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**ABSTRACT**

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As evidenced by the research results of Chapter 1, the practical component of financial relations in the conditions of recovery and post-war transformation processes, high variability of the environment requires the maximum involvement of every member of society in the functioning of the financial system and the accumulation of the financial potential of Ukraine. Road transport infrastructure is a powerful lever, therefore the search for ways to improve the main directions of its development program is a priority vector. Insufficient provision of the transport infrastructure with the resources necessary for its functioning leads to a decrease in the efficiency of its development, and the unbalanced development of modern types of transport in conditions of limited resources. The role of transport infrastructure in the system of socio-economic development of the region is determined. A detailed author's definition of the term "transport infrastructure of the region" is provided. Factors influencing the transport infrastructure of the region and the economic consequences of their implementation are systemized. The supporting subsystems of the motor transport infrastructure were studied, and on this basis the definition of the category "motor transport infrastructure" was given. A management system for the region's motor vehicle infrastructure has been developed. The stages of the formation of the program for increasing the efficiency of the development of motor transport infrastructure have been determined. Variations regarding the formation of the basic principles of the program for increasing the efficiency of the development of the motor transport infrastructure of the region re analyzed. Ways of improving directions for increasing the efficiency of managing the development of motor vehicle infrastructure at the state, regional and local levels are proposed and substantiated.

**KEYWORDS**

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Transport infrastructure of the region, motor transport infrastructure, development program, socio-economic development, management system.

**2.1 PROBLEMS ON THE ROAD TO THE DEVELOPMENT OF MOTOR TRANSPORT INFRASTRUCTURE**

Transport and transport infrastructure, which provides the conditions for its operation, is one of the system-forming branches of the economy of the regions, which ensures their territorial integrity and the unity of the economic space, and therefore the development of transport infrastructure

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is a necessary condition for the implementation of an innovative model of economic growth and improving the quality of life of the population of the regions. The lagging behind the development of the transport infrastructure from the needs of the national economy branches of the regions in the field of freight transportation restrains the development of the economy of the region as a whole.

At the same time, it should be noted that insufficient provision of the transport infrastructure with the necessary resources for its functioning leads to a decrease in the efficiency of its development, and the unbalanced development of modern types of transport in conditions of limited resources (often these resources are investment resources) leads to an irrational ratio in the transport balance of the region. The solution to this problem depends on overcoming the problem of spatial differentiation of the country's regions, as well as the overall development of the national transport services market [1]. The developed methods do not fully take into account the assessment principles that characterize the parameters of the transport infrastructure; the proposed indicators cannot always be calculated on the basis of published statistical reports; there is no single methodical approach to assessing the effectiveness of the development of the transport infrastructure of the region; efficiency is assessed mainly through indicators reflecting the results of its activity; compliance of the motor transport infrastructure with the needs of the region in the implementation of transport and economic connections is not taken into account. Therefore, the solution of these problems is currently an actual direction of research in the complex of socio-economic development of the region.

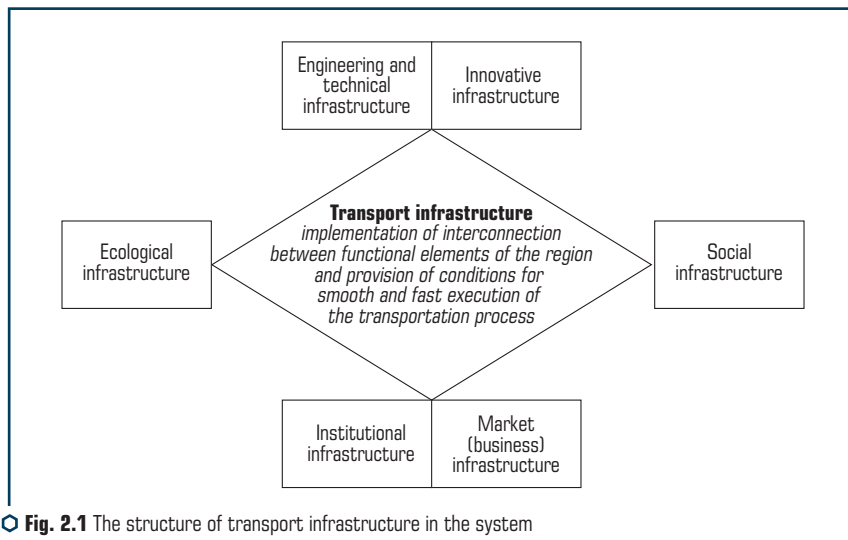
## 2.2 FEATURES OF THE FORMATION AND DEVELOPMENT OF MOTOR TRANSPORT INFRASTRUCTURE

Unlike other branches of the economy, transport is a necessary condition for regional production – the region can successfully develop without raw materials, but without the presence of a transport complex, the main component of which is transport infrastructure, its socio-economic development is practically impossible. The presence of transport flows in the region implies a developed transport infrastructure, which makes it possible to fully ensure their development with the use of modern technologies. Transport infrastructure is aimed at ensuring transportation needs of the economy and the population of a separate territory, reliable internal and interregional trade in accordance with the requirements of national economic and environmental security, planned and proportional development of land, water and air. routes, regional transport security, as well as mobilization readiness for transportation in emergency situations [2].

Scientific works [2, 3] proved that the transport infrastructure is a separate consolidated element of the regional infrastructure, the key overall function of which can be considered the implementation of regional and interregional transport and economic connections (**Fig. 2.1**).

