INTEGRATED ACCOUNTING CLASSIFICATION OF EXPENSES AND INCOMES OF THE MAIN ACTIVITIES OF PASSENGER CARRIERS


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Introduction. The functioning of passenger carriers in the conditions of a smart city creates unique opportunities for optimizing financial results of operations. The application of the latest information and communication technologies in the economic activity of motor transport enterprises ensures the minimization of operating expenses. Instead,
the optimization of passenger flow management involves the operation of multifaceted information not only about expenses, but also about incomes. Such information is generated by the accounting system, which requires a primary study of the classification of expenses and incomes of passenger carriers in accounting theory.

**The purpose of the article** is to improve the classification of expenses and incomes of the main activity of motor transport enterprises in accounting for the purposes of integrated management of financial results of passenger transportation services.

**Methods.** The following methods were used in the research in accordance with the set goal: analysis, synthesis and comparison - to detail the object of study; logical generalization and scientific abstraction - to clarify the categorical and conceptual apparatus of research; systematic approach in determining the classification features in the study of expenses and incomes; historical - to clarify the scientific views on the separation of costs and revenues of transport enterprises. Bibliographic and comparative analysis became the methodological tools of the study. The empirical study was conducted using a bibliometric approach known as “analysis of common words” and the information resource “ResearchGate”.

**Results.** The existence of a classification conflict with regard to expenses in regulatory documents in the field of accounting and industry regulations on the formation of the cost of transport services for the transportation of passengers has been proven. It is proposed to expand the list of classification features in the study of expenses of the main activity of passenger carriers in order to optimize their management. An integrated scheme for the classification of expenses and income has been developed according to such classification criteria as: Economic elements, Type of transport services, Stages of passenger service, Stage of the carrier’s activity, Type and distance of transport, Capitalization, Homogeneity, Inclusion in the cost price, Change in the volume of transport, Control, Anticipation, Emergency, Recognition, Term of occurrence, Calendar period, Reporting period, Form of receipt, Management influence, Other criteria for classification of expenses and income. The use of the developed full integrated classification of expenses and incomes provides a single methodology for determining financial results from the provision of passenger transportation services, their accounting and control for the purposes of effective management of the activities of motor transport enterprises.

**Prospects.** Further research should be conducted to find out the influence of the internal and external conditions of the functioning of passenger carriers, which leads to the emergence of various expenses and income, on the methodology and organization of accounting and control of the provision of passenger transportation services.

**Keywords:** accounting, classification of expenses, classification of incomes, management of passenger carriers, motor transport enterprises.

Formula: 0; fig.: 1; tab.: 1; bibl.: 17.

**JEL Classification:** M40, M41, D24.

**Introduction.** The economic activity of passenger carriers in the conditions of a smart city undergoes even more radical changes, which positions transport as one of the most technically innovative branches of the economy. In a smart city, motor transport companies have unique opportunities for development. In addition to infrastructural advantages, passenger carriers optimize their financial performance. Economically successful
companies providing transport services are carriers that make full use of information generated in the context of a smart city. Skillful management of information resources ensures the achievement of competitive advantages of carriers under identical (uniform) conditions of operation. For the full use of information about financial and economic processes in a smart city, it is necessary to develop an effective system of accounting and control at the enterprise.

For the growth of the efficiency of managing financial results, it is necessary to improve the methodology of accounting and control of income and expenses. The use of innovative smart city technologies creates conditions for minimizing certain types of costs, as well as increasing operating income from the provision of transport services. Accordingly, the classification of income and expenses of motor transport enterprises from the standpoint of accounting needs to be clarified in order to find ways of ensuring the profitability of passenger transportation.

Analysis of research and problem statement. Most scientists identify separate transport costs and revenues in the process of their classification and determination of the financial results of enterprises. At industrial enterprises, transport costs together with procurement costs are accumulated in the cost of purchased current assets. Transportation of goods between production divisions of enterprises leads to the emergence of general production costs. Costs for the transportation of tangible assets to the final consumer from the point of view of accounting are marketable. At the same time, the costs of transporting employees, depending on the position, by vehicles owned by the enterprise, are also included in operating costs (general production, administrative, sales, and others).

