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THE ISSUES OF THE DEVELOPMENT STRATEGY FORMATION OF AUTOMOBILE INDUSTRY COMPANIES IN UKRAINE

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Abstract

Purpose: *The purpose this study of is to consider the problems to ensure the efficiency of of automobile industry enterprise, to identify measures and areas of improvement and optimization of freight trucking companies and to prove the methods and ways to optimize cargo transportation process, which will give the opportunity to influence the technical level of the new technology and production as a whole*. ***Methods:*** *Monitoring and researching problems ensure, trucking companies, classification and description of components improve the management and optimization of transportation that will enable to transport enterprises to influence the design of the transportation process efficiency, reduce transportation costs and production as a whole. Correlation-regression analysis of the effectiveness determining rational route of vehicles that can improve the technical and operational performance of the rolling stock, increase productivity and reduce the cost of cars of cargo.* ***Results****: identified areas to ensure the efficiency of transportation companies automotive industry through the development and adoption of decisions on optimization of freight trucking companies through the development of rational route of vehicle design proposals from warehouse management (number) vehicle fleet, improvement of dispatching service and optimization of organizational structure .* ***Discussion:*** *identifying areas of improvement of transport enterprises automotive industry due to the need to increase the volume of freight traffic, increase usage of rolling stock, saving material and energy resources, reduce labor costs. Decision-making to improve the management and optimization of freight is an important topic for future research, which will create an opportunity for the company to influence the technical level of the new technology and production as a whole.*

Keywords: automobile transport enterprise; efficiency increasing; freight transportation; optimization; transport process.

1. Introduction.

In market conditions the company as an open system, operating in a difficult environment is characterized by instability and constant dynamics. The company is affected by both external and internal factors, which include fairly aggressive competitive environment prevailing in the transport market, reducing state regulation of vehicles, lack of transportation planning processes, management and coordination of all subsystems automobile company, control of transport process, recording and analysis of its activities. In this context, special attention becomes search of activities and reserves improvement and optimization of automobile transport enterprises.

2. Analysis of the Latest Research and Publications.

An important role in the scientific heritage issues increasing the efficiency of transport companies owned by such famous scientists as Azoev G.L., Antonyuk L.L., Basovskyy L.E., Bychkivskyy R.M., Voychak A.V., Kamyshnikov R.V., Dolzhanskiy I.Z., Zagorna T.O., Kotelnikov D.I., Zadorozhna S.M., Mazur I.I., Shapiro V.D., Melnik A.O., Mishin V.N., Okrepylov V.V., Poznyak S.V., Porter M., Fathutdynov R.A., Shershnev Z.E.

Furthermore problems of increasing efficiency and automobile transport enterprises freight transportation optimization were studied by Zhitkov V.A., Kim K.V., Korolev Y.S., Ludchenko O.A, Govoruschenko M.J., Varfolomyeyev V.M., Voloshin N.A.

The article aims to identify the main components of improving the management and optimization of freight transportation that will enable transport enterprises to influence the design of rational (optimal) transportation process, reducing transportation costs and production as a whole.

3. Research tasks.

The research issues of ensuring the efficient transport enterprises functioning and preventing inefficient freight transportation management, irrational transport planning, low technical readiness

of the fleet, the low utilization rate of run routes and vehicle downtime due to lack of orders for freight resulted in the need to identify ways of increasing automobile industry enterprises transport activities.

4. Research results.

An important condition for improving the management and optimization of freight traffic is increasing the scientific validity of methods of decision-making at all levels of the planning guide. To solve this problem, do the right socio-economic assessment of the effectiveness of implementation of each progressive technical solutions.

The enterprises of automobile transport determine the effectiveness of the introduction of new technology, inventions and innovations carried out in accordance with certain procedures, which should play an essential role management tool technical progress and its effectiveness. Before the automobile enterprises are specific goals to increase the volume of freight traffic, increase usage of rolling stock, saving material and energy resources, reduce labor costs. To achieve these goals decision-making is necessary to improve the management and optimization of freight, which creates an opportunity to influence the company the technical level of the new technology and production as a whole [1,2].

