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industrial policy, industrial potential, hierarchy analysis method, industrial activity criterion, hierarchical model, model of Thomas Saati.

ABSTRACT

The article assesses the results of activity of enterprises of cities and districts of Zakarpattya region with the use of the Saati method.
The conducted studies on this method allowed to obtain an assessment of the activities of enterprises by integrating several indicators, by quantifying the level of industrial activity, to identify those criteria, which will allow for the adoption of the right managerial decisions to improve the efficiency of industrial policy in the region, to identify depressed areas that need investment and state regulation .
The scientific novelty consists in the construction of a hierarchical model for evaluating industrial policy using fully matched matrices of pairwise comparisons obtained through the transformation of economic activity indices into dimensionless criteria of Thomas Saati's hierarchical model.

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Постановка проблеми. Для прийняття правильних управлінських рішень і позитивного впливу на економічні процеси в промисловості окремої області та й України в цілому необхідне формування організаційно-методичного забезпечення управління регіональною промисловою політикою [1, с. 26].

Регіональна політика є невід'ємною складовою загальнодержавної економічної політики. Вона ґрунтується на пріоритетності національних інтересів, економічній самостійності регіонів та сприяє ефективному використанню внутрішнього потенціалу територій. Здійснення цієї політики повинно забезпечити єдність державних, регіональних та місцевих інтересів.

Аналіз останніх досліджень та публікацій. Проблеми формування та реалізації державної промислової політики в економічній літературі опрацьовано досить широко у працях Бугай С. М.[1], З. С. Варналін, В. Є. Воротін, В. С. Куйбіда [2], Сааті Т.[3], та ін.

Незважаючи на значні досягнення у вивченні проблем з формування та реалізації державної промислової політики, на сучасному етапі є потреба у поглибленому вивченні проблем щодо проведення ефективної регіональної промислової політики шляхом проведення її оцінки за допомогою методу аналізу ієрархій.

Метою статті є інтегральна оцінка діяльності підприємств міст та районів області методом аналізу ієрархій, що дозволить проранжувати їх активність за кількісною оцінкою та дозволить приймати обґрунтовані управлінські рішення стосовно промислової політики в містах та районах.

Результати дослідження. Адаптація існуючих математичних методів до сучасних підходів з прийняття професійних управлінських рішень включає аналіз та оцінку ефективності проведення регіональної промислової політики, зокрема, в Карпатському регіоні за допомогою методу аналізу ієрархій.

Для оцінювання рівня регіональної промислової політики Карпатського регіону пропонуємо використовувати метод Сааті (метод аналізу ієрархій) [3].

У табл. 1 наведено основні показники діяльності підприємств Закарпатської області у 2017 р. по містах та районах.

Для оцінки промислової політики застосуємо метод аналізу ієрархій. Реалізація цього методу здійснюється шляхом структурування проблеми у вигляді ієрархії, рис.1. Ієрархія будується з вершини − це загальна мета або фокус проблеми:

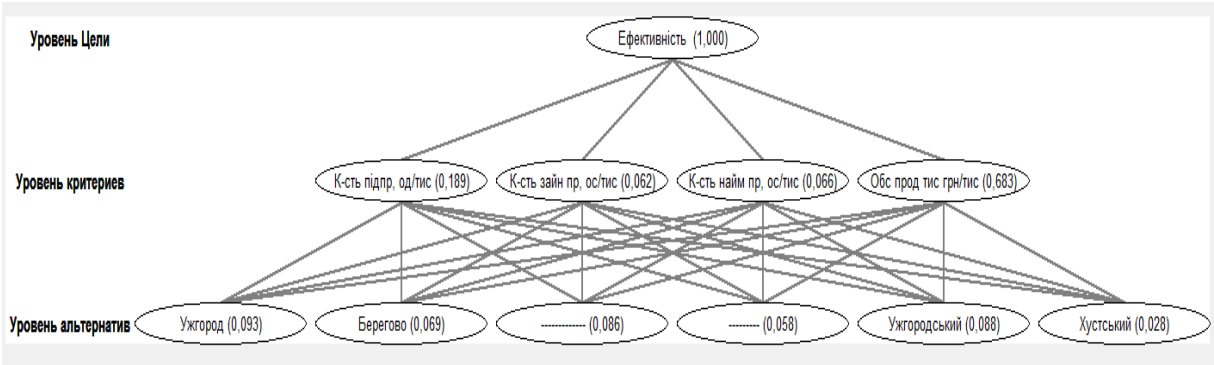

Рис. 1. Ієрархічна структура орграфа оцінки альтернатив, 2017 рік
Джерело: розробка автора

Мета «Оцінка».

За фокусом слідують **критерії** (показники):

1. «Кількість підприємств» (0,189 – вага критерію).
2. «Кількість зайнятих працівників» (0,062 – вага критерію).
3. «Кількість найманих працівників» (0,066 – вага критерію).
4. «Обсяг реалізованої продукції» (0,683 – вага критерію).

ОПР (особа, яка приймає рішення), або експерт, при побудові ієрархії змушений вникнути в проблему. Від цього етапу багато в чому залежать кінцеві результати оцінки, що здійснюються з урахуванням рекомендацій стосовно важливості тих або інших критеріїв.

Таблиця 1. Основні показники діяльності підприємств по містах та районах у 2017 р.

Населенні пункти	**Населення тис. осіб**	**Основні показники діяльності підприємств у 2017 р.**			
		К-сть Підприємств (віднесено до к-сті насел.)	**К-сть зайнятих пр., осіб (віднесено до к-сті насел.)**	**К-сть найманих пр., осіб (віднесено до к-сті насел.)**	**Обсяг прод., послуг, млрд.грн (віднесено до к-сті насел., млн.грн)**
1	2	3	4	5	6
По області	1258,10	5788 (5)	80872,0 (64)	78206,0 (62)	49,8(39,6)
м. Ужгород	114,00	1638 (14)	16226,0 (142)	15558,0 (136)	12,0 (105,7)
м. Берегово	24,10	194 (8)	3829,0 (159)	3743,0 (155)	1,2(48)
м. Мукачево	85,90	698 (8)	15705,0 (183)	15526,0 (181)	11,1(129,6)
м. Хуст	31,70	206 (6)	2133,0 (67)	2057,0 (65)	1,5(45,9)
м. Чоп	8,90	56 (6)	924,0 (104)	896,0 (101)	0,3(36,7)
Берегівський	50,80	309 (6)	1894,0 (37)	1646,0 (32)	0,7(12,9)
Великоберезнянський	26,40	58 (2)	1155,0 (44)	1135,0 (43)	0,3(10,5)
Виноградівський	121,20	483 (4)	7017,0 (58)	6656,0 (55)	1,6(13,1)

Продовження таблиці 1.

1	2	3	4	5	6
Воловецький	24,20	58 (2)	572,0 (24)	553,0 (23)	0,2(6,6)
Іршавський	100,50	200 (2)	1936,0(19)	1837,0 (18)	0,4(4,3)
Міжгірський	47,70	107 (2)	1034,0 (22)	989,0 (21)	0,3(5,6)
Мукачівський	100,50	343 (3)	4449,0 (44)	4269,0 (42)	3,2(31,5)
Перечинський	31,90	78 (2)	2113,0 (66)	2076,0 (65)	1,5(47,3)
Рахівський	92,80	230 (2)	2461,0 (27)	2383,0 (26)	0,6(6,9)
Свалявський	54,60	195 (4)	3972,0 (73)	3871,0 (71)	1,5(26,6)
Тячівський	175,50	289 (2)	3045,0 (17)	2917,0 (17)	2,4(13,8)
Ужгородський	71,60	549 (8)	10813,0 (151)	10503,0 (147)	10,7(149,2)
Хустський	95,80	97 (1)	1639,0 (17)	1591,0 (17)	0,4 (4,6)
	Ваг.коеф.=	2,84	2,39	2,44	3,73

Джерело: сформовано автором за [4]

Оцінка вагових коефіцієнтів критеріїв зроблена нами з таких міркувань:

1. Більша варіація критерію - більша вага критерію.

2. Матрицю попарних порівнянь критерію переведено в шкалу 1-9 за таблицею 2 та формулою 2.

