

The Strategy for Development of the Railway Transport in the Dobrogea Region. The Passengers Transport

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Abstract

In this paper, a railway transport analysis is carried out in the Dobrogea region, one of the most important regions in Romania, but where no major investments have been made in this type of transport for a very long time. Taking into account the steps taken in the European Union to stimulate the development of railway transport, it is important to know the real situation in Dobrogea in order to propose strategic development directions, that are not on paper but are taken into account and used by the central and local authorities.

Key words: transport, strategies, railways, passengers, development

J.E.L. classification: E61, R11.

1. Introduction

Rail transport has developed very much in Romania after 1970, when electrification of main railways began between major cities and industrial areas. In this direction, the Dobrogea region had among the first electrified railway lines on the Bucharest, Cernavoda, Medgidia and Constanta route. The electrified line was extended from Constanta station to Constanta port and especially to the southern port area, to the Danube-Black Sea Canal at Agigea and the container terminal. The main data on the situation of Romanian railways are presented in Table no 1.

Table no 1. Situation of rail transport infrastructure

The length of the railway network	10.818 km	Number of crossings with rail (number of automatic ones).	5.119 (1.082)
Double line	2.909 (27%)	Number of switches	20.868
Simple line	7.771 (72%)	Train control (signaling) infrastructure: -Electronic interlocking systems. -Relay centralization systems. -Installations without centralization. Automatic line block: -Number of installations.	28 618 354 577
Electrified (over 25 Kv)	4.002 (37%)	Non electrified	6.816 (63%)
Number of stations	965	Number of tunnels	177
Number of bridges	4.216	Length of tunnels	6.809
Number of floors (little bridges)	13.961	-	-

Source: N.C. „CFR” Sp.A., information on the railway network.

2. The situation of rail transport in the European Union

It follows from the European Union documents that "the absence of an international market has made initially no liberalization and integration initiatives for this type of land transport" (EC, 1992, pg. 7). In 1969 a Council Regulation (EEC-II, 1969, pg. 30) emerged, which established common accounting mechanisms for the national railway companies (EEC-III, 1977, pg. 7). In 2000, the

European Parliament and the European Council adopted a "Proposal for a Regulation" on the statistical record of rail transport. During the period 1981-1996 the desire for cooperation between the national railway companies in the case of international goods and passenger traffic intensified (EEC-I, 1969, pg. 3). After 1995 there were proposals for the liberalization of railway transports, and in 1996 a strategy was published regarding the revitalization of the railway transport, because the lagging behind of them and the loss of the market share were noted. In order to guarantee free access to the railway market, the European Union's leadership, economic recovery and integration of national networks were proposed in a European network. Thus, four Directives, drafted by the European Commission:

-Directive European Parliament - Council no. 2001/12/EC of 26.02.2001 amending Council Directive no. 91/440/EEC on the development of the Community's railways. This Directive has been followed: liberalization, free access of valid license holders, guaranteeing the independence of national railway companies, internal management, administration and control.

-Directive European Parliament - Council no. 2001/13/EC of 26 February 2001 amending Council Directive 95/18/EC on the licensing of railway transport.

-Directive European Parliament - Council no. 2001/14/CEE of 26.02.2001 promoting "Integration of rail transport and increasing competitiveness".

-Directive European Parliament - Council no. 2001/16/EC on "Interoperability of the European Rail System".

Through this genuine "infrastructure package", the European Commission has pursued the opening of rail freight markets, creating an optimal framework for access conditions for railway companies to national networks. In 2002, the European Commission proposed a new package of measures designed to revitalize railways through the rapid construction of an integrated railway area in Europe.

In 2004, the European Commission adopted a third package of measures aimed at furthering the rail sector reform by opening up international passenger transport services to the European Union, strengthening passengers' rights, establishing a certification system for train drivers locomotive and improving the quality of rail freight services. Rail transport has been a worrying decline in Europe over the last thirty years, notably the transport of goods. In 1970, the share of railways was 21% of all goods transported in the 15 EU countries before the union expanded. In 2000, this figure dropped to 8.1%. Over the same period, the share of road freight transport increased from 30.8% to 43.8%. The rail sector is the only one to decline, all the others have improved their performance. Rail passenger traffic has fallen, but not as dramatic as freight. The main cause of this state of affairs is that the rail sector is not as competitive as road transport. Rail transport is less secure than road transport in terms of delivery terms, which are less predictable. On some international routes, delivery terms have doubled or even tripled in recent years. This is mainly due to the very long stops on the route, as other trains, especially for passengers, have priority, and border procedures are complicated because train crews and locomotives have to be changed due to differences in signaling systems from a country to country, etc. Terms of delivery are very important for many sectors of activity. Railways have a number of advantages in this way: it is a safe and clean way of transport, a train can carry 50-60 trucks. The railway infrastructure covers a lot of territory and is in good condition, but it does not meet the requirements of the customers.