Logistic approach to automobile transport causes new methodological content that consists in the fact, that the main part of transport should be designing optimal (efficient) transportation process. It means searching for best possible organizational and technical solutions to ensure maximum efficiency of transportation from their place of manufacture to point of consumption.

To improve the system for freight transport enterprises to improve the efficiency of rolling stock usage may be offered such an event as the development of rational route of the vehicle.

Organization of the rolling stock movement on the routes should provide the highest performance and lowest cost of transportation. Traffic route called the rolling stock way in freight carrying.

The choice of the route depends on the deployment of cargo handling areas, type of cargo and type of rolling stock. In drawing up routes affected family transport. In the application of rolling stock (except for cars, trucks) run empty in most cases also can not be excluded. [3]

Quantity of cargo on a particular route often does not provide the full load of the rolling stock during working hours. So often there are cases when changes within the rolling stock used for the carriage of goods by several orders.

To develop efficient route may be offered the following routes [4]:

1. Pendulum route with reverse idle run.

2. Pendulum completely reverse route of loaded mileage, i.e. the movement of cargo vehicles in both directions.

3. The route with the inverse is not fully loaded run.

The criteria for selecting the best alternative is to select criteria such as:

- The maximum vehicle load;
- A minimum of empty mileage;
- Reducing the cost of transportation of 1 ton of cargo;
- Increased utilization of the run.

Proper assembly route achieves the highest utilization rate path and, therefore, reduce the cost of transportation [5].

To assess the effectiveness of certain rational route of car company should choose as criteria:

1. The time required for one revolution of the car:

$$t_0 = \frac{2 \times l_{er} A}{V_t} + t_{n-pA} + t_{n-pB}$$

where l_{erA} – transportion distance in the forward direction;

V_t – technical automobile speed;

$t_{п\text{-}pA}$ і $t_{п\text{-}pB}$ - downtime during loading - unloading in paragraph A and B/

1. The value of the coefficient of run that calculated by the following formula:

$$\beta = \frac{l_{er}}{l_{er} + l_x}$$

$$\beta = \frac{l_{er} À + l_{er} Â}{2 \times l_{er} À}$$

2. The cost of diesel fuel per 1 ton of cargo carried forward by the formula:

$$Â = \frac{Q_i \times P}{Q_â}$$

Where $Q_п$ – the amount of fuel;

P – the price per liter;

$Q_в$ – the amount of transported cargo.

The proposed variants of route rationalization is very effective, can improve the technical and operational performance of the rolling stock, increase productivity and reduce the cost of cars 1 ton of cargo and earn additional income for providing transport services. In the absence of a sufficient number of orders for transportation companies in the automotive industry, usually two-

thirds idle fleet in good technical condition. It is therefore necessary to decide on the reduction of fleet automobiles. Possible solutions to this problem are [6]:

1. Sale idle in the car.
2. Leasing of vehicles other organizations.

To select the alternative is to use criteria such as the ability to generate income from the use of transport and reduce operating costs for its maintenance. The most feasible option is renting automobiles since the end of the lease cars returned to trucking companies. Moreover, in the case of additional orders for transport services in the future, the company will not have to buy expensive new cars, used cars, it can be returned at the end of the lease term. Reducing fleet of vehicles is a necessary measure, since the lack of a sufficient number of orders for transportation impossible operation "extra" cars. Delivery of these vehicles for rent will reduce the cost of maintaining the car park due to reduced number of cars, and the company will get additional revenue in the form of the rental car. [7]

As additional measures to improve the operation and coordination at all stages of the transport process of transport enterprise can offer activities such as organizing jointly with the shipper control center in the loading of cargo; improve the transportation process technology by adding variable-day transportation plan. Thus, it is necessary to organize the work control center, whose main task is the preparation, organization and operational transport planning, dispatch management, accounting and analysis [8].

