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Методи оцінки ефективності вантажних перевізників

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Анотація. *Мета дослідження.* Мета статті полягає в удосконаленні методичних положень щодо розробки рейтингової оцінки ефективності діяльності перевізників вантажів на системи збалансованих показників (СЗП), що сприятиме підвищенню ефективності діяльності суб'єктів господарювання, які здійснюють діяльність по перевезенню вантажів. *Методологія.* При визначенні вагомості складових інтегрального показника рейтингової оцінки підприємств; метод інтегральної оцінки при визначенні рейтингу ефективності діяльності перевізників.

Результати. Особливостями методичного підходу щодо рейтингової оцінки ефективності діяльності автотранспортних підприємств є його комплексність, яку забезпечує визначення інтегрального показника на основі поєднання системи збалансованих показників (СЗП), адаптованої до сфери автоперевезень вантажів, експертної оцінки фахівців та оцінки споживачів (клієнтів підприємств), адже саме споживачі є замовниками послуг перевезення вантажів і здійснюють вибір транспортної компанії. Показники (критерії та індикатори), що включені до складу елементів інтегральної оцінки, пов'язані з системою стратегічних цілей. Результати досягнення поставлених цілей вимірюються за допомогою критеріїв ефективності (КЕ) – це ознаки, на основі яких формується оцінка ефективності діяльності.

Практичне значення дослідження полягає в тому, що рейтингове оцінювання слід використовувати при проведенні ліцензування автоперевізників, що забезпечить реальну оцінку можливостей перевізника щодо виконання своїх зобов'язань; впровадженні допуску до ринку автомобільних перевезень згідно

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вимог ЄС, що передбачає необхідність відповідності перевізника певним вимогам щодо доброї ділової репутації, задовільного фінансового стану, наявності транспортних засобів, необхідної професійної компетентності персоналу; встановленні контролю за періодами роботи і відпочинку водіїв тощо.

Ключові слова: ефективність діяльності автотранспортних підприємств, рейтингова оцінка, система збалансованих показників

Methods of rating assessment of efficiency of cargo carriers

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Abstract. The aim of the study. The purpose of the article is to improve the methodological provisions for the development of a rating assessment of the efficiency of carriers of goods on the Balanced Scorecard (BMS), which will increase the efficiency of economic entities engaged in the transportation of goods. Methodology. In determining the weight of the components of the integrated indicator of the rating of enterprises; method of integrated assessment in determining the efficiency rating of carriers.

Results. Peculiarities of the methodical approach to rating the efficiency of motor transport enterprises are its complexity, which provides the definition of an integrated indicator based on a combination of balanced scores (SWP), adapted to the field of road transport, expert assessment and consumer assessment (customers), because consumers are customers of freight transportation services and choose a transport company. Indicators (criteria and indicators) included in the elements of integrated assessment are related to the system of strategic goals. The results of achieving the set goals are measured using performance criteria (EE) - these are the features on the basis of which the assessment of performance is formed.

The practical significance of the study is that the rating should be used in the licensing of road carriers, which will provide a realistic assessment of the carrier's ability to meet its obligations; introduction of admission to the road transport market in accordance with EU requirements, which provides for the need for the carrier to meet certain requirements for good business reputation, satisfactory financial condition, availability of vehicles, the necessary professional competence of staff; establishing control over the periods of work and rest of drivers, etc.

Keywords: efficiency of motor transport enterprises, rating assessment, system of balanced indicators

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1. Вступ.

The successful development and operation of enterprises requires the development of effective business management tools (integrated management system) aimed at improving the efficiency of economic entities engaged in the transportation of goods. A specific feature of freight road transport is the need for its interaction with other participants in the supply chain: suppliers, freight forwarders, other modes of transport, warehousing operators, customs brokers, because road transport is one of the elements of the supply chain, which depends on the reliability of the logistics chain. in general. On the other hand, the state of infrastructure and coordination of all participants in the chain affect the efficiency of road transport. At present, the impact of a complex set of factors inherent in the relevant field should be taken into account when assessing the efficiency of road hauliers.

Formulation of the problem.

