

**შრომის სფეროში თანამედროვე ტრენდების გავლენა საწარმოს საკადრო პოტენციალის ფორმირებაზე**

**THE INFLUENCE OF MODERN TRENDS IN LABOR ON THE FORMATION OF WORKFORCE CAPACITY OF THE ENTERPRISES**

**ლიუდმილა კალინიჩენკო,**

ე.მ.დ., პროფესორი

**ვალენტინა სმაჩილო,**

ე.მ.კ., დოცენტი

**ტარას ნალივაიკო,**

ასპირანტი ხარკოვის მშენებლობისა

და არქიტექტურის ეროვნული უნივერსიტეტი,

ხარკოვი, უკრაინა

**LIUDMILA KALINICHENKO,**

Doctor of Science (Economics), Professor,

Head of Department of Economics

**VALENTYNA SMACHYLO,**

Candidate of Sciences (Economics), Associate Professor

Professor of Department of Economics

**TARAS NALYVAIKO,**

Applicant of degree “Doctor of Philosophy”

Kharkiv National University of Civil Engineering and

Architecture Kharkiv, Ukraine

**ABSTRACT**

*The study summarizes the main trends that have shaped at different levels in the area of labor – from global to industry; the features and directions of transformation of the characteristics of workers as agents of the workforce capacity of enterprises are defined; the factors and the force of influence on the workforce capacity of transport enterprises and their effect on the trends of workforce capacity development are determined, as well as the forecast model is developed; the problem points of formation of the workforce capacity of transport enterprises are explained.*

**Key words.** trend, factor, workforce capacity of the enterprises, transport, correlation and regression analysis, strategy

**ანოტაცია**

კვლევაში განზოგადებულია ძირითადი ტრენდები, რომლებიც ჩამოყალიბდა შრომის სფეროს სხვადასხვა დონეებზე - გლობალურიდან დარგობრივამდე, განსაზღვრულია თანამშრომლების, როგორც საწარმოს საკადრო პოტენციალის მატარებლების, მახასიათებლების ტრანსფორმაციის თავისებურებები და მიმართულებები, განსაზღვრულია ფაქტორები და მათი ზემოქმედების ძალა სატრანსპორტო საწარმოს საკადრო პოტენციალზე და მათი ზემოქმედება საკადრო პოტენციალის განვითარების ტენდენციებზე, ასევე აგებულია საპროგნოზო მოდელი, გამოვლენილია სატრანსპორტო საწარმოების საკადრო პოტენციალის ფორმირების პრობლემური მომენტები.

*საკვანძო სიტყვები: ტრენდი, ფაქტორი, საწარმოს საკადრო პოტენციალი, ტრანსპორტი, კორელაციურ - რეგრესიული ანალიზი, სტრატეგია.*

**INTRODUCTION.**

Globalization processes in all areas of life have had a significant impact on economic relations. Their transition to a higher level is noted – the formation of the knowledge economy, which requires consolidation of role of the person who represents knowledge and acts as its agent.

Due to the essential differences between the knowledge economy and the traditional economy, to ensure its effective functioning it is necessary to transform the principles and models of personnel management of enterprises, which is impossible without the search for new concepts, theories, methods, mechanisms of workforce capacity formation. And that is why the definition of the impact of modern trends in the area of labor determines the topicality of this paper.

The purpose of the study is to analyze the impact of modern trends on the formation of the workforce capacity of enterprises. The achievement of this goal provides for the statement and solution of the main tasks: to identify the main trends in the labor market at different levels; to determine the current trends in the system of development of workforce capacity of enterprises; to identify the factors affecting the workforce capacity of the enterprise and their impact on the trends in the development of workforce capacity; to cover this issue both for the general labor market of the country and in the priority sectors of the national economy.

Research methods: time series are applied to identify trends; regression and correlation analysis is used to identify the impact of factors and build a forecast model, min-max normalization ensures statistical data normalization.