Only some scientific works are devoted to the classification of costs and revenues directly in the transport sector of the economy. For example, Y.Ya.Dankiv, M.Ya. Ostapyuk identified the production costs of motor transport enterprises and explained the procedure for forming the cost of transport services [1]. O. Yu. Burdyk also explained the impact of bus passenger transportation on the allocation of specific costs and revenues, which form the financial result of carriers [2]. N.Y. Radionova identified the company’s transport costs in the context of positioning accounting as a component of management at the operational, tactical, and strategic levels [3]. The impact of international transportation on the organization and method of accounting for costs and revenues of motor transport enterprises was substantiated by S. Ya. Kovalchuk and A. O. Tsurkan [4]. V. M. Krochuk investigated the costs and revenues of transport enterprises from the standpoint of ensuring their internal and external audit [5].

On the other hand, scientists explain the importance of research and improvement of the classification of transport costs and revenues. For example, Joe Caggiano identified differences in the classification of costs from the standpoint of accounting and other economic disciplines [6]. Natalia Ovcharova, Olena Kravchenko and Yevheniia Ustyk explained the sectoral difference in the classification of transport costs and revenues using the example of the trade sector of the economy [7]. Scientist Simon Nagy explained the impact of planning processes and organization of urban entities on the classification and size of transport costs [8]. Similar studies were conducted by Kamba Adamu, Kardi Suleiman and Dikko Yunusa, who explained the need for study of the classification of costs during the formation of the final cost of the provided transport services [9]. Among
all scholars, there is no common or similar scientific position regarding the classification of both costs and revenues related to passenger transportation. Therefore, it is necessary to develop a unified classification system for accounting of costs and revenues of passenger carriers, which determined the purpose of this scientific study.

The purpose of the article lies in improving the classification of expenses and incomes of the main activity of motor transport enterprises in accounting for the purposes of integrated management of financial results of passenger transportation services.

Research results. As evidenced by scientific publications, modern motor transport enterprises in accounting and control practice are limited only to the legally established classification of costs: by elements and items of costs regulated by National regulation of accounting (NRA) 16 “Costs” [10] and Methodical recommendations on the formation of the cost of transportation (works, services) on transport [11]. In accordance with NRA 16 “Expenses”, it is proposed to account for costs as part of: material costs, labor costs, deductions for social events, depreciation, other operating costs [10]. Instead, the Methodological recommendations for the formation of the cost of transportation (works, services) in transport propose a more complete method of classifying the costs of passenger carriers for the purposes of accounting and control [11] (Table 1).

<table>
<thead>
<tr>
<th>No.</th>
<th>Classification sign</th>
<th>Type of expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>By types</td>
<td>By economic elements, by costing articles</td>
</tr>
<tr>
<td>2.</td>
<td>According to the costing method of passenger transportation services</td>
<td>Direct, indirect</td>
</tr>
<tr>
<td>3.</td>
<td>According to the degree of influence of the number of passengers on the level of costs</td>
<td>Variable, constant</td>
</tr>
<tr>
<td>4.</td>
<td>By composition</td>
<td>Single-element, complex</td>
</tr>
<tr>
<td>5.</td>
<td>By periods of occurrence</td>
<td>Current, expenses of future periods, expenses of past periods</td>
</tr>
<tr>
<td>6.</td>
<td>By expediency</td>
<td>Productive, unproductive</td>
</tr>
<tr>
<td>7.</td>
<td>By place of origin</td>
<td>Costs of main production, costs of auxiliary production, costs of service production</td>
</tr>
</tbody>
</table>

The classification of expenses by types, method of attribution to the cost of passenger transportation services, by degree of influence of the number of passengers on the level of expenses, by composition, by periods of occurrence, by expediency, by place of occurrence is sufficiently researched by scientists and tested in the activities of enterprises of various forms of ownership, size of business and branches of activity. But the classification of expenses of passenger carriers by types of economic elements and classification articles creates a conflict in the provisions of NRA 16 “Costs” [10] and Methodical recommendations on the formation of the cost of transportation (works, services) in transport [11]. As V. O. Ozeran and O. O. Paslavskaya prove, in the given distribution of motor vehicle costs, “costs by economic elements and costs by articles are unreasonably
combined into one classification feature, while they are different types of costs and should act as independent classification signs” [12, p. 120]. The separate accounting of expenses by elements and articles is also emphasized in NRA 16 “Expenses”.