Therefore, the methodological approaches to the rating of the efficiency of motor transport enterprises need to be improved. A comprehensive approach to rating performance of freight carriers is needed, which can ensure the use of efficiency management techniques based on a system of balanced scores (Balanced Scorecard), proposed by R. Kaplan D. Norton.

2. Analysis of recent research and publications.

The question of assessing the effectiveness of motor transport enterprises, determining the competitiveness of their services has been studied by such scientists as. S. Abalonin (Abalonin, 2004), N. Belozertseva, M. Yaraykina (Belozertseva, Yaraikina, 2011)), N. Green, G. Podvalna (Hryniv, Podvalna, 2015), O. Kalinichenko, S. Zhornik (Kalinichenko, Zhornik, 2012), L. Karbovska, G. Bratus, O. Lozhachevska, K. Zheleznyak, T. Navrotska (Karbovska, Bratus, Lozhachevska, Zheleznsak, Navrotska. 2019), S.Kulytskyi (Kulytskyi, 2017), N. Penshin (Penshin, 2008).

3. Research methods.

The article uses a systematic analysis, the method of expert assessments - in determining the importance of the components of the integrated indicator of the rating of enterprises; method of integrated assessment in determining the efficiency rating of carriers.

4. Formulation of research objectives.

The aim is to improve the methodological provisions for the development of a rating assessment of the efficiency of carriers of goods on the systems of balanced scores (SPS).

5. Presentation of the main results and their substantiation.

The term "rating" means the construction of some objects in a certain order in accordance with established rules and criteria. Rating is characterized by the value of a specific indicator, which synthesizes certain aspects of the object of study, obtained on the basis of mathematical processing of the system of individual indicators. The procedure for rating assessment, which includes 12 steps (stages), is presented in Fig.1.