Main part. Based on the system approach, the workforce capacity of the enterprise (WCE) is a complex socio-economic dynamic system, which is represented by the set of abilities and capabilities of the enterprise personnel, having quantitative and qualitative characteristics necessary for the enterprise to ensure its sustainable development [1].

WCE logically interacts as a microsystem with the macrosystem and is subject to a set of factors that can be classified as internal and external to it. It is the influence of factors that determine the quantitative and qualitative characteristics of the workforce capacity of the enterprise in any field of activity.

The author finds it is reasonable to single out external factors of macroeconomic (megaglobal and national) and mesoeconomic (sectoral and regional) levels. The first group of external factors is formed globally as a whole and is reflected at the national level from the perspective of state and national specifics. The second group of external factors is formed under the influence of macroeconomic factors, but taking into account sectoral and regional specific features.

Internal factors of influence on the workforce capacity of the enterprise are also divided into two groups: personal and microeconomic levels. Since WCE is a living socio-economic system, it will be influenced by the personal qualities of employees of the enterprise, their mentality, education, religious and cultural principles, morality and

spirituality. In addition, each enterprise, as an open, dynamic system, is also characterized by specific features: management style, mission, goals, values, production capacity, organizational and legal form, etc., which will determine workforce capacity at all stages of the existence of the enterprise. Inside the enterprise – in the domestic labor market – one may also identify a number of factors affecting the value of its workforce capacity:

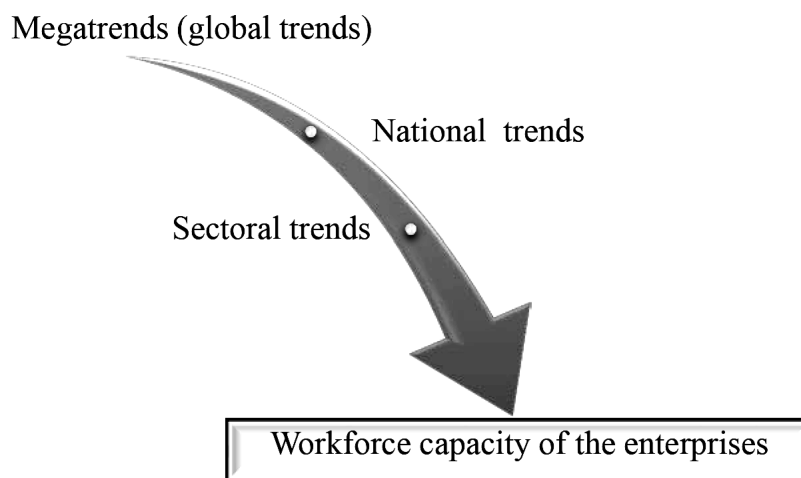
- social mobility in the domestic labor market, which is expressed in the educational, qualification and professional, that is, quality, changes in the characteristics of personnel;

- the compensation rate that has shaped at the enterprise in comparison with the compensation rate in the country, sector, region or in comparison with the previous period, which would encourage changes in the quantitative and qualitative characteristics of workforce capacity.

In addition to the grouping of factors according to the criterion of relationship to the WCE (internal/external) grouping according to the essential criterion is suggested, with the emphasis on quality factors, which determine the qualitative characteristics of WCE and their changes, and quantitative, defining the quantitative characteristics of WCE and their changes.

There is a mutual influence between groups of factors, both external and internal, which can be direct or indirect, strong or not, but it exists in any case.

The action of factors with a certain frequency and force of influence determines the trends in the development of the object (WCE); therefore, to assess the strength of the influence of factors, one should determine the existing trends in the economy. They should also be considered at different levels of the socio-economic system (fig. 1).