Далі йдуть **альтернативи:**

Міста: «м. Ужгород», «м. Берегово», «м. Мукачево», «м. Хуст», «м. Чоп».

Райони: «Берегівський»,«Великоберезнянський»,«Виноградівський», «Воловецький», «Іршавський», «Міжгірський», «Мукачівський», «Перечинський», «Рахівський», «Свалявський», «Тячівський», «Ужгородський», «Хустський».

В таблиці 1 бачимо, що максимальна кількість населення в Тячівському районі, кількість підприємств, зайнятих та найманих працівників в м. Ужгород, а обсяг реалізованої продукції, − також у м. Ужгород.

Ваговий коефіцієнт розраховано за формулою:

$$ваг.коеф. = \frac{max - min}{с.зн.} \quad (1)$$

Таблиця 2. Шкала відносної важливості критеріїв

Кількісна оцінка інтенсивності відносної важливості	**Якісна оцінка інтенсивності відносної важливості**	**Пояснення**
1	Рівна важливість	рівний внесок двох критеріїв
3	Помірна перевага одного над іншим	досвід і судження дають легку перевагу одного критерія над іншим
5	Істотна або сильна перевага	досвід і судження дають сильну перевагу одного критерія над іншим
7	Значну перевага	один критерій має настільки сильну перевагу, що він стає практично значним
9	Дуже сильна перевага	очевидність переваги одного критерія над іншим підтверджується найбільш сильно
2, 4, 6, 8	Проміжні рішення між двома сусідніми судженнями	застосовуються в компромісному випадку

Отримаємо матрицю попарних порівнянь за формулами:

$$\begin{cases} a_{ij} = 8 \times \frac{x_{ij} - 1}{x_{max} - 1} + 1, & якщо\ x_{ij} > 1 \\ a_{ij} = \frac{1}{x_{ij}}, & якщо\ x_{ij} \le 1 \end{cases} \quad (2)$$

де x_{ij} – елементи матриці попарних порівнянь вагових коефіцієнтів критеріїв, таблиця 1, a_{ij} – елементи таблиці 3, матриці попарних порівнянь критеріїв переведені в шкалу 1-9, за таблицею 2 з використанням формули 2.

Таблиця 3. Матриця попарних порівнянь критеріїв за шкалою відносної важливості критеріїв

Назви показників	**К-сть підпр., од./тис.**	**К-сть зайнятих пр., осіб/тис.**	**К-сть найманих пр., осіб/тис.**	**Обсяг прод., послуг, тис.грн/тис.**
К-сть підпр., од./тис.	1	4	3	1/5
К-сть зайнятих пр., осіб/тис.	1/4	1	1	1/9
К-сть найманих пр., осіб/тис.	1/3	1	1	1/9
Обсяг прод., послуг, тис.грн/тис.	5	9	9	1

Отримаємо матриці попарних порівнянь для міст та районів по кожному показнику, трансформовану в шкалу 1-9 (табл. 2). Результати подано нижче (табл. 4).

Таблиця 4. Матриця попарного порівняння кількості підприємств

Місто, район	**м. Ужгород**	**м. Берегово**	**м. Мукачево**	**м. Хуст**	**м. Чоп**	**Берегівський**	**Великоберезнянський**	**Виноградівський**	**Воловецький**	**Іршавський**	**Міжгірський**	**Мукачівський**	**Перечинський**	**Рахівський**	**Свалявський**	**Тячівський**	**Ужгородський**	**Хустський**
1	1	1	1	2	2	2	4	3	4	5	4	3	4	4	3	6	2	9
2	1	1	1	1	1	1	3	2	2	3	3	2	2	2	2	3	1	5
3	1	1	1	1	1	1	3	2	2	3	3	2	2	2	2	3	1	5
4	1/2	1	1	1	1	1	2	1	2	2	2	2	2	2	2	3	1	4
5	1/2	1	1	1	1	1	2	1	2	2	2	2	2	2	1	3	1	4
6	1/2	1	1	1	1	1	2	1	2	2	2	1	2	2	1	3	1	4
7	1/4	1/3	1/3	1/2	1/2	1/2	1	1/2	1	1	1	1	1	1	1	1	1/3	2
8	1/3	1/2	1/2	1	1	1	2	1	1	2	1	1	1	1	1	2	1/2	3
9	1/4	1/2	1/2	1/2	1/2	1/2	1	1	1	1	1	1	1	1	1	1	1/2	2
10	1/5	1/3	1/3	1/2	1/2	1/2	1	1/2	1	1	1	1	1	1	1/2	1	1/3	2
11	1/4	1/3	1/3	1/2	1/2	1/2	1	1	1	1	1	1	1	1	1	1	1/2	2
12	1/3	1/2	1/2	1/2	1/2	1	1	1	1	1	1	1	1	1	1	2	1/2	2
13	1/4	1/2	1/2	1/2	1/2	1/2	1	1	1	1	1	1	1	1	1	1	1/2	2
14	1/4	1/2	1/2	1/2	1/2	1/2	1	1	1	1	1	1	1	1	1	1	1/2	2
15	1/3	1/2	1/2	1/2	1	1	1	1	1	2	1	1	1	1	1	2	1/2	3
16	1/6	1/3	1/3	1/3	1/3	1/3	1	1/2	1	1	1	1/2	1	1	1/2	1	1/3	1
17	1/2	1	1	1	1	1	3	2	2	3	2	2	2	2	2	3	1	5
18	1/9	1/5	1/5	1/4	1/4	1/4	1/2	1/3	1/2	1/2	1/2	1/2	1/2	1/2	1/3	1	1/5	1

$\lambda max = 18,248$ – власне значення матриці

ИС = 0,015

ОС = 0,007

Аналогічно отримано:

1. Матрицю попарного порівняння кількості зайнятих;
2. Матрицю попарного порівняння кількість найманих працівників;
3. Матрицю попарного порівняння обсягу продаж;

Вагові коефіцієнти критеріїв зображені на гістограмі, рис.2. Критерій «Обсяг реалізованої продукції має найбільшу вагу» оскільки відносна варіація даного критерію найбільша і становить 3,73 рази, таблиця 1.

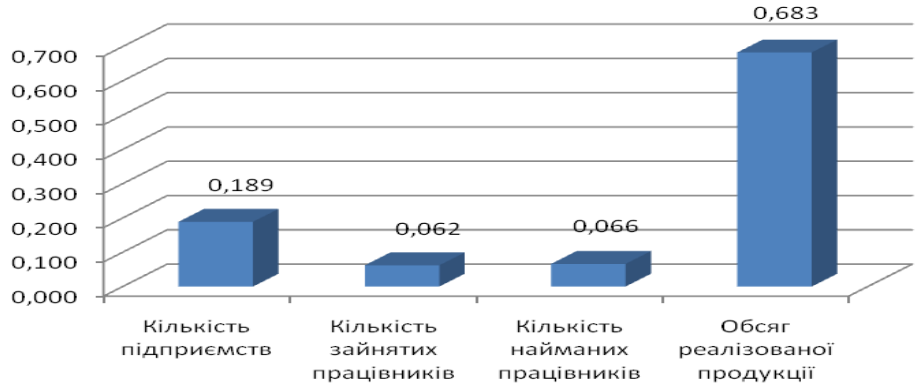

Рис.2. Вагові коефіцієнти критеріїв.

Результати розрахунків методом ієрархій зображені на гістограмі, рис.3. Оскілки альтернативами, в даному дослідженні, є міста та райони, а сума вагових коефіцієнтів альтернатив рівна 1, трактувати дані гістограми слід так, що «Основні показники діяльності підприємств по містах та районах у 2017 р.» вказують на інтегральну оцінку розвитку діяльності підприємств:

- в Перечинському районі стан найкращий, при меншій кількості підприємств на 1 тис. населення ніж в м. Ужгород та Ужгородському районі;
- в Хустському районі стан найгірший.

