

1 METHODOLOGICAL PRINCIPLES OF FORMATION OF TARIFFS FOR 2 RAILWAY

3 **Abstract.** The **purpose** of the paper is research scientific and methodological approaches
4 that affect the efficiency of government regulation of tariff for railway transportation industry
5 in both sectors. **Methodology.** The article studies scientific and methodological approaches
6 to government regulation of tariffs for passenger and freight rail transportation. It is shown
7 that the railway, using its dominant position in the market, strive to realize their own
8 interests, by establishing a high tariff levels for their services that requires the intervention of
9 the government in the process of tariff. Analyzed the impact of various tools of government
10 regulation of tariffs in natural monopoly and potentially competitive sectors of rail transport,
11 identified various approaches to the regulation of pricing for services of these sectors of the
12 railway industry. **Results** of the survey showed that in the current economic conditions the
13 implementation of administrative regulatory infrastructure component makes use of unilateral
14 restriction that allows the cost recovery fees for services infrastructure and determine the
15 volume of necessary financial support in case of unprofitable rates. Regarding the operational
16 component, the creation of tariff conditions for competition requires bilateral limit, which
17 allows to determine the economically justified the lower and upper boundaries within which
18 the price depending on the factors set fees sphere of operation. This approach to pricing
19 regulation in potentially competitive sector allows carriers to limit the boundaries of
20 flexibility to respond to changing conditions of transport markets, consider the price elasticity
21 of demand, positive trends in the use of the laws of the market economy. **Practical**
22 **implications.** Sharing unilateral restrictions to justify the fees for services natural monopoly
23 and bilateral - in potentially competitive services sector is a competitive motivational method
24 of pricing, which meet the requirements of effective functioning of natural monopolies in the
25 market environment, and provides irreversible monopolization of potentially competitive
26 sectors. **Value/originality.** Using of competitive motivational method for pricing regulation
27 will establish market-oriented competitive tariffs for freight and passenger transportations,
28 and also promotes creation of conditions for adaptation of railway transport to enhance
29 competition in the transport market.
30
31 **Key words:** monopoly, railway industry, pricing regulation, production volume, competition,
32 natural monopoly, potentially competitive sector.

33 **JEL Classification:** D20, D42, D52

34 **1. Introduction**

35 The transition to market economy requires adaptation of government regulation of tariff on
36 passenger and freight rail transport of Ukraine to the current requirements. Necessity of
37 government regulation of tariffs for railway caused in the first place, the distribution of the
38 railway industry in natural monopoly and potentially competitive sectors, and secondly, the
39 monopoly position of railways in the market of railway transport, and thirdly, establishing
40 high monopoly prices for services rail transport in natural monopoly sector. In particular, the
41 use of government regulation of railway tariffs due to the need to enhance competition and
42 ensure a smooth transition to free pricing in the sector of operation, and to prevent the
43 establishment of unjustified levels of tariffs for natural monopoly sector.

44 As market conditions rate is an important factor affecting both the financial condition of
45 railways, and the performance of individual sectors and the economy, as a whole. Railways
46 set a high tariff levels, requiring constant regulation of pricing in order to balance the
47 interests of all participants in the transportation process.

48 Meanwhile, existing methods for regulation of tariffs for railway transportation in conflict
49 with the requirements of market economy, holding back market reforms in the railway sector,
50 reducing the effectiveness of its functioning and slowing economic growth in the country.

51 Increased competition in the transport market requires constant adaptation to the railway
52 industry market environment, which necessitates the use of competitive motivational method
53 of regulating tariffs for railway transportation of Ukraine for the effective functioning of the
54 industry and the economy as a whole.