**Fig.1 Hierarchy of trends in the system of formation of workforce capacity of the enterprises (developed by the authors)**

The global trends of social and economic systems are the following:

- succession of generations. Another change of technological structures is underway, which changes the characteristics of the people themselves – in the near future people who cannot imagine life without computers, and the Internet, will reach the working age; which must be taken into account for their management. This is also important in the view of a significant transformation in the labor market, which occurs due to the succession of generations. It provides for the division of all people, depending on the age of birth, into generations X, Y and Z, which have specific behavioral characteristics that determine their behavior in the labor market. For instance, generation Y (Millennials) until 2030 will amount to approximately 75% of the global labour market [2]. According to the same source [8], the peculiarities of working with generation Y were identified as the main factors that make it difficult to engage and retain talent (recruitment management).

- increasing the level of automation, and robotic application work. It is predicted that by 2025 smart machines and programs will be able to replace 33% of professions [2]. That is, the feature of the future requirements of employers to employees will be the ability to perform not routine work, but creative, which, in turn, will change the management methods for such a workforce. In the words of Jack Ma, founder of the largest e-commerce platform Alibaba, which he said at the World Economic Forum in Davos (2018) - in the future, most of the processes will be automated and it is only the uniqueness, and creativity of the human that machine will not be able to repeat.

- population growth and aging [2]. By 2030, the world population will increase by 13% to 8.4 billion people, and the average age of the population will increase to 34 years, which is four years more than now;

- activation of migration processes [2]. Globalization facilitates the free movement of labour and capital to more favourable locations and has created new ways of interacting. As a result, it is becoming increasingly difficult for the companies to engage and retain talented employees. An increase in the share of migrants by 5% leads to an increase in world income by 1%;

- increasing flexibility and adaptability of management processes. Dynamic transformations of economic processes, and globalization require changes to be made in approaches to the formation of labor collectives in general. Organizational structures should be flexible and adaptive to the rapid disruption of the external environment, updated requirements and needs. The concept of a “company employee” widens - blending workforce man-

agement [2]. The modern generation of workers aims to try themselves in different industries and areas of activity, provokes frequent changes in the workplace, the desire to have flexible work schedule and work from different places in the world, which requires the HR services of enterprises to find non-standard solutions for staffing. That is why the concept of “blended workforce” appears – when not only full-time employees, but also external industry experts, freelancers, etc. are engaged in the implementation of business tasks of the company.

The national level of the labor market is also under their influence and, therefore, the current trends of the labor market of Ukraine indicate an imbalance between the need for workers of a certain profession and qualification and the available labor potential, forming its labor shortage situation. This is based on the officially defined problems of the labor market of Ukraine [3], where one should note a significant employee turnover in high-priority economic activities, migration abroad of highly qualified personnel (especially young people), the imbalance in the professional qualification section due to the inadequate response of the educational market to the needs of the labor market.

The main trends of the domestic labor market include:

- a high level of migration processes, in which Ukraine is considered as a transit country, which causes the depletion of qualified personnel, while 30% have higher education, which is paid from the budget [4];

- increase in the proportion of the population engaged in the informal employment sector from 22.9% to 26.2% for the period 2010-2015 [4];

- the emergence of new forms of non-standard labor, which at present are almost not regulated by the current national labor legislation, among which remote employment (telework) and agency work should be mentioned [4]. Its negative impact also manifests itself in the fact that the most qualified personnel work for foreign employers, that is, the domestic workforce capacity is used for the development of foreign economies, not domestic;

- reduction of the employed population in Ukraine (for example, in 2012, the number of employed was 19,621 thousand people, and in 2015, 16443.2 thousand people; in 2017, 16156.4 thousand people), which is due not only to the annexation of territories, but also other factors, mainly economic ones (according to figures provided by [5]);

- instability in the area of wages and its low level: despite the growth of its nominal level (from 2010 to 2017, we note the positive dynamics of the average wage, which increased by 4495 UAH, or 171.63%.) against the background of the large-scale devaluation of the national cur-

rency, the average wage in foreign equivalent is decreasing rapidly. Thus, in 2017, this figure was \$ 263, which is \$ 64, or 24.33% less than in 2010. This indicates a decrease in the social standard of living, an increase in social tension in society and contributes to the labor migration of skilled workers at working age [4].

