

GUIDELINES FOR IMPROVING THE QUALITY OF TRANSPORT SERVICES PROVIDED BY RAILWAY CARGO FORWARDERS

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Received: 25.10.2019, Accepted: 10.11.2019

Abstract

The Republic of Bulgaria's membership in the EU has led to deep reforms in the transport sector. After the liberalization of the transport market, private railway cargo operators began operating within the country, leading to increased competition and improved quality of services. The "BSR Cargo Freights" Ltd. state enterprise failed to restructure itself and lost customers, with its market share dropping below 50% at the end of 2018. Its rolling stock is obsolete, resulting in operational problems and deteriorated quality. Despite the difficulties it faces, railway transport is much more energy efficient and more environmentally friendly than automobile transport. The realization of ecological goals gives railway transport major advantages over other types of transport. The subject of the present article is to offer effective approaches for improving the quality of transport service. The information which has been used for this purpose is the result of the implementation of techniques such as surveillance and polling.

Key words: *quality of cargo freights, stable improvement of the quality of transport services*

JEL Codes: *R 40, R 41, R 49*

Introduction

"BSR Cargo Freights" Ltd is a trading company, with 100% ownership of "Holding BSR" SJSC whose Board of Directors exercises sole owner rights. The association is part of a holding structure where the mother company – "Holding BSR" SJSC, is a management center for strategic development and control, creating guidelines and goals, and the subsidiaries – "BSR – Passenger Freights" Ltd. and "BSR – Cargo Freights" Ltd., follow the management strategy and carry out the primary business

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activities of railway carriers. The Association's subject of activity is carrying out railway cargo freights in internal and/or international messages, leasing locomotive traction and wagons for cargo freights, maintenance and repair of traction and rolling stock, as well as every other activity that is not legally prohibited. The association holds an indefinite license for railway cargo freights, issued by the minister of transport, information technology and messages; said license is re-examined during certain periods and on occasions planned in applicable law. In recent years, the financial situation of "BSR – Cargo Freights" Ltd. has been severe. In its short 10-year history, "BSR – Cargo Freights" Ltd. has reported negative financial indicators which result from the environment, as well as ascertained failures in activities and processes within the association. The total accumulated loss for this period is approximately 131 million BGN. During the 2007-2009 period the association is run through an unstable business model where income and expenses are determined in an administrative and non-transparent way. This reduces visibility on the state of business and impedes the making of objective managerial decisions. As a result, in 2009 "BSR – Cargo Freights" Ltd. generates an operating loss of 25 million BGN against an income of 137 million BGN (the profit/loss indicator prior to interest, taxes and depreciation – EBITDA). The 2010-2013 period is a period of reforms which eliminates the previous unstable business model and expenses start to be controlled in relation to income. In 2011 the company manages to reverse the trend of yearly contraction of the volume of work and increases the volume of transported tonne-kilometers. As a result, the association gradually manages to gain operating profit in 2013. In 2014 the reforms stop. With the decreasing volumes of work, the revenue drops, expenses rise again and the association returns to a state of operating loss, with its own funds contracting by about a third, reaching 54 million BGN. While the income from the association's main activity continues to drop during the 2015-2016 period, the effect from the undertaken reforms is reflected in the association's improved financial indicators. In 2017, for the first time since 2012, "BSR – Cargo Freights" Ltd. achieves a growth of 49 tons of transported cargo. Revenue has increased by 3% and expenses – by 5%. In order to retain its positions on the market in the conditions of increased competition on the part of both private railway carriers and alternative automobile transport and to keep their current customers, "BSR – Cargo Freights" Ltd. have to make daily efforts to improve the quality of freights, shorten delivery deadlines, prepare wagons for loading/unloading in a timely and precise fashion, and offer information on wagon tracking at every single moment during freights.

1. Analysis of transported tonnes of cargo and realized revenue for the 2009-2017 period

Table no.1 Analysis of transported tonnes of cargo and realized revenue

In BGN (thousands)	2009	2011	2013	2015	2017
Financial indicators					
Earnings – Total	125 525	167 396	129 941	114 125	97 669
Volume indicators					
Transported tonnes (thousands)	10 633	11 607	8 861	8 316	6 201

Source: The association’s financial report for 2017

As the table indicates, sales revenue for the 2009-2017 period show a 22% drop, which could be attributed mainly to the 42% drop in freight volume. The main factors which lead to the emergence of this trend include: 1) The reduction of the share of railway transport as part of land transport (see Table 2) as a result of low competitive power; and 2) The association’s ineffective management in recent years.

