

POSSIBILITIES TO INCREASE THE PUBLIC TRANSPORT EFFICIENCY IN R.A.T. CRAIOVA

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Abstract: The present organization of the accountancy management of R.A.T. Craiova (the public transport company) does not have a well-defined finality, in the sense that there is not an actual calculation of the costs, but the management costs have only a statistic function, being used to collect the expenses on profit centers and within these on cost centers. From the perspective of the cost optimization as a way to increase the efficiency of the public transport in the city of Craiova, it is mandatory to reorganize the management accountancy in R.A.T. Craiova so that it can fulfill its objective to allow the determination of a cost for any existing center and the comparison of this cost with the income of the same center. Given the context, it is advisable to utilize the tariff-hour-car method (for the services), for the public transport for persons, since this activity is continuous and has a certain regularity; To calculate the costs it can be used as "cost carrier" either the covered kilometer, either the drive.

JEL classification: M41, M49

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1. INTRODUCTION

The management of the modern entity is in the position to take rational decisions that will lead to the achievement of some optimum results only if there is a managerial organized accounting (management accounting) which will provide the appropriate information.

It is widely known that, theoretically, there are three methods to organize the management accounting: the autonomous organization (with or without using the management accounts) being specific to the dualist accounting system, including our country, the integrated organization, specific to the monist accounting system and the organization under the circumstances of the autonomous data processing. RAT Craiova combines all the three forms of organization, meaning that by processing the data of the primary documents, on the basis of software, information on incomes and expenses at the level of the profit centers (sections) or only on expenses, at the level of the independent cost centers are acquired.

2. OBJECTIVES

Aiming to optimize the costs in order to increase the efficiency of passenger transport in Craiova city, it is necessary to improve the managerial quality of RAT Craiova, so that it achieves its finality, that is to enable the computing of a cost on each center as well as its comparison with the incomes registered at the concerned center.

3. METHODOLOGY

For carrying out this study, we analyzed the current conception of the managerial accounting organization in RAT Craiova. On the basis of the conclusions we have drawn, we consider that, taking into account the specificity of the analyzed entity activity, both the calculation tariff – hour – vehicle method (for services) in the case of public passenger transport and the order based method, in the case of freight transport can be successfully used as it is further presented.

4. ANALYSES

4.1. *The reorganization of managerial accounting at RAT Craiova*

Although the conception of managerial accounting organization meets almost completely the control necessities of the interior activity of the entity, from the analysis we have carried out, we observe that it can be improved so that the data on the costs of activities facilitate the decision making process aiming to increase the efficiency of the performed activities.

We specially refer to the compliance with OMFP no. 1826/2003 which approved the Mentions on some measures related to the organization and performance of management accounting, an order included in the provisions of OMFP no. 3055/2009 and which must insure, among others, “the registration of actions concerning the expenses collecting and distribution on destinations, respectively on activities, cost centers or profit centers, as it may be the case”¹.

In this context, if we have in view the current calculation methodology of the distribution coefficient of the indirect expenses from the 923 management account “Indirect production expenses”, we establish that the methodological norms of the management accounting are breached. We neither refer to the fact that we identified some expenses at the level of costs centers which should be normally considered indirect administration expenses (protocol expenses, advertising and publicity, expenses with banking interest rates) nor to the fact that in some situations there are some calculation mistakes whose influence is in most cases insignificant. We do refer to the notion of calculating the distribution coefficient which negatively influences the calculation of estimation prices although it is not used to establish costs.

Thus, according to the conception practiced by the enterprise, the coefficient is calculated following the formula:

$$K = \frac{T921 + T923 - (607 + 608 + 623 + 666 + 658 + 691)}{\text{expenses with the manual labour of } T921 + T923}$$

¹ *** Order OMFP no. 1826/2003 which approved the Mentions on some measures related to the organization and performance of management accounting, Official Gazette of Romania no. 23/2004, p. 14.

