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ОБҐРУНТУВАННЯ ПОКАЗНИКІВ ДЛЯ ОЦІНКИ РІВНЯ КОНКУРЕНТОСПРОМОЖНОСТІ ЗАЛІЗНИЦЬ НА РИНКУ ВАНТАЖНИХ ПЕРЕВЕЗЕНЬ

Активізація конкуренції на ринку транспортних послуг змушує залізниці формувати та реалізовувати конкурентні переваги, що обумовлює необхідність оцінювання конкурентоспроможності залізниць на ринку вантажних перевезень. На основі аналізу публікацій вітчизняних та зарубіжних вчених щодо оцінювання конкурентоспроможності суб'єктів господарювання автором статті було запропоновано модифікований графічний метод оцінки конкурентоспроможності підприємств. Відповідно до цього методу оцінку зміни конкурентоспроможності залізниць на ринку вантажних перевезень слід здійснювати на основі порівняння значень інтегрального показника за ряд періодів часу. Однак дотепер досліджень показників, які слід використати для визначення інтегрального показника конкурентоспроможності залізниць на ринку вантажних перевезень, не проводилось, що обумовило мету даної статті. Проведені дослідження дозволили дійти висновку, що в систему показників для оцінювання рівня конкурентоспроможності залізниць на ринку вантажних перевезень слід включати такі, які відображають положення залізниць відносно їхніх конкурентів, фінансові результати діяльності залізниць по вантажних перевезеннях, ефективність використання наявних економічних ресурсів. Доведено, що для визначення інтегрального показника конкурентоспроможності залізниць на ринку вантажних перевезень необхідно використати обсяги вантажних перевезень залізницями країни, питому вагу національних залізниць у вантажних перевезеннях, прибуток залізниць від вантажних перевезень, рентабельність вантажних залізничних перевезень, середньодобову продуктивність вантажного вагона, придатність основних засобів залізничного транспорту, які використовуються у вантажних перевезеннях, коефіцієнт самофінансування інвестицій на залізничному транспорті по вантажних перевезеннях, коефіцієнт ефективності залізничного транспорту по вантажних перевезеннях.

Ключові слова: залізниці, вантажні перевезення, конкуренція, конкурентоспроможність, інтегральний показник конкурентоспроможності.

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ОБОСНОВАНИЕ ПОКАЗАТЕЛЕЙ ДЛЯ ОЦЕНКИ УРОВНЯ КОНКУРЕНТОСПОСОБНОСТИ ЖЕЛЕЗНЫХ ДОРОГ НА РЫНКЕ ГРУЗОВЫХ ПЕРЕВОЗОК

Активизация конкуренции на рынке транспортных услуг вынуждает железные дороги формировать и реализовывать конкурентные преимущества, что обусловливает необходимость оценивания конкурентоспособности железных дорог на рынке грузовых перевозок. На основе анализа публикаций отечественных и зарубежных ученых про оценивание конкурентоспособности субъектов хозяйствования автором статьи был предложен модифицированный графический метод оценки конкурентоспособности предприятий. В соответствии с этим методом оценку изменения конкурентоспособности железных дорог на рынке грузовых перевозок следует производить на основе сравнения значений интегрального показателя за ряд периодов времени. Однако до настоящего времени исследование показателей, которые следует использовать для определения интегрального показателя конкурентоспособности железных дорог на рынке грузовых перевозок, не проводилось, что обусловило цель данной статьи. Проведенные исследования позволили сделать вывод о том, что в систему показателей для оценивания уровня конкурентоспособности железных дорог на рынке грузовых перевозок следует включить такие, которые отображают положение железных дорог относительно их конкурентов, финансовые результаты деятельности железных дорог по грузовым перевозкам, эффективность использования имеющихся экономических ресурсов. Доказано, что для определения интегрального показателя конкурентоспособности железных дорог на рынке грузовых перевозок необходимо использовать объемы грузовых перевозок железными дорогами страны, удельный вес национальных железных дорог в грузовых перевозках, прибыль железных дорог от грузовых перевозок, рентабельность грузовых железнодорожных перевозок, среднесуточную производительность грузового вагона, пригодность основных средств железнодорожного транспорта, используемых в грузовых перевозках, коэффициент самофинансирования инвестиций на железнодорожном транспорте по грузовым перевозкам, коэффициент эффективности железнодорожного транспорта по грузовым перевозкам.

Ключевые слова: железные дороги, грузовые перевозки, конкуренция, конкурентоспособность, интегральный показатель конкурентоспособности.

