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FINANCIAL INSTRUMENTS FOR SUSTAINABLE DEVELOPMENT OF "BSR – CARGO FREIGHT" LTD

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Abstract*: The liberalization of the railway cargo freight market has led to fierce competition and higher customer criteria regarding the quality of provided transport services. Despite the difficulties that Bulgaria's primary state cargo forwarder, "BSR – Cargo Freights" Ltd., faces, it possesses indisputable energy and ecological advantages over other types of ground transport. The paper emphasizes the association's capabilities for becoming more effective, achieving permanent stabilization and stable development through the implementation of good management practices and approaches, and putting an end to organizational inertia. The study suggests the integration of innovative financial tools, which will eliminate the current ineffective processes in the association's activity. "Budget from Zero" is a method of budgeting where all costs have to be balanced in relation to the expected earnings for each studied period. In order to achieve better results in the elimination of ineffective processes, the "Budget by Activities" method can also be implemented in order to analyze the costs and cost-effectiveness of the products that the association offers. These two approaches are a radical alternative to the historical budget the association currently uses and are in conformity with the international standards for permanent improvement of the financial indicators and the association's liquidity. The paper's methodology observes the system approach and traditional research methods.*

INTRODUCTION

Globalization is the foundation of economic life and a leading trend in the development of economic relations based on the opening of national economies. It necessitates the search for newer and newer forms of competition and protectionism to protect the national holdings of smaller countries from the global invasion of larger ones and become worthy partners to them. In the long run, the globalization trend in world economy will continue, and Bulgaria's transport sector should be prepared to meet this challenge.

The liberalization of the railway sector and the emergence of real competition are in service of customers, economy and society; in general, it is subject to the strategic goal for increasing railways' competitive power compared to other types of transport [1]. The competition between historical /national/ and new railway freighters should be viewed as a necessary condition for increasing one's own competitive power, as well as the competitiveness of Bulgaria's railway transport as a whole.

In order for primary railway forwarder "BSR-Cargo Freights" Ltd. to become flexible and permanently profitable and to start reacting adequately and proactively to market realities, effective approaches and innovative methods for preserving market positions, increasing competitive power and improving the quality of offered service should be sought [2]. Such tools include the incorporation of "Budget from zero" and "Budget by activities", which define the free capacity of assets and human resources and smooth out existing inefficiencies in the association's activity. In this case the growth in earnings and the reduction of costs should not be examined as separate goals, but rather as balanced management of an overall dynamic process [3].

BUDGET FROM ZERO

"Budget from zero" is a budgeting method where all costs should be balanced towards the expected earnings for every investigated period. What is peculiar about this method is that every functional budget is worked out with the assumption that the activity for which it is prepared does not exist and no funds have been stockpiled for it. The increases in the budget statement are compared to the increases in the revenue part of the budget for the particular activity or operation. The "Budget from zero" is worked out in backward sequence; for each activity managers protect every item cost that contributes to the realization of planned earnings, starting from zero. Budgeting based on zero can reduce costs by avoiding noticeable growth or reduction to the budget of the previous period [4]. The preparation of a zero base budget usually involves discussing the point of a certain activity in the enterprise, what benefits its continued functioning would bring, the possibility of its elimination or alternate ways of conducting it, and how much that activity costs in other enterprises. Such examination and reforming of an enterprise's individual activities lead to various advantages. For example, the integration of this financial tool leads to more effective allocation of resources in an association and finding increased budgets and effective costs for improving operations. Other advantages of "Budget from zero" include increased staff motivation by providing greater incentive and responsibility when making decisions, and increased communication and coordination within the organization. Additionally, this tool identifies and eliminates wasteful and outdated operations. It can be concluded that "Budget from zero" is a more effective budgeting tool compared to the one that BSR "Cargo Freights" Ltd. has used so far (See table 1).