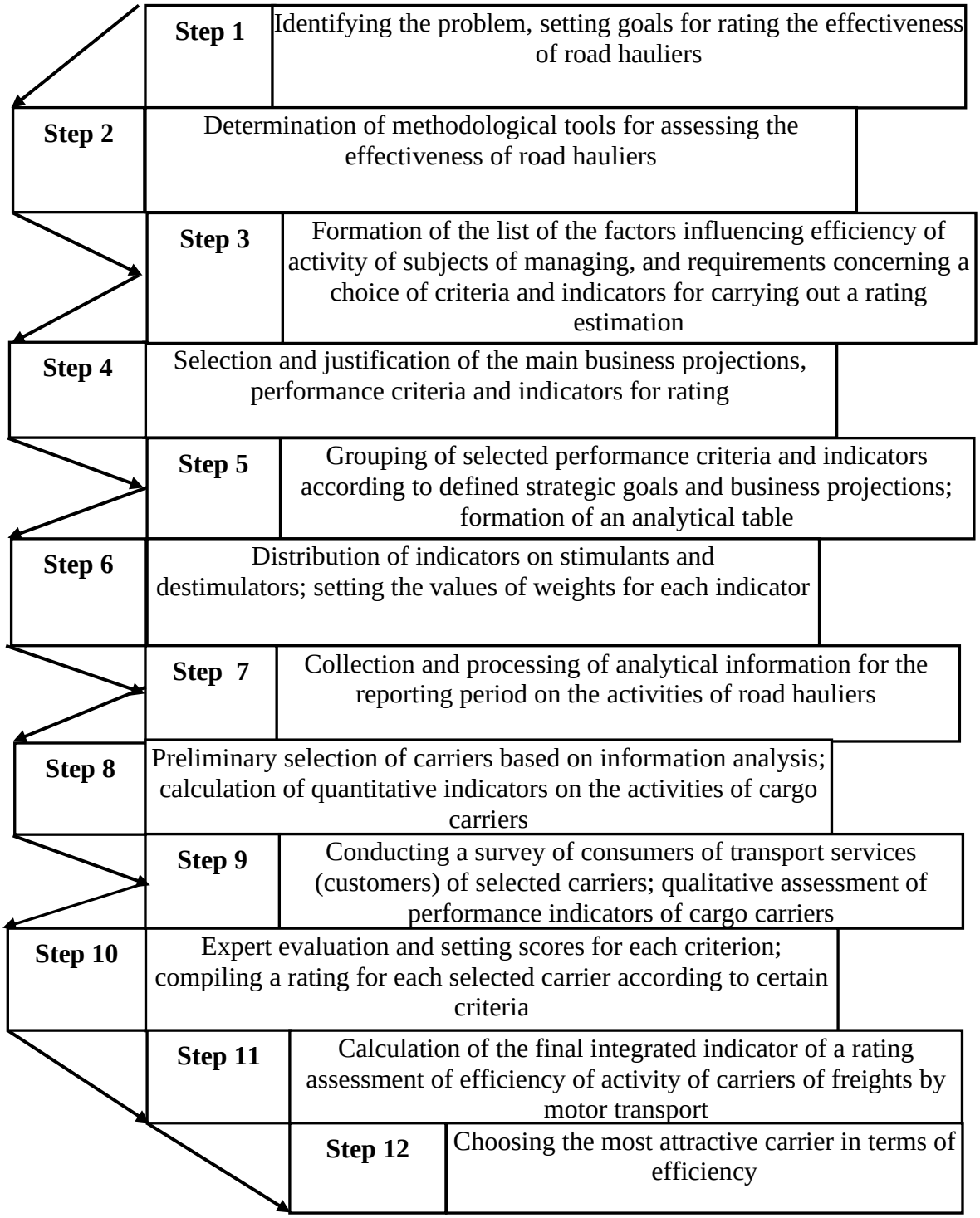

Fig. 1. Procedure for rating the efficiency of road hauliers
Source: developed by the author

1. Identifying the problem, setting goals for rating the efficiency of road hauliers.

The market of road haulage services is highly competitive - the proposal is formed by about 52 thousand units of officially registered businesses, most of which are small businesses , which carry out up to 90% of traffic. Thus, in the field of trucking there are

mainly small and micro businesses. The dynamic development of road haulage in Ukraine is hampered by a number of problems, including the following: low quality of transport infrastructure; corruption in the road construction sector as a result of inefficient management of the sphere of activity; the most acute problem related to the quality of roads is road safety; pollution of the environment by vehicles with emissions of harmful gases and traffic noise; technological lag of transport infrastructure; low level of introduction of modern technologies on motor transport; lack of weight control on; non-compliance with the principles of fair competition in the freight market; non-compliance with European market access requirements, etc.

The purpose of the rating assessment is: to form a system of indicators to determine the efficiency and competitiveness of economic entities engaged in the carriage of goods by road; balancing supply and demand for road transport services; meeting the needs of the population in quality and affordable services; creation of conditions for demonopolization of the market of motor transport services and formation of open competition; increasing the transparency of road hauliers, anti-corruption [5].

The main principles of rating assessment are: complexity - presents all the main aspects of the carrier's activities in terms of assessment (finance, customers, technology, security, staff); balance - all prospects must be presented in the assessment of a sufficient number of indicators; objectivity - the predominant use of indicators of financial and statistical reporting and expert comparative evaluation of indicators.

2. Defining methodological tools for assessing the efficiency of road haulage carriers

The method of rating assessment is to determine the integrated indicator based on a combination of SZP, expert assessment and assessment of consumers of transport services (customers of enterprises) by questionnaires. {1}

3. Formation of a list of factors influencing the efficiency of economic entities and requirements for the selection of criteria and indicators for rating assessment.

List of environmental factors influencing the demand and supply of transport services and, consequently, the efficiency of activity carriers of goods by road, are presented in table 1.

Selection and justification of the main business projections, performance criteria and indicators for rating.

The results of achieving the set goals are measured using performance criteria. The criterion of efficiency (KE) is a sign on the basis of which the estimation of efficiency of activity of carriers of cargoes by motor transport is formed. When forming a system of efficiency criteria and indicators it is necessary to take into account their independence (lack of functional or close correlation), completeness (taking into account all qualitative aspects of the subject), informativeness (variability of criterion values in time and space), measurability (determining types of measurement scales) and stability (consistency of the system of criteria for comparison of assessments). Grouping of selected criteria and indicators according to the defined strategic goals and business projections; formation of an analytical table.