If the calculation methodology of the distribution coefficient had been respected, we would have:

$$K = \frac{T923 - (607 + 608 + 623 + 666 + 658 + 691)}{\text{expenses with the manual labour of T921}}$$

By referring to the same requirements of the regulations in force, we consider that, to increase the informational content of the centralizing situations, it is necessary to elaborate a Centralizing situation of expenses on management accounts by distributing the sums on profit centers (sections) and independent cost centers, a situation that render a cleared image of the expenses at the level of profit centers. Furthermore, taking into account the destination of activities A5 – road safety exploitation, A14 – mechanical-energetic and A21 – ITP the expenses identified at this level can be distributed to the beneficiary centers, thus, leading to the possibility of comparing the real expenses with the budgetary levels on those particular activities.

In the same context, we considered that it is appropriate to elaborate a Centralizer of the direct expenses on the activities from the profit centers in order to deepen the management accounting. Yet, we observe that, at the level of activities A31 – Freight transport Profit center 1, A39 – Freight transport Profit center 2, and A33 – Freight transport Profit center 3 we do not have direct expenses, but, in exchange, according to the situation from the Centralizer of direct expenses on activities at the level of enterprise, we do have collected indirect expenses. Even if the activities of freight transport are occasional, but, when they are performed, they imply identifiable expenses. Otherwise, the existence of such activities wouldn't be justified and they would have to be considered seasonal expenses.

In the present organization pattern, the management accounting doesn't have finality. We are referring to the static role of the management accounts since only their debit part is used. We believe that it would be necessary to include the incomes costs at the level of profit centers and the data comparison using the accounting method should be included in order to increase their informational role.

We can achieve it using different variants. A more difficult variant proposes the inclusion of some management accounts which, in present, are not registered in the class 9 of the General accounts plan such as: "Interior deductions - sales"; "Interior deductions – analytical results"; "Results from sales".

A simpler variant supposes the use of the existing management accounts, and some of them will receive new accounting roles and functions (accounts 921, 902, 903 and 931) taking into account that RAT Craiova is not an entity that manufactures material goods.

On the other side, in order to establish the incomes on profit centers as correctly as possible, a future solution would be the equipping the buses and trams with modern systems that would register the number of passengers and, consequently, of tickets at the entrance of the mean of transport.

On the basis of the present existing situation, we considered it would be appropriate to elaborate the Comparative situation of expenses and incomes on the activities within the profit centers, in order to deepen the management accounting and to establish the analytical results on activities.

The same think applies to the possibility of changing the three independent cost centers (5, 14 and 21) into profit centers.

We enumerate the following arguments to sustain this proposal:

-some of these centers (A5 and A21) not only carry out the basic activities of RAT Craiova (passenger transport and freight transport), but also execute works or provide services for third parties, so they register incomes;

-to empower the managers at the level of these sections in order to carry out activities more efficient and profitable, existing also the variant of externalize some works and services;

-the use of prices of interior cession at the level or the market price to deduct the works and services carried out for the basic activities of the whole section or mutually provided.

According to the aforementioned conclusions, the current conception of organizing the management accounting at RAT Craiova does not have a clear finality, that is no proper calculation is performed, the management accounts having only a static function and being used only to collect the expenses on profit centers and within them on cost centers.

In order to improve the costs for increasing the passenger transport efficiency in Craiova city, it is compulsory to reorganize the managerial accounting of RAT Craiova, so that it achieve its finality, and enable the calculation of a cost on each constituted center, as well as its comparison with the incomes registered at the level of that particular center.

In this context, we consider that two calculation methods can be used in the activity of RAT Craiova, namely:

-the tariff-hour-vehicle method, in the case of passenger transport because it is a continuous activity and it is carried out with a certain rhythmicity;

-the order based method, in the case of freight transport because it is an occasional activity and it is carried out only on the base of orders or contracts.