The lack of an effective transport infrastructure causes loss of products in the process of its movement both by elements of the infrastructure of the region and outside its borders, restrains the development of branches of the national economy and social relations, as well as social

development of the region, which proves the decisive role of the transport infrastructure in the implementation of the processes of reproduction of the region.

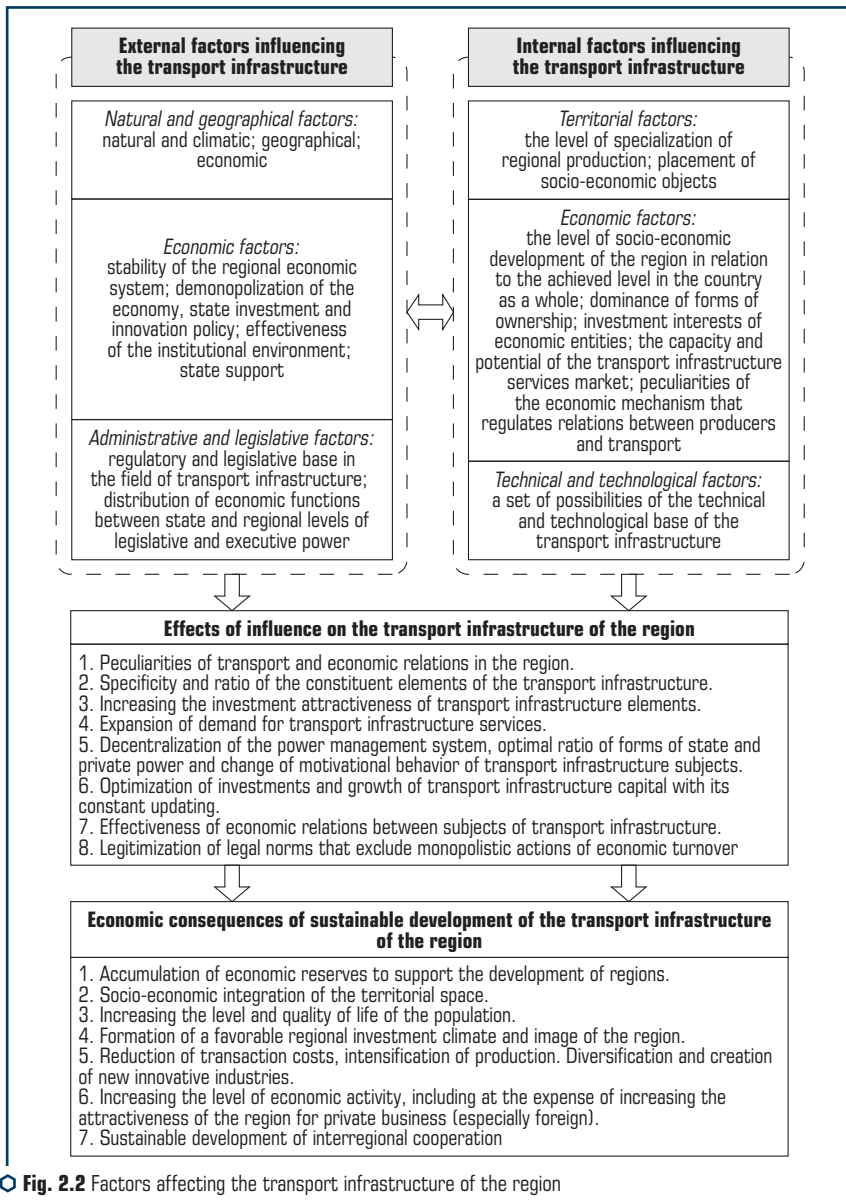


**Fig. 2.1** The structure of transport infrastructure in the system of socio-economic development of the region  
*Source: systematized by the author based on [2, 3]*

Based on the above-described processes, own experience and researched scientific sources [1–5], it can be concluded that the transport infrastructure of the region is a specific (special) type of infrastructure complex that has a special region-forming character, which is expressed in the ability of the transport infrastructure to ensure the territorial integrity of the region and create conditions for its socio-economic development by performing the functions entrusted to it to ensure transport and economic connections between different territories and territorial-administrative entities. Such an interpretation of this category in our study will allow a more in-depth assessment of the efficiency of development and the compliance of the transport infrastructure with the needs in the implementation of transport and economic connections of both a separate region and the country as a whole.

It can be argued that the nature of the development of transport infrastructure and its functional features are determined based on the specifics of the region, the commonality of regional socio-economic interests under the influence of many different factors. Depending on the goals of the study, a different set of factors of the efficiency of the development of transport infrastructure is substantiated, which are expediently classified according to the scope of action into external ones arising at the level of the macroeconomic system and internal ones arising at the level of regional transport infrastructure (**Fig. 2.2**) [6–8].

**2 ROAD TRANSPORT INFRASTRUCTURE DEVELOPMENT PROGRAM OF THE REGION:  
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**Fig. 2.2** Factors affecting the transport infrastructure of the region and the economic consequences of their implementation

Source: developed by the author based on [6–8]

From **Fig. 2.2**, it turns out that internal factors are subjective and directly affect the efficiency of transport infrastructure, so these factors can be defined as infrastructure-forming. External factors are objective and have an indirect effect on the efficiency of functioning not only of transport infrastructure, but also of other types of regional infrastructure, so they can be defined as conditions created in the economy for the formation of regional infrastructure.