3. The situation of rail transport in Romania

Following the analyzes carried out by the Ministry of Transport, I found a series of issues, related to the real situation of the railway transports in Romania and several development perspectives. First of all, the situation of the rail freight transport is interesting, as it is presented in the program documents of the Ministry of Transports. Thus, it is considered that "rail transport covers the entire area of the country", "it is more advantageous to transport goods over long distances by rail, because rail transport provides economies of scale better than road transport" (MT, 2015, pg. 213). In the documents drawn up, it is recognized that "the Romanian rail freight transport has been in decline for some time, partly due to the fact that traditional industries such as the metallurgical industry have been affected by a significant decrease in production". A second particularly interesting appreciation is that "rail freight transport will continue to lose market share

if there is no involvement in new, more dynamic industries". Equally important is the recognition that "the road sector has been a serious competitor for rail transport, offering lower prices, lower mileage and higher punctuality". Nothing new in the documents of the Ministry of Transport, information was taken from the documents of the European Union. These assessments, together with the detailed analyzes carried out for each railway sector in the country, highlight the disaster of freight transport by rail. Concerning passenger transport by rail, in the same document drafted by the Ministry of Transport, it is estimated that "the number of passengers has decreased between 2004 and 2012, from about 100 million to 58 million per year" (MT, 2015). "The great decrease in the utilization rate of the Romanian railways between 2004 and 2009 is the largest decrease registered in the Member States of the European Union". The demand for rail transport in Romania, measured in kilometers traveled/passenger, is 2-3 times lower than in other countries. Average in the European Union is 650 km/passenger/year, and in Romania the equivalent indicator is 66% lower. In a comparative analysis of the mileage/passenger ratio in Romania it is 239 km/passenger, much lower than other EU Member States. This means that compared to countries with similar rail network capacity, based on the number of inhabitants, it is clear that the Romanian railways use rate for passengers is very low.

Another important analysis is related to the situation of the large railway companies, whether they are profitable or not, whether they bring revenues to the state budget or vice versa, live on government subsidies. Following the synthetic statements in the Balance Sheets (CFR, CFRM, CFRC, 2017), I compiled table 2, with the main indicators of the company's assets. From this table it follows that in the year 2016 the national companies "CFR" and "CFR Călători" had profit, and "CFR Marfa" had losses. Following the situations presented in their supporting documents, there is a clear downward trend in the revenues of the three major companies, which has important causes for each type of business. I believe that at this moment the situation of "CFR Marfa" is serious, with fewer possibilities for recovery by its own forces or by government subsidies. Looking at the debt situation for "CFR", other companies which are using the railway infrastructure, the image of the heavy rail transport situation is more than obvious. This can be explained by the tendency for rail transport to fall, both freight and passengers. In this context, does the natural question arise, whether the rail network is still needed, if infrastructure, locomotives, freight wagons or travelers are still needed? As a result of simplified analyzes, it is clear that, without the real involvement of the state government, the government through the ministries responsible for transport, economy, tourism and finance, there can be no real re-launch of rail transport. Taking into account the situation at European level and especially the strategies provided by the European Union, for the re-launching of this type of transport, only responsible, concrete and consistency political decisions can save the Romanian railways and the businesses they generate.

Table 2. Main indicators of Railway trade companies in 2016

No	THE COMMERCIAL SOCIETY	Revenue	Costs	Net profit (+) / Loss (-)
				lei
1.	National Railway Company "CFR" SpA.	3,183,823,180	2,491,942,820	+501,300,000
2.	National Railway Freight Transport Company "CFR Marfa" SpA.	745,505,290	939,806,745	-128,673,548
3.	The National Railway Passenger Company "CFR Călători" SpA.	2,174,748,000	2,125,655,000	+48,964,000

Source: author's study, official companies documents.

4. Developing passenger transport by rail in the Dobrogea region

As can be seen from Figures 1, 2 and 3, Dobrogea is crossed by a railway network as follows:

- Electrified railway from Bucharest, Cernavoda, Medgidia, Constanta, Agigea and Constanta South - Agigea port, figure 1.
- Constanta - Navodari railway, the city of Constanta, the non-electrified railway, figure 1.
- Constanta - Mangalia railway line, to the commercial port Mangalia, unelectric railway, figure 1.
- The Medgidia - Negru-Voda railway, non-electrified railway, Figure 1.

-The Medgidia Railway - Tulcea, unelectric railway, Figures 2 and 3.