- increase in the number of vacant jobs (by 3.7% for the period from 2012 to 2017) while reducing the weight by registered unemployed.

Let us consider the impact of certain trends on the transport sector in Ukraine. It should be noted that the transport industry has an important place in the economy of Ukraine, based on the structure of gross value added for the first quarter of 2018 its share was 8.2% (for comparison: construction – only 2.2%, agriculture – 4.0%, although lower than in industry – 27.7% and trade – 17.5%) (according to figures provided by [5]).

It is the transport infrastructure that ensures the activ-

ities of all other sectors of the economy and contributes to the economic development of the country, creating additional cost, by providing transport services, which include [6]: direct transportation of passengers and goods; loading and unloading; storage of goods at the warehouses of stations; maintenance and preparation of rolling stock for transportation; provision of means of transportation for rent or lease; other services.

Naturally, the development of transport infrastructure provides for its reform, which is enshrined in the “Transport Strategy of Ukraine for the period up to 2020”, approved in 2010, “Updated Transport Strategy of Ukraine: Policies” and “National Transport Strategy for the period up to 2030 “Drive Ukraine 2030”, which was approved on 30.05.2018 [7].

National Transport Strategy for the period up to 2030 takes into account the global trends inherent in the transport sector (Fig. 2).

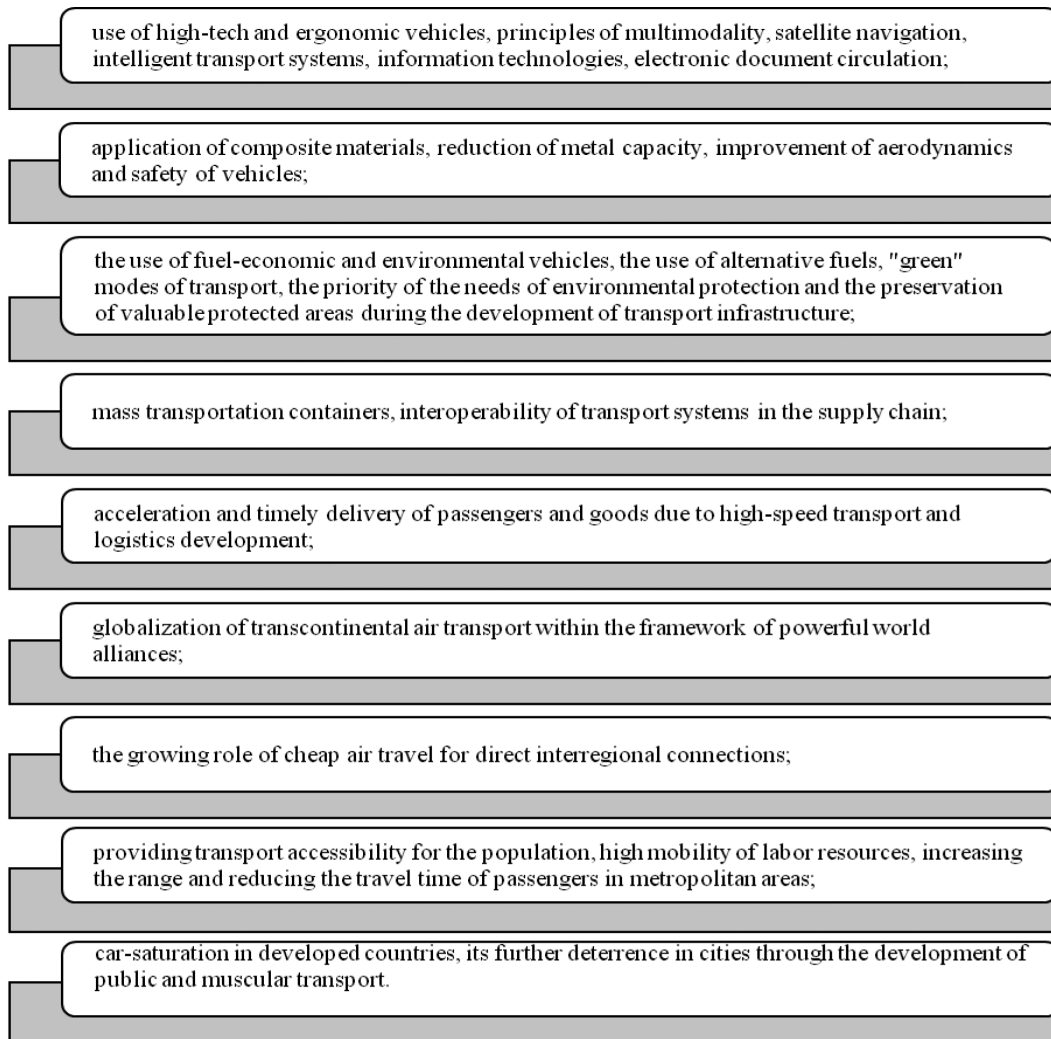


Fig. 2. Global trends in the transport sector (developed by the authors based on [7])

Taking into account these trends, a Strategy has been developed, which identifies 4 main directions of transport reform. Fig. 3 shows only the problems, objectives, and intended outcomes that are directly related to the labor.

As one can see, the transport sector reform involves significant transformations in this direction. They take into account global, national and industry trends.