Thus, the effectiveness of the development of the transport infrastructure of a specific territory is determined by the influence of infrastructure-forming factors and the conditions created in the economy for its formation and at the same time is one of the determining factors of the level of socio-economic development of the region. It is worth noting that the influence of transport infrastructure on regional development under the influence of these factors can be both strengthened and weakened, and therefore their study allows not only to determine their role, specificity and direction of influence, but also to assess the economic consequences of the effectiveness of regional transport infrastructure development [6]. The experience of the world's leading countries shows that the creation of a developed transport infrastructure contributes to the effective use of the resource, economic and social potential of territories through the effective implementation of transport and economic connections [7].

Motor transport infrastructure is assigned the most important state task – along with other types of transport infrastructure, it is designed to form a unified transport complex of the country, to meet the country's needs in the implementation of transport and economic connections. Currently, the road transport infrastructure occupies one of the leading places in the transport and infrastructure complex of Ukraine – in 2022, road transport will account for more than 42 % of all transported passengers and approximately 30.0 % of cargo (note that in pre-war times, the specific weight of transport road transport was much more – more than 50 % of passenger transportation and 75 % of cargo transportation) [8, 9].

It should be noted that the main task of the motor transport infrastructure is to meet the needs of the economic system in the implementation of transport and economic connections. So, the motor transport infrastructure is a multidimensional system, and each of its subsystems is a set of elements that provide various aspects of the transport process. Studies have shown that the entire set of elements of the motor transport infrastructure can be conventionally divided into four functional subsystems based on the feature of provision (**Fig. 2.3**).

Thus, on the basis of the researched in **Fig. 2.3** of support subsystems and the above definition of the concept of "transport infrastructure", it is possible to make an author's definition of the category "motor transport infrastructure", namely, it is a set of interconnected structural elements that provide transportation and related processes that perform the tasks assigned to this type infrastructural complex functions to create conditions for the implementation of transport and economic connections at the local, regional and state levels.

It is worth agreeing with the opinion of transport infrastructure researchers [1, 3, 5–8, 10, 11] that the most important problem of the effective development of the transport infrastructure in Ukraine and its regions is the unsatisfactory transport and operational condition, a high degree

of wear and tear and non-compliance with modern technical requirements the existing network of public highways and artificial structures on them, as well as structures and service equipment of automobile carriers.

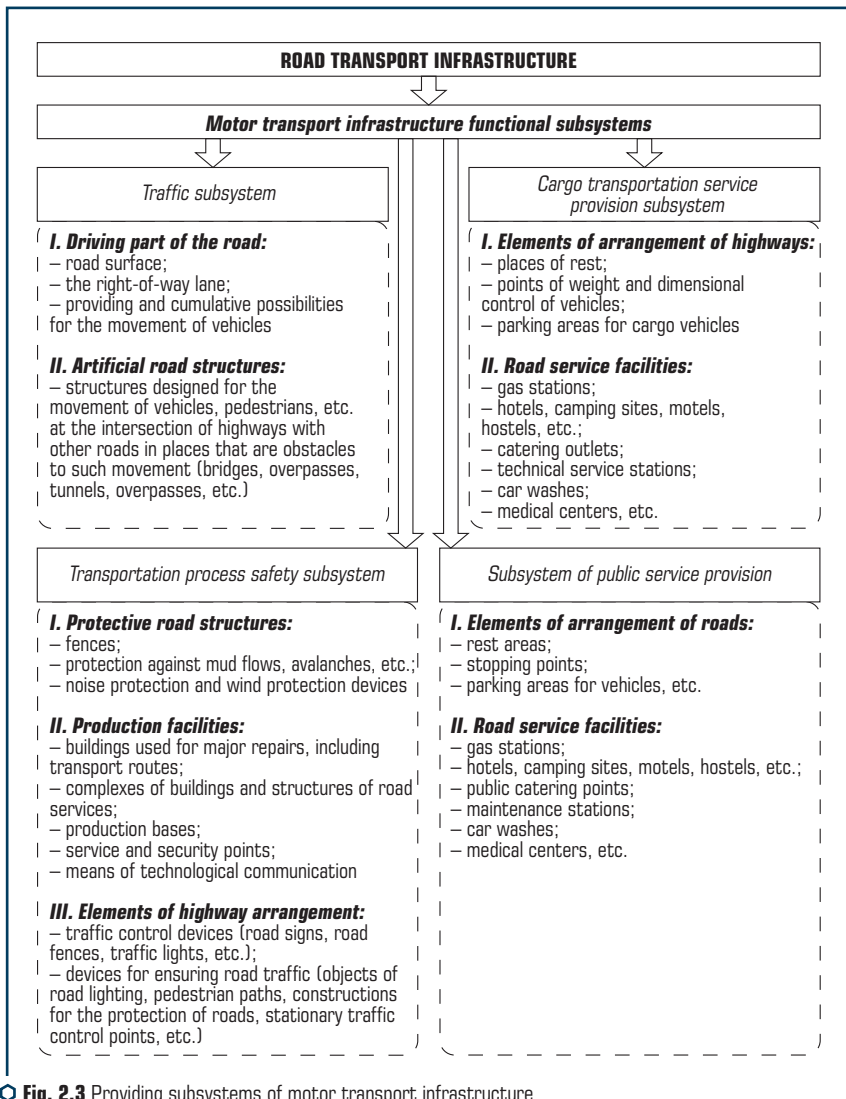


Fig. 2.3 Providing subsystems of motor transport infrastructure  
Source: built by the author based on [10, 11]

The problems listed above create a threat of slowing down the economic growth and social development of the regions of Ukraine, and therefore, without their solution, it is impossible to achieve radical positive changes in the socio-economic situation of the country.