Table 1Differences between traditional budgeting and budgeting from zero

Traditional budgeting	Budgeting from zero
Starts from what already exists	Starts from zero base costs
Studies the "costs/benefits" interconnection only for new activities and projects	Studies the "costs/benefits" interconnection for all activities and projects
Starts with monetary values	Starts with goals and activities, as well as quantitative indicators for the necessary activities
Does not study new ways for operating activities as part of the budget process	Studying new ways for operating activities is part of the budget process
The result is a single budget	The result is a selection of several variants for activities and their respective costs

Source: Authors

"Budget from zero" has a methodology that follows five main steps, namely:

Stage 1 – in accordance with the aims and goals of the enterprise and the specificity of individual sections, their paramount functions and objectives are defined. They serve as a

basis for the formulation of the target results for the period. Possibilities for measuring the results are determined.

Stage 2 – preparation of suggestions for the realization of each function and goal with a view to securing target results. Alternative decisions are sought, potential risks are defined.

Stage 3 – suggestions are sorted based on criteria for efficiency. Projects for the realization of the section's individual functions and objectives are designed based on the most appropriate suggestion.

Stage 4 – individual projects are united in a program for the section's activity during the period. The projects' priorities are defined, their interconnection is accounted for, possibilities for increasing the positive synergetic effects are sought.

Stage 5 – the minimal permissible resource allocation for the program is determined and the budget for the respective section is prepared.

Something that is especially important with this type of budgeting is the collection of a wide range of suggestions for alternative decisions and getting more managers and executive staff members involved with them. This not only creates prerequisites for making optimal budgets, it is also a means of overcoming the psychological resistance of associates that arises from the approach of this type of budgeting. Budgeting from zero also involves the application of budgeting by activities, which is an auxiliary tool that determines the primary factors driving the direct costs for various activities. Their purpose is to go down to the micro-levels of the processes which are typical for a certain activity and highlight their inefficiencies. Budgeting by activities and budgeting from zero are management tools for planning which are used as a radical alternative to the historical budget that the association has used so far. They are applied in cases when the free capacity has to be precisely defined and a procedure for smoothing out existing inefficiencies has to be started. Their implementation generates an environment which accepts change and creates prerequisites for better focus on the established long-term goals; it looks toward the future. The "Budget from zero", combined with the "Budget by activities", improves the management of the execution, eliminates inefficiencies, activities which are either entirely unnecessary or with exceedingly large costs by revealing possibilities for alternative ways they can be performed. For its needs in "BSR – Cargo Freights" Ltd., 7 primary functions below the budget can be identified, covering all activities (primary and auxiliary) in the association: budget for planned earnings; budget for railway station activities; budget for locomotive operation; budget for locomotive repairs; budget for cargo wagon repairs; budget for MTO; labor budget for the locomotive repair activity.

Budget for planned earnings

The earnings of "BSR – Cargo Freights" Ltd. are formed on the basis of orders placed by forwarding agents and consignors for quantities of cargo by types, relations. Average income rates, as well as total ones, for all customers of the association are formed on the basis of these parameters. The main elements of the creation of this sub-budget include:

Table 2 Elements of sub-budget

Indicator	Measure
Cargo freight	tonnes (thousands)
Average freight distance	km.
Net (ton. / km.)	ml.
Earnings – net	BGN (thousands)
Net income rate	BGN (ton. / km.)

Source: Author

The data, which includes cargo quantities by types, relations, volumes, is processed and analyzed. This, in turn, leads to determining the profit that the association will achieve when fulfilling the specified volume indicators for the following financial year, as well as the expected inbound cash flow of planned, respectively realized, earnings. The results from the analysis also carry another type of information for the association. In order to transport the declared quantities of cargo, the required number of wagon and locomotive fleet needs to be delivered by type and in good technical condition; routes need to be provided as well.