Table no. 2

Types of transport	2009	2012	2015	2016	2017	2017 / 2009	Share in land transport
Land	87 085	102 542	123 626	121 910	123 779	142.14%	
Automobile	54 700	65 282	85 234	82 543	83 370	152.41%	67.35%
Pipeline	19 095	24 790	23 757	25 141	24 705	129.38%	19.96%
Railway	13 290	12 470	14 635	14 226	15 704	118.16%	12.69%

Source: NSI

The table makes it clear that the share of railway transport in land transport shows a trend of steady decline in the 2009-2016 period, dropping from 15% to 12%. Presently, over 10 000 companies in Bulgaria have valid licenses for carrying out international automobile cargo freights. The share of automobile transport has increased by 5% for the 2009-2016 period, whereas the share of railway cargo freights has dropped by 3%. In relation to the aforementioned trend, it is expected that the introduction of a toll system covering high-capacity cars over 3,5 tonnes in 2018 will increase the expenses of automobile carriers, which will have a positive effect on railway transport with a 15% increase in carried out freights. It should also be noted that there are other private railway carriers on the market, the strong competition from which has resulted in “BSR – Cargo Freights” Ltd. losing niche markets and customers.

Table no. 3 shows the volume of freights carried out by licensed railway carriers during the 2010-2017 period (thousands of tonnes).

Table no. 3

	2010	2011	2012	2013	2014	2015	2016	2017
Bulgaria – Total	12940	14152	12470	13539	13691	14635	14226	15704
BSR CF	10778	11607	9770	8861	8658	8315	6201	5988
% BSR CF	83%	82%	78%	65%	63%	57%	44%	38%
Competitors	2162	2545	2700	4678	5033	6320	8025	9716
% Competitors	17%	18%	22%	35%	37%	43%	56%	62%

Source: NSI

The table shows that the market share of “BSR – Cargo Freights” Ltd. for the 2010-2017 period is 83%. Presently, it is 38%, i.e. it has dropped by 45%, whereas the share of private carriers indicates the same percentage of growth.

2. Analysis of the quality and user satisfaction for the enterprise

The indicators which characterize user satisfaction include: service quality; range of provided services; competence of attending personnel; staff commitment in the solution of customers’ problems; staff courtesy during customer contact; the staff’s communication skills; and last, but not least – service prices.

In order to determine the main problems regarding the association’s functioning and competitive power, a marketing study was carried out through polls to evaluate the quality of offered services and other predetermined indicators of the association’s primary customers for the 2014-2017 period (see Table 4):

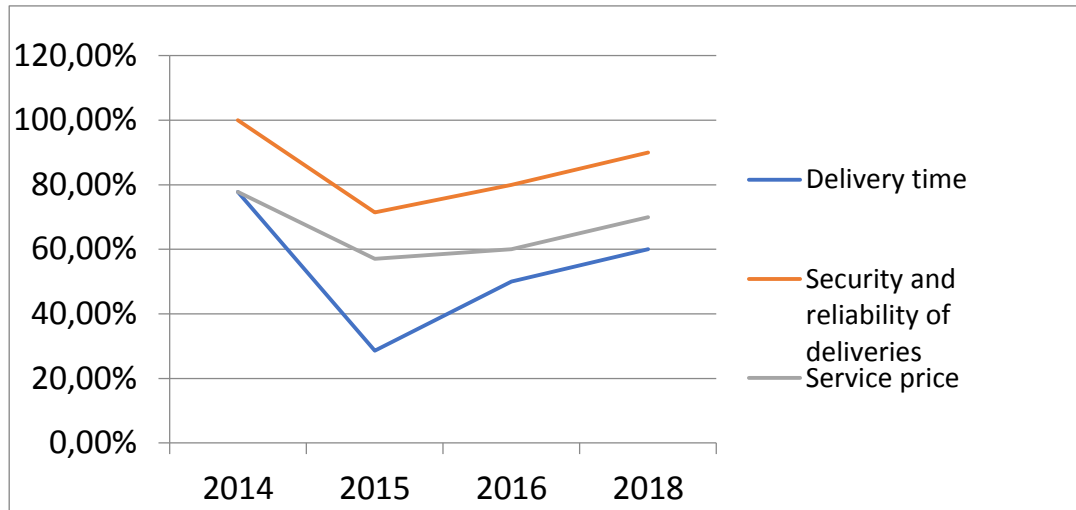
Table no. 4 Analysis of the quality and satisfaction indicators