Solving these problems requires an assessment of the provision of the motor transport infrastructure with the necessary functional subsystems, the efficiency of its development and compliance with the needs of the region in the implementation of transport and economic connections and the mobility of the population. For this purpose, it is expedient to form a system of management of the transport infrastructure of the region.

### 2.3 SYSTEM OF MANAGEMENT OF MOTOR TRANSPORT INFRASTRUCTURE OF THE REGION

As discussed above, the transport infrastructure plays a dual role in the socio-economic development of the region, it is rightfully considered a key factor in the formation of both economic and social space. Such a special position of this type of infrastructure complex in the region is explained by the fact that the motor transport infrastructure provides the needs of the region in the implementation of transport and economic connections.

Therefore, ensuring a high level of adaptability of the motor transport infrastructure to the dynamic conditions of the development of the regional environment and meeting the existing needs of the region in the implementation of transport and economic connections requires the need for its qualitative and quantitative assessment, which is one of the main elements of the management system of the motor transport infrastructure of the region. It is worth noting that such an assessment should be carried out in order to determine the possibilities of forming an effective motor transport infrastructure in accordance with the needs of the region in the implementation of transport and economic connections using the existing intra-regional reserves. Based on this, let's consider it expedient to form a system for managing the transport infrastructure of the region, which consists of:

- login to the system, which collects all available retrospective information on the state and problems of the region's motor transport infrastructure;
- five interconnected subsystems, which are the core and main driving force of the developed system;
- exit from the system, where the expected results of the system functioning are presented;
- feedback, which is the main mechanism for correcting the effects of retrospective data and subsystems of the formed system by the region's motor transport infrastructure (**Fig. 2.4**).

As can be seen from **Fig. 2.4**, the logical result of the operation of the system of managing the road transport infrastructure of the region is the development of a program to increase the efficiency of the development of the road transport infrastructure in accordance with the needs of the region. The ultimate goal of road transport infrastructure development is to meet the needs of the region in the implementation of transport and economic connections at the expense of more complete provision of infrastructure elements. Therefore, the formation of a program for increasing

the efficiency of the development of road transport infrastructure should be carried out not only for those regions where this infrastructure does not meet the needs of the region due to the low supply of its infrastructure elements (the first case), but also for regions with an effectively developed road and transport infrastructure (the second case), as well as for regions where the level of provision of structural elements exceeds the needs of the region in the implementation of transport and economic connections (the third case).

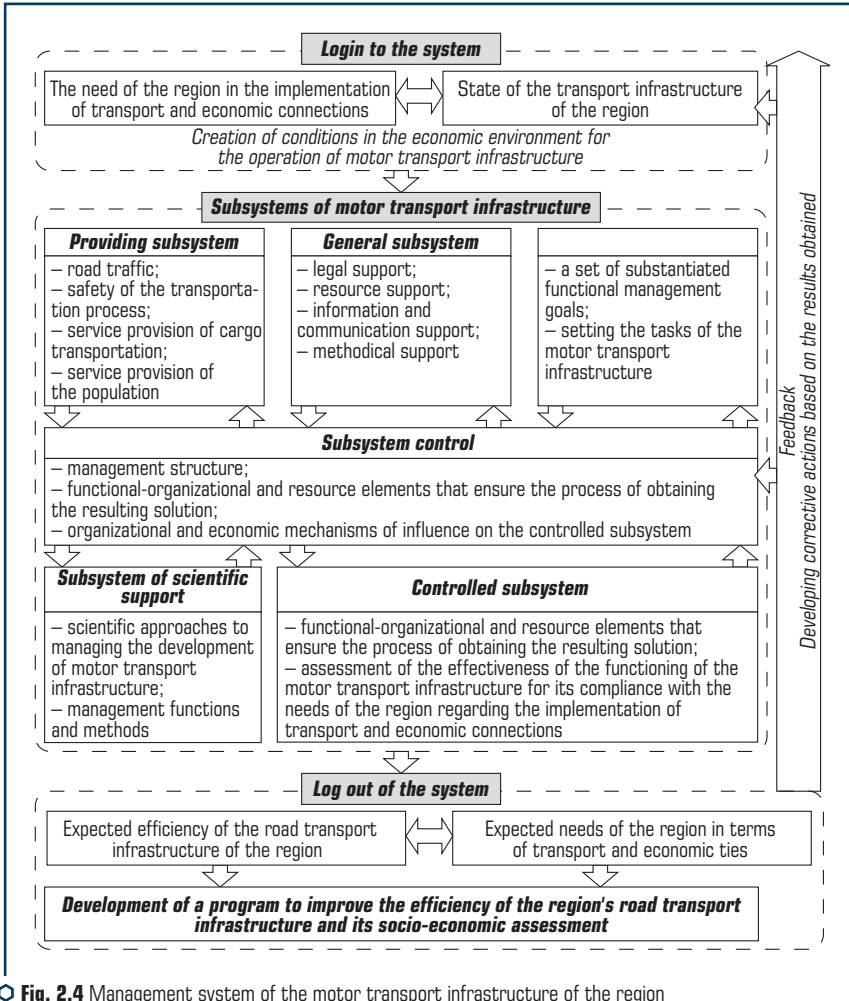


Fig. 2.4 Management system of the motor transport infrastructure of the region  
Source: developed by the author



From this, it is possible to draw general conclusions that the measures of the program should be aimed at:

- in the first case, to increase the efficiency of the development of the motor transport infrastructure in terms of compliance with the needs of the region in the implementation of complex transport and economic connections;
- in the second case, to achieve sustainable compliance of the motor transport infrastructure with the needs of the region in the implementation of complex transport and economic connections;
- in the third case, to support sustainable socio-economic transport infrastructure of the region.