Centralized organization of cargo transportation with forwarding service provides dispatch department, which includes includes motor company manager and team. The main functions of the entire dispatch department are: selection of the type of rolling stock for centralized freight and distribution of the type of goods; monitor the effective use of rolling stock and drivers at work; providing high-use rolling stock; efficient use of labor and machinery; summarizing the work and take measures to eliminate shortcomings in the audits. In the dispatch department relies responsibility for delivery of cargo and putting it on consignment notes consignees, freight forwarding warehouse to warehouse and dispatch messages consignee of goods.

The duties of the manager who is directly at the motor company include: enforcement of drivers replaceable-day plan; providing timely information about the shipment consignee against them; analysis of the plan for the day, decade, identifying the cause of failure, take action to correct deficiencies; monitor the timely arrival of vehicles, loading and unloading it in the established standard time; coordination replaceable-day plan task force; downtime accounting, drafting regulations to take action; organization performance variable-day traffic plan.This essential work is successful coordination clear coordination group manager of operational enterprise consignee. In the task force responsibilities included: development of consignment notes; exercise daily operational planning of cargo transportation in accordance with established objectives driver; the timely transmission of variable-day plan dispatcher. In order to most successful co-management of the plant is necessary to ensure load cargo for each vehicle in the norms of time set by the full range of consumer goods, a special parking lot considering most convenient way to download it. To organize work on a centralized cargo delivery controller designed in conjunction with the agreed schedule of the consignee of rolling stock for loading and unloading, as well as the frequency of delivery of the necessary clarifications. At the task force, which is located in the consignee must put additional responsibilities: monitoring the supply of goods points and boot mechanisms; control over the timely arrival of rolling stock on the plant; check waybill drivers, monitor the performance of the drivers specified routes traffic; execution of orders received from employees control group. Scope road transport depends on many factors, and transportation schemes that provide for a system of delivery of export goods. The centralization of processing and analyzing information on planning the necessary number of cars in traffic, etc. will more accurately coordinate the work of transport enterprise in conjunction with the shipper. To improve the transportation process technology and timely control of this process, it is necessary drafting variable-day plan for every working day. The centralized delivery of goods will be carried out according to the plan, which consists of team.

Drawing variable-day plans need to clearly identify the shipper to transport goods, delivery schedule to develop cars under load, calculate the time spent on the organization of cargo on a

particular route. In addition, variable-day plan serves as the basis for the analysis of cargo on a particular route. The objectives of the analysis are: determining the extent to variable-day plan for transportation in the whole transport enterprise, the main types of cargo, etc; determine the causes of deviations from the plan; determine the status of settlements with customers for cargo transportation; the analysis taken appropriate measures to ensure the elimination of identified deficiencies [9].
planning transport enterprise.

2. The emergence of the organizational structure of the person responsible Measures related to the organization of dispatching points in the loading of cargo, with the following key benefits: a clear division of responsibilities shippers, consignees and transport enterprise during delivery; creating conditions for the general mechanization of loading and unloading of consignees and consignors; possibility of rolling stock of clear, predetermined schedule; elimination of unproductive idle awaiting handling by the organization of scheduled downtime and reduce rolling during loading and unloading due to mechanization; productivity of the rolling stock and consequently reducing the need for rolling stock and reduce transportation costs.

Thus, centralized transportation of goods by road, which is a progressive method of operation of rolling stock, characterized by considerable economic efficiency for all participants in the direct delivery of goods, companies and organizations - shippers and consignees and trucking companies.

The main indicators of economic efficiency are: reducing the need for rolling stock to perform certain volume of cargo transportation; reducing the number of stevedores and shipping agent for loading and unloading cargo and maintenance and reduce limits on labor and payroll; reduce the cost of transportation, unloading, loading and maintenance of cargo, ie reduce transport costs [10].