6. Distribution of indicators on

stimulants and destimulators; setting the values of weights for each indicator.

Table 1. Factors of internal and external environment influencing efficiency of activity of carriers of cargoes by motor transport

<table>
<tr><th colspan="4">Factors of the internal environment</th><th colspan="2">Environmental factors</th></tr>
<tr><td colspan="2">Offer</td><td colspan="2">Demand</td><td>Offer</td><td>Demand</td></tr>
<tr><td rowspan="2">Competitive potential</td><td rowspan="2">Availability of resources and their rational use</td><td colspan="2">Transportation needs</td><td>Investment in the industry</td><td>The state of economic development</td></tr>
<tr><td colspan="2">Expected benefits</td><td>Dynamics of prices for fuels and lubricants</td><td>Consumer income level</td></tr>
<tr><td rowspan="6"></td><td>Compliance of logistics of demand for services</td><td rowspan="3">Competitiveness of the enterprise</td><td>Business risk</td><td>State and interstate regulation of road haulage</td><td>Dynamics of transportation tariffs and their flexibility</td></tr>
<tr><td>Stable financial condition of the enterprise</td><td>Complexity of services</td><td colspan="2">Quality and condition of transport infrastructure</td></tr>
<tr><td>Production and sales costs</td><td>Level of service</td><td colspan="2">Road safety</td></tr>
<tr><td>Demand for services</td><td rowspan="3">Competitiveness of services</td><td>Offer price</td><td>Emergency</td><td rowspan="3">The impact of transport on the environment</td></tr>
<tr><td>Human resources</td><td>Quality of services</td><td rowspan="2">New technologies and software</td></tr>
<tr><td>Innovative approach in management</td><td>Accessibility
Uniqueness</td></tr>
</table>

Source: developed by the author

Due to the fact that the indicators have a different direction of action, they are divided into stimulators: K1-K14, K16-K21 (positive direction) and destimulators: K15, K22 - K26 (negative direction)).Currently, the selected indicators are unequal in terms of their significance, so to objectify the assessment of the efficiency of car companies, experts have determined the weights; their ranking was carried out by the method of pairwise comparisons (each expert chose from the two indicators the most important according to his own preferences and put points (1 or 0). information for the reporting period on the activities of road hauliers. The calculation of key indicators was carried out on the basis of data from the State Statistics Service of Ukraine and statistical and financial reporting of enterprises.

SZP provides for the determination of quantitative and qualitative indicators, therefore, quantitative indicators were calculated: K1-K8, K14-K16, K18-K21 activities of motor transport enterprises on the basis of statistical and financial reporting. K22 – K26 are determined by the results of a survey (questionnaire) of customers (consumers of tran sports services).

9. Conducting a survey of consumers of transport services (customers) of selected carriers. The survey was conducted on customer orientation, marketing development, technical equipment of rolling stock with modern means of communication, security and business reputation of carriers PJSC "KVN Rapid", PJSC TEK

"Zahidukrtrans" and LLC "M Trans Co", PJSC "Ukrtrans-Vinnytsia" and PJSC "Melavtotrans".

10.Expert evaluation and setting scores for each indicator; compiling a rating of carriers. The group of experts set a score for each of the surveyed enterprises on each of the indicators on a scale from 0 to 5 (highest score).

11. Calculation of the final integrated indicator of the rating assessment of the efficiency of cargo carriers by road.

12. Selection of the most attractive in terms of efficiency of the carrier (Table 2).

Table 2. Rating assessment of the efficiency of motor transport enterprises on the basis of a system of balanced scores