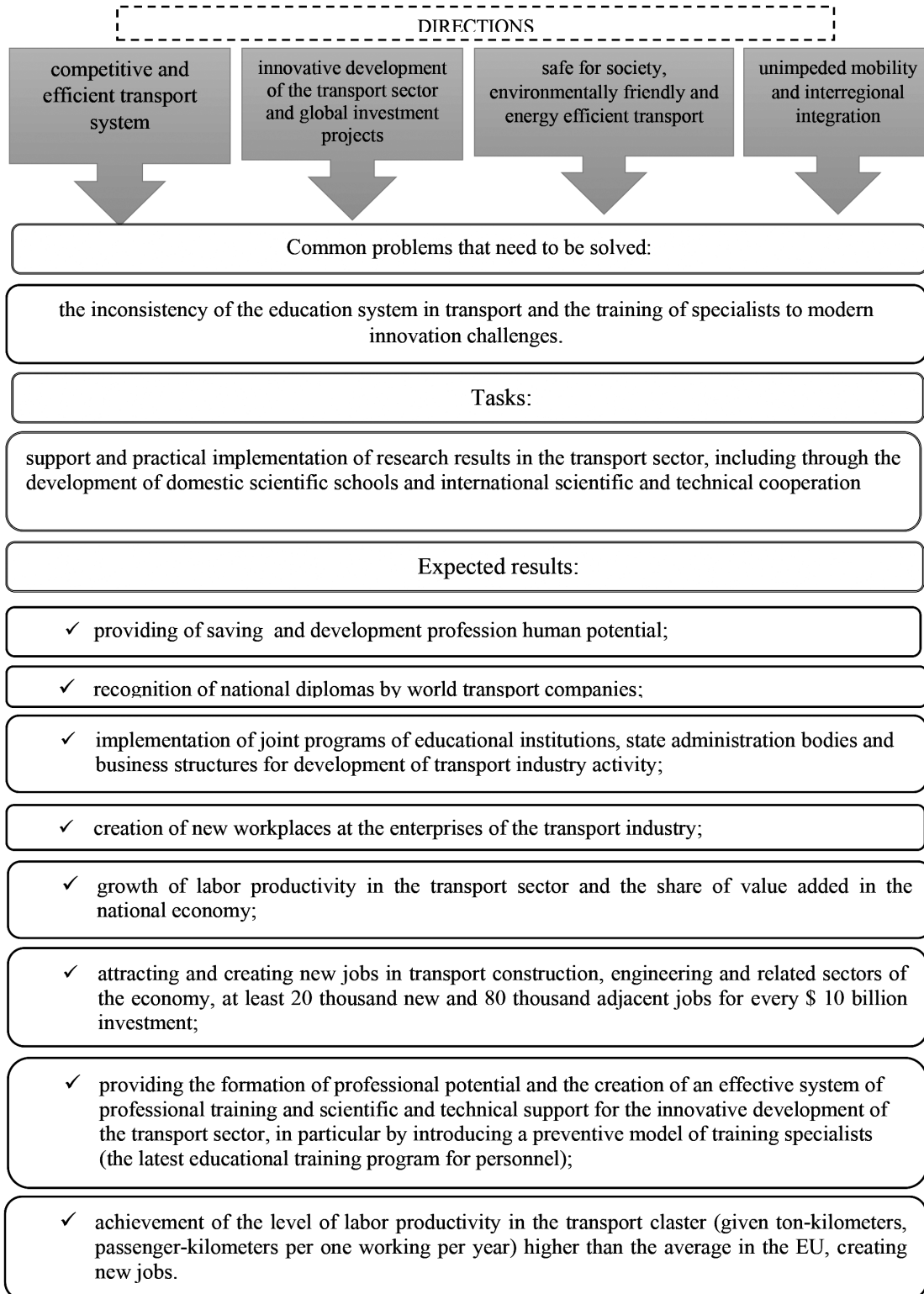


Fig. 3 Directions and expected results of reforming the transport sector (developed by the authors based on [7])

Therefore, the study of trends and factors affecting the formation and development of workforce capacity is a necessary and important research task.

Such global changes require changes in management principles and training of relevant personnel who could manage infrastructure projects in the area of transport according to European standards and regulations. Therefore, the preservation, renewal, formation of workforce capacity

of the enterprises ensuring the activity of the transport system of Ukraine remains pressing issues.

Consequently, it is necessary to analyze the current trends of the industry labor market, which, to some extent, determine the processes of formation of workforce capacity of the transport industry. Let us consider the dynamics of full-time employees in 2017 at the transport enterprises in the context of its types (Fig. 4).