	2014	2015	2016	2017
Evaluating satisfaction in %				
Evaluating the quality of offered services	88.9%	60.5%	75.0%	72.5%
Evaluating the preparation and execution of transport services	77.7%	57.2%	70.0%	90.0%
Evaluating the offers	61.2%	49.3%	65.0%	90.0%
Individual approach towards customer demands during specific inquiries	0.0%	71.4%	90.0%	85.0%
Sufficient and complete information about services	55.6%	57.1%	90.0%	95.0%
Evaluating the ways and deadlines for placing orders and carrying out freights	77.8%	65.7%	70.0%	85.0%
Evaluating offered prices and methods of payment	77.8%	67.9%	60.0%	80.0%
Evaluating the observation of legal deadlines for processing and arranging claims	66.7%	85.7%	80.0%	90.0%
Evaluating cooperation between employees in the face of problems that arise during freights	88.9%	71.4%	100.0%	100.0%
Evaluating the assortment/types of offered products/services	50.0%	42.8%	60.0%	85.0%
Evaluating employee professionalism	55.6%	85.7%	80.0%	40.0%
Evaluating the ways of contacting employess	55.6%	57.2%	70.0%	70.0%

Evaluating the site of “Holding BSR” SJSC/ “BSR – Cargo Freights” Ltd.	88.8%	75.1%	90.0%	90.0%
Degree of satisfaction with the work of “BSR – Cargo Freights” Ltd.	77.8%	41.4%	70.0%	100.0%

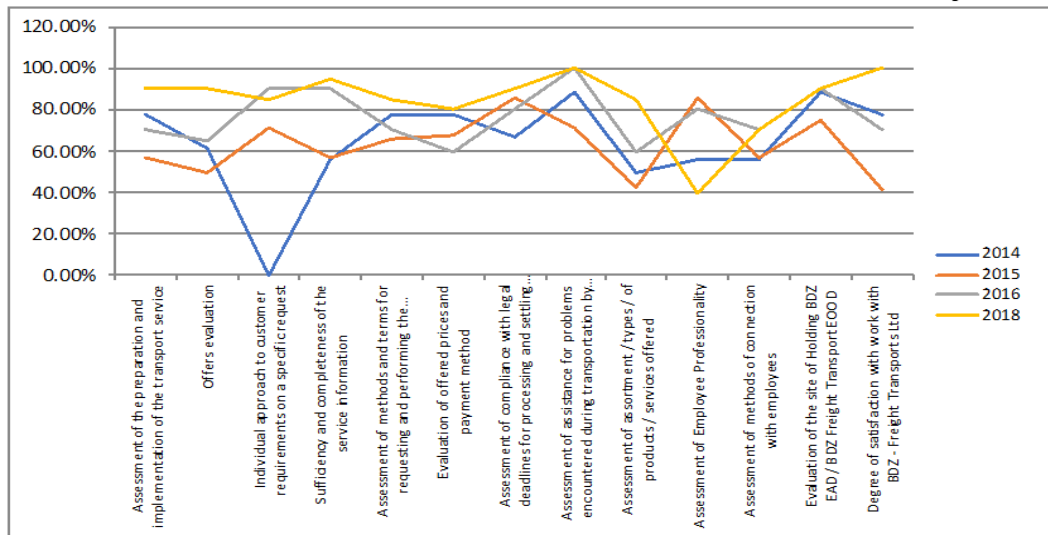
Source: Questionare survey

Figure no. 1: Evaluation of the quality of the offered services



Source: Author

Figure no. 2: Gradation of the importance of marketing criteria on the quality of the services provided



Source: Author

The lack of quality and competitive power of offered services results from the influence of ineffective processes and significant excess capacity of assets and personnel, which have a direct influence on the association’s constant and variable expenses which determine the association’s rate of pay for the offered services. In order for “BSR – Cargo Freights” Ltd. to make its business flexible and permanently profitable and start reacting adequately and proactively to market realities, its management should undertake adequate and immediate actions.