These figures show that the railroad arrangement in Dobrogea cuts the region on two main axes, on the west-east (electrified) and north-south (non-electrified) directions. The electrified railway was put into use in 1970, but since then the Romanian state has not electrified the other railways in Dobrogea. There was an electrification project up to Mangalia, but it was not completed. At present, with the Ministry of Transport, in the Master Plan elaborated for the development of transports, no investments in the Dobrogea railway line are foreseen. All documents refer only to maintenance and repairs. At this point, the question may be whether it is a correct approach to the situation or is it wrong? Beginning with the business philosophy that sometimes "supply - create demand ", currently used in China at state policy level, regarding infrastructure development in central and western China, areas undeveloped (WS, 2016), I believe that the Romanian state must develop the railway infrastructure in Dobrogea and offer economic operators and travelers the possibility to use it at European quality standards.

For this purpose, for the development of passenger transport, the following railway investments can be made:

-Electrification of the line between Navodari and Constanța, modernization of the railway to introduce an over ground metro, starting from the Midia-Năvodari petrochemical platform (Midia head), with passenger stations at Năvodari, Lumina, Ovidiu, Constanța west (Aurel Vlaicu street, in the commercial and industrial area), to Constanta main station.

-The electrification of the line between Agigea and Mangalia, the modernization of the railway and the transformation of the passenger trains into the over ground metro, leaving the commercial port of Mangalia, with stations in "2 May", Limanu, South Mangalia, to Mangalia main station and from there to Constanta. The metro line could unite the Mangalia port, with the Midia-Navodari platform. This could practically link the entire coastal area from "May 2" village to Midia's head.

-Transformation of the "Palas" tunnel, which was carried out between 1895-1900, by Anghel Saligny, on a access road in the port, linking the "CET" area with the port of Constanta, which would reduce the traffic on the Aurel Vlaicu and Caraiman streets up to Gate no 5 of the port.

-Electrification of the line between Medgidia, Babadag and Tulcea. Due to the low number of localities in the three main cities, it is not necessary to introduce an over ground metro, but increasing the speed of travel and reducing the journey time would favor the development of rail travel.

-Modernization of railway stations, connection with the means of road transport, connecting the railway stations with social and economic objectives, through partnerships concluded with the road transport operators.

-Planning a timetable to take into account the interests of commuters, their needs to get to the workplace, at school or college on time and safely (Iordanoaia, 2017, pg. 48).

Figure no. 1. The center and southern area of Dobrudja.



Source: http://tren.transira.ro/index_files/harta/Romania_rail.jpg

Figure no. 2. The center area of the region



Figure no. 3. The northern area of the region



Source: http://tren.transira.ro/index_files/harta/Romania_rail.jpg

Taking into account the increasing speed of the trains between Bucharest and Constanta, a speed line between Bucharest and Tulcea would favor the development of tourism in the “Danube Delta” area and other insufficiently explored tourist areas, such as the Geological Reserve “Gorge of Dobrudja”, Nature Reserve “The Mouth of Dobrudja”, the “Slava Cercheza” –“Slava Rusa” area, the Nature Reserve “Babadag Forest”. These would become known to tourists from the country and abroad, but will also make the “Danube Delta” tourist areas more attractive, starting from Ceamurila de Jos (which has a railway station) to Jurilovca and “Golovița” Lake and the “Mouth of Portiței”.

5. Conclusions

For the development of passenger rail transport in the Dobrogea region, Constanta and Tulcea counties, consider the following steps and measures:

-Planning and realization of a joint development project of the two counties. The project must be carried out by the Constanta County Council and the Tulcea County Council. Involvement of Local Councils and Town Halls in the project to provide legal support for infrastructure investments, modernization of roadways linking main roads to railway stations. Funding can come from the European Union.

-Realizing the public-private partnership, with the passenger transport companies, on the railway track and for the continuation of the road journeys. Scheduled by mutual agreement.

-For the Medgidia - Negru-Voda railway, with the connection in Bulgaria via Kardam to Dobrici, steps must be taken with the district authorities in the Dobrici region to develop a joint project on the development of the common rail transport between the center and the southern part of the county of Constanta and the northern district of Dobrici. Funding a cross-border project can be with European funds.

-Supporting the company "CFR Călători", through government subsidies, for the acquisition of light trains for the over ground metro.

Without a real partnership between all those interested in this type of transport, with no combined effort, nothing will change for the better. The problem is not only of costs and congestion, but also of permanent pollution by means of the road transport. Also, the citizens of Constanta County have changed their behavior using personal cars to gain time and shorten the journey, which contributes decisively to agglomeration, pollution and a certain type of daily stress related traffic. If during the cold season, fewer tourists arrive in Constanta County, but during the summer season, the increase in the number of participants in cars traffic creates serious problems in several critical areas of the Black Sea coast, from Vama Veche to Navodari. Moving travelers and commuters, from road to rail, in high-quality conditions and low-time for travel, would lead to decongesting road traffic and reducing pollution. Also, for each person, it would reduce transport costs by using subscriptions.

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