Even more controversial is the division of the costs of passenger carriers by the place of origin into the costs of the main, auxiliary and service industries. Such separation of costs does not correspond to the organizational and technological prerequisites for the functioning of motor transport enterprises. Taking into account the significant sectoral differences in the production and transport sectors of the economy, the use of a single approach to the classification of costs is incorrect. Therefore, it is advisable to transform the allocation of costs of passenger carriers according to the criterion of the importance of the production process, taking into account the types, stages and phases of the provision of transport services for the transportation of passengers.

The stages of passenger service, which are characterized by variable costs, are the boarding of passengers, their transportation between public transport stops and disembarkation at the destination [13]. At the stage of boarding and disembarking of passengers, costs connected with the functioning of the transport infrastructure and fare validation systems arise. For example, such costs include maintenance of automatic kiosks and terminals for selling tickets or replenishing electronic travel documents, passenger access turnstiles, fare validators and identification of passengers in vehicles. At the stage of passenger transportation, there are specific costs associated with the movement of vehicles between public transport stops.

The stages of providing passenger transportation services are the following processes: purchase and major repair of vehicles, passenger service, operational maintenance, and ongoing repair of carriers’ rolling stock. Each of the stages has specific costs associated with the main activity of passenger carriers. However, at the first stage, there are mainly capital costs associated with the purchase of vehicles and their major repairs. Those current costs related to the processes of bringing vehicles to a condition suitable for commissioning are also capitalized in the cost of rolling stock of passenger carriers. Accordingly, the costs of passenger carriers are also divided into capitalized and non-capitalized. At other stages of the provision of transport services, expenses of a production, sales and administrative nature arise during the reporting period.

The above types of costs arise in all motor transport companies which provide passenger services, regardless of the distance of passenger transportation. According to the territorial characteristics, the expenses of passenger carriers are divided into: urban, suburban, intercity and international transportation. Depending on the duration of one trip in the transport route, the cost structure may change. For example, in urban transportation, a larger share of costs falls on cash services for passengers and salaries of conductors and controllers. On international trips, there are expenses for food and accommodation of drivers, etc. It is also possible to classify the income of motor transport enterprises according to territorial characteristics.

T.V. Davidyuk, O.V. Manoilenko, T.I. Lomachenko, A.V. Reznichenko classify income according to the following groups: income (revenue) from the main activity; net income from the sale of products (goods, works, services); other operating income; financial income; other incomes [14]. The main activities of motor transport enterprises include the
provision of the following services: transportation of passengers, transportation of goods, and transport and forwarding conveyance. And although the main activity of passenger carriers is related to the transportation of passengers, it is possible to obtain additional operating income from the implementation of related services. For example, most transport companies charge payments for transporting oversized luggage. The cost of transportation traditionally foresees transportation of a small amount of small hand luggage. But when passengers exceed the quantity and weight limits, it is necessary to purchase a special ticket (making an additional payment) for luggage transportation. Receipt from providing such services is income from cargo transportation. That is, passenger carriers can receive additional operating income from cargo transportation. However, it is difficult to recognize such activity as auxiliary from the point of view of accounting, since motor transport companies do not bear significant additional costs for the transportation of luggage. Accordingly, the transportation of luggage is an additional main activity with the reflection of possible related costs as a part of production costs, and income is a reflection of receipts from the sale of the main products (goods, works, services). A necessary condition for the separation of revenues from the provision of services for the transportation of passengers and cargo is the presence of different tickets (paper or electronic) that identify the source of receipt of funds.

Another additional activity of motor transport enterprises, which is not often carried out by passenger carriers, is the provision of transport and forwarding conveyance services. Vehicles used for transportation of passengers can also move goods between logistics points. Logistics companies can transfer documents, hand luggage, and cash through drivers of passenger vehicles. Receipts from the provision of such services is the forwarder’s payment and it is recognized as transport and forwarding income in accounting. Transport and forwarding activities are carried out mainly by intercity passenger carriers and to a much lesser extent by public city transport companies. Therefore, such activity for motor transport enterprises is a accompanying operating one with the appropriate reflection of the cost of services as part of production costs, and the receipts as operating income on the corresponding sub-accounts.

The given classification of passenger carriers’ income is incomplete for the purposes of their accounting and control. N.V. Gurina, on the basis of the study of various scientific works, offers an extended classification of the income of enterprises, which can be partially implemented in the activities of motor transport enterprises. For example, the scientist suggests separating income according to the following criteria: the form of receipt (tangible, intangible (non-monetary)); recognition (planned, actually received); periodicity (past, current, future periods); degree of materiality (material, non-material); by centers of responsibility; by the degree of controllability (controlled, uncontrolled) and other classification features that do not relate to the service sector [15]. The given classification of income is directly correlated with the allocation of certain types of expenses of passenger carriers. In other words, most of the classification features are common when dividing both revenues and expenses of enterprises providing passenger transportation services.