For all the cases described above, the formation of a program for increasing the efficiency of the development of motor transport infrastructure should consist of the following stages, namely:

Stage 1. Identification of elements of the structural components of the motor transport infrastructure to meet the needs of the region in the implementation of complex transport and economic connections. For the successful implementation of this stage of the program, it is advisable to divide it into the following components, in particular:

- ranking of individual indicators of provision of motor transport infrastructure with infrastructural elements according to the deviation from the average regional value;
- identification of infrastructural elements that do not meet the needs of the region in the implementation of complex transport and economic connections based on the result of their ranking.

Stage 2. Elucidation of factors that have a negative impact on the provision of motor transport infrastructure with elements of structural components.

Stage 3. Development of ways to increase the efficiency of the development of motor transport infrastructure (the main stage of program development, the effective implementation of which will allow achieving sustainable socio-economic growth of the region in the field of motor transport infrastructure).

Stage 4. Selection of priority directions for increasing the efficiency of the development of motor transport infrastructure.

Stage 5. Processing and adjusting the performance criteria of the program's measures, which are aimed at increasing the efficiency of the development of motor transport infrastructure, using feedback.

Thus, it can be concluded that the formation of the program is carried out taking into account the level of provision of the necessary infrastructure elements and compliance with the needs of the region in the implementation of complex transport and economic connections in order to eliminate a possible imbalance between them. At the same time, the region's need to implement complex transport and economic connections provides an opportunity to have different options for forming a program to increase the efficiency of the development of motor transport infrastructure, taking into account the level of its provision with elements of functional subsystems and compliance with the needs of the region in the implementation of transport and economic connections (**Table 2.1**).

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**2 ROAD TRANSPORT INFRASTRUCTURE DEVELOPMENT PROGRAM OF THE REGION:  
IMPROVEMENT OF MAIN AREAS**

**Table 2.1** Variations regarding the formation of the basic principles of the program to increase the efficiency of the development of the motor transport infrastructure of the region

<b>No.</b>	<b>Correspondence of the motor transport infrastructure to the needs of the region</b>	<b>Variations in the formation and implementation of the program</b>
I	Available reserves for the use of motor transport infrastructure for the needs of the region in the implementation of complex transport and economic connections	<ul style="list-style-type: none"> <li>– support for effective socio-economic development of the region's motor transport infrastructure;</li> <li>– achieving a more sustainable compliance of the motor transport infrastructure with the needs of the region in the implementation of complex transport and economic connections</li> </ul>
II	Road transport infrastructure meets the needs of the region in the implementation of complex transport and economic connections	<ul style="list-style-type: none"> <li>– achievement of a more stable compliance of the motor transport infrastructure with the needs of the region in the implementation of complex transport and economic connections;</li> <li>– increasing the efficiency of the development of motor transport infrastructure and bringing its characteristics to a level that meets the needs of the region</li> </ul>
III	Road transport infrastructure does not meet the needs of the region in the implementation of complex transport and economic connections and restrains their development	<ul style="list-style-type: none"> <li>– achievement of a more stable compliance of the motor transport infrastructure with the needs of the region in the implementation of complex transport and economic connections;</li> <li>– increasing the efficiency of the development of motor transport infrastructure and bringing its characteristics to the level that meets the needs of the region</li> </ul>

*Source: developed by the author*

It should be noted that the conducted studies of the implementation of various programs of regional and local development [12, 13], including those aimed at increasing the efficiency of the development of motor transport infrastructure, indicate significant shortcomings that do not allow optimal use of financial and economic, resource and organizational and management potential of regions regarding their implementation. This is primarily due to the incorrect allocation of strategic priorities in the structure of programs, which does not allow to effectively solve the tasks of regional socio-economic development. In this regard, let's consider it expedient to investigate and develop ways of improving the directions of increasing the efficiency of the development of motor transport infrastructure.

#### **2.4 IMPROVEMENT OF DIRECTIONS FOR INCREASING THE EFFICIENCY OF MANAGEMENT OF THE DEVELOPMENT OF MOTOR TRANSPORT INFRASTRUCTURE**

In the conditions of the modern dynamic socio-economic situation in Ukraine, researching the problems and prospects of introducing innovative models and management methods into the motor transport infrastructure of the regions is an urgent task, since the process of forming its unified system is very urgent complex and does not meet the modern parameters of the development of the entire infrastructure system of the national economy. In the previous chapter of this study,

the author's vision for the formation of the management system of the motor transport infrastructure of the region is proposed, the final result of which is a program for increasing the efficiency of the motor transport infrastructure development. It was also proved that the main stage of the construction of this program is the development and improvement of directions for increasing the efficiency of management of the development of motor transport infrastructure. For this purpose, it is expedient to form a system complex of general economic tasks regarding the determination of directions for the development of the motor transport infrastructure of the regional economy, in particular:

- complex construction of infrastructure in the regions;
- observance of the regional balance of interests of all subjects of the motor vehicle market, smoothing of spatial differentiation;
- ensuring public-private partnership, technical and technological improvement;
- formation of a set of measures regarding the institutional and cluster attractiveness of the region.