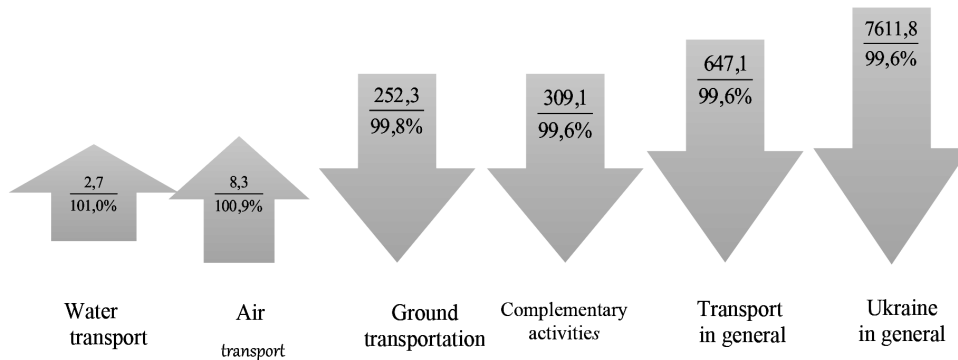


Fig. 4. Number of full-time employees, thousand people and their change in % to the same period (developed by the authors based on [5])

Fig. 4. shows that the overall dynamics of full-time employees in the transport sector meets the all-Ukrainian trend and is characterized by a slight reduction. At the same time, in the sectors of air and water transport, a slight positive growth should be noted. In addition, additional activities related to logistic support have slightly less drop than road transport.

Studying the dynamics of the coefficients of movement of workers (Fig. 5) for 2017, we may note that the engagement turnover rate is lower than for the departure

in general for Ukraine, and in the area of transport, in the area of road transport and additional activities. At the same time, we may note the revival of air and water transport.