In particular, for the organization of reliable accounting of revenues and expenses, it is advisable to separate responsibility centers in the organizational structure of passenger carriers. It is expedient to refer to the centers of responsibility, in which costs and revenues
arise: the enterprise’s garage, repair shop, transport station for the maintenance of individual routes, workshop, gas filling (charging) station [16]. Each of the responsibility centers can be an independent business unit of the passenger carrier. Separate functioning of units of motor transport enterprises creates conditions for determining the financial results of their activities. As a result, accounting by responsibility centers assists in ensuring control over financial and economic activities and increasing the motivation of the personnel of divisions of motor transport enterprises.

However, not all expenses of passenger carriers are subject to control in responsibility centers. Quite often, unexpected costs arise, which are associated with the riskiness of the operation of enterprises providing passenger transportation services. N.V.Ovcharova, O.V.Kravchenko, E.S.Ustyk call such expenses extraordinary, which, along with ordinary ones, are the expenses of passenger carriers depending on the expectation of their manifestation by the management of the enterprise [7, p.162]. But not all expected costs are controllable, as well as unexpected costs may arise as a result of normal activities of transport companies and force majeure circumstances. Therefore, it is important for effective accounting and control to classify the costs and revenues of passenger carriers according to controllability and emergency criteria.

The occurrence of uncontrollable costs is connected with the technical condition of the rolling stock of passenger carriers, the availability of appropriate repair infrastructure, an effective management system, etc. A separate type of expenses that are not subject to control is related to the manifestation of extraordinary events and phenomena. To uncontrollable costs belong, for example, the repair of unforeseen breakdowns; payment of the labor of additionally engaged drivers due to the temporary incapacity of full-time employees; stoppage of the rolling stock due to the lack of spare parts and consumables. Instead to extraordinary belong losses of motor transport enterprises due to extraordinary circumstances such as: natural disasters, military and pandemic expectations of business, loss of business reputation of certain carriers, etc. The only method of preventing and eliminating the consequences of emergency phenomena and events and, accordingly, minimizing uncontrolled costs, is the introduction of anti-crisis management by public carriers. Similarly, the income of motor transport enterprises can be classified according to the criteria of expectation, controllability and emergency.

The main advantage of functioning of responsibility centers is the possibility of planning expenses and incomes arising from the activities of passenger carriers. Accordingly, all costs and revenues can be classified into planned (approximate based on experience or future expectations) and actual (obtained as a result of past events). On the basis of comparison of planned and actual indicators, it is possible to determine the effectiveness of the responsibility centers and the entire business entity for the provision of passenger transportation services. At the same time, the causes of deviations and the culprits are determined, which helps to optimize the management of passenger carriers.

A similar relationship between the classification of expenses and revenues is present when they are divided according to: terms of occurrence (past periods, current and future periods), calendar periods (one-time, current, long-term), reporting periods (hourly, daily, weekly, monthly, quarterly, semi-annual, annual, etc.). The time criterion of classification is universal in the study of costs and revenues of passenger carriers. A generalization of
the classification of costs and revenues in the context of their integration interaction and actuality for passenger carriers is shown in fig.

**Fig. 2. Integrated classification of expenses and incomes of passenger carriers**

**Source:** created by the authors independently.
The given integrated classification of costs and revenues is complete and maximally corresponds to the industry profile of passenger carriers. If necessary, in the conditions of the complication of social and economic processes of social formations, it is possible to improve the proposed classification scheme. It should be noted that most of the classification criteria are common when identifying certain types of costs and revenues of enterprises providing passenger transportation services. The integrated classification according to the above criteria is a universal method of researching costs and revenues in the accounting and control of the operation of passenger carriers. The use of the submitted proposals provides a single integrated methodology for determining financial results, their accounting and control for the purposes of effective management of the activities of motor transport enterprises.

Conclusions. Functioning of passenger carriers in the conditions of a smart city is based on the use not only of a developed transport infrastructure, but also on innovative management optimization methods. Ensuring effective management and obtaining positive financial indicators of the activity of motor transport enterprises involves the improvement of accounting and control of costs and revenues through clarification of their classification.