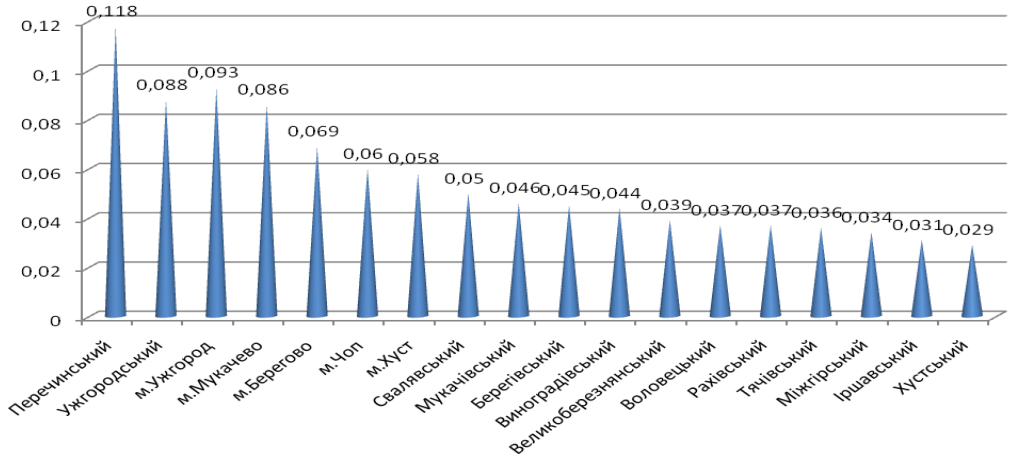

Рис. 3. Розподіл альтернатив за методом ієрархій.

Висновки і перспективи подальших досліджень.

У статті проведено оцінювання діяльності підприємств міст та районів Закарпатської області за допомогою методу Сааті (методу аналізу ієрархій). Встановлено, що інтегральна оцінка відносної ефективності регіональної промислової політики в Закарпатті є найвищою у Перечинському районі. В першу чергу потребують уваги влади та інвесторів Хустський, Іршавський та Міжгірський райони.

Проведені дослідження за методом аналізу ієрархій дозволили проранжувати міста та райони за кількісною оцінкою рівня промислової активності виявити ті критерії, урахування яких дасть змогу прийняти правильні управлінські рішення щодо підвищення ефективності

промислової політики в містах та районах області. Очевидно правильними управлінськими рішеннями будуть ті рішення, що направлені на вирівнювання розподілу альтернатив, рис. 3 та вагових коефіцієнтів критеріїв, рис. 2.

Перспективи подальших досліджень з даної тематики будуть базуватись на вивченні та розробці механізмів впровадження ефективної інноваційної діяльності для забезпечення росту економічних показників діяльності міст та районів області, ефективного використання трудових ресурсів міст та районів з низьким рівнем розподілу альтернатив, рис. 3.

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INNOVATIONS IN THE AGRICULTURAL BUSINESS: PROBLEMS AND PROSPECTS IN UKRAINE

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ABSTRACT

The main purpose of the research is to determine the role of innovation of agrarian enterprises for their effective management, as well as analysis of the internal and external environment of innovation activity of agrarian enterprises, their threats and opportunities with the help of SWOT-analysis. The systematization of literary sources and approaches to innovative activity of agrarian enterprises made it possible to generalize that the fundamental questions related to the interpretation of the essence of innovations, innovation activity and innovative processes of enterprises, with the specifics of their manifestation in agrarian enterprises, were investigated by domestic and foreign scientists as well as regulated by normative- legal acts. The urgency of solving this scientific problem lies in the fact that the determining factor of the efficiency of economic activity of the enterprise is their innovative development, which is based on the introduction and implementation of innovations, which determine the improvement of its activities, affect the strengthening of its market positions and produce suitable conditions for its development. One of the promising areas for innovations is the agrarian sector. Introduction of innovations in practice in all spheres of agrarian enterprises contributes to: the increase of labor productivity, decrease of expenses and cost of production, saving of various kinds of resources, increase of volumes and improvement of efficiency of agrarian production. The article analyzes the main directions of IT innovations in agrarian business, innovative solutions (products) and opportunities. It is determined, that any agrarian enterprise has its own peculiarities and specificity and requires individual innovative solutions. The management of the company often can easily identify, what is needed to increase the efficiency. And sometimes the services of analysts and IT consultants, who are professionals of their business, and can unmistakably determine the individual needs and decisions, can be useful. The peculiarities of formation and development of innovation process in agriculture were analyzed. A SWOT analysis of innovative activity of agrarian enterprises was conducted, which allowed to identify their strengths (weaknesses) sides, opportunities and threats. The results of the research can be useful for scientists, specialists and heads of agrarian enterprises, teachers of higher educational establishments, postgraduates, students and all those, who are interested in problems of development and efficiency of innovation activity.

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Introduction. The current economic conditions cause serious problems regarding the effective operation of agricultural enterprises. Inflation processes, a sharp increase in prices and crisis phenomena stimulate agricultural companies to strengthen their market positions (Gutsalenko et al., 2018). The determining factor of the efficiency of the enterprise's economic activity and the strengthening of market positions is their innovative development, which is based on the introduction

and implementation of innovations, which determine the improvement of its activities, affect the strengthening of its market positions and produce suitable conditions for its development.

In 2019, according to the Global Innovation Index (2019), Ukraine took the 47rd place out of 126 in the ranking of the most innovative countries in the world (Table 1).

Ukraine performs better in Innovation Outputs than Inputs. This year Ukraine ranks 82nd in Innovation Inputs, worse than last year and compared to 2017. As for Innovation Outputs, Ukraine ranks 36th. This position is worse than last year, but better compared to 2017. Ukraine ranks 2nd among the 26 lower middle-income economies. Ukraine ranks 32nd among the 39 economies in Europe.

Table 1. Ukraine's Rankings in Global Innovation Index, 2017 – 2019

Years	GII	Innovation Inputs	Innovation Outputs
2017	50	77	40
2018	43	75	35
2019	47	82	36

This is the evidence, that the dynamics of innovation activity of domestic enterprises is positive, that is, it has a tendency to increase. One of the promising areas for introduction of innovations is the agrarian sector. Considerable introduction of innovations in practice in all spheres of agrarian enterprises contributes to: the growth of labor productivity, decrease of expenses and cost of production, saving of various kinds of resources, increase of volumes and improvement of efficiency of agrarian production.

The introduction of innovations in agriculture increases the level of state security in terms of food, providing domestic and foreign markets with essential products. In addition, the development of new varieties of plants, animal breeds, approaches to optimal use of resource potential, updating of equipment and technologies, etc. is a guarantee of the competitiveness of agricultural producers, which is a topical issue for Ukraine at this stage (Kirichenko et al., 2008). With the use of innovative products, domestic agricultural enterprises will be able to stabilize production processes in crop and livestock production and compete properly in domestic and foreign markets (Vysochan et al., 2011).

Extremely urgent is the search for such innovative solutions, that would ensure an increase in the efficiency of the functioning of the agrarian sphere in conditions of limited and depleted natural resources. At present, the constant implementation of the latest developments is a guarantee of sustainable development of agriculture (Bilinska, 2015).

Brooks and Loevinsohm (2011) argue that an enhanced farmer capacity and access to information, in whatever way is essential to the development of more effective, local adapted responses to changed circumstances. The capacity to innovate is as central to adaptation to climate change as it always has been, since farmers are constantly adapting to changing circumstances. It is this underlying, quintessentially local capacity that underlies the diversity of agricultural systems and their constituents.

Taking into account the above mentioned, the activation of innovative processes of agrarian business development is one of the priority ways of development, effective management and economic growth.

The fundamental issues, related to the interpretation of the essence of innovation, innovation activity and innovative processes of business entities, with their specifics in agrarian enterprises, were studied by domestic and foreign scientists and regulated by normative and legal acts.

Thus, the basis for the innovative development of enterprises is laid down in the Law of Ukraine "On Innovation Activity" (2002), which defines: innovations - newly created (applied) and (or) improved competitive technologies, products or services, as well as organizational and technical decisions of an industrial, administrative, commercial or other nature that significantly improve the structure and quality of production and (or) the social sphere.

In Ukraine, the Council for the Development of Innovations was formed (2017), it is provided, that it is a temporary consultative and advisory body of the Cabinet of Ministers of Ukraine, formed for the study of problematic issues, related to the implementation of state policy in the field of development of innovations.