Budget for railway station activities

Its development requires following the steps listed off below, as well as making detailed calculations for:

Preliminary customer orders for the year, which should include the following parameters: In order to prepare a budget for railway station activities, information is provided about the number of wagons ordered by customers, taking into account the nature of the cargo, the wagon turnover, the technological operations and the time necessary to carry out each operation. The information provided for the aforementioned parameters is the basis for summarizing and calculating volumes – in tonnes, earnings – in BGN, tone-kilometer work, average freight distance and average income rate. Information about cargo type, relation and volume is given to the "Operation" department to determine the type and number of wagons and locomotives, as well as the number of routes;

The calculation for the net and gross tone-kilometer work for the year in which the budget will be prepared includes the following parameters: The calculation for processed wagons by railway stations includes the following parameters - the calculation for wagon work by train categories for the respective year in which the budget will be prepared includes the following parameters; the calculation should comply with the Train Traffic Schedule (TTS) for the respective year. It appropriates the required railway routes submitted within the respective deadlines; The calculation for train work shows which train types have the largest relative share. Additionally, it provides information for the total size of train kilometers. This indicator serves the proper budgeting of the costs for infrastructure fees, which are derivatives of the volume of train kilometers and gross tone-kilometers, multiplied by the established rate of pay;

Allocation of loading by dispatch stations during the respective year in which the budget will be prepared with the following parameters: When determining the average daily loading by dispatch stations, the existing irregularity should be investigated by months, weeks and days. During some days, it is possible for individual stations to load 90 times per year, whereas others can load for 365 days; therefore, a purely mathematical approach does not work when determining a certain station's work load – it is a matter of optimal organization of the station's technology. This calculation is precisely the one that should be approached professionally and determine the necessary number of staff members;

Allocation of unloading by receiving stations for the respective year: The number of railway stations is studied, and the number of necessary staff members is calculated on the basis of loaded and unloaded wagons by days throughout the year and the time necessary time for each operation. Said staff members are compared to the ones who are actually on the payroll and it is observed what the difference is, if any such difference emerges. This provides clear judgment on whether or not there is excess capacity or shortage of staff. For example: 130 stations have been studied in 2018; the number of necessary staff members is calculated on the basis of loaded and unloaded wagons by days throughout the year and the time necessary for each operation. This helps determine the company's excess capacity from this type of activity.

Budget for locomotive operation

The budget for locomotive operation is worked out on the basis of planned earnings and established Train Traffic Schedule (TTS), and it should comply with the reduced number of railway stations. The staff members who are studied in this budget are part of the operating staff – engineer, assistant engineer and depot masters. When conducting the analysis, certain specificities about the operating process should be taken into account, such as imposing the appointment of additional (facultative) trains not foreseen in the TTS. It should also be noted that throughout the majority of the year regular trains travel with compositions heavier than what is planned in the TCP (Train Composition Plan), which results in servicing them with a larger number of locomotives, respectively a larger number of locomotive brigades. Due to repair-related interruptions along the railway infrastructure and the lack of capacity they cause, as well as the lack of a sufficient number of locomotives in working order for the needs of the TTS, delays are caused which necessitate the use of additional brigades and extended office-hours for said brigades. Taking into account the aforementioned specifics, the conducted analyses show that the company reports a 9% deficit in operating staff.

Budget for locomotive repairs

Depending on the declared quantity of cargo by the company's forwarders and consignors, a repair schedule of the locomotive fleet owned by the association is prepared. The purpose of the locomotive repair budget is to provide the necessary number of roadworthy locomotives (diesel, electrical, for train work and maneuverable activity). The budget for locomotive repair is prepared on the basis of the number of roadworthy locomotives required for providing the TTS of cargo trains for the respective year for which the budget will be made. The activity will be carried out in: four locomotive depots (LDs) in the structure of "BSR – Cargo Freights" Ltd.; "BSR – Passenger Freights" Ltd. depots; factories. The locomotive repair budget is structured by locomotive depots and contractors under PPA by type and number of repairs, costs of each repair, by months and with accumulation from the start of the year. The labor budget in the "locomotive repair" activity is developed on the basis of the association's planned locomotive repair program. The purpose of the labor budget is to provide the locomotive repair activity with the necessary human resources to perform the foreseen number of repairs throughout the year. The final result in the development of this budget manifests itself as either "excess capacity" or shortage of human resources.