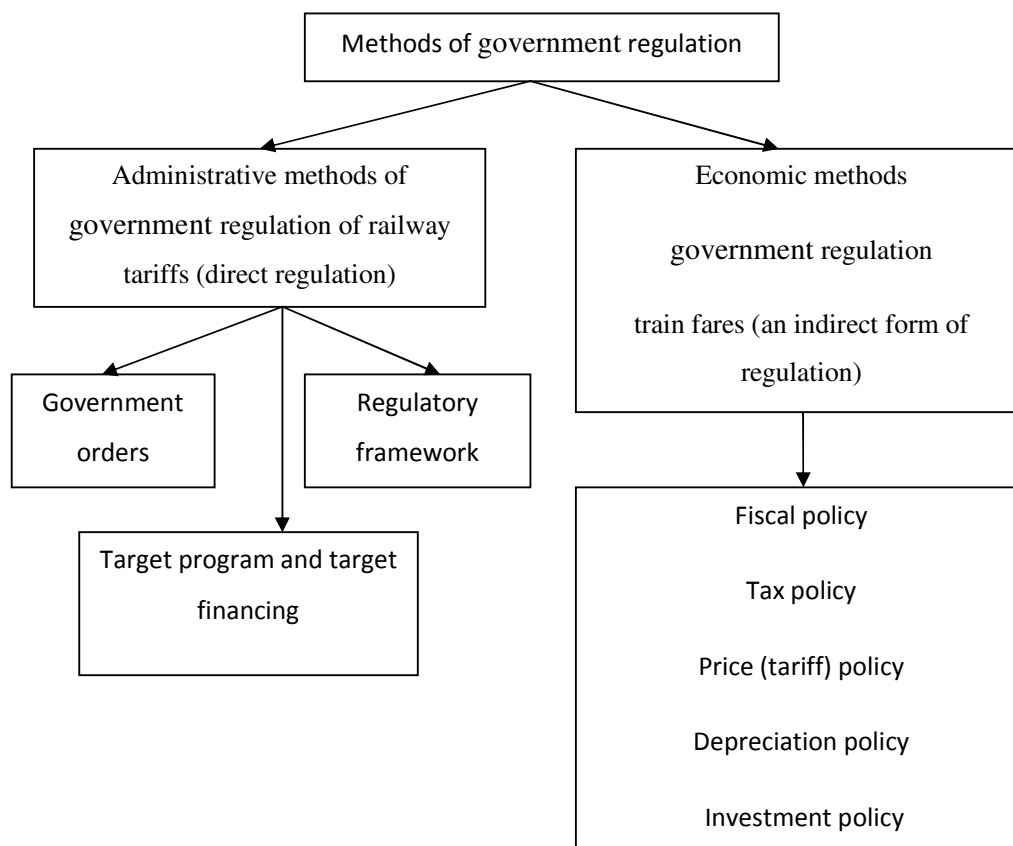
55 The issue of government regulation of tariff for railway very relevant today. Among the
56 foreign and domestic scientists work devoted to this issue Kolesnikova N.M, Bulgak V.A, I.P
57 Ilyin etc. (Kolesnikova N.M., 2015), (Bulgak V.A., 2009), (I.P Ilyin, 2012), but none of
58 these authors did not study the scientific and methodological approaches to the government
59 regulation of tariff for freight and passenger rail transportation.

60 **2. The Railways on the transport market in the conditions of development of market** 61 **relations**

62 As you know, the main purpose of Railways in the transport market in the conditions of
63 development of market relations is obtaining the maximum possible profit and satisfaction of
64 consumer needs in full. Lower profits in the industry reduces its capacity and maintenance in
65 proper condition of material-technical base, and the complete disappearance of profit will
66 cause the removal of capital from the industry. It is therefore considered necessary to conduct
67 a study of scientific and methodological approaches to government regulation of tariffs for
68 railway transportation, with the aim of achieving goals that are different for both sectors of
69 the railway transport.

70 Tariff policy in respect of transport services mostly depends on the government approach to
71 the system of tariff setting. Government regulation of tariffs on railway transportation should
72 be carried out by administrative and economic methods of regulation, and this classification
73 is given in fig. 1.

74 The administrative method of government regulation of tariffs for the services of the railways
75 is a regulation using the tools of the regulatory framework and government influence on the
76 regulation of tariffs for transport services. The use of this method of regulation for the
77 services sector of the railway infrastructure caused by natural phenomena and is due to the
78 fact that this sector, according to the Law of Ukraine "On natural monopolies", is the subject
79 of natural monopoly (The Law of Ukraine "On natural monopolies", 2013.). The tools of the
80 administrative method of regulation of tariffs for services of railways are government orders,
81 regulatory framework, target program and target financing.



82

83 Figure 1. Classification of methods of government regulation of tariff for railway services

84

3. Problems of normative-legal base

85 Providing the necessary legal framework is a priority for the operation of any entity.
 86 Currently, legislation on price regulation for services not both sectors is systemic and needs
 87 improvement. Therefore, to improve the competitiveness of the railway sector and improve
 88 its functioning should be divided natural monopoly and potentially competitive sectors of
 89 railways, and appropriate legal framework for government regulation of pricing the services
 90 sectors both railways. This, in turn, requires changes in existing regulations and laws (in this
 91 case, some of them will be the same for both sectors of railways, and some will be different,
 92 and can be used to regulate only one of the sectors).