Criteria (indicators) of efficiency	Indicators	PJSC KVN Rapid	PJSC TEK "West-Ukrtrans"	LLC "M Trans Co."	PJSC "Ukrtrans-Vinnytsia"	PJSC "Melavto-trans"
Finances						
Profitability	Gross income ratio (K1)	12,6	21	0	0	0
	Net profit ratio (K2)	16,8	12,6	21	16,8	8,4
	Return on assets (K3)	3,6	18	7,2	0	0
Financial stability	Coverage ratio (K4)	9	15	12	3	3
	Rapid liquidity ratio (K5)	12	15	6	3	3
	Absolute liquidity ratio (K6)	15	12	6	3	3
	Financial stability ratio (K7)	9	15	12	0	0
Rating		11,14	15,51	9,17	3,69	2,49
Market (market position, consumers, marketing)						
Market position	Market share,% (K8)	12,6	21	8,4	4,2	8,4
Consumer relations	Customer-oriented approach (K 9)	27,5	27,5	16,5	16,5	16,5
Marketing	Quality of services (speed of delivery, timeliness)	27,5	27,5	22	16,5	11
	Complexity of services (additional services) (K11)	24	24	24	14,4	14,4
	Flexibility of pricing policy (level of prices / tariffs for transportation) (K12)	24,4	30,5	24,4	6,1	6,1
	Service level (K13)	21	21	16,8	12,6	12,6
Rating		22,83	25,25	18,68	11,72	11,50
Management (internal business processes)						
Production efficiency	Profitability of production (K14)	12,6	21	0	0	0
	Coefficient of cost of goods sold (K15)	6	9	0	3	15
	Vehicle renewal rate (K16)	18	14,4	10,8	0	0
Technology	Technical equipment with modern means of communication (K17)	21	16,8	8,4	4,2	12,6
Rating		14,4	15,3	4,8	1,8	6,9
Personnel						
Effective personnel management	Staffing (average annual number of employees) (K18)	12	15	3	3	9
	Level of qualified specialists in the	9	9	7,2	7,2	3,6

	total number of employees,% (K19)					
	Average level of wages, thousand UAH (K20)	9	7,2	5,4	5,4	3,6
	Advanced training (number of employees trained) (K21)	12	9,6	2,4	2,4	0
Rating		10,5	10,2	4,5	4,5	4,05
Safety and impeccable business reputation of the carrier						
Observance of safety of automobile transportations	Number of traffic violations (K22)	-6	-6	-6	-9	-6
	The total number of accidents due to the fault of the enterprise (K23)	-3,6	-3,6	0	-3,6	0
	Number of violations of requirements for transportation of dangerous goods (K24)	0	-4,8	0	0	0
Business reputation of the carrier	Number of violations of the mode of work and rest of drivers (K25)	0	-4,2	0	0	0
	Number of violations of the maximum weight and dimensions of vehicles (K26)	-16,5	-11	-16,5	-16,5	-22
Rating		-0,85	-1,43	-0,95	-2,75	-2,57
Overall rating		58,02	64,83	36,2	22,37	22,37

Source: developed by the author

The rating assessment of the efficiency of motor transport enterprises allowed to determine that the highest rating by the sum of scores has PJSC TEK "Zahidukrtrans" - 64.83 points, PJSC "KVN" Rapid "- 58.02 points, which are the best carriers; in LLC "M Trans Co" - 36.20 points, PJSC "Melavtotrans" - 22.37 points and PJSC "Ukrtrans-Vinnytsia" - 18.96 points (see Table 2).

6. Conclusions.

To improve the efficiency of car management companies need a formalized system that tracks key performance indicators and allows on the basis of this information to influence the activities of freight carriers. One of the most advanced such systems is the management of results based on key performance indicators. A single set of facts and information generated by such a system makes the process of results management objective and objective, significantly improving the quality of business management in general. Success in the management of the strategy of a business entity engaged in the transportation of goods by road can be achieved taking into account the formed key performance indicators of the company and aimed at developing "customer focus", which will have such effects as: balancing supply and demand for transportation services by road; meeting the needs of the population in quality and affordable services; creation of conditions for demonopolization of the market of motor transport services and formation of open competition; increasing the transparency of road hauliers, the fight against corruption; compliance with the principles of fair competition in the freight market and in the field of road construction and reconstruction; introduction of modern innovative technologies; ensuring effective control of road safety; introduction of energy saving and ecological technologies.

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