The tariff-hour-vehicle method supposes to distribute the expenses generated by the passenger transport on a group of similar vehicles which execute series of similar actions – in the present case – the transport route. If on the same route different vehicles are distributes taking into account specific criteria (capacity of transport, speed, degree of comfort provided to passengers etc.), then, the cost center must be type of vehicle/transport route.

Consequently, for each route or type of vehicle/transport route a different analytic will be established for the accounts:

921 “Expenses of the basic activity”;

902 “Interior deductions on the obtained production”;

903 “Interior deductions on the obtained result”;

931 “Incomes from the basic activity”.

To calculate the cost, it can be used as a cost carrier either the covered kilometer or the route, the latter actually consisting in the distance covered by the bus/tram of the complete road between the initial and final station.

In consequence, all the direct costs can be calculated on each transport route, and the monthly variable cost on cost center is established in proportion to the number of routes.

By comparing the cost with the income distributed to every transport route, the result of the route can be established in the end of the month, and the cost center becomes a profit center.

The tariff-hour-vehicle method has series of advantages among which we enumerate:

-insures the more appropriate distribution of the indirect expenses by using some distribution bases chosen following the causality principle;

-implies the allocation of the expenses with manpower and of the other indirect expenses in proportion to a more correct criterion, the covered kilometer, consequently enabling to establish more precisely the cost on the transport route and the percentage of each route of the profit mass.

Order based method. The specificity of this method and its appliance within RAT Craiova is that the cost center is considered to be the order (contract) for the freight transport towards third parties, the cost carrier being the same as in the case of passenger transport, covered kilometer or route.

4.2. Analysis of urban passenger transport at RAT Craiova on transport routes

To carry out this study, in the new concept of management accounting organization, we selected the routes of buses 2R and 9 within the profit center (section) 1, as cost centers or, in some conditions, even profit centers, as we will present in the end of the study.

Among the direct expenses of the activity A11 – buses from the profit center 1, we identified as direct expenses (variable) for the routes of 2R and 9 the following consumptions: fuels, drivers' wages plus the employer's financial contributions, amortization, materials (spare parts, tires, oil, additional materials), insurances (RCA + CASCO), leasing interests.

The direct expenses (variable) were established on routes through specific calculations, on the basis of the data taken from the primary documents (table no. 1).

Mention:

On the other bus and tram routes of RAT Craiova, the same direct expenses (variable) are identified which are calculated using the same calculation methodology.

In what the indirect expenses (fixed) are concerned, they are distributed on the routed in two stages:

-in the first stage the expenses generated by the cost centers are distributed: 5 – road safety exploitation; 14 – mechanical-energetic and 21 – ITP on the activities from the RAT Craiova profit centers which benefited from the services and works of the 3 sections, using as distribution base the indirect expenses of the beneficiary sections (debit side of account 923);

-in the second stage the indirect expenses of each of the three profit centers are distributed on the bus or tram routes belonging to the concerned center. Thus, the indirect expenses collected during the month in the debit of account 923 are added to the expenses from the distribution in the end of the month, in the first distribution stage (stage a). The distribution stage is represented by the total amount of the direct expenses of the concerned center (debit side of account 921).

For the distribution of the indirect expenses, differentiated criteria can be used which are chosen by taking into consideration, in the first place, their causal connection with the distribution expenses such as:

- direct wages;
- direct material expenses (monthly average consumption of fuels and lubricants/route and/or on bus is a very good indicator in this case);
- number of the covered kilometers etc.