The cost of transport, as a rule, centralized traffic decreases. However, there may be cases where the introduction of centralized traffic slightly increased cost, especially when using these transport of rolling stock. Specialized rolling stock may be less than in the respective car models with universal flatbed, load capacity by installing various additional equipment, increasing their weight during installation of specialized bodies, etc. Specialized rolling stock has a higher value and, consequently, higher depreciation charges.

However, the use of rolling stock creates the possibility of transporting these goods can not be transported cars with universal flatbed, for example, the panel block apartments, long loads etc. A certain increase in transportation costs may occur due to increased wage costs drivers - surcharge for combining responsibilities at central dispatch traffic. However, be sure to consider reducing the cost recipients or senders of cargo forwarders for maintenance staff. The practice of motor company shows that the savings obtained transport customers, many times overrides the "loss" motor company in connection with a slight increase in cost. Thus, the decision was taken to centralize management of transportation is very effective and can improve cargo transportation planning and coordination of all participants in the transport process. Drawing variable-day plans need to clearly identify the shipper to transport goods, delivery schedule to develop cars under load, calculate the time spent on the organization of cargo on a particular route.

In addition, variable-day plan serves as the basis for the analysis of cargo on a particular route. The objectives of the analysis are: determining the extent to variable-day plan for transportation in the whole transport enterprise, the main types of cargo, etc; determine the causes of deviations from the plan; determine the status of settlements with customers for cargo transportation; the analysis taken appropriate measures to ensure the elimination of deficiencies. The advantage of such cargo is also that all obligations to implement forwarding operations assumes haulage, freeing shippers from non-core functions of the organization of transport and consignees - from a large number of freight forwarders to accompany the goods. Scheme design and management decisions to optimize cargo shown in Fig.

In enterprises where almost no work is done in order to improve the transportation process, optimizing freight and improve the technical and operational performance of the automobiles in the organizational management structure it is useful to introduce the post of logiest as part of the control of service and engaged in these issues. You must pick a highly qualified specialist in logistics, higher education and work experience in the field of road transport.

In logistics functional responsibilities will include: development of effective new forms of road transport in compliance with road safety and their

implementation; implementing organization of work of drivers; the introduction of rational and efficient use of rolling stock, handling machinery and equipment; measures for the timely conclusion of contracts with companies for the carriage of goods; Planning centralized carriage of goods and their implementation; quality control of variable execution tasks (daily operational plan), detecting illegal transport process, establish their causes and take measures to eliminate them; development schemes distances and route network traffic; analysis of the plan for technical and operational parameters characterizing the operation of rolling stock and ensure the implementation of measures for their improvement (utilization of run, capacity, reduce downtime during loading and unloading, etc.); control over the work of linear control stations, including control stations established in shippers; optimization of cargo and material flows of the company; continuous improvement of the transportation process [11].

This logistics should know: purpose, applicability, and basic technical and operational characteristics of motor vehicles, trailers and cargo handling machinery; the technical operation of vehicles; Types of cargo in the area of transport enterprise; transport conditions specified in the contract; based on mathematical methods of planning road transport; transportation tariffs and rules for their use; latest achievements in the field of operation of vehicles; economy, labor and management on a vehicle; basics of labor legislation.