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GROUNDINGS OF INDEXES FOR THE ESTIMATION OF COMPETITIVENESS LEVEL OF RAILWAYS AT CARGO CARRIAGE MARKET

Activation of competition at the transport service market forces railways for generation and implementation of competitive advantages that conditions necessity to estimate the competitiveness railway at the cargo carriage market. Basing at the analysis of the publication of Ukrainian and foreign scientists concerning the estimation of competitiveness of the economic operators the author of the article proposed modified graphic method of estimation of competitiveness of entities. According to this method estimation of competitiveness at the cargo carriage market should be conducted basing at the comparison of integral indicator values for range of periods of time. However till now there have been no researches of indexes that should be used for the determination of the integral index of competitiveness of railways at the cargo carriage market and this conditioned the aim of this article. The researches conducted allowed to come to the conclusion that indexes system for estimation of the level of railway competitiveness at the cargo carriage market needs to include indexes that will reflect position of railways against their competitors, financial results of railways activity on cargo carriage, efficiency of use of available economic resources. It was proved that for the determination of the integral index of competitiveness of railways at the cargo carriage market it is necessary to use relative share of national railways in the cargo carriage, profit of railways from cargo carriage, profitability of railway cargo carriage, average daily production of cargo wagon, workability of the main means of railway transport that is used in cargo carriage, self-financing ration of investments at the railway transport on the cargo carriage, efficiency ratio of railway transport on cargo carriage.

Keywords: railway, cargo carriage, competition, competitiveness, integral competitiveness index.

Statement of the problem. During the further implementation of State Special Purpose Program of reforming of the railway transport for 2010-2019 further gradual demonopolization of potentially competitive sectors of transport services market will take place which promotes establishing of new carriage operators of different forms of ownership and leads to strengthening of competition at cargo carriage market. In these conditions national railways should generate and maintain sustainable competition advantages in long-term prospect that will provide high level of competition at the cargo carriage market. This conditions the need to estimate competitiveness of railways at the cargo carriage market in order to reveal and mobilize hidden potential possibilities to get beneficial competitive positions at the transport market.

Analysis of recent researches and publications. It is worth to note that a lot of foreign and Ukrainian scientists, including M. Porter, R.A. Fathudinov, I.G. Ansoff, G.L. Azoev, G. Pasternak-Taranushenko, S.F. Pokropivniy, S.V. Mocherniy, M.P. Voinarenko, I.M. Petrovych, G.I. Rizaev, A.F. Kit, V.V. Lukiyanov, T.F. Kosyanchuk and others [1-7] worked on the estimation of competitiveness of the economic operators. Author of the article basing at the results of other researches proposed modified graphical method of

entities competitiveness estimation that is based at the rational selection of the amount of factors influencing the competitiveness, determination of indexes that reflect the influence of factors, scaling of the indexes under analysis, taking into account both power of influence of each factor at the competitiveness and increased results of common activity of the factors, of the calculation of integral index of competitiveness [8-9]

This method may be used for the estimation of competitiveness of any entity including railway. According to this method estimation of railways competitiveness change at the cargo carriage market should be conducted basing at the comparison of the indications of the integral index for the analyzed and basic periods, or for the current and previous periods, or for the range of time periods. Till now there have been no researches of the indexes that should be used for the determination of the integral index of railways competitiveness at the cargo carriage market. That is why research of the most influential factors and selection of relevant indexes is necessary for the application of modified graphic method for the estimation of competitiveness of railways in cargo carriage

The aim of the article is grounding of the indexes for the estimation of competitiveness of the railways at the cargo carriage market basing at the modified graphic method.

Statement of the basic material of research. Use of the modified graphic method of estimation of the estimation of competitiveness of railways at the cargo carriage market conditions the need to determine the most informative indexes that in total provide the impartial view on the status of railways during certain period of time. Taking into account that from the one part competitiveness of the economic operator can be observed only in comparison with its competitors at certain market, and from another the competitiveness of railways in the cargo carriage market we should include those that reflect:

- status of railways against their competitors (railways of neighbor countries, carriage operators, owners of cargo wagons, entities of other types of transport, etc.);
- financial results of activity of railways at the cargo carriage;
- efficiency of use of available economic resources.

In general the evaluation of the competition status of the economic operator at the relevant market should be conducted with the aim to reveal the unused potential and development and implementation of measures concerning the increase of competitiveness against competitors. But special features of operation of the railways in the modern conditions of economy, specific character of provision of cargo carriage with railway transport condition the interdependence between the competitiveness of Ukrainian railways and competitiveness of railways of neighbor countries, operators of carriage, owners of cargo wagons, cargo owners, etc.

This interdependence is one of the main factors of use of partnership and competition approach to the cooperation of railways with the economic operators mentioned above according to which cargo carriage market participants are, from one part, competitors, and from other part partners. Taking into account this and the fact that the essence of competitiveness of railways at cargo carriage market lies in the ability to provide in the long period of time stable financial results basing at the rational use of own economic resources, efficient cooperation with cargo owners, owners of cargo wagons, international railways concerning the use of international wagons, generation of competitive advantages against the road transport entities and against the railways of neighbor counties concerning the transit cargo flows, system of indexes for the estimation of competitiveness of the railways at cargo carriage market should comprise of quantity and quality indexes.