Table no.1. Variable consumptions for 2R line

Indicators	Fuel	Direct salaries	Amortization	Materials	Insurance	Leasing interests
Average distance covered on a drive	20,6	20,6	20,6	20,6	20,6	20,6
Maximum number of seats:						
-Prestij:	43					
-Mann:	99					
-Mercedes:	96					
-BMC	66					
Average consumption/ covered km	0,29					
Total consumption/ drive	5,97					
Average price/ liter of fuel	3,56					
Average number of drives daily	7	7	7	7	7	7
Number of buses	<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>
-Prestij:	5	5	5	5	5	5
-Mann:	8	8	8	8	8	8
-Mercedes:	1	1	1	1	1	1
-BMC	1	1	1	1	1	1
Average number of working days	30	30	30	30	30	30
Average salary per covered km		0,45				
Number of direct employees		15				
Amortization on covered km			0,28			
Average monthly distance covered by a bus	4321	4321	4321	4321	4321	4321
Material consumptions / covered km				0,23		
Insurance consumptions/ covered km					0,1	
Leasing interests consumption/ covered km						0,0007
Variable consumptions/drive/ bus	21,25	9,27	5,77	4,74	2,06	0,015
Direct monthly consumptions	66959,89	28910	18213,76	14773,09	6706	46

Source: Data were taken from the accountability of RAT Craiova, 2008.

In the literature, it is recommended to use complex coefficients such as:
 -the number of buses multiplied with the rate of average fuel consumption (I1);

-the number of kilometers covered on a particular route multiplied with the rate of average fuel consumption (I2).

Nonetheless, this solution leads to a heavy workload, and the result of the cost accuracy is insignificant compared to the necessary effort, since, taking into account the current situation of economic uncertainty and instability, the conditions of carrying out the activity are frequently changing generating a repeated calculations.

Following the specific carried out calculations, we collected for the two selected bus routes the following monthly total expenses:

-route 2R – 167.613 lei;

-route 9 – 37.121 lei.

The analysis can be deepened by establishing the incomes of the routes 2R and 9. In order to achieve it, the aforementioned distribution methodology can be used which, in fact, was the only possible until the buses and trams have been equipped with modern systems of registering the incomes. Thus, we will have:

Capacity of transport:

-route of 2R: 1169 passengers/drive;

-route 9: 215 passenger/drive;

-total of profit center: 9425 passengers/drive.

The percentage of the route of the total of profit center 1:

-route 2R: $1169/9425 = 0,12$;

-route 9: $215/9425 = 0,03$;

Incomes A11 – buses profit center 1: 1.778.610,71 lei

Distributes incomes for:

-route 2R: $1.778.610,71 \times 0,12 = 213.433$ lei;

-route 9: $1.778.610,71 \times 0,03 = 53.358$ lei.

By comparing these incomes with the total expenses of the two routes, we observe that in August 2008, the activity of these two routes was profitable:

-route 2R: $213.413 - 167.613 = 45.800$ lei (profit);

-route 9: $53.358 - 37.121 = 16.237$ lei (profit).

Mention:

The analysis of the routes 2R and 9 can be extended to all the bus and tram routes of RAT Craiova, following the same methodology so that the management of the whole section intervene with redressing measures, if there will be any routes with an unprofitable activity.

5. CONCLUSIONS

By implementing the managerial accounting according to our proposed variant, it can be stated that RAT Craiova passes from empiricism to modernism by providing the data necessary to the management for taking some rational decisions and, what is even more essential, for expecting the consequences of such decisions.

Thus, by establishing the cost of each transport route, every cost center (route) becomes a responsibility center, and by comparing the incomes with the total expenses, each transport route also becomes a profit center. In consequence, the performances of the persons responsible of the concerned centers can be quantified due not only to the economies of expenses, but also to the result obtained at the level of the mean of transport.

In addition, on the routes of public passenger transport in which various types of buses run, the difference between them being set according to some criteria (capacity

of transport, speed, degree of comfort provided to passengers etc.), the analysis of profitability and efficiency can be detailed having in view even the level of the bus type or of a group of similar buses.

In the same context, on the basis of the data provided by the managerial accounting, we can establish the selling price of tickets on the whole route or on shorter distances and the loading degree of the bus/tram that insure a profitable transport.

Furthermore, by calculating the monthly average cost on the covered kilometer we can establish the expenses of passenger urban transport for R.A.T. Craiova and, thus, informed decisions on extending some routes or introducing new routes of passenger public transport can be taken.

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