Budget for cargo wagon repair

"BSR – CF" Ltd. carries out railway cargo freights through wagons that are suitable and safe for operation. In its capacity as owner, "BSR – CF" Ltd. provides the necessary roadworthy rolling stock to carry out freights by maintaining and repairing the used wagons (private and foreign) in wagon repair workshops. The repair activity of "BSR – Cargo Freights" Ltd. includes: Routine maintenance of the cargo wagons used by "BSR – CF" Ltd. for freights; Conducting preemptive (average) repairs of wagons owned by "BSR – Cargo Freights" Ltd. in accordance with market necessities and keeping the necessary fleet in working order; Repairs of other wagons by orders from outside customers. The repair volume of cargo wagons is developed on the basis of the determined fleet of roadworthy wagons required for transporting the planned cargo volume, the condition of the cargo wagons, with regard to inter-repair deadlines and damage frequency. The specialization of individual repair workshops in the respective formation stations should also be taken into account when determining their program. In order to perform its primary cargo freight activities, "BSR – CF" Ltd. should have roadworthy cargo at loading places and repair damaged ones in a timely fashion in order to transport cargo to the final destination as quickly as possible.

Budget for MTO

Because the company has 57 storehouses (actually differentiated sites), the storage facilities need to be optimized – 15 warehouses in Sofia, 16 in Plovdiv and 26 in Gorna Oryahovitsa. It can be inferred that over the past couple of decades the association has amassed large quantities of unnecessary assets and scrap assets which impede the maintenance and repair of the railway rolling stock, create exceptional prerequisites for violations, take up storage space, generate conservation and storage costs, create prerequisites for accidents at work, etc. To a large extent, this burden of unnecessary assets severely inhibits inventory-making due to the lack of necessary storage space where all commodity-material values (CMV) can be properly arranged to make their counting possible. In that regard, it is crucially necessary to take actions in the short term for the selling of all unnecessary assets owned by the association. This will prevent the aforementioned negative consequences for the association and guarantee substantial financial resources for "BSR-Cargo Freights" Ltd. Taking into account the actual condition of the association's storage facilities and the conducted analysis, it is necessary to take actions for the optimization of the activities through: reducing the number of storehouses; proper logistic layout of storage facilities which complies with the necessity for repair and operational activities in the company; Staff optimization.

Labor budget for the locomotive repair activity

The labor budget for the "Locomotive Repair" activity is developed on the basis of the planned "Locomotive Repair" program. The labor budget's purpose is to secure the necessary human resources for the conduction of the foreseen number of locomotive repairs throughout the year. The final result in the development of this budget is manifested as "excess capacity" or shortage of human resources. The process time for each train, divided by the effective "working hours" fund, provides the necessary number of staff members (engineers and assistant engineers) for bundling trains by TTS. The developed labor budget makes it clear that the association has an excess capacity of 14%. The poor technical and physical condition of the locomotive fleet, 85% of which is over 30 years old, creates prerequisites for increasing the repair volume in operator hours as additional work.

Effect: In the net financial result the effect will manifest itself as reduction of salary costs, as well as the social expenses that accompany them. The total annual effect in the reduction of numbers will reduce the costs of "BSR – Cargo Freights" Ltd. The total annual effect will be reflected during the following year because during the one for which this calculation is made, compensations will have to be paid; said compensations are equal to no less than 5 gross wages (4 gross wages by CBA, which is a minimum of +1 salary from unused annual leave).

THE „ACTIVITY - BASED COSTING" MODEL

In order for the company to develop better corporate focus and strategy when analyzing and understanding costs, it is necessary to apply the "Activity–based costing" model. The "Activity–based costing" structure (ABC) is methods for calculating costs which identifies activities in a certain organization and determines the costs for each activity with resources for all products and services, depending on the actual use of each one. With ABC, the association can perform a reliable evaluation of the elements of costs for whole products, activities and services which can help inform the company's decisions or to: Identify and eliminate those products and services that are unprofitable and lower the prices of those that are overpriced (product and service portfolio aim); Identify and eliminate production or service processes that are ineffective and allocate processing concepts that lead to the very

same product at a better yield (process re-engineering aim). In a business organization, the ABC methodology assigns an organization's resource costs through activities to the products and services provided to its customers. Activity–based costing (ABC) is generally used as a tool for understanding product and customer cost and profitability based on the production or performing processes. As such, ABC has predominantly been used to support strategic decisions such as pricing, outsourcing, identification and measurement of process improvement initiatives. In order for the association to make reliable evaluations of the costs from products, activities and services it offers, the analyses should be aimed toward profitability with regard to customers, business processes, as well as market segments: profitability of the company's consignors and forwarding agents; profitability of business lines; investigating activities and processes in order to identify inefficiencies in them.