93 Developed and introduced new legal framework will set fees for the use of infrastructure in
 94 the form of regulated tariffs and sector of operation to promote the transition to free prices
 95 from active competition between carriers for the provision of services. In the infrastructure
 96 sector always operate instruments of government regulation of tariffs as railways

infrastructure is the subject of natural monopoly. But the sector operated by means of government is objectively necessary departure from monopolistic competition in which entities set monopolistically high prices that do not meet the opportunities society. Therefore, the transition from monopoly to free competition in the area of operation will increase the efficiency of rail transport.

Targeted funding and public contracts as tools of government regulation of tariff transportation service mark its influence on regulation freight and passenger rail transportation. According to the Law of Ukraine "On Railway Transport" targeted funding to be provided by the government budget of Ukraine (The Law of Ukraine "On Railway Transport", 1996). The need for public funding of infrastructure sector is the result of government regulation, since the government insists on setting too low tariffs for infrastructure sector to meet the needs of society. But given the government level of tariffs does not provide the normal reproductive process of the railway infrastructure and railway transport losses are at regulated tariffs.

Therefore financing of natural monopoly railway sector should be provided as fees for the use of infrastructure and by grants from the government and local budgets. The infrastructure sector is under the supervision of the government, and the fee for the use of railway infrastructure is regulated by the government and budget financing should ensure the implementation of the government control infrastructure, support for rail infrastructure transport system and target subsidies to unprofitable shipments.

Target program for the development of railways are divided into medium and long-term government program not only for reconstruction, but in some cases new construction of rail lines. Targeted funding requires addressing the issue of public funding of infrastructure construction, which are protective, national and regional importance; attract funds from national target programs, budgetary subsidies for infrastructure development, providing transportation for government needs and socially important transportation. Solving these problems will have a positive impact on the establishment of fees for the use of railway infrastructure, since in this case there is the possibility to reduce the level of the tariff for its use.

Government orders represent a change for the infrastructure at the lower of cost and provided by the public administration financed from the government budget and designed to meet

national needs. Government financial incentives, orders and purchases under the economic program has a significant impact on profitability, sustainability and competitiveness of the railways, which positively affects the economy and increases the purchasing power of users.

3. Methods of the government egulation

Government regulation of tariffs for passenger and feight transportation in sector of operation through economic method is very efficient. Today it is sourcing necessary because railroads continue to occupy a monopoly position in the market of railway transport. If the operation of monopolistic competition in the sector of operation, by virtue of objective economic laws (monopolization, concentration, centralization), the relevant entities will be combined to form a monopoly associations, enabling them to establish high monopoly prices. Creating a monopoly associations make medium and small carriers redirect their activities to other sectors of the economy. Factor countering this trend is only government regulation based on economic methods. Government regulation of tariffs in the sector of operation, with the objective economic law of competition should force entities compete with one another in response to changing market conditions. If the active promotion of competition in the sector operation considered appropriate gradual shift from direct government influence on the process of tariff for the services sector, said the railways. But the need for indirect government influence on fares is because it is necessary to gradually start using economic methods of regulation of tariffs.

The tools of economic methods of government regulation of tariff for the services of the railways is appropriate budget, tax, depreciation, investment and pricing policies.

Fiscal policy should include government funding losses from unprofitable railway transport, and the financing of reconstruction and modernization of the infrastructure sector. Tax policy should be aimed at the implementation of preferential taxes which will boost competition in the potentially competitive sector. The use of fiscal and tax policies in the sector caused by the operation of the need to ensure equal competitive conditions for all participants in the traffic, without creating undue competitive advantage to individual entities.

Depreciation policy aims to target the accumulation of money and use them to play worn assets and carrying value of fixed assets gradually worn on the cost of services provided by the railways. The government determines the order of depreciation, and the entity through

158 accelerated depreciation reduces the amount of income subject to taxation, stimulating the
159 rapid introduction of new technology.

160 One reason for high costs of maintaining the railway infrastructure is the lack of additional
161 investment. Therefore, the main objective of the investment policy of government regulation
162 of tariff for the services of railways is developing and enforcing mechanism to attract
163 necessary funding for compensation as fixed costs in the process of transportation and
164 investment into the infrastructure. In the absence of rail infrastructure investment from the
165 budget, railways continue to carry unprofitable social traffic and work at a loss.