Quantity indexes, selected for the estimation of competitiveness of national railways at the cargo carriage market should comprise of volume and value indexes as they should reflect both volumes of railways activity and final financial results. Also the volumes of activity should give possibility to estimate both the status of railways in the context of

satisfaction of the effective demand of cargo owners and positions of railways against competitors. That is why volume indexes must include volume of cargo carriage by the railways of the country and share of national railways in the cargo carriage.

This can be explained that today cargo carriage with railway transport is conducted both in the wagons of inventory fleet of the railway and in own wagons. Volumes of carriage of cargo with railway transport depend on the efficiency of cooperation between railways with foreign railways and generation of implementation of competitive advantages against the road transport entities.

However for the estimation of competitiveness of railways at cargo carriage market volumes of cargo carriage with railway transport only is insufficient, as this index does not allow estimation of market share of railways at the market researched. Only the dynamics of the cargo carriage and share of railways at the market of cargo carriage allow analyzing how the position of railway is changing against the competitors. This conditions the need to include share of railways in the total volume of cargo carriage into the indexes for estimation of competitiveness of railways

Share of national railways in the cargo carriage shows what segment of the cargo carriage market is served by the railways, to what extent the railways influence the generation of the researched market condition if there is a potential possibility to drive out the market of cargo carriage.

Value indexes must reflect the financial results of activity on the cargo carriage that is why for the estimation of competitiveness of railways we need to use such indexes as profit and profitability of cargo carriage.

The source of the profit is efficient use of the resources and innovations in the process of dynamic development. At modern stage of operation railways profit plays key role as it is a reliable source to provide the transition from the narrowed to expanded reproduction of means of production.

Use of such index as profitability of carriage can be explained with the interdependence between the competitiveness and efficiency, proved by the author of the article in [8]. In the competition environment source of increase of the profitability is decrease of the prime cost of products (works, services). Today when each year manufacturers raise prices for industrial products, decrease of prime cost of railway cargo is possible only on the account of increase of the volumes of carriage that lead to significant decrease of the current expenses, etc. Thus dynamics of the profitability of cargo railway transport (the profitability is determined as proportion of profit to the operational expenses) is the informational economic index concerning the competitiveness of railways at cargo carriage railway market.

Dynamics of the qualitative index included into the system of indexes for the estimation of competitiveness of railways at cargo carriage market should reflect the ability of railways to generate and implement competitive advantages. Availability of the competitive advantages at cargo carriage market and their successful implementation will promote the cargo flow of railways and it will at least enable not to decrease the cargo flow in the conditions when the total volume of cargo carriage with all modes of transport is decreasing

This proves the need to use such index as average daily productivity of cargo wagon. The improvement of cargo wagon operation technology that will decrease empty runs will lead to the decrease of average daily productivity of the cargo wagon that is calculated according to the formula:

$$\Pi_{s} = P_{\partial}^{san} \cdot S_{sae} \cdot (1 - \alpha_{nop}^{sae}), \qquad (1)$$

where $P_{\partial}^{\text{ван}}$ is average impact forces of working fleet wagon (determined as the proportion of the cargo flow to the total run of cargo wagons for the certain period of time);

$S_{\text{ваг}}$ – average daily run of cargo wagon (determined as the proportion of the total run of cargo wagons for day to the amount of working fleet of wagons);

$\alpha_{\text{пор}}^{\text{заг}}$ – coefficient of empty runs of cargo wagons (determined as proportion of empty wagon runs to the total runs of wagons for certain period of time).

The need to provide transfer from the narrowed to expanded reproduction of main means of railway transport needs such index as suitability of main assets or the estimation of railways competitiveness at the cargo carriage market. This is explained with critical run-out of the main means of national railways and the need to develop material and technical base in innovation and investment approach.

In order to provide the transfer from the narrowed to the expanded reproduction of main means as important condition for the increase of competitiveness of national railways it is important to generate own investment resources that include profit and amortization. This conditions the need to use coefficient of self-financing of the investments for the estimation of competitive status of railways and this coefficient is determined as proportion of own investment resources of railways to the full investment needs.

Interdependence between the competitiveness of the railways at the cargo carriage market and efficiency of their operation also demands to use the efficiency coefficient that should be estimated as proportion of revenues to the operational expenses of railways in cargo carriage.

Conclusions and propositions. Application of grounded indexes using the modified graphic method for estimation of competitiveness will allow to estimate the level of competitiveness of railways at cargo carriage market in more objective way taking into account that railway cargo carriage is conducted both in railway fleet wagons and in own wagons. Dynamics of changes of competitivenesslevel should be used in the generation of competitive advantages of railways at transport service market.

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