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## **BALANCED REGIONAL DEVELOPMENT IN THE CONTEXT OF THE TRANSPORT COMPLEX OF KAZAKHSTAN AND AKTOBE REGION**

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**Abstract.** The article deals with the topic of balanced spatial development of the transport system of Kazakhstan and the Aktobe region. Due to economic and geographical factors, regional development policies are aimed at large cities, where access to infrastructure, capital, and labor is simplified. This leads to the disparity of extended development between territories, and without special measures, the difference between regional centers and depressed areas will only increase. The disproportionality of indicators of the development of the transport system of the country's regions and districts of the Aktobe region is consistently demonstrated. Authors list the measures that the state directs to smooth out the discrepancy. Based on the analysis of indicators for the development of transport infrastructure and mobility, ways to compensate for spatial imbalances and the possibility of polycentric development of regions are considered. The issue of subsidizing passenger transportation in socially important areas is also being considered.

**Key words.** Interregional differentiation, transport system, transport infrastructure, regional development policy.

**Аңдатпа.** Мақалада Қазақстан мен Ақтөбе облысының көлік жүйесінің теңдестірілген территориялық даму тақырыбы қарастырылған. Өңірлік даму саясаты экономикалық және географиялық факторларға байланысты инфрақұрылымға, капиталға және жұмыс күшіне қолжетімділік жеңілдетілген үлкен қалаларға бағытталған. Бұл аумақтар арасындағы территориялық дамудың диспропорциясын білдіреді, ал арнайы шараларсыз облыс орталықтары мен депрессиялық аудандар арасындағы айырмашылық тек артады. Еліміздің облыстары мен Ақтөбе облысы аудандарының көлік жүйесінің даму көрсеткіштерінің сәйкессіздігі бірізді түрде көрсетіледі. Мемлекет сәйкессіздікті жеңілдетуге бағыттаған шаралар сараланады. Көлік инфрақұрылымын дамыту индикаторларын және ұтқырлықты талдау негізінде кеңістіктік сәйкессіздіктерді өтеу жолдары және өңірлерді орталықтандырып дамыту мүмкіндігі қаралады. Сондай-ақ, әлеуметтік маңызы бар бағыттар бойынша жолаушылар тасымалын субсидиялау мәселесі қарастырылады.

**Түйін сөздер.** Өңіраралық дифференциация, көлік жүйесі, көлік инфрақұрылымы, өңірлік даму саясаты.

**Аннотация.** Статья рассматривает тему сбалансированного пространственного развития транспортной системы Казахстана и Актыобинской области. В силу экономических и географических факторов, региональная

политика развития направлена на большие города, где упрощен доступ к инфраструктуре, капиталу и рабочей силе. Отсюда вытекают диспропорции пространственного развития между территориями, и без специальных мер разница между областными центрами и депрессивными районами будет лишь возрастать. Последовательно демонстрируется непропорциональность показателей развитости транспортной системы областей страны и районов Актюбинской области. Перечисляются меры, которые государство направляет на сглаживание несоответствия. На основе анализа индикаторов развития транспортной инфраструктуры и мобильности рассматриваются пути компенсации пространственных диспропорций и возможность полицентрического развития регионов. Также рассматривается вопрос субсидирования пассажирских перевозок по социально значимым направлениям.

**Ключевые слова.** Межрегиональная дифференциация, транспортная система, транспортная инфраструктура, региональная политика развития.

**Introduction.** The major strategic goal of regional management policy in any country is to assure the productive development of regions and increase their overall competitiveness. The accomplishment of infrastructure complex development contingent upon the necessity to establish new socio-economic tasks in the particular regions and improve the methods of their implementation. It is necessary to constantly improve the current system of regional management, both in general and in separate branches such as transport. Smoothing out inter-regional disproportionality will lead to full coverage of the population with transport services, to increased mobility, to increased density of road networks, and as a result, to overall balanced development.

**Methods.** The research is based on theoretical and empirical methods of content analysis of materials from scientific and educative sources, analysis of scientific literature of recent years. Authors also analyzed data from state organizations in the field of transport. A comparative analysis is carried out, foreign experience in the formation of spatial development policy of the region is considered.