166 The main role in the whole system of government regulation of the economy plays to
167 maintain an appropriate level of prices, because the imbalance price mechanism leads to
168 devastating consequences. It is clear that pricing is the main hub of action for government
169 regulation of tariffs for rail transportation. Upon reaching the free competition in the
170 potentially competitive sector of the market will force independent of the carriers to reduce
171 their costs, improve the quality of service provided by railways and the like. A necessary
172 condition for the transition to free competition – free prices. In the result of the interaction of
173 supply, demand, and competition set the market price, which should provide coverage of
174 businesses and profits.

175 In the implementation process of freight transport is used as an infrastructure sector and
176 sector of operation. In particular, in the area of operating with the method of administration
177 need to move from monopoly to free competition, which will contribute to the introduction of
178 free pricing in this sector. Freight transport is a continuation of the process of production, and
179 the passenger meet the needs of consumers. Therefore, tariffs for freight transport should take
180 into account the competitiveness of freight and passenger fares should focus on the effective
181 demand of the population.

182 The process of passenger transportation sector provided the infrastructure and operation, but
183 competition in the sector is no operation and 100% of the market belongs to the railways.
184 Government intervention in the infrastructure sector with the administration method aims
185 assumptions not setting high tariffs and the creation of conditions in which the rail tends to
186 reduce their costs.

Thus, regulation of tariff for the services sector as infrastructure for freight and for passenger transport should be treated equally, and government regulation of tariffs for freight and passenger traffic in potentially competitive sectors of railways will be different.

To improve the actions of government regulation of tariffs for railway should consider the impact of administrative and economic methods of regulating the installation of infrastructure fees and the establishment of tariffs for operation in the sphere of passenger and freight rail transportation.

Consider the impact of economic instruments method for operating activities sector separately for freight and separately in rail transportation. Budget policy should be improved, to ensure the normal process of reproduction as a priority improvement are: reduction of budget funds aimed at directly subsidizing unprofitable rail traffic by profitable since unprofitable railway transport limit the ability to update the material and technical base; increasing use of budget financing of investment projects involving the private capital that will upgrade old and build new infrastructure on the basis of budget financing and involved the participation of private investment funds. Brought financial resources contribute to the development of infrastructure and provision of normal reproductive process; budget planning expansion, reflecting the strategic direction of transport, production capacity will keep repair facilities and provide the necessary amount of repair rolling stock in terms of increasing rail traffic.

Given the above, it can be noted that fiscal policy significantly affects the regulation of passenger transport, as the impact of fiscal policy on them is determined by the necessity of their funding from the government because they are unprofitable. To create competition in the field of passenger transport it is necessary at the legislative level to make a decision on liquidation of unprofitableness of the passenger terminal and to determine the feasibility of bringing the tariffs on passenger transportation services to the economically due to costs and the allocation of budget funds for compensation of losses of passenger transport, in connection with the exercise of their price regulation.

As regards fiscal policy, the primary objective is the development of a program that contributes to building and enhancing an appropriate competitive environment, the long-term existence of free competition between operators on the basis of free prices. Instruments of tax

policy aimed at creating equal competitive conditions for participants of the transport process, allowing to increase the competitiveness of Railways on the transport market.

In the absence of legal documents defining the clear ideology of the tariff policy, it is not possible to exercise effective tariff regulation in the sphere of freight transportation on the railway transport. Pricing policy should aim at decision-making on the introduction, modification or cessation of regulation of railway tariffs in certain market segments of Railways.

Depreciation policy marks a significant impact on passenger and freight transportation. The high degree of depreciation of fixed assets that require large expenses for their current detention threatens the loss of technological stability railways and identifies the need for investment. The purpose of the investment policy updates and technical re-equipment production base process, transport, development of technological and social opportunities for the development of public transport demand increasing, and must ensure the formation of sources of financing of investment programs.

5. Conclusions

Thus, all the tools of administrative methods of government regulation of tariff for services in the application infrastructure are important, but every tool of influence occurs at some point, that the first legal framework, public order and national target programs and targeted funding. Also, it is clear that economic methods of government regulation of pricing on service areas of operation of railway transport aimed at enhancing competition and did not have any impact on the infrastructure sector since the establishment in natural monopoly sector competition is not possible. Consideration received the study results in the development of government regulation of pricing on the railways will make it effective that today is very important for both the rail industry and to the economy.

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