In the scientific literature, domestic and foreign scientists investigated:

- the concept of "innovations", "agro-innovations" Krikunenko D. O. (2011), Uniyat L. M. (2018), Donets O. (2013), Rudenko G. R. (2015), Vysochan O. S. et al. (2011), Shpykulyak O. G. et al. (2016);

- modern problems of implementation of the results of innovative activity Krikunenko D. O. (2011), Bilinska V. (2015), Rudenko G. R. (2015), Dichenko L. L. (2017), Ayodele O. J. et al. (2019);
- the most important barriers and principles of innovation, that restrain the output of an innovative product on the domestic market Krikunenko D.O. (2011);
- peculiarities of innovations in agriculture and their types Koneva T. A. et al. (2016), Belinska V. (2015), Uniyat L. M. (2018), Donets O. (2013), Klerkx L. et al. (2009), Vysochan O.S. et al. (2011), Shpykulyak O.G. et al. (2016), Saranchuk G. M. (2010), Kirichenko V. V. et al. (2008), Ayodele O. J. et al. (2019).
- experience of foreign countries in the development of agricultural enterprises due to the timely introduction of innovations Rudenko G. R. (2015);
- ways of overcoming the crisis of innovative − technological support of agricultural enterprises, the activities of which are aimed at the dynamic development of agriculture in Ukraine Bilinska V. (2015);
- introduction of innovations in the agrarian sector at newly-owned enterprises Gray A. et al. (2004);
- supporting innovation, by examining methods and organizations, and on evaluating innovation, using different yardsticks Faure G. et al. (2018);
- assessing key factors for innovation system performance and demonstrating the use of system thinking in the facilitation of processes of agricultural innovation by means of innovation brokers and reflexive process monitoring Laurens K. et al. (2012);
- shaping agricultural innovation systems responsive to food insecurity and climate change Brooks et al. (2011) etc.

A detailed analysis of the scientists' works and an assessment of the opportunities, problems and prospects for the development and adaptation of innovative solutions of the management of agrarian business in modern economic conditions require more detailed and thorough research.

Materials and Methods. The purpose of the article - research of innovations and innovative activity of agrarian enterprises and the definition of their role for their effective management. Conducting an analysis of the internal and external environment of the innovative activity of agrarian enterprises, their threats and opportunities with the help of SWOT-analysis.

The article is based on general scientific methods of research and special methods. The article uses: historical and logical methods – in studying the evolution of the problem statement and the continuity of its solution, review of literary sources; economic and statistical – in carrying out an analysis of the current state of activity of agricultural enterprises and innovative projects and solutions in agro-industrial production; abstract-logical – for generalization and formation of conclusions. In addition, the article constructs a matrix of SWOT-analysis.

The SWOT framework was first described in detail in the late 1960's by Edmund P. Learned, C. Roland Christiansen, Kenneth Andrews, and William D. Guth in Business Policy, Text and Cases (Irwin, 1969).

SWOT analysis is a process of establishing links between the most characteristic for the enterprise opportunities, threats, strengths (advantages) and weaknesses, the results of which can be further used to formulate and select the enterprise strategies (Saenko, 2006).

Strengths (S) and weaknesses (W) sides are factors of the internal environment of the analysis object, (that is, what the object itself is able to influence); Opportunities (O) and threats (T) are factors of the external environment (that is, what can affect the object from outside and is not controlled by the object at the same time).

The SWOT methodology provides for the prior identification of strengths and weaknesses and the further establishment of interrelationships between them, that can be used to formulate the organization's strategy. So, the SWOT matrix provides the managers with a structured information field, within which they can strategically orient and make management decisions (Malyuk, 2015).

The SWOT analysis matrix might look like this (table 2).

The methodology (SWOT analysis) has the advantage of being used as a 'quick and dirty' tool or a comprehensive management tool, more importantly this is not a decision that has to be made in advanced as one can lead to the other. This flexibility is one of the factors that has contributed to its success, along with many believing it is light weight, due to their lack of its original purpose (Morrison, 2016).

Table 2. SWOT analysis matrix

SWOT Analysis	**POSITIVE/ HELPFUL to achieving the goal**	**NEGATIVE/ HARMFUL/ RISKS to achieving the goal**
INTERNAL Origin facts/ factors of the organization	**Strengths** Things that are good now, maintain them, build on them and use as leverage	**Weaknesses** Things that are bad now, remedy, change or stop them.
EXTERNAL Origin facts/ factors of the environment in which the organization operates	**Opportunities** Things that are good for the future, prioritize them, capture them, build on them and optimize	**Threats** Things that are bad for the future, put in plans to manage them or counter them

Source: (Morrison, 2016).

Research results. Ukraine has significant potential for the development of agrarian business. This is mainly due to fertile soils and a fairly favorable climate in most parts of the country. Agriculture of Ukraine is a rather promising area and one of the leaders in exporting products to world markets. In addition, the agrarian sector is the leading driving force for the economic growth of the country and ensuring the wealth of population.

Agriculture is an important industry not only for Ukraine, but also for other countries of the world. So, Ayodele et al. (2019) believes, that agriculture is considered as a business, that can provide a reasonable basis for export of agricultural products, for export to earn further wealth, job creation and country's potential.

Evidence of the fact, that agriculture in Ukraine has a significant potential, can serve the data, shown in Table 3., where it is evident, that with a decrease in the number of enterprises and employees in this sphere, there is a tendency to increase net profit, profitability, wages, gross added value, export of agricultural products.

While agrarian business has improved its results, the use of new technologies in practice is the further a more characteristic attribute of this industry in Ukraine. Innovative activity as note Shpykulyak O. G. and Gritsaenko M. I. (2016), acts as the embodiment of the latest approaches in the theory and practice of farming, providing a comprehensive intensification of agricultural production, resource savings, improving competitiveness of products or the enterprise.

Table 3. The main indicators of activity of enterprises of agrarian business of Ukraine, 2014-2018

Indexes	Years					Deviation 2018/14 years
	2014	2015	2016	2017	2018	
Number of enterprises, units.	46199	45379	47697	45558	49208	3009
Net profit (loss), mln UAH	21413,4	101912,2	89816,3	68276,8	66878,1	45464,7
The level of profitability of all activity, %	9,3	30,4	25,6	16,5	13,5	4,2
Number of employees, thousand persons	596	569,4	583,4	565,1	540,5	-55,5
Average monthly salary of regular employees of enterprises, UAH	2556	3309	4195	6057	7557	5001
Agricultural products, mln. UAH (at constant prices in 2010)	251427,2	239467,3	254640,5	249157	268570,9	17143,7
Agricultural lands, thousand hectares	41511,7	41507,9	41504,9	41489,3	41489,3	-22,4
Direct investments, mln $	776,9	617	502,2	586,2	578,6	-198,3
Gross added value, UAH million	161145	239806	279701	305194	360757	199612
Export of agro-industrial complex, mln $	16668,9	14563,1	15281,8	17756,9	18611,8	1942,9
Import of agro-industrial complex, mln $	6059,3	3484,4	3891,1	4301,2	5055,5	-1003,8

Source: (State Statistics Service of Ukraine, 2018)

Agricultural innovation is seen as a co-evolutionary process, i.e. combined technological, social, economic and institutional change (Laurens et al., 2012).

Highlighting the importance of innovations Faure et al. (2018), point out, that innovation is often referred to as one of the main catalysts for more sustainable and inclusive development. In agricultural and food sectors, innovation is characterized not only by specificities, arising from its relation to nature, but also from the wide variety of its stakeholders, ranging from farmers to consumers and including intermediaries, such as research communities and advisory services. Innovation emerges from the interaction between these actors, who mobilize resources and generate knowledge in collaborative mechanisms to generate changes. It encompasses domains as diverse as production practices, market organization, and eating habits. Innovation is closely linked to major development challenges in its various forms: agro-ecological innovation, social innovation, territorial innovation, etc.

Gray A. et al. (2004) identified key economic concepts that help create a framework for assessing the commercial potential of innovations. In particular, the concepts of consumer welfare and individual firm demand elasticities and what determines those elasticities combined with competitor analyses and the resource- based view to determine the innovation's value proposition to the market.