To solve these problems, it is advisable to divide the development and improvement of directions for improving the management of the development of motor vehicle infrastructure into three components, in particular, state-regional, regional, and regional-local [14]:

#### **I. State-regional component.**

In scientific literature and in practice, it has been proven that state influence is fundamental, in particular:

- the state is always present in the economy and it should not depart from it;
- the degree of state participation depends on the set and volume of functions. which are recognized;
- practical policy cannot be based entirely on any one doctrine, because circumstances arise in life that objectively make it expedient for the state to perform various sets of functions and vary their scope;
- the choice of the optimal level of state participation in the economy must take into account a number of factors, including the conditions and stage of the country's development, its position in relation to other countries, the peculiarities of national culture and institutions, the degree of uncertainty of the current situation, other force majeure circumstances (military operations, epidemics, etc.).

Thus, it is possible to clearly position the following directions for increasing the efficiency of management of the development of motor vehicle infrastructure in this component, namely:

1. Modernization of the regulatory and institutional framework at the state level. It should be noted that the improvement of the legal system is a continuous process. However, the main drawback of this improvement of the legislation is the lack of a system of consistency between individual provisions of the Civil Code and normative interpretations in other administrative documents. It should also be noted that the legal registration or granting of legal status lags far behind in the field of improving the regulatory and legal framework for the adaptation of scientific and technical, technological improvements in socio-economic relations in the development of infrastructure

in general, and in motor vehicles in particular. This especially applies to everyday norms and rules of human behavior, groups of people on transport when using innovative facilities and communications, which are sometimes not directly protected in the legal aspect, and indirect legal protection under current legal acts is ineffective. Therefore, it is necessary to emphasize the importance of the next direction of improvement.

2. Ensuring comprehensive safety and stability of the motor vehicle system. Comprehensive security involves not only the legal side of the issue, but also a simple formalization of the rules of use, as well as the formation of a system or its modernization, continuous professional development of the personnel employed in transport or motor transport communications.

3. Increasing the competitiveness of the state motor transport system. It can be achieved through the formation and constant growth of technical and technological and service potential. Traditionally, competitiveness in the motor transport industry is considered as the compliance of the transport service with the requirements of the market situation in terms of technical, technological, economic and other characteristics that determine its difference and superiority from the services of other carriers [15]. This direction is important from the point of view of reducing the cost of transportation due to the involvement of additional paid services. This creates prerequisites for the profitable operation of transport organizations, provides additional employment at transport enterprises, etc. [15].

4. Overcoming limitations of socio-economic development. This direction can be developed at the expense of infrastructure investments, which are designed to solve the problem of excessive wear and tear of fixed assets, modernization of the fixed capital of motor vehicle enterprises and organizations of the regional economy, as well as to be included in the system of co-financing of entrepreneurial initiatives and state programs for the modernization of motor vehicle infrastructure and the introduction of resource-saving technologies into its operation.

5. Development of motor vehicle complexes and their integration into the world transport system.

6. Expansion of the capacity of the transport network at the state and regional level.

7. Implementation of transit export-import potential through a complex of investment measures aimed at the development of international transport corridors.

8. Creation of financing programs for the reconstruction and construction of new buildings and structures of motor transport infrastructure of national and regional importance.

9. Formation and distribution of innovative logistics technologies that increase the quality and availability of motor transport services.

10. Formation of a grid network of national highways, which is a long and costly process, which is implemented only under the conditions of the presence of autonomous, targeted and stable sources of funding for the road industry. Currently, in the modern conditions of Ukraine, it can be implemented only in the post-war period.

11. Formation of a complex state-regional system of tariff regulation in the motor transport system.

12. Formation of state rules regarding the use of land plots for the creation of new facilities and communications of the region's motor transport system.

## **II. Regional component.**

This component includes a number of directions that are characteristic of certain regions in their dominant development, that is, they have certain motor vehicle specifics or complex characteristics based on natural and geographical parameters.

Modern socio-economic policy of the state, according to many scientists and specialists, dictates such conditions of development, under which the center of gravity of economic policy should be shifted from external sources of development to internal ones, the main of which in the long term is the increase of the reproductive potential of regions and cities through development territory and development of human potential [16]. The basis of such "regionally oriented development" should be the modernization of infrastructure – the fundamental layer of regional and urban systems, which creates resource prerequisites for economic growth [16].

Thus, it is possible to establish a circle of directions for improving the development of the motor transport infrastructure of the regional economy, namely:

1. Introduction of new equipment and technologies in the road transportation market.
2. Update of the motor vehicle fleet (passenger, cargo).
3. Support in the development of the competitive sector of private operator services in the region's motor transport system.
4. Development of the supporting transport network in the regions.
5. Organization of high-speed movement of passenger and cargo vehicles on priority routes of the network due to the construction of modern high-quality roads and infrastructural facilities of the regions.
6. Implementation of large infrastructural regional projects involving investments (including foreign ones).
7. Regional arrangement of directions of international motor transport corridors and their branches.
8. Reconstruction and construction of cluster-type regional motor transport infrastructure.
9. Achieving the optimality of the indicator of "humanity" of the regional motor transport system, i.e. 3 to 1 in relation to the ratio of passenger-kilometers to ton-kilometers (it is considered the optimal norm of this indicator for large developed countries [17]).
10. Elimination of regional "lobbying" and corruption connections (schemes) in the development and implementation of various motor transport projects.
11. Formation and development of institutional organizations and structures that regulate motor transport policy and provide broad services to the population.
12. Development and implementation of plans and implementation programs to increase the capacity of the supporting transport network of the region.
13. Construction of regional programs for leveling the causes and consequences of traffic accidents.
14. Formation of a network of nodal distribution centers to create conditions for increasing the competitiveness of cargo delivery from the sender to the consignee, including reduction of delivery time, reduction of transportation costs, reduction of risks, control of cargo movement along the entire path.