**Results.** To establish balanced regional development of transport infrastructure, cargo and passenger transportation, it is necessary to attract private investment for cross regional network quality and density. In the course of research on the topic, it was found that there is no universal model for application in the field of balanced spatial development, the choice of alternatives leads to shortcomings in each of them, ignoring of which by state can lead to a strong disproportion not only at the regional scale but also at the district level. Based on this, continuous monitoring of the implementation of regional development programs of a particular district is required.

**Discussion.** The development strategy of the Republic of Kazakhstan until 2030 also includes a regional development policy, on the implementation of which a lot depends. This regional policy, if it is considered in the context of the transport system, although it tries to avoid serious imbalances by developing supporting villages and cities, does not fully cover the problem of

interregional imbalance in the transport system. And this is logical, since the state does not have sufficient financial resources to solve all the problems at once, and it needs to concentrate on developing the transport system of agglomeration centers.

The issue of spatial balanced or sustainable development, including in the transport aspect, has been discussed in recent years in the works of Kurushina E.V., Petrov M.B. [1], Kotov A.V. [2], Kolmakov V.V., Polyakova A.G., Karpova S.V., Golovina A.N. [3], in terms of regional resilience – Giannakis E., Bruggeman A. [4] and others.

Based on the research, it was proved that the development of the transport industry in Kazakhstan is influenced by a lot of factors that are not inherent in the system, as well as some previously non-considered factors such as the solvency of the population [5]. Different logistics characteristics separately contribute to the classic types of rootedness in the geographical expansion of entities. However, this does not negate the effectiveness of other expansion alternatives [6].

Putting forward a hypothesis about the disproportionate development of the transport industry, it is necessary to demonstrate this. First of all, we analyze Kazakhstan's main transportation and logistics infrastructure indicators. WEF Global Competitiveness report considers various indicators, which include transport infrastructure indicators. Kazakhstan in 2019 ranked 55<sup>th</sup> and performed scores, shown in the Table 1.

Table 1. Kazakhstan's transport infrastructure indicators in Global Competitiveness report [7].

| Indicator                                       | Value    | Score | Rank |
|---|----------|-------|------|
| Road connectivity, range 0-100                  | 79.3     | 79.3  | 56   |
| Quality of road infrastructure, range 1-7       | 3.6      | 43.2  | 93   |
| Railroad density                                | 5.9      | 14.9  | 66   |
| Efficiency of train services, range 1-7         | 4.2      | 53.4  | 33   |
| Airport connectivity                            | 33,808.6 | 46.4  | 72   |
| Efficiency of air transport services, range 1-7 | 4.3      | 54.9  | 89   |
| Efficiency of seaport services, range 1-7       | 3.3      | 38.9  | 99   |

From the data on Table 1, we are able to conclude that not only regions, but there are differences by the modes of transport. In road connectivity indicator Kazakhstan ranked 56, performing score of 79.3. However, highest rank of country is efficiency of train services, in which Kazakhstan ranked 33, scoring 53.4.

Experience in developed countries, which top the WEF Global Competitiveness report and serves as benchmark, suggests that in circumstance of relatively low budget funds to fulfil the group of targets of regional policy in several districts and to solve issues of transport infrastructure, to reduce the weight on the republican and local budget it is required to broaden public-private

partnerships, more deep and intensive use of private sector funds to build toll roads and etc. For example, the regional policy of the European countries is mainly based on the theory of «poles of growth», in which satellite small cities focus on concentration cities. The key target of this model is to diverse and develop economic activity in relatively low degree regions in order to equalize the levels of socio-economic and infrastructure development [8].

To avoid direct adaptation, it is needed to analyze features of benchmark experience and adapt the mechanisms for developing activities in relatively less developed regions.

The topic of choosing a regional development model focused on centers of concentration and an overall balanced development program with support for depressed areas is the subject of ongoing discussions, choice which is left to public policy [9].

Before establishing of regional policy, an analysis of the agglomeration potential of regions and cities in Kazakhstan was carried out. As key indicators served demographic capacity, logistics and economic potential, alongside the administrative status of the center city.

Based on the conclusion of the analysis, it was proposed to determine the agglomerations of two levels: first level agglomerations - Astana, Almaty and Shymkent, cities of republican value, as having the greatest potentiality. Second level agglomerations – Aktobe agglomeration and Aktau agglomeration [10]. In general, the main task is to find out the formation scheme of agglomerations as long-term growth drivers in the development of Kazakhstan. Country scale and local integration, as a result, will only rise. The proposal of the recent state programs, was 3-way development, establishing agglomeration centers as transport hubs and key cities in transport system, synergistic development of its infrastructure, strengthening of spatial balanced long-term development.