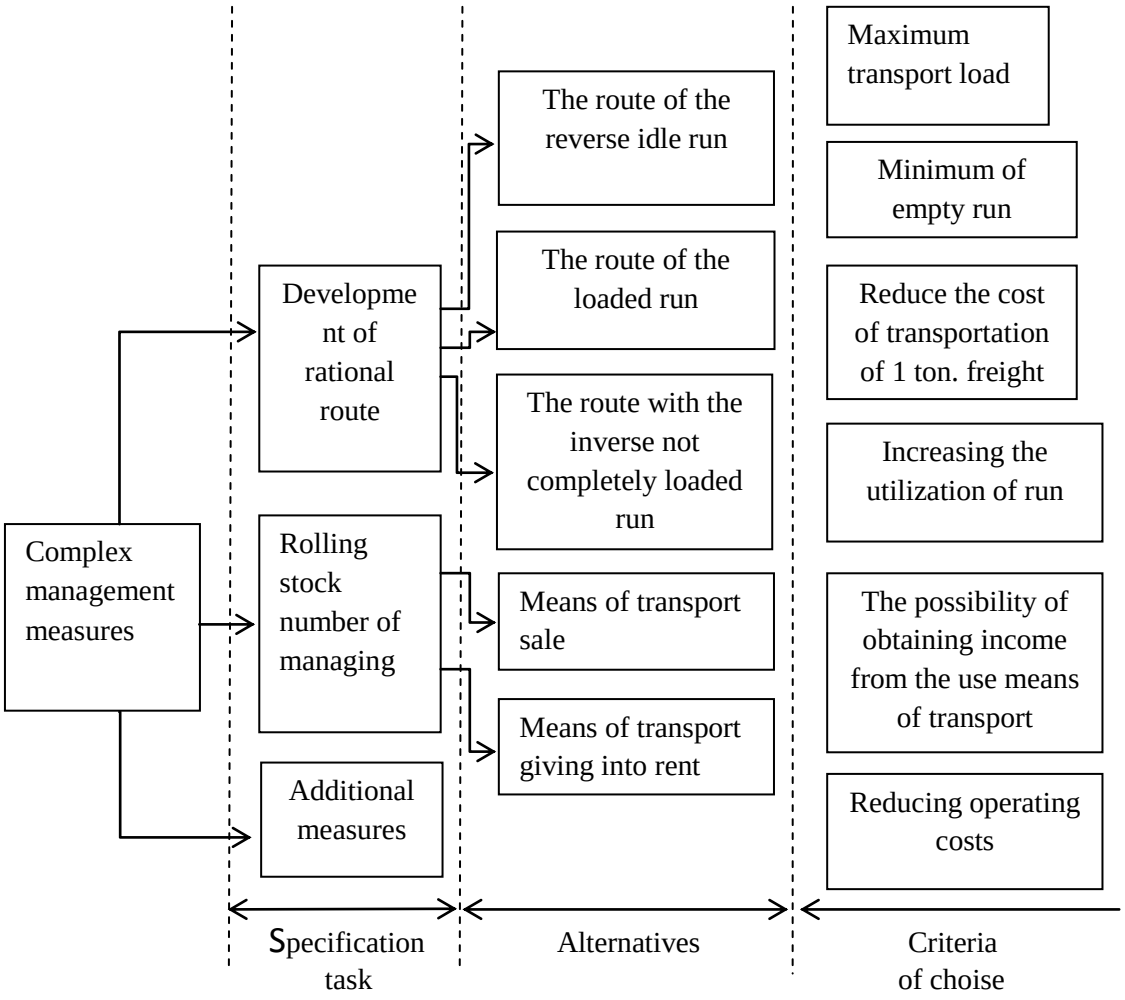

Fig. Scheme of development and decision making to optimize freight transportation by transport enterprises

Entering office Logistics has several obvious advantages:

1. Organization clearer centralized transport for the optimization of transportation, for the implementation of measures to improve the technical and economic performance of vehicles.

3. Organization of measures to improve the transportation process, search for the best ways of operation of rolling stock.

4. Study the latest trends in freight transportation by road and the introduction of STP in the practice of trucking companies.

Thus, the introduction of the post of logistics and should be sufficient for more efficient coordination of dispatching service in general and for the successful management of the rolling stock enterprises automobile industry.

5. Conclusions.

In this article the directions to ensure the effectiveness of transportation companies automobile industry through the development and through the development of rational route of automobile design proposals from warehouse management (number adoption of decisions on optimization of freight trucking companies) vehicle fleet, improvement of dispatching service and optimization of the organizational structure company.