3. Analysis of the age composition of the locomotive fleet

By October 30 2017, “BSR – Cargo Freights” Ltd. has 207 locomotives, 65 units of which are classified as “assets held for sale”. They are also evaluated by independent appraisers and will be offered for sale in 2017/2018. The association also owns 142 locomotives with which it performs its operational activity. They are shown according to age composition in the following table:

Table 5: Age composition of the rolling stock of BSR “Cargo Freights” Ltd. – 2017.

Type of TRS/ Age composition	Series	Inventory park					Total
		Up to 10 years	11 - 20 years	21 - 25 years	26 - 30 years	Over 30 years	
train, diesel	06	0	0	0	0	17	17
train, diesel	07	0	0	0	0	15	15
train, electric	40	0	0	0	0	48	48
train, electric	46	0	0	0	8	9	17
shunting engines, diesel	51	0	0	0	0	3	3
shunting engines, diesel	52	0	0	0	0	9	9
shunting engines, diesel	55	0	0	0	0	27	27
shunting engines, electric	61	0	0	6	0	0	6
Total		0	0	6	8	128	142
Age composition		0,0%	0,0%	4,23%	5,63%	90,14%	100%

Source: The association’s financial report for 2017

The aforementioned information makes it clear that 90,14% of the association’s locomotives are over 30 years old. The restoration of the technical parameters of this physically obsolete fleet requires an average of 12-14 million BGN annually. The association performs its operational activities with an average of 103-105 locomotives per month. The Association’s traction rolling stock in 2017 is serviced and maintained in technical readiness by 4 locomotive depots.

4. Analyzing the age composition of the cargo wagon fleet

Table 6 Age composition of cargo wagons, property of “BSR – Cargo Freights” Ltd.

Type of wagon	10-15 years	15-20 years	20-25 years	25-30 years	Over 30 years	Total
Covered, 4-axle		11		64	232	307
Platform			103		826	929
Open				344	1 299	1 643
Grain carriers				306	282	588
Ore carriers				248		248
Selliform				288	85	373
Hopper-wagons					21	21
Cisterns		12		95	275	382
Refrigerative					50	50
Cement carriers				92	31	123
Boat					1	1
Guides					209	209
Manure carriers			4	13	1	18
Passenger					3	3
Total	0	23	107	1450	3315	4895
Age composition	0,00%	0,47%	2,19%	29,62%	67,72%	100,00%

Source: The association’s financial report for 2017

As the table shows, “BSR – Cargo Freights” Ltd. has a large capacity of different types of cargo wagons; however, the constant lack of financial resources in recent years has made it difficult to maintain the good technical condition of a large portion of the rolling stock. Almost 68% of the wagon fleet is over 30 years old. Of the total number of cargo wagons the association has at its disposal, 1156 units are classified as assets held for sale and are on standby for carrying out regulatory transactions.

5. Inferences

In recent years, the financial crisis and the gradual changes in the structure of Bulgaria’s economy have led to a drop in the production of heavy industry, which in turn has resulted in smaller amounts of cargo suitable for railway transport freights – the number of freights of raw materials, machines and facilities, mineral coal, petroleum, construction materials, etc. has dropped. The association’s difficult financial situation is a prerequisite for the impossibility to invest in the maintenance of the good technical condition of the rolling stock and the execution of repair programmes for the planned periods. At the same time, the intense competition from automobile cargo transport on one hand and the large number of licensed carriers on the other has led to the necessity for “BSR – Cargo Freights” Ltd. to improve the way it manages its relations

with its customers in order to possibly achieve the positive effect of keeping said customers and its reflection on the association's market and financial results. Retaining and developing the customer base is an element of loyalty, which in turn is influenced by customer satisfaction. One of the conditions necessary for monitoring and managing influence in the "market and financial results – loyalty – satisfaction" is the systematic examination of user criteria regarding the quality of offered services and the indicators for customer satisfaction. It is also necessary to constantly accumulate information regarding the attitudes and behavior of the enterprise's customers. In order to stably improve the quality of offered services and customer satisfaction with the cargo freight services that "BSR – Cargo Freight" Ltd. provides, it is necessary to improve the association's technical-economic indicators by adopting adequate measures and actions towards optimizing operational activities and eliminating ineffective ones.