15. Formation of a system of high-tech projects for the development of regional motor transport hubs.

16. Development of the concept of development of regional motor transport infrastructure for passenger transport of general use.

### **III. Regional and local component.**

The main pool of problems of motor transport infrastructure with all the various strategic results of state development programs is implemented, first of all, at the local level. It should be noted that this implementation goes in two directions, in particular: either the project of national significance is adapted to the territorial specifics of a specific local community, or the advantages of the local territory allow the implementation of motor transport infrastructure projects, which in turn brings a positive effect both for the region and for the entire nation economy of Ukraine. In any case, all infrastructural transport projects and modernization phenomena in this area are part of the tasks of city authorities [18].

The importance of understanding the role of local management of transport infrastructure is due to objective reasons that determine the relationship between the socio-economic sphere of human activity and the management of motor transport provision of this activity in the local territorial formation.

In the implementation of the infrastructure policy at the regional level, the main attention was paid to the measures of technical modernization and re-equipment of the industry, and not to institutional transformations. However, the depth of the problems of the formation of socio-economic relations in the motor vehicle sector between its participants is quite significant and cannot always be fully resolved.

Whatever measures are taken by the regional authorities aimed at creating a functional motor vehicle environment, these actions are leveled by changes in the socio-economic environment of a specific territory of the region, the transformation of economic and industrial relations, as well as the socio-economic mechanisms and control levers operating at the local level [19].

Therefore, it is necessary to highlight and most effectively solve the following areas of development of the motor transport infrastructure, characteristic for the local level, namely:

1. Modernization and development of municipally owned motor vehicle infrastructure.
2. Ensuring stable, reliable and accessible communication links with socially important objects and other territories of the region in local territories.
3. Provision of modern information, communication and technical equipment of city transport hubs.
4. Update of morally and physically outdated equipment and technologies of motor transport infrastructure at the local level.
5. Elimination of cross-subsidization in the implementation of local motor transport projects, which creates the basis for the emergence of corrupt and fraudulent schemes for the outflow of financial and other resources.
6. Formation and development of innovative nodal transport platforms and loading and unloading complexes.
7. Development of the information and communication concept of local transport policy and its coverage in mass media.

8. Implementation of concession relations or public-private partnership at the local level.

9. Formation of the local concept of service of state and regional motor transport communications as a factor of increasing the employment of the local population and smoothing spatial differentiation [20].

10. Formation of urban traffic junctions and engineering systems of life support of the population.

11. Wide implementation of electronic and index informatization at the objects of motor transport infrastructure.

Summarizing all of the above research, it should be noted that the differentiation of directions for improving the development of motor vehicle infrastructure at the state, regional and local levels with their socio-economic detailing by objects of influence, as well as the broad integration of each program will allow to adaptively and rationally develop a unified system of managing the motor vehicle infrastructure of the region and timely and fully implement and implement the directions of socio-economic development substantiated in the work.

## 2.5 DISCUSSION OF THE RESULTS OF THE IMPROVEMENT PROGRAM FOR THE DEVELOPMENT OF THE MOTOR TRANSPORT INFRASTRUCTURE OF THE REGION

In the course of a comprehensive study of the actual problem of finding ways to improve the main parameters of the region's motor transport infrastructure development program, the following scientific, methodological and practical results were obtained, namely:

– a clarified author's definition of the term "transport infrastructure of the region" is provided – it is a specific (special) type of infrastructure complex that has a special region-forming character, which is expressed in the ability of transport infrastructure to ensure the territorial integrity of the region and create conditions for its socio-economic development by fulfilling the tasks assigned to it functions to ensure transport and economic connections between different territories and territorial-administrative entities;

– systematized factors of influence on the transport infrastructure of the region and the economic consequences of their implementation – this made it possible to prove that the effectiveness of the development of the transport infrastructure of a specific territory is determined by the influence of infrastructure-forming factors and the conditions created in the economy for its formation and at the same time is one of the determining factors of the level of socio-economic development of the region in general;

– a system of managing the motor transport infrastructure of the region was developed, the logical result of which is the formation of a program for increasing the efficiency of the development of the motor transport infrastructure in accordance with the needs of the region;

– the stages of the formation of the program for increasing the efficiency of the development of motor transport infrastructure are determined and a generalized conclusion is made that the implementation of this program is carried out taking into account the level of provision of the

necessary infrastructure elements and compliance with the needs of the region in the implementation of complex transport and economic connections in order to eliminate a possible imbalance between them;

– the ways of improving directions for increasing the efficiency of managing the development of motor transport infrastructure at the state, regional and local levels are proposed and substantiated.

The problem of finding directions for the development of the transport infrastructure of the region is outlined in this chapter, so the next chapter 3 will be devoted directly to the mechanism of managing the development of transport enterprises.

