined norms)	Well developed, with sanctions (compliance with the timetable, connected services, reliability of the rolling stock, equipment and convenience, washing and cleanliness - clearly defined norms)
<i>Existence of tariff obligation</i>	Any change in the tariff requires the consent of the Government	It is paid on a monthly basis, in accordance with the services actually provided	Price and discounts for certain categories of passengers prescribed by the contract	Tariff obligations are an integral part of the contract	Tariff obligations are an integral part of the contract, especially for pupils and students
<i>Provisions on sanctions</i>	Sanctions are not provided for in the contract	Deviations up to 5% from basic indicators are tolerated. For deviations of 0.1% over those 5%, the compensation is reduced by 0.05%. It is reduced by 2% if the hygiene requirement is not met, and for delays over 60 min there is no payout	Sanctions are not provided for in the contract	A special sanction is defined for deviation from each norm. For example, the compensation for canceled trains which is fault of the operator is reduced annually	The competent authority may assign part of the services to another operator, and the operator pays the competent authority a defined amount for non-compliance with individual quality levels.
<i>Structure of costs included in the PSO</i>	Standard costs defined by Regulation 1370/2007	Standard costs defined by Regulation 1370/2007 + vehicle repair costs, rolling stock, and the payment of historical debts	Standard costs defined by Regulation 1370/2007 + rolling stock, installations necessary for the provision of services and payment of historical debts	Standard costs defined by Regulation 1370/2007 with remark that part of the costs is managed and calculated directly (according to the services) + costs of repairs, fees and other indirect costs	Standard costs defined by Regulation 1370/2007, with remark that most of the costs is managed and calculated directly + assistance to passengers with reduced mobility and the costs of service controls
<i>Supervision and control over implementation</i>	Reporting to the competent authority	Reporting, regular quality checks, system of complaints, recommendations for eliminating identified deficiencies	Audits aimed at controlling the accuracy and justification of costs and revenues, market monitoring and the complaints system	Independent audits to verify the accuracy and justification of costs and revenues and regular checks of train services	Unannounced financial checks, standard train service quality checks and regular reporting
OVERALL ASSESSMENT	Contract management at the initial level	Contract management at the intermediate level	Contract management at the initial level	Contract management at a satisfactory level	Contract management at a satisfactory level