6. Guidelines for improving the quality of services offered by "BSR – Cargo Freights" Ltd

The enterprise's transport service is a complex process where the activities of all sections in the association – marketing, sales, operation and finances – intersect and complement each other. The stable development of its quality has to involve the adoption of complex measures for overcoming the aforementioned problems and achieving short-term and medium-term objectives. In order to improve the quality of offered services, it is crucial to maintain the good technical quality of the rolling stock and carry out preliminarily planned repairs of cargo wagons and locomotives in a timely fashion. It is also necessary to improve control of wagon transfer and reception by customers, as well as control during loading and unloading operations; strict control should also be exercised on the technical condition of locomotives during traffic.

Improving the quality of services depends on shortening cargo delivery time, which in turn reduces wagon turnover. For this purpose, it is necessary to: deliver wagons to customers for loading and unloading in a timely fashion, as well as shorten the time at from the wago's arrival in its starting/receiving stations to its delivery to customers for loading/unloading; improving the organization of work for maneuvers in starting stations in order to optimize wagon arrangement and minimize maneuvers in receiving and transit stations; offer wagons with improved design to customers in order to improve the quality of cargo storage and shorten the time for loading and unloading operations. The enterprise should also improve its communication with customers by exchanging daily information on solving emerging problems and creating an organization for loading and unloading of block-trains. Customers should also be notified in a timely fashion about changes in regulations when unusual packages, dangerous cargo and cargo under customs control are transported. Customers should also: a) be informed about interruptions in train movement due to routine and emergency repairs along the republic's infrastructure, when packages are transported along circuitous routes; and b) offered respective prices in a

timely fashion. The system for managing and planning results should be used effectively in order to optimize the allocation of empty wagons for loading and minimize vacant runs. It is also necessary to improve the system for communicating with the systems of other railway carriers included in the freight process, in accordance with the Commission's Regulation № 1305/2014 from December 12 2014 about the technical specification for operative compatibility regarding the "Telematic Applications for Cargo Freights" sub-system of the EU's railway system. Information should be exchanged about departing wagons, arriving wagons, wagons received at border passages, as well as data regarding waysbill ways for the purpose of introducing electronic waysbill ways in international messages and inform customers via e-mail about the condition of packages and their movement. The quality of the "transit freight" service can be improved by reducing transit time by 50%, minimizing the prerequisites for cargo damage, and offering options for providing wagons that carry precious cargo with additional security. Increasing the qualification of workers and employees is also crucial to the improvement of the service. Employers should be aware of problems in enterprises, of their short-term and medium-term goals; the introduction of a system for additional payments will also increase their motivation.

7. Conclusion

"BSR – Cargo Freights" Ltd. is the most environmentally friendly carrier of heavy cargo over long distances in the Republic of Bulgaria. The association's ambition is to become the most effective carrier in the future and to offer flexible services for all industries in the Republic of Bulgaria and the region. The strategy for its future stable development needs to be orientated towards resources and consistent with the competitive situation on the market. Resources offer full competitive advantage only when they are applied to the market dynamic appropriately. The strategy of "BSR – Cargo Freights" Ltd. for achieving success on the cargo market consists of developing several key internal resources and using them to offer a broad product portfolio to all types of customers. Said key resources are: 1) Availability of the capacity for traction and transport railway rolling stock, i.e. magnitude and variety, in order to satisfy the needs of every customer in Bulgaria, and with transit international cargo as well; and 2) In-depth experience and specific professional knowledge in the construction of railway transport services under measure for individual customers within the Republic of Bulgaria and abroad. The stable development of "BSR – Cargo Freights" Ltd. can be achieved by improving the quality of transport services, i.e. only by modernizing the rolling railway stock, introducing a modern staff management system in order to maintain high competence, motivation and satisfaction, and improving working conditions in order to eliminate risks and prevent injuries and illnesses among the crew, as well as maintaining a high level of safety for services.

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