For comprehensive consideration of the impact of motor vehicle activity in the transportation of passengers on the integrated classification of costs and revenues, it is advisable to use such classification criteria as: Economic elements, Type of transport services, Stages of passenger service, Stage of the carrier’s activity, Type and distance of transportation, Capitalization, Homogeneity, Inclusion in the cost price, Change in transportation volumes, Control, Anticipation, Emergency, Recognition, Term of occurrence, Calendar period, Reporting period, Receipt form, Management influence, Other criteria for classification of expenses and revenue.

Most of the above classification criteria are common when identifying certain types of costs and revenues of enterprises providing passenger transportation services in the context of a smart city. The use of the submitted proposals provides a single integrated methodology for determining financial results, their accounting and control for the purposes of effective management of the activities of motor vehicle enterprises, regardless of the form of ownership, business size, number of employees, passenger traffic, etc.

However, further research is needed on the influence of the internal and external conditions of functioning of passenger carriers, which leads to the emergence of various costs and revenues, on the methodology and organization of accounting and control of the provision of passenger transportation services.

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ІНТЕГРОВАНА ОБЛІКОВА КЛАСИФІКАЦІЯ ВИТРАТ І ДОХОДІВ ОСНОВНОЇ ДІЯЛЬНОСТІ ПАСАЖИРСЬКИХ ПЕРЕВІЗНИКІВ

Вступ. Функціонування пасажирських перевізників в умовах смарт-міста формує унікальні можливості з оптимизації фінансових результатів діяльності. Застосування новітніх інформаційно-комунікаційних технологій у господарській діяльності автомобільних перевізників забезпечує мінімізацію операційних витрат. Натомість оптимізація управління пасажиропотоками передбачає оперування різносторонньою інформацією не тільки про витрати, а й про
доходи. Таку інформацію генерує система бухгалтерського обліку, що потребує першочергового дослідження класифікації витрат і доходів пасажирських перевізників з позиції облікової методики.

Мета статті полягає в удосконаленні класифікації витрат і доходів основної діяльності автотранспортних підприємств у бухгалтерському обліку для цілей інтегрованого управління фінансовими результатами діяльності з надання послуг пасажирських перевезень.

Методи. У науковому дослідженні відповідно до поставленої мети використано такі методи: аналіз, синтез та порівняння – для деталізації об’єкта дослідження; логічне узагальнення та наукова абстракція – для уточнення категорійно-понятійного апарату дослідження; системний підхід для визначення класифікаційних ознак у дослідженні витрат і доходів; історичний – для з’ясування наукових позицій щодо виокремлення витрат і доходів транспортних підприємств. Методичним інструментарієм проведеного дослідження стали методи бібліографічного та компаративного аналізу. Емпіричне дослідження проведено з використанням бібліометричного підходу, відомого як «аналіз спільних слів», та застосуванням інформаційного ресурсу «ResearchGate».

Результати. Доведена наявність класифікаційної колізії щодо витрат в нормативних документах у сфері бухгалтерського обліку та галузевих регламентах з формування собівартості транспортних послуг з перевезення пасажирів. Запропоновано розширити перелік класифікаційних ознак для дослідження витрат основної діяльності пасажирських перевізників для оптимізації управління ними. Розроблено інтелектуальну схему класифікації витрат і доходів за такими класифікаційними критеріями, як: Економічні елементи, Вид транспортних послуг, Етапи обслуговування пасажирів, Стадія діяльності перевізника, Вид та відстань перевезень, Капіталізація, Однорідність, Включення до собівартості, Зміна обсягів перевезень, Контроль, Оцінка, Визнання, Визнання, Термін виникнення, Календарний період, Звітний період, Форма отримання, Вплив управління, Інші критерії класифікації витрат і доходів. Використання розробленої повної інтелектуальної класифікації витрат і доходів забезпечує єдину методику визначення фінансових результатів з надання послуг пасажирських перевезень, їхнього обліку та контролю для цілей ефективного управління діяльністю автотранспортних підприємств.

Перспективи. Подальші дослідження необхідно проводити щодо з’ясування впливу внутрішніх та зовнішніх умов функціонування пасажирських перевізників, що призводить до виникнення різних витрат і доходів, на методику та організацію бухгалтерського обліку й контролю надання послуг з перевезення пасажирів.

Ключові слова: облік, класифікація витрат, класифікація доходів, управління пасажирськими перевізниками, автотранспортні підприємства.

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