In this term, we should note that Brakman, S., Garretsen, H., van Marrewijk, C. found that the degree and nature of regional urbanization is important for specific regional resilience [11].

Transport services gross output helps to determine main regions, where transport services provided, as shown in the Figure 1.

From the Figure 1, it is clear that main regions of transportation services concentration are republican value cities as Almaty – 1 140 718,58 million tenge, Nur-Sultan – 798 031,59 million tenge, and main resource bases as Atyrau – 1 011 631,88 million tenge, Karagandy – 507 601,29 million tenge.

Investments in the fixed assets indicator helps to highlight regions with investment attractiveness, which subsequently, directly and implicitly provides concertation of transportation service carriers' priority on given regions. The Figure 2 shows the distribution of investments in the fixed assets among the regions.

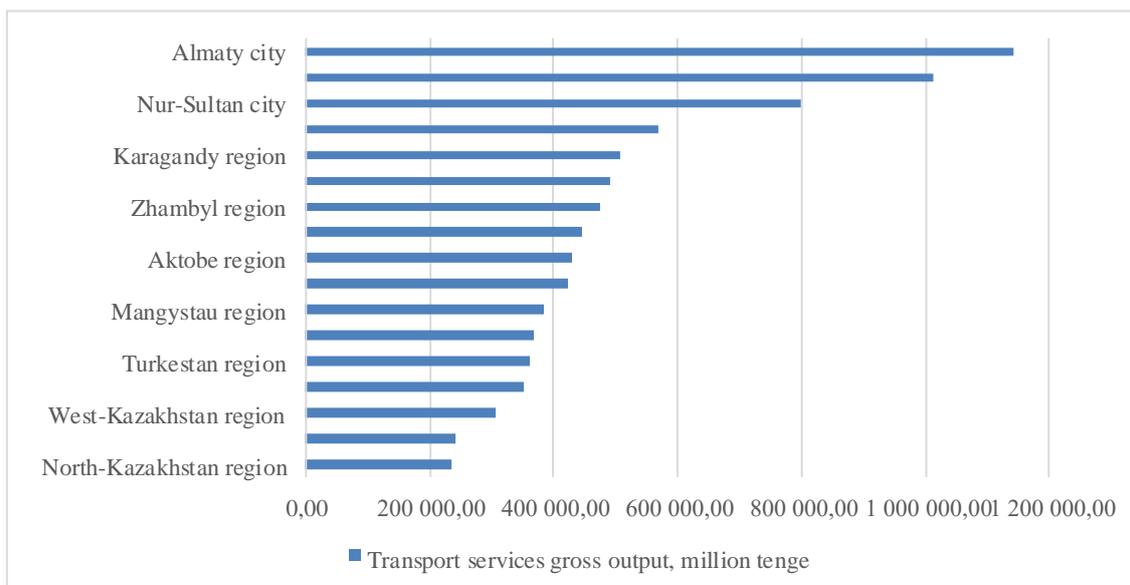


Figure 1. Transport services gross output among the regions [12]