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Т.О. Сімкова[1], І.О. Борисюк[2]. Напрями оптимізації вантажних перевезень підприємств автомобільного транспорту

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Мета: розглянути проблематику забезпечення ефективності діяльності підприємств автомобільної галузі, Визначити заходи та напрями покращення та оптимізації вантажних перевезень автотранспортних підприємств. Обґрунтувати методи та шляхи оптимізації вантажного перевізного процесу, що надасть можливість впливати на технічний рівень нової техніки і виробництва в цілому. **Методи:** Спостереження і дослідження проблематики забезпечення ефективної діяльності автотранспортних підприємств, класифікація та опис складових вдосконалення управління та оптимізації вантажних перевезень, що надасть можливість на автотранспортних підприємствах впливати на проектування раціонального перевізного процесу, скорочення транспортних витрат та виробництва в цілому. Кореляційно-регресійний аналіз ефективності визначення раціонального маршруту руху автомашин, що дозволяє поліпшити техніко-експлуатаційні показники роботи

рухомого складу, підвищити продуктивність автомобілів і знизити витрати перевезеного вантажу. **Результати:** визначені напрямки забезпечення ефективності діяльності вантажних перевезень підприємств автомобільної галузі шляхом розробки і прийняття рішень щодо оптимізації вантажоперевезень автотранспортних підприємств через розробку раціонального маршруту руху транспортних засобів, розробку пропозицій з управління складом (чисельністю) транспортного парку, вдосконалення роботи диспетчерської служби та оптимізації організаційної структури підприємства. **Обговорення:** визначення напрямів підвищення діяльності транспортних підприємств автомобільної галузі обумовлено необхідністю збільшенню обсягу вантажних перевезень, підвищенню інтенсивності використання рухомого складу, економії матеріальних та енергетичних ресурсів, зниження трудових витрат. Прийняття рішень з удосконалення управління та оптимізації вантажоперевезень є важливою темою для майбутніх досліджень, що створить можливість на підприємстві впливати на технічний рівень нової техніки і виробництва в цілому.
Ключові слова: автотранспортне підприємство; вантажні перевезення; оптимізація; підвищення ефективності; транспортний процес.

Т.А. Симкова[1], И.А. Борисюк[2]. Направления оптимизации грузовых перевозок предприятий автомобильного транспорта

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Цель: рассмотреть проблематику обеспечения эффективности деятельности предприятий автомобильной отрасли, определить меры и направления улучшения и оптимизации грузовых перевозок автотранспортных предприятий. Обосновать методы и пути оптимизации грузового перевозочного процесса, что позволит влиять на технический уровень новой техники и производства в целом. **Методы:** Наблюдения и исследования проблематики обеспечения эффективной деятельности автотранспортных предприятий, классификация и описание составляющих совершенствования управления и оптимизации грузовых перевозок, что позволит на автотранспортных предприятиях влиять на проектирование рационального перевозочного процесса, сокращения транспортных расходов и производства в целом. Корреляционно-регрессионный анализ эффективности определения рационального маршрута движения автомашин, позволяет улучшить технико-эксплуатационные показатели работы подвижного состава, повысить производительность автомобилей и снизить расходы перевозимого груза. **Результаты**: определены направления обеспечения эффективности деятельности грузовых перевозок предприятий автомобильной отрасли путем разработки и принятия решений по оптимизации грузоперевозок автотранспортных предприятий посредством разработки рационального маршрута движения транспортных средств, разработку предложений по управлению составом (численностью) транспортного парка, совершенствование работы диспетчерской службы и оптимизации организационной структуры предприятия. **Обсуждение:** определение направлений улучшения деятельности транспортных предприятий автомобильной отрасли обусловлено необходимостью увеличению объема грузовых перевозок, повышению интенсивности использования подвижного состава, экономии материальных и энергетических ресурсов, снижение трудовых затрат. Принятие решений по совершенствованию управления и оптимизации грузоперевозок является важной темой для будущих исследований, которая создаст возможность на предприятии воздействовать на технический уровень новой техники и производство в целом.
Ключевые слова: автотранспортное предприятие; грузовые перевозки; оптимизация; повышение эффективности; транспортный процесс.

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