The "profitability of consignors and forwarding agents" model of "BSR – Cargo Freights" Ltd. is based around allocation of costs by certain drivers. The results are analyzed and follow-up actions are taken to increase the margin of customers with negative results, if necessary. Profitability also brings another type of information, namely the influence of variable costs, fixed costs and administrative costs concerning the provided service. The analysis of the earnings and costs realized by "BSR – Cargo Freights" Ltd. for individual cargo wagon freights on a yearly basis (2018) shows a 32% loss from individual cargo wagon freights. The implementation of these two tools generates an environment for a radical alternative through which the free capacity is defined, opportunities for smoothing out existing inefficiencies are given, and prerequisites for better focus on the company's long-term goals are created.

CONCLUSION AND RECOMMENDATIONS

Despite the difficulties it faces, the railway sector has a number of ecological advantages over other types of land transport [5]. Because electric traction is so widely applicable, railway transport is more energy efficient than automobile transport and it has a far less negative impact on the environment. Compared to automobile transport, it consumes 8 times less energy for the transportation of one ton of cargo [6]**.** The completion of the ecological objectives gives railway transport major priorities over other types of transport. Railway transport is the most environmentally friendly type of transport in the country – 70,3% of Bulgaria's railway network is electrified [7]. In conclusion, it can be summarized that the postponement of difficult and unpopular decisions for incorporating innovative management approaches within the state railway cargo forwarder will cause serious decline in all primary operational and financial indicators.

Increasing competitive power is the main goal of every railway freighter. In essence, a tangible growth in economic efficiency is necessary in order to maintain market positions [8]. In that regard, the formation of a clear vision for the future, as well as the development and consistent practical implementation of a long-term and stable strategy for stabilization, financial rescue, modernization and development of the state freighter become crucial, as they can only guarantee the success of this strategic sub-branch for Bulgaria's economy and society.

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ФИНАНСОВИ ИНСТРУМЕНТИ ЗА УСТОЙЧИВО РАЗВИТИЕ НА ФИРМА “БДЖ– ТОВАРНИ ПРЕВОЗИ”

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Ключови думи: *товарни превози, устойчиво развитие, финансови инструменти.*

Резюме*: Либерализацията на товарния железопътен транспорт доведе до ожесточена конкуренция и високи изисквания на потребителите по отношение на качеството на предлаганата транспортна услуга. Независимо от трудностите, които среща Българската държавна железница “БДЖ – Товарни превози” ООД, тя притежава изключително енергийно и екологично предимство пред останалите видове сухопътен транспорт. В настоящия доклад се поставя акцент върху възможностите на холдинга да бъде по-ефективен, да постигне постоянно стабилно развитие чрез въвеждането на добри управленски практики и подходи и да се сложи край на статуквото. Изследването предполага интегрирането на иновативни финансови инструменти, които ще позволят да се елиминират неефективните процеси от дейността на холдинга. “Бюджет от Нулата” е метод на бюджетиране, при който всички разходи трябва да бъдат балансирани във връзка с очакваните приходи при всеки изследван период. С цел да бъдат постигнати по-добри резултати при елиминиране на неефективните процеси, методът „Бюджет по дейности“ може да бъде използван, така че да се анализират разходите и ефективността на разходите във връзка с услугите, които предлага холдинга. Тези два подхода могат да се приемат като радикална алтернатива на използвания в момента от холдинга исторически анализ на бюджета, освен това те отговарят и на международните стандарти за постоянно подобряване на финансовите показатели и ликвидността на холдинга. В доклада се прилага системния подход и традиционни изследователски методи.*