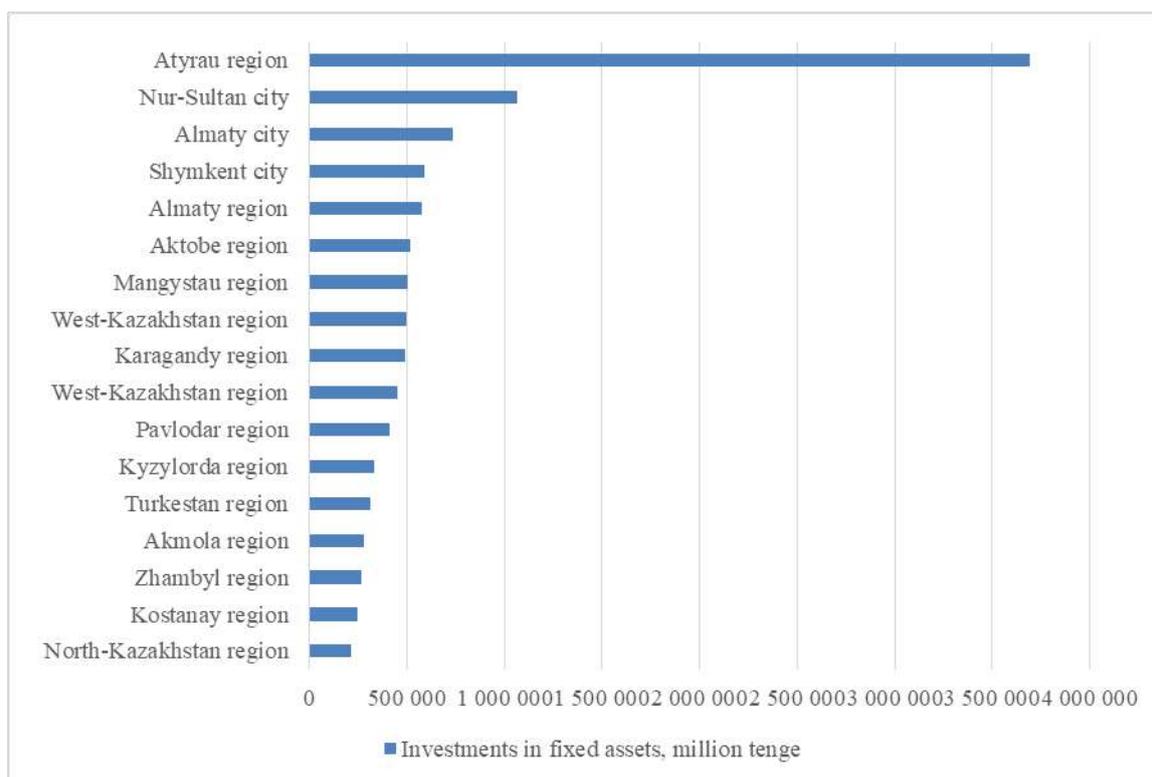


Figure 2. Investment in fixed assets among the regions [12]

As we can observe from the Figure 2, Atyrau region tops the list, attracting 3 694 401 million tenge, while the lowest score belongs to North-Kazakhstan region – 214 181 million tenge. It should be noted that despite the high rates of service production and investment attraction, Atyrau region is not defined as an agglomeration center or transport hub of regional importance.

Aktobe region. The creation of the Aktobe agglomeration will hugely expand the transport capabilities of the region, which is already the main center of the Western part of the country.

In five years, Aktobe should become one of the few urban centers in Kazakhstan. By this time, 31 localities in five districts will be located within the borders of agglomeration scheme, including the towns of Alga, Kandyagash and the single-industry town of Khromtau.

The Western Europe - Western China international transport corridor is the fastest road connecting Germany with China. The 628 kilometers long Aktobe segment of this road, was first commissioned in 2011. Nowadays, the main project in the field of highways is reconstruction of the Aktobe-Atyrau-Astrakhan road through the districts of Aktobe region. The progressive priority project for the advancement of transport infrastructure in the region is the Center-West corridor, which will provide access to the Aktau seaport and Kyryk dry port from the Nur-Sultan. The network of transport logistics centers will expand as a result of the creation of a multimodal transport corridor. National rail operator will lead this project, together with foreign investors. The possibility launch of cargo terminal at Aktobe international airport is being developed and evaluated.

For Aktobe region, as well as to other Kazakhstan regions, is characteristic appreciable differences in the level of development of districts and cities. Thereby, the coefficient of concentration of major entities shows that all key enterprises and big businesses are located in Aktobe city. In Aktobe city more than 77% of the region's entities are registered. The remaining 23% are related to resource extraction in the districts and relate to those enterprises for which proximity to the production and resource base plays a key role. This leads to the fact that due to small economic activity, the priority of the region in investment decreases and the outgoing flow of labor resources increases. In the development programs up to 2020, coordination measures were taken to direct migration flows from low-activity villages and districts to supporting administrative units where economic activity is relatively high. If government does not continue to coordinate the outflow of labor resources and does not invest in the transport industry of depressed regions, this will lead to a hopeless situation for the entire depressed region.

However, there is a need to develop a complementing theorization of the economies of migration, since the centrality of migrant labor, the role of employers, and the extraction of value from the transnational situation of migrants' lives remain vague [13]. On the Table 2, features of districts of Aktobe region are analyzed.