## REFERENCES

1. Dmytriieva, O. I. (2019). Spatial inequality and industry-regional asymmetry of innovative development of transport infrastructure in Ukraine. *Bulletin of Sumy National Agrarian University*, 3 (81), 51–58. doi: <https://doi.org/10.32845/bsnau.2019.3.9>
2. Dykan, V. V., Kovalevska, A. V., Bilous, L. B.; Aleksandrova, V. V., Rodchenka, V. B., Tretyak, V. P. (Eds.) (2018). *Implementatsiia dyrektyv yak faktor vplyvu na ekonomichni rozvytok rehionu. Sotsialno-ekonomichni rozvytok Ukrainy: prostorovyi, orhanizatsiino-administratyvnyi ta tsinnisnyi vymiry*. Kharkiv: KhNU imeni V. N. Karazina, 216–239.
3. Holubka, S., Ovcha, P. (2018). Mechanisms of regulation of motor transport in the system of national economy. *Ekonomika ta Derzhava*, 9, 4–10. doi: <https://doi.org/10.32702/2306-6806.2018.9.4>
4. Nykyforuk, O. I. (Ed.) (2018). *Rozvytok transportu z metoiu vidnovlennia i zrostantia ukrainskoi ekonomiky*. Kyiv, 200.
5. Dubnytsky, V. I., Fedulova, S. O., Vasyliuk, O. V. (2017). *Regional Infrastructure: Modernization, Priorities and Development Prospects*. *Problemy ekonomiky*, 2, 161–168.
6. Avanesova, N. E., Mordovtsev, O. S., Serhiienko, Y. I. (2020). The Theoretical-Methodical Principles of Identification and Interrelation of the Influence of Destabilizing Factors on the Economic Security of an Industrial Enterprise. *Business Inform*, 9 (512), 20–28. doi: <https://doi.org/10.32983/2222-4459-2020-9-20-28>
7. Dmytriieva, O. I. (2020). *Derzhavne rehuliuвання innovatsiinoho rozvytku transportnoi infrastruktury: teoriia, metodolohiia, praktyka*. Kharkiv: FOP Brovin O. V., 368.
8. Tatyryntseva, Y., Pushkar, O., Druhova, O., Osypova, S., Makarenko, A., Mordovtsev, O. (2022). Economic evaluation of digital marketing management at the enterprise. *Eastern-European Journal of Enterprise Technologies*, 2 (13 (116)), 24–30. doi: <https://doi.org/10.15587/1729-4061.2022.254485>
9. *Derzhavna sluzhba statystyky Ukrainy. Ekonomichna statystyka. Ekonomichna diialnist. Transport*. Available at: [https://ukrstat.gov.ua/operativ/menu/menu\\_u/tr.htm](https://ukrstat.gov.ua/operativ/menu/menu_u/tr.htm) Last accessed: 15.01.2023



10. Shyba, O. A. (2017). Vplyv rozvytku transportnoi infrastruktury na ekonomichne zrostantia krain-chleniv Yevropeiskoho Soiuzu. Lviv, 204.
11. Rudchenko, A. Yu., Polishchuk, O. N. (2017). Mechanism of the Megalopolis Transport/Infrastructure Development State Regulation. *Universytetski naukovi zapysky*, 61, 93–100.
12. Fediai, N. (2018). Features of the integration of ukrainian transport infrastructure into the trans-european network transport. *Efektivna Ekonomika*, 12. doi: <https://doi.org/10.32702/2307-2105-2018.12.93>
13. Levchenko, Ia., Dmytriiev, I., Dmytriieva, O., Shevchenko, I., Britchenko, I., Tripak, M. et al.; Dmytriiev, I., Levchenko, Ia. (Eds.) (2021). Problems and prospects of development of the road transport complex: financing, management, innovation, quality, safety – integrated approach. Kharkiv: PC TECHNOLOGY CENTER, 180. doi: <http://doi.org/10.15587/978-617-7319-45-9>
14. Levchenko, Ia., Dmytriiev, I., Dmytriieva, O., Shevchenko, I., Britchenko, I.; Dmytriiev, I., Levchenko, Ia. (Eds.) (2021). Methodological fundamentals of support of scientific and educational institutions through targeted capital investments. Problems and prospects of development of the road transport complex: financing, management, innovation, quality, safety – integrated approach. Kharkiv: PC TECHNOLOGY CENTER, 2–16. doi: <http://doi.org/10.15587/978-617-7319-45-9.ch1>
15. Ovchynnikova, V. O., Ostroverkh, H. Ye., Pasich, Ya. V. (2017). Formation of personnel strategy domestic enterprises of autotransport. *Visnyk ekonomiky transportu i promyslovosti*, 60, 178–185.
16. Antoniuk, D. A. (2015). Rozvytok instytutsionalnoi infrastruktury pidpriemnytstva rehionu v protsesi yevropeiskoi intehratsii. Lviv: DU "IRD im. M.I. Dolishnoho NAN Ukrainy"; Zaporizhzhia: ZIEIT, 340.
17. Tretiak, V. P. (2014). Upravlinnia rozvytkom sotsialnoi infrastruktury Ukrainy v umovakh hlobalizatsii. Kharkiv: KhNU imeni V. N. Karazina, 317.
18. Chavhan, S., Venkataram, P. (2017). Commuters' traffic pattern and prediction analysis in a metropolitan area. *Journal on Vehicle Routing Algorithms*, 1 (1), 33–46. doi: <https://doi.org/10.1007/s41604-017-0004-z>
19. Dmytriiev, I. A., Shevchenko, I. Yu., Kudryavtsev, V. M., Lushnikova, O. M., Zhytnik, T. S. (2019). The World Experience and a Unified Model for Government Regulation of Development of the Automotive Industry. *Public Policy And Administration*, 18 (3), 46–58. doi: <https://doi.org/10.5755/j01.ppa.18.3.24720>
20. Jiang, X., Zhang, L., Xiong, C., Wang, R. (2015). Transportation and Regional Economic Development: Analysis of Spatial Spillovers in China Provincial Regions. *Networks and Spatial Economics*, 16 (3), 769–790. doi: <https://doi.org/10.1007/s11067-015-9298-2>