Common for all industries are the following trends:

- reducing the number of employees from 1150.9 thousand persons in 2012 to 991.6 thousand persons in 2017. (according to figures provided by [5]);
- wage growth in the industry over the analysis period from 2012 to 2017 is from 3,405 UAH to 7,688 UAH. At the same time, in comparison with the national level, the

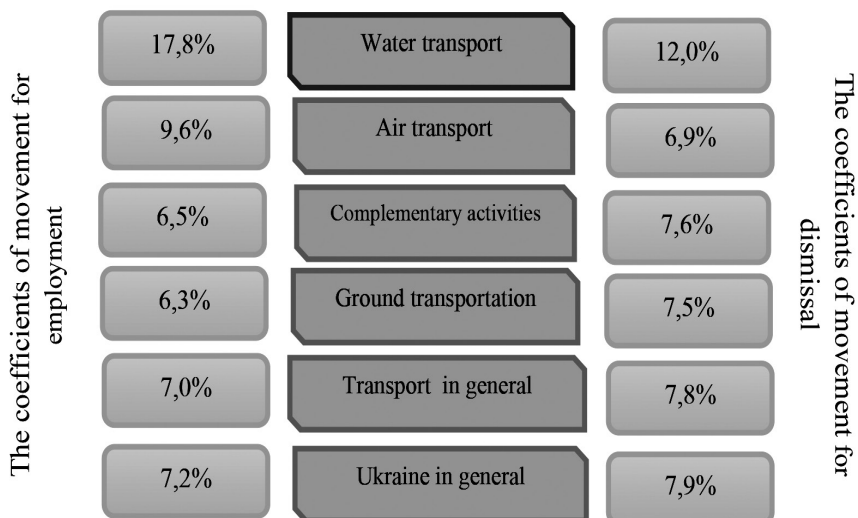


Fig. 5. The coefficients of movement of workers for 2017 (developed by the authors based on [5])

wages of the industry were lower in 2012, and in 2017, it exceeded the national level by 8.2% (according to figures provided by [5]);

- increase in the number of vacant jobs from 4.4 thousand to 5.4 thousand for the period from 2012 to 2017. (according to figures provided by [3,5]).

Since the number of employees is the basis for the formation of the workforce capacity of enterprises, it is necessary to determine the factors affecting it.

We believe that the number of employees in the field

of transport ( $y$ ) is influenced both by factors characterizing economic activity in the industry and motivational factors that make it attractive for employment. These factors are:  $x_1$  - cargo turnover;  $x_2$  - passenger turnover;  $x_3$  - average monthly salary translated into the US dollar. It is advisable to identify the impact of these factors and build a forecast model using regression and correlation analysis.

The order and results of the regression-correlation analysis are shown in Fig. 6.

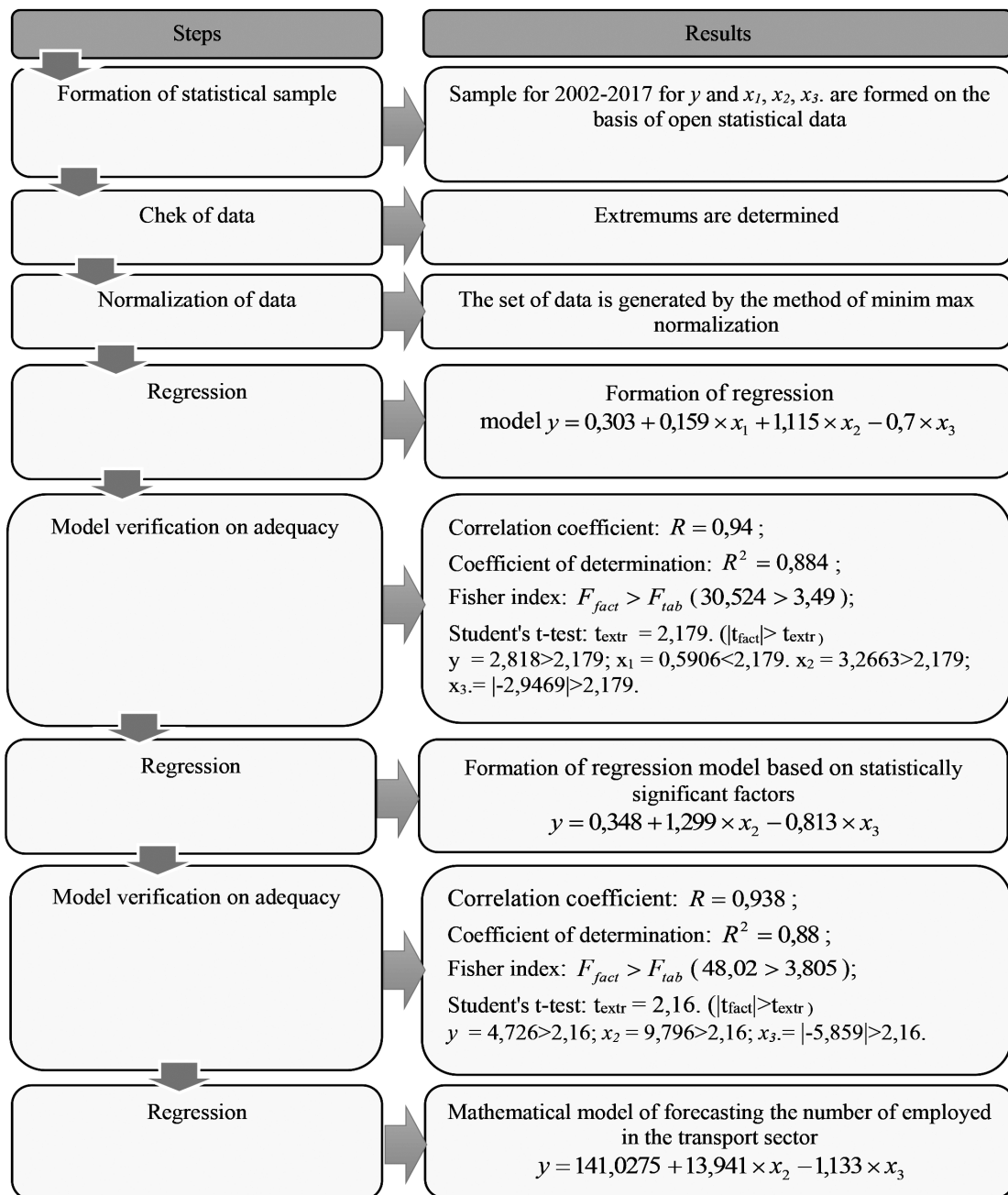


Fig. 6. Steps and the results of correlation and regression analysis (developed by the authors)

The calculated coefficients of the arguments show that when the variable  $x$  increases by one, the average value  $y$  increases by the corresponding value of the coefficient. The “+” sign near the coefficient shows a direct correlation between the corresponding arguments and the value of the employed, the “-” sign shows the inverse one. The factor with the most direct impact is:  $X_2$  - with an increase in passenger traffic by 1 billion.pass.km, the number of employees in this area increases by 13.941 thousand people. The negative coefficient 1.133 near  $x_3$  indicates the insufficiency of the level of wages in the industry and its value contributes to the depletion of the workforce capacity of enterprises and the impossibility to remain in the industry.

Conclusion. The study summarizes the main trends that have shaped at different levels in the area of labor – from global to industry; the features and directions of

transformation of the characteristics of workers as agents of the workforce capacity of enterprises are defined; the factors and the force of influence on the workforce capacity of transport enterprises and their effect on the trends of workforce capacity development are determined, as well as the forecast model is developed; the problem points of formation of the workforce capacity of transport enterprises are explained.

Therefore, the above evidences the significant transformations in the area of human resources management at the enterprises both due to external factors and changes in the object of management, which requires the development of new systems, forms and methods of management that could be adapted very quickly to dynamic changes, and these are the issues the authors intend to consider in further research.

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