Table 2. Aktobe region's districts transportation characteristics [14]

| Districts          | Population                                   | Area, thousand km <sup>2</sup> | Distance to agglomeration center, km | Highways and roads                          | Last repair and construction projects  |
|--------------------|--|--------------------------------|--------------------------------------|---|--|
| Aitekebi district  | 24 895<br>density: 0,67<br>p/km <sup>2</sup> | 36,8                           | 307                                  | M-32, A-22,<br>Orsk-Rudniy<br>Klad railway  | Komsomol-Ushkatty 193 349,1<br>million tenge   |
| Alga district      | 40 783<br>density: 5,38<br>p/km <sup>2</sup> | 7,5                            | 47                                   | KD-5,<br>Aktobe-<br>Astrakhan<br>road       | Aktobe-Bolgarka-Shubarkydyk 3,9<br>billion tenge                                       |
| Baiganin district  | 22 809<br>density: 0,37<br>p/km <sup>2</sup> | 61                             | 248                                  | Aktobe-<br>Astrakhan<br>road                | Baiganin-Sagyzy  |
| Irgiz district     | 14 999<br>density: 0,36<br>p/km <sup>2</sup> | 41,5                           | 432                                  | Center-West<br>road                         | Irgiz street roads 189,7 million<br>tenge  |
| Kargaly district   | 17 107<br>density: 3,42<br>p/km <sup>2</sup> | 5                              | 135                                  | KD-2, KD-8                                  | Donskoe-Badamsha 1,8 billion<br>tenge  |
| Kobda district     | 19 062<br>density: 1,35<br>p/km <sup>2</sup> | 14                             | 115                                  | KD-6  | Kobda-Sol-Iletsk 4,6 billion tenge<br>Kobda-Martuk 4,359 billion tenge                 |
| Martuk district    | 29 980<br>density: 4,53<br>p/km <sup>2</sup> | 6,6                            | 86                                   | KD-1, KD-6                                  | Martuk-Baityrasai 178 149,9<br>million tenge   |
| Mugalzhar district | 67 416<br>density: 2,28<br>p/km <sup>2</sup> | 29,5                           | 98                                   | Center-West<br>road,<br>KD-4                | Pokrovka-Kenkiyak-Temir-Emba<br>2, 157 billion tenge                                   |
| Temir district     | 37 740<br>density: 2,99<br>p/km <sup>2</sup> | 12,6                           | 178                                  | Aktobe-<br>Astrakhan<br>road, KD-4,<br>KD-5 | Aktobe-Bolgarka-Shubarkydyk 3,9<br>billion tenge,<br>Shubarkydyk-Uil 1,1 billion tenge |
| Uil district       | 18 651<br>density: 1,62<br>p/km <sup>2</sup> | 11,5                           | 261                                  | KD-3  | Shubarkydyk-Uil 1,1 billion tenge<br>Uil-Karatal 248,3 million tenge                   |
| Khromtau district  | 42 951<br>density: 3,32<br>p/km <sup>2</sup> | 12,9                           | 92                                   | KD-2  | Tasotekel road 852,4 million tenge<br>Tassai road 729,9 million tenge                  |
| Shalkar district   | 45 996<br>density: 0,73<br>p/km <sup>2</sup> | 62,2                           | 358                                  | Center-West<br>road                         | Shalkar-Bozoi-Nukus 6,3 billion<br>tenge   |

On the Table 2, the area of the considered territory, density, road network and the population of the region remain constants of the spatial analysis [15]. As you can see, financial resources are steadily directed to maintaining the regional road infrastructure, and huge investments are allocated in areas with roads of national importance. As the main problem remains the rate of wear of surface.

Aktobe region consists of 372 rural settlements in 12 districts and agglomeration center of Aktobe. West and south part of Aktobe region is characterized by low population, road network, infrastructure objects density, while north part of the region has highest density. Several factors contribute to this:

- general plans for the development of localities are not developed for all villages which ultimately leads to an unpredictable development trajectory.

- inter-district roads and roads between villages and individual streets, in general, need major repairs, and in many areas they do not exist at all. This factor enormously limits the transit potential, growth of network density and etc.

- due to the very large financial investments required for the repair and construction of roads and stations, the funds provided do not cover even half of the network.