The world experience of agribusiness development shows, that the most competitive are those agricultural enterprise, that constantly use the development of scientific and technological progress, innovative and resource-saving technologies in production, organization and marketing activities in the field of production and sales of final products (Uniyat, 2018).

It should be noted, that the IT sector in Ukraine, which is now on the rise, finds an attractive field of application − agricultural, and such combination between the two industries provides powerful opportunities for innovations.

As notes Dichenko A. L. (2017) now there is a constant introduction of innovations and scientific developments - guarantee of sustainable development of the agricultural enterprises. Selection of crops, genetic engineering, organic agriculture, drop irrigation, space technologies, nanotechnologies, etc. are actively used in crop production. In livestock production, innovative technologies consist in use of biotechnologies, the advanced feeding systems, selection and breeding work, nanotechnologies, electro-and resource-saving technologies. Today, agricultural enterprise, engaged in plant growing and livestock farming, are searching and implementing qualitative innovative solutions, that can increase the efficiency and productivity of their activities. A variety of specialists are working on finding innovations: breeders, technologists, biologists, economists and other specialists. An important place in this direction is given to IT specialists, who, by their decisions, have substantially changed and continue to change the activities of many enterprises and companies in various fields of business, including agrarian ones.

At present, many innovative products operate on the domestic agrarian market in different directions (Table 4).

It should be noted, that this list is not exhaustive. Any agrarian enterprise has its own peculiarities and specificity and requires individual innovative solutions. Often, management can easily identify, what is needed to increase the efficiency. And sometimes the services of analysts and IT consultants, who are professionals of their business and can accurately determine individual needs and decisions, may be useful. Today there are already IT companies, that choose the agro industry as the main branch of their activity (Khomyn, 2017).

As practice confirms, agrarian business and the introduction of innovative activities are carried out under the influence of certain factors, which are caused by the specifics of this industry. Among them: depending on the climatic conditions, seasonality of production, work with living organisms, the main means of production in the agricultural sector are land, the natural attributes of which are associated with climatic conditions, a rather long process of production, etc.

On that, O. Donets (2013) states, that in the management of innovations it is necessary to take into account the requirements not only of economic laws, but also laws of nature: equivalence, indispensability and a combination of life factors, laws of minimum, optimum and maximum.

Table 4. Main directions of IT innovations in agrarian business

The direction of innovations	**Innovative solutions (products)**	**Opportunities**
1	2	3
Cartography	Digital thematic maps	It involves the application of clear boundaries of sites with the possibility of their correction, you can find out the area of the plot, the culture, which it is grown, the average fertility or efficiency, the history of previous crops and many other necessary information according to the needs of the user.
	Digital models of relief	Provides mapping of additional relief of land plots. It is possible to adjust effectively the irrigation system, as well as to carry out sowing of moisture-tolerant or moisture-resistant plants in the optimal for this places.
	Other cartographic solutions	Provides visualization of the dynamics of soil analysis, analysis of satellite images from the NDVI, creation of crop yield maps, identification of the most productive and productive plots, tracking the dynamics of crops, monitoring the state of fields, forecasting yields, etc.
Logistic	Navizor.com	It provides the construction of optimal routes for collecting and delivering finished products from the purchasers to the warehouse or plant. Allows you to save fuel, waste time, reduce the risk of product damage.
	Logistic solutions with the integration of the system GPS-monitoring	Allows you to control the movement of the entire rolling stock of Agrocompany in real time and, accordingly, respond in a timely manner to significant delays or deviations from the route.
	The solution with the integration of the system of electronic document flow	Provides inventory management and efficient procurement planning, which greatly simplifies the exchange of information between adjacent units of agrocompany.
Monitoring of the technology park	GPS - tracking technology	Provides fixing and recording in the database, calculates the number of crossed kilometers for reporting periods (day, month, year).
	Logbook	Allows the employee to report on their activities in real time and receive notifications, reminders and warnings about the departure from the route or excessive hours of work of the vehicle, etc. The use of log-books also allows photo and video fixation of the situation at the work place and the immediate transfer of files to the administration point.
Planning	Innovative decisions in planning	Provide planning of optimal neighborhood of plants, alternating plantations, planning of the possibility of mixed plantings and application of certain rules of optimization of processes. Allow to minimize dependence on climatic conditions, use weather features in their favor, automate the irrigation system, plan the fertilization, based on the analysis of the state of fields, monitor the presents of pests and plan the application of pesticides, only when it is actually needed.
Management of personnel, clients, partners	Specialized CRM- and HRM-systems	Provide an opportunity in online mode to issue instructions to employees and respond to their requests. In turn, the employee can create field reports with the attachment of photo or video materials, it is possible to monitor the activity and efficiency of each employee in particular, etc. Effective motivational loyalty programs are also being introduced.

Continuation of table 4.

1	2	3
Analytics and making rational decisions	Innovative solutions in analytics	Provide calculation of reporting indicators, their comparison with similar for previous periods, reflection of dynamics, warning about "bottlenecks" in technological processes. This is a reliable basis for making effective management decisions.
Monitoring of health and quality	Innovative solutions in animal husbandry	Allow: to maintain the optimum microclimate in the premises with animals, to monitor the dynamics of health, weight gain and compliance of these indicators with the criteria, to automate the planning of the herd structure, to take into account genealogy and biological cycles in the planning of reproduction, automatically form a diet, etc.
Mobility	Mobile applications	Allow: vehicle tracking and control, driver monitoring, reminders, warning, maintenance and support. With mobile applications, all the necessary information is directly in the hands of the employee anywhere, at any moment.

Source: Built by the authors, based on (Khomyn, 2017).

All this determines the special needs of business entities in this area and encourages the use of certain innovative solutions that help to manage more efficiently, increase productivity, optimize the use of available production resources and meet current market needs.

The peculiarities of the formation and development of the innovative process in agriculture were researched by many scientists Kirichenko V. V. et al. (2008), Saranchuk G. M. (2010), Donets O. (2013), Rudenko G. R. (2015) et al.

The most comprehensive list, in our opinion, is presented by Saranchuk G.M. (2010):

1) the diversity of agricultural products and products of their processing, a significant difference in the technologies of their production;

2) significant differentiation of the individual regions of the country under the agro-technological conditions of production;

3) dependence of technologies, used in agriculture, from natural conditions;

4) the dispersion of agricultural production in a large area;

5) a large difference in the periods of production of certain types of agricultural products;

6) the isolation of agricultural producers from scientific institutions, engaged in the production of scientific and technical products;

7) absence of organizational and economic mechanism of transferring the achievements of science to agricultural commodity producers.

The practical application of innovations in agrarian business has both positive impacts, opportunities and certain risks. In order to evaluate them, it is expedient to analyze a set of factors, that influence the development of the business entity and its innovative activities through SWOT analysis.

The SWOT analysis of innovative activity of agrarian enterprises makes it possible to identify the main strengths (weaknesses), opportunities and threats (Table 5).

Table 5. SWOT-analysis of innovative activity of agrarian enterprises

Strengths	**Weaknesses**
1	2
- Significant potential for the development of agrarian business and innovative activities; - agrarian sector − the main source of currency receip in Ukraine; - key factor in maintaining trade balance; - use of modern agrotechnics; - growth of export potential and development of trade with the EU; - favorable natural and climatic conditions for effective agricultural production; - existence of agrarian educational institutions and other research institutions.	- lack of clear recommendations for the use of innovative products; - weak state support, lack of subsidies; - insufficient financing and significant cost of innovative products; - high cost of renewal and modernization of equipment; - high level of physical wear of domestic equipment; - low level of use of robotics; - problems of certification of organic products, nano-products; - absence of biological means of plant protection; - weak development of breeding work; - a significant investment need; - the need for highly skilled staff, scientists.

Continuation of table 5.

1	2
Opportunities	**Threats**
- assistance in planning of crops, conducting of electronic agrochemical passports of fields, drawing up of technological maps, field maps; - control of crop rotation, analysis of the dynamics of crop development, tracking the status of the fields and estimating the forecast of yield; - automation of calculations of the needs of seeds, fertilizers and plants (animals) protection products, the formation of planned and actual costs, the formation of analytical reports; - automation of planning of the herd structure, genealogy accounting and analysis of growth and weight, food rationing and veterinary measures; - monitoring of work of the equipment, accounting of fuel consumption; - increase of competitiveness of agricultural products; - creation of innovative clusters.	- appearance of carcinogenic and mutagenic effects; - the emergence of unwanted mutations; - reduction of nutritional properties of products; - reduction of reproductive capacity; - harmful effect on human health; - need for retraining of the staff; - climate change, degradation of arable land through intensive soil cultivation; - high interest rates on loans; - increase in the cost of mineral fertilizers, energy carriers, fuel and lubricants, etc.; - the instability of the agricultural market, which makes it impossible to predict the price of agricultural products for the next season; - the instability of the legislative framework.

Source: Developed by the authors

The table shows, that the innovative activities of agricultural enterprises are influenced by various factors, which help to assess the modern innovative potential, opportunities and threats, and to identify the features of innovative activity of business entities.

The positive changes in the introduction of innovations in the production of agricultural products include:

1) increase of crop productivity;

2) increase of profitability of the enterprise;

3) increase of competitiveness of agricultural products on the domestic and foreign markets;

4) improving the quality of products and saving of productive resources;

5) introduction of energy-saving and resource-saving technologies (Rudenko, 2015).

The problems of introducing innovations in agriculture in Ukraine include the lack of proper financing, low level of state support for enterprises, low level of innovation research in agriculture in Ukraine, seasonal activity of enterprises, a variety of climatic conditions and cultivated products (Rudenko, 2015). Despite the fact that there are significant developments, experience in the innovative activities of agrarian enterprises, there are certain obstacles to its development.

So, Koneva T. A. et al. (2016) considers the main problems of increase in innovative activity in agrarian and industrial complex are lack of the corresponding state policy, the crisis phenomena in agriculture, deficiency and limited of financial resources. Considering it, leasing and cooperation can become the perspective directions of financing of innovations in the sector of agriculture.

We support the opinion of D. O. Krikunenko (2011), who believes, that in order to overcome the barriers on the way of introducing innovations, agrarian enterprises should use the following approaches:

1. To work with innovations a certain group of creative people must be created. Managers should carefully approach the discovery and further unification of creative personalities. It is creativity, the ability to divergent thinking, that positively influence the production and implementation of innovative ideas.

2. Group motivation. The use of material and non-material methods of motivation enables to improve the efficiency of the innovation process as a whole.

3. Planning of work will allow to define clearly the goals and the possibility of further control of the tasks.

4. Control over implementation of tactical and strategic plans of innovative policy, using specially developed evaluation criteria (Krikunenko, 2011).

We believe, that the practical application of such approaches will facilitate the activation of innovative activity.

Having analyzed the possibilities of using and the problems of adaptation of advanced technologies in agriculture, one can conclude, that in order to overcome the low level of innovative-

technological equipment of the agrarian sector it is necessary to make a number of changes, which, first of all, should concern:

- institutional and legal support, concerning methods of agricultural management;
- intensification of the development of agrarian science and intellectual potential of agro-industrial complex;
- improvement of the level of training and raising the skills of the agrarian sector workers;
- stimulation of state financial support of agricultural enterprises engaged in innovative activity;
- attraction of investments for introduction of scientific and technical achievements in production;
- implementation of corresponding programs and strategies of the development of innovative activity in agriculture;
- development and introduction of effective mechanisms of stimulating of innovations in the agrarian sector;
- state support in the field of breeding, genetic engineering and nanotechnologies;
- formation of organizational and economic mechanism of technological safety of the agrarian sector;
- increase in the competitiveness of agrarian products in the context of eco and bio development, etc. (Bilinska, 2015)

Conclusions. Innovations are an important factor in the efficiency of enterprise management. They influence the improvement of its activities, strengthen market positions and produce suitable conditions for development. A promising industry for innovation is the domestic agrarian sector, which has significant potential. The introduction of innovations in this area will help: to increase labor productivity, reduce costs, save resources, increase production volumes and increase the efficiency of activities.

An important place for the formation of innovations for agrarian business is allocated to the IT sector and IT specialists, which by their decisions change the activities of many agribusinesses and offer various innovative solutions in certain directions.

Experience has shown, that the application in practice of innovations in the agrarian business has both positive effects, opportunities and certain risks. In order to evaluate them, it is expedient to carry out the analysis of internal and external factors, that influence the development of an enterprise and its innovative activity with the help of SWOT-analysis. Such an analysis enabled us to identify the strengths and weaknesses of the innovative activity, its potential and threats.

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CHARACTERISTICS OF BASIC COMPONENTS OF THE SOCIAL AND LABOR RELATIONS REGULATION MECHANISM IN THE UNITED TERRITORIAL COMMUNITIES

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ABSTRACT

The study is devoted to the substantiation of the basic components of the mechanism of regulation of social and labor relations in the united territorial communities of Ukraine. The article analyzes the research on the role of the state and local governments in regulating and developing social and labor relations at the local level. The leading world concepts in regulating social and labor relations have been characterized. The purpose and role of local self-government bodies in regulating social and labor relations have been defined. The basic scientific approaches to the concept of "community development" have been investigated. Based on the research, the basic components of the mechanisms of regulation of social and labor relations in the united territorial communities have been identified and their characteristics have been given.

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Introduction. Under current conditions, ensuring sustainable development of social and labor relations requires not only the updating of regulatory tools, but also the development of new forms and approaches of state regulation, the construction of new mechanisms in the field of SLR regulation, taking into account the existing laws and trends in the world and local labor markets. The role of local self-government bodies in the mechanisms of regulating social and labor relations needs to be rethought, since in the conditions of reforming the administrative and territorial structure of Ukraine, they receive full responsibility for the level of their well-being and quality of life, socio-economic development of the territories, etc. Hence the need to identify a number of basic components of the mechanisms of regulation of social and labor relations and social and labor sphere of the united territorial communities, with the substantiation of their functional purpose for further development in Ukraine of systems of effective territorial regulation and development of SLR.

The role of the state in regulating social and labor relations is investigated in the writings of a number of scholars, whose views can be reduced to two main directions:

– maximum decentralization of regulation, transfer of its basic measures to the level of production systems, significant limitation of state intervention [1, 2, 3];

– active involvement of the state in the social and labor sphere, including in the sphere of social and labor relations of individual employers [4, 5, 6].

At the same time, representatives of all economic schools and trends fully or with some reservations support the thesis about the scale and multi-vector nature of the state's role in shaping socio-economic policy [7].

All the variety of subjects regulating social and labor relations in the scientific literature is reduced to three groups:

1) regulation of employment;

2) regulation of social and labor relations related to the organization and efficiency of work;

3) regulation of issues of remuneration and social and labor relations arising from remuneration for work [8].

The leading role in the development of social and labor relations belongs to the state, represented by the relevant authorities and local self-government, on the basis of adherence to the principle of "tripartism", as recommended by the International Labor Organization (ILO). Tripartite cooperation is a proven form in many countries of achieving a balance of state, employers, and employees in many countries. Under this form of cooperation, the implementation of social policy is divided between three partners, and the bodies representing the interests of the state have the opportunity to check in practice the effectiveness of the principles of social partnership, the perfection of the current legal framework, and realize the national interests. With this form of cooperation the state should carry out procedures that ensure effective consultations, regular negotiations between representatives of the social partnership parties on issues that are the subject of social and labor relations [9].

The greatest attention of modern researchers is drawn to social partnership as a method of regulating social and labor relations. Social partnership is now regarded as one of the most important principles of building social and labor relations in organizations and in the economic environment, since it determines the need for interaction of all factors of welfare and development of society, taking into account the interests not only of business owners, but also of all actors affected by it.

In the Western concept of social partnership, the mechanism of its action is based on three elements:

– developed practice of collective interaction and ability to conduct business negotiations from the positions of representatives of certain socio-economic groups;

– ethics of contractual relations, i.e., in the fact, any contract is executed and the guarantor of its implementation is the entire administrative and legal system of the state;

– a high level of self-organization of workers and the population, which determines their ability to formulate their interests and goals, to form representative bodies that uphold these interests and to produce various forms of social protest that allow them to achieve their goals [10].

Instead, in Ukraine, although the need to develop social partnership relations is emphasized everywhere, no real preconditions for this have been created yet. Current national scientific opinion is based on the consideration of social partnership as the main method of regulation of SLR at the level of local self-government, although it acknowledges that its application is not effective at present. On this basis, we can say that the development of social partnership relations should take place in the system of regulation of social and labor relations, but it should not be considered as the main method, and, therefore, it is worth exploring in more detail the issue of isolation of the main components of the mechanism of regulation of SLR in united territorial communities.

The purpose of this study is to identify and characterize the basic components of the mechanism for regulating social and labor relations in the united territorial communities of Ukraine.

Research results. The generalized designation of local self-government bodies of the united territorial community is to ensure sustainable socio-economic development. Hence, the regulatory activities of the territorial authorities should be directed at protecting the interests of the UTC and its population, ensuring compliance with the law, preserving, multiplying and efficient use of resources, etc. In this context, the regulation of social and labor relations in UTC should aim, first, to ensure their development and, second, to function in the legal field. At the same time, the general direction of regulation of social and labor relations should be in the plane of improving the quality of life of the population of the community, because the higher it will be, the more developed the community will be, and therefore it will contribute to the further social development of the united territorial community.

Consequently, the purpose of regulating social and labor relations in UTC is to ensure the development of social and labor relations in the community in the legal field and in the direction of improving the quality of life of the population. Achieving this goal is possible during the following tasks implementation:

– to ensure compliance with social and labor legislation;

– to promote the development of the labor market and social and labor relations in the community;

– to ensure sustainable social and economic development of the community;
– to implement measures aimed at improving the quality of life of the population.

It is worth noting that at the present stage the idea of the driving forces and the correlation of various factors of development, the role and the place of a person in civilizational progress have changed radically. The experience of economically developed countries, and, even more so, of the countries that made the economic breakthrough (in different periods of the twentieth century: Japan, Korea, Germany, Ireland, Czech Republic, Hungary, Slovenia), testifies to the crucial importance of human capital, quality of workforce and motivation for effective work. This is a new concept focused on the primacy of human development [11].

The concept of "community economic development" is largely interpreted in two respects:

– prevailing focus on economic development [12, 13];
– inclusion of a wide range of components, among which, in addition to indicators of social and economic development of the community, the state of the environment and the results of the activities of the authorities [14].

That is, the global scientific community views the economic development of communities as a process or strategy that is used to improve social and economic development, improve well-being, ensure progress in the social and work spheres, and so on.

Community development is related to community progress. It is a process of developing and enhancing a community's ability to act collectively. The result of these actions is to improve the indicators of community social and economic development in aspects of the physical, social, political and economic spectrum [15].

Community development is a sustainable concept and, as proven by world practice, is more successful if clear methodology, approaches and state support are applied. In doing so, a quality approach is one in which "the community economy builds connections with the surrounding environment and seeks and uses the possibility to invest in the underlying economic plans, strategies and opportunities that shape the wider economy around it" [16].

It is human and social capital that is currently delivering the highest rates of economic growth. The need to ensure the economic development of the united territorial communities of Ukraine requires improvement of conditions and strengthening of incentives for formation of labor potential and its maximum utilization. Hence, the mechanisms for regulating social and labor relations in the UTC must consist of a hierarchical system of components, the implementation of which aims to promote the progress of the community as a whole and the development of its social and labor sphere in particular.

In general, at the level of the united territorial community, the regulation of social and labor relations is intended to establish social dialogue between the subjects of social and labor sphere, to ensure compliance with the legislation in the process of social and labor relations and to promote the development of SLR in the community. Hence, the local self-government bodies of the united territorial community must ensure the territorial development of the SLR in the community; contribute to the formation and expansion of the social and labor sphere of the UTC; to organize and coordinate the work of territorial branches of public services and bodies of social and labor sphere; to establish social dialogue between the subjects of social and labor relations, to participate in the settlement of conflicts; to monitor the indicators of development of social and labor sphere of the community.

At the local level, that is, at the level of individual settlements, the functional purpose of regulating social and labor relations is to create incentives and conditions for the development of SLR at the local level, and to establish relations between local subjects of social and labor sphere. In particular, it is necessary to monitor the indicators of development of social and labor sphere of the settlement; promote reconciliation between the parties of social and labor relations in conflict situations; to stimulate the development of SLR and social and labor sphere of the settlement; ensure harmonization of relations between the parties of social and labor relations in the settlement; promote the development of social and labor relations at the local level.

Based on the above, we can distinguish a number of major components that should underpin mechanisms for regulating social and labor relations in the united territorial communities (Figure 1).

The organizational and forming component of the mechanism is intended to ensure the qualitative formation of the social and labor sphere of the united territorial community through the clear organization of the work of local self-government bodies, coordination of their activities with the territorial branches of state services and bodies of the social and labor sphere, development of the

infrastructure of control services in social and labor services. field, development of organizational regulations (organizational projects), regulations on structural units, job descriptions, working hours and recreation, consultations, negotiations between the social partners, the conclusion of a system of agreements and contracts at different levels of social and labor relations.

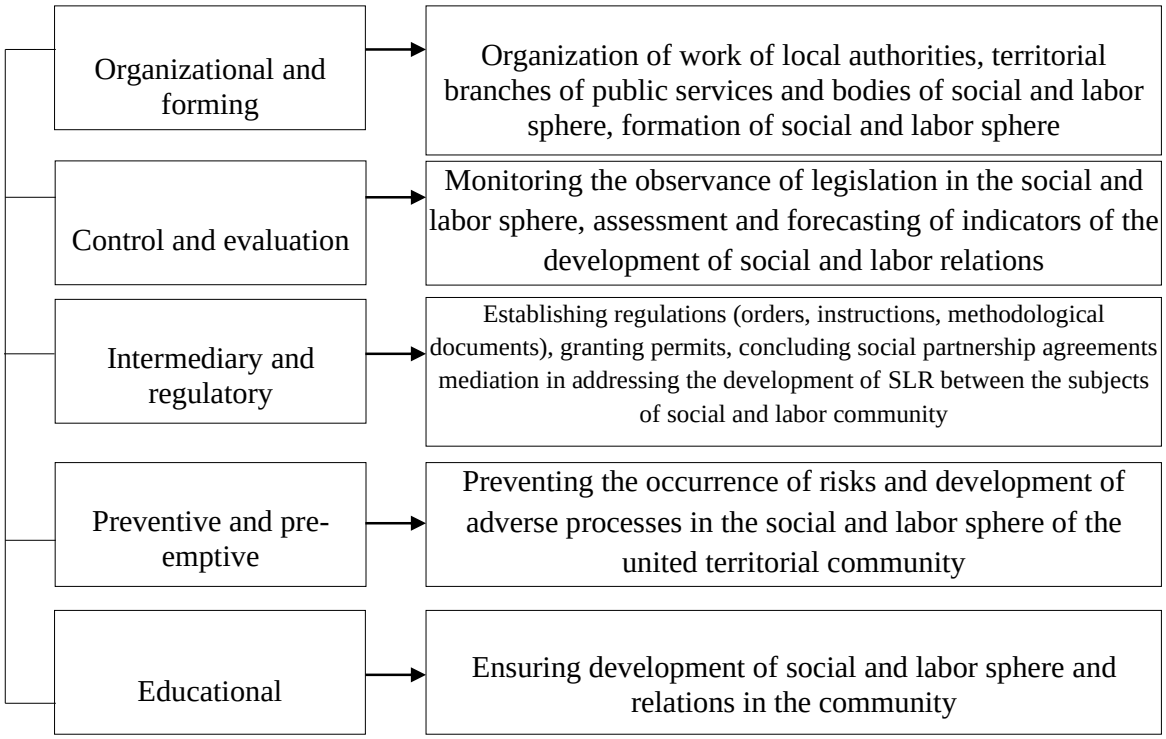

Fig. 1. Basic components of mechanisms for regulating social and labor relations in united communities

The control and evaluation component is intended to ensure a qualitative assessment of the state of development of the social and labor sphere of the community as a whole and its individual components, with the identification of factors influencing the development of UTC and forecasting the dynamics of evaluation indicators, as well as the effective control over the implementation of regulations, socio-economic programs, observance of norms, standards in social and labor sphere, provisions of collective agreements, etc.

The intermediary and regulatory component is necessary in the mechanism of regulation of social and labor relations of the united territorial community in order to define the legal framework of functioning of the social and labor sphere of the community; development of standards, criteria; imposition of restrictions, prohibitions, limits, penalties; creation of regulatory norms (orders, instructions, methodological documents), granting of permits, conclusion of agreements on social partnership; participation in resolving conflicts in the social and employment sphere through negotiations, consultations, fact-finding, testimony in court and arbitration hearings; the application of specific ways of resolving disputes and conflicts in the social and labor sphere aimed at reaching an agreed solution; implementation of indirect regulation (subsidies, state orders, accelerated depreciation, financial and credit and tax benefits, direct financial assistance for the implementation of government programs).

The preventive and pre-emptive component of the mechanism is intended to ensure the quality work of local self-government bodies in the direction of preventing the occurrence of risks and development of adverse processes in the social and labor sphere of the united territorial community, prevention of conflict situations.

The educational component in the mechanism of regulation of social and labor relations in the UTC aims to ensure the development and implementation of development programs (territorial, local) in the social and labor sphere, the introduction of modern forms and methods of involvement of employees in production management, adoption and organization of organizational and management

innovations, work to expand the community's social and work spheres, increase employment and living standards of the population, etc.

Conclusions. The implementation of decentralization reform in Ukraine after the long-term implementation of the centralized public administration system has raised a number of issues related to the organization of effective local self-government, including the establishment of effective mechanisms for regulating social and labor relations at the local level. Applying the world's leading experience in addressing the issue at present cannot produce tangible positive results in relation to the historically shaped features of the country's social and economic development. Therefore, it is necessary to form new mechanisms for regulating social and labor relations in the united territorial communities, adapted to the Ukrainian realities and able, if implemented, to ensure the effective activity of local self-government bodies in the direction not only of regulating social and labor relations in the communities, but also their sustainable development.

On the basis of the conducted research, five main components have been identified, on which mechanisms of regulation of social and labor relations in the united territorial communities of Ukraine can be based. They are, in particular, organizational and forming, control and evaluation, intermediary and regulatory, preventive and pre-emptive and educational. The further direction of the research should be the formation of organizational and functional structures of the considered mechanism, taking into account certain components.

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ЩОДО ВЕРИФІКАЦІЇ ЕКОНОМІЧНОЇ МОДЕЛІ ТАРИФУ НА РОЗПОДІЛ ГАЗУ ПРИНЦИПАМ СТИМУЛЮВАННЯ

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ABSTRACT

The purpose of this study is to determine the conformity (verification) of the current model of tariff formation for gas distribution service of gas companies to the principle of incentive regulation based on the selection of model elements and their comparison with the world successful experience. The method of verification based on the selection of model elements, the determination of the advantages and disadvantages of such a model, and the comparison of the latter, introduced at domestic gas companies on natural gas distribution, with the world's successful experience in regulating this issue. It is presented that this model does not fully comply with the principles based on long-term incentive regulation, which show its effectiveness in the world, which will be continued in the following studies.

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Вступ. Між постачальниками і споживачами природного газу виникають економічні взаємовідносини, які визначаються певними тарифами. У різних країнах застосовуються тарифні системи, які розрізняють за принципами формування та структурною складністю. Періодично вносяться корективи в ціноутворення відповідно до змін у сферах власності та організації управління, зовнішніх умов розвитку галузі, інтересів споживачів і змін у структурі енергоспоживання [1]. Водночас роздрібні тарифи на газ у більшості країн формуються з урахуванням закупівельної (ринкової) оптової ціни, витрат на розподіл та постачання, технологічних витрат в мережах під час транспортування та надбавки для покриття витрат на утримання системи, диспетчеризацію, а також інвестиційної складової.

Серед основних завдань, які сьогодні мають вирішувати тарифи на енергію, зокрема і газ, виділяють [1]: покриття реальних витрат (короткострокових та довгострокових); стимулювання до вирівнювання графіка навантаження енергосистеми; спонукання споживачів до проведення енергоощадних заходів; стимулювання компаній до інвестування в підвищення енергоефективності, надійності та якості енергозабезпечення та вирішення екологічних проблем тощо.

Мета дослідження визначити відповідність (верифікувати) діючої моделі формування тарифу на послугу розподілу газу нафтогазовий компаній принципу стимулюючого регулювання на основі виділення елементів моделі та співставлення їх з світовим успішним досвідом.

Верифікація – методологічне поняття, що визначає процес встановлення істинності наукових положень у результаті їхньої емпіричної перевірки. За принципом верифікації твердження вважається осмисленим, якщо можна встановити його істинність чи хибність шляхом підтвердження або заперечення його змісту даними [2].

Національна комісія, яка здійснює державне регулювання у сфері енергетики та комунальних послуг (НКРЕКП) в жовтні 2019 року затвердила нову методику розрахунку тарифу на доставку газу для операторів газорозподільної мережі (ГРМ) та схвалила проект тарифів. Про це повідомляє пресслужба Регіональної газової компанії [3]. Це сервісна компанія, що надає послуги з фінансового, юридичного, технологічного консалтингу. Клієнтами компанії є нафтогазові компанії, які постачальниками газу в 16 регіонах країни, а також 19 газорозподільні компаній, на обслуговуванні яких перебуває понад 200 тис. км газопроводів і 8 млн побутових споживачів газу. Прозорий підхід у встановленні плати за доставку газу ґрунтується на замовленій споживачем потужності та залежатиме від обсягів споживання (табл. 1).

Таблиця 1 Узагальнення підхід до формування моделі тарифу на розподіл газу газорозподільними підприємствами України (сформовано автором на основі [4])

Елементи	Суть
Принцип	на основі потужності та на основі багаторічного стимулюючого регулювання.
Тарифу на послуги розподілу природного газу ($T_{розп}$)	$T_{розп} = \frac{ТВ}{W_{розп}}$ ТВ − планована річна тарифна виручка суб'єкта господарювання з розподілу природного газу на планований період, (тис. грн); $W_{розп}$ − загальний планований річний обсяг надання послуг розподілу природного газу, 1000 куб. м.
Планована річна тарифна виручка (*ТВ*)	*ТВ = В+П* *В* – повна планова собівартость; *П* – плановановий прибуток.
Перелік витрат, що враховуються при визначенні планованої тарифної виручки (*В*)	*В = МВ + ВОП + ВнСЗ + Ам + ІнОВ + ФВ* *МВ* − плановані матеріальні витрати (за винятком вартості зворотних відходів); *ВОП* − плановані витрати на оплату праці; *ВнСЗ* − плановані відрахування на соціальні заходи; *Ам* − планована амортизація; *ІнОВ* − інші плановані операційні витрати; *ФВ* − плановані фінансові витрати за кредитними договорами, запозичення за якими та умови яких узгоджені відповідно до чинного законодавства.
Прибуток (*П*), який визначається з урахуванням необхідності:	• здійснення інвестицій, пов'язаних з ліцензованою діяльністю з розподілу природного газу; • погашення основної суми кредитів та/або запозичень, які залучені для виконання інвестиційної програми та які погоджені НКРЕКП, та/або суми інвестицій за рахунок власного капіталу в необоротні матеріальні та нематеріальні активи; • спрямування частини чистого прибутку на виплату дивідендів; • фінансування компенсації витрат (збитків), яких зазнало підприємство, та інших обґрунтованих потреб фінансово-господарської діяльності суб'єкта господарювання, сплати податку на прибуток.

Відповідно до табл. 1, розрахунок ґрунтується на визначенні і плануванні валової виручки, необхідної для компенсації обґрунтованих виробничих витрат, податків і зборів, а також отриманні економічно обґрунтованої прибутку при здійсненні господарської діяльності протягом планового періоду.

Слід зазначити, що запропонована НЕКРЕКП нова модель тарифу на розподіл газу [4] є більш справедливою у порівнянні з попереднім підходом, що ґрунтувався на максимальній встановленій