In the field of passenger transport of Aktobe region, due to the constant increase in prices for spare parts, vehicles, fuel and due to the low tariff for operations, several passenger carriers incur financial losses, since revenues do not cover the costs of transportation process. Because of unprofitability, the route of movement of carriers on intra-regional routes from Aktobe to Badamsha, Shubarkuduk, Irgiz, Emba, Kandyagash and Kenkiyak was stopped. For example, on the route Aktobe-Irgiz the contract with carrier was signed in 2018, but only 10 transportations were performed in 2019. Transportation costs composed 390 thousand tenge, while income composed only 240 thousand tenge.

To subsidize unprofitable routes, carriers have submitted calculations in accordance with the methodology for calculating tariffs for the provision of passenger and baggage transportation services on regular routes.

On June 2020, at a meeting of the tariff commission, the calculations of carriers on regular intra-regional routes of the Aktobe region were considered. According to the calculations of carriers, the required amount of subsidies for cross regional routes for the second half of 2020 is 116.5 million tenge. Due to the lack of regular transportation to Irgiz, Shubarkuduk, Badamsha, Kandyagash, Emba and Kenkiyak residents use taxi services. In Aktobe region, there are 3 bus stations in the cities of Aktobe and Khromtau, in 2018, at the expense of the private carrier a bus station was built in the village of Zhurgenov of Aitekebiy district. In other regional centers of the region there are cash points for the sale of travel documents.

Conclusion. From the analysis, we can conclude that for the balanced regional development of transport infrastructure, cargo and passenger transportation, if the dynamics of public financing is maintained, it is also necessary to attract private investment for cross regional network quality and density. In the sphere of influence of the territorial management should include not only acceleration of natural developing regional cluster processes, but also targeting the necessary for this prerequisites and conditions with an orientation subsequently on qualitative changes in directions and nature of regional socio-economic development.

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## ҒТАМР 06.81.45

### ШЫҒЫН, ҚҰН, БАҒА ҰҒЫМДАРЫНА ТЕОРИЯЛЫҚ КӨЗҚАРАСТАР

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**Аңдатпа.** Кәсіпорындарда шығын, құн, баға ұғымдары ерекше рөл атқарады. Ғалым экономистер Батыс елдеріндегі кәсіпорынның шығындарына тұжырымдама жасайды. Кәсіпорын шығындарының төмендеуі арқылы өндірістің қаржылық жағдайы жақсарады. Бәсекеге қабілеттілігі жоғарлайды. Өнімді өндіруге бағытталған шығын өзіндік құн болып сипатталады. Жалпы алғанда шығындардың бірнеше түрлері болады. Пайданы молырақ алу үшін өндірістің шығындарын талдау қажет. Кәсіпорындарда баға белгілеу, баға қалыптастыру үлкен рөл атқарады. Кәсіпорында бағаның жоғары төмен ауытқуын қадағалау қажет. Құн мен баға ұқсас ұғымдар алайда құн өндірістің шығындарын көрсетеді. Табыс дегеніміз белгілі бір кәсіпорынға міндетті шығыннан бөлек пайда түсімі. Бұл қарастыралатын ұғымдардың барлығы өндіріс саласында бір-бірімен тығыз байланысты.

**Түйін сөздер:** кәсіпорын, шығын, құн мен баға, пайда, табыс, бәсекеге қабілеттілік, өндіріс, тауар мен өнім.

**Аннотация.** Особую роль на предприятиях играют понятия затрат, стоимости, цены. Ученые экономисты разрабатывают концепцию расходов предприятия в западных странах. За счет снижения издержек предприятия улучшится финансовое состояние производства. Повышается конкурентоспособность. Затраты, направленные на производство продукции, характеризуются себестоимостью. В целом, существует несколько видов затрат. Для получения большей прибыли необходимо проанализировать издержки производства. Большую роль играет ценообразование, ценообразование на предприятиях. На предприятии необходимо следить за низким колебанием цен. Стоимость и цена схожие понятия, однако стоимость отражает затраты производства. Доход представляет собой поступление прибыли, помимо обязательных затрат на определенное предприятие. Все эти рассматриваемые понятия тесно связаны друг с другом в сфере производства.

**Ключевые слова:** предприятие, затраты, стоимость и цена, прибыль, доход, конкурентоспособность, производство, товар и продукция.

**Abstract.** A special role in enterprises is played by the concepts of costs and price. In western countries academic economists develop the concept of enterprise expenses. The financial condition of production will be improved by reducing the company's costs. Competitiveness will be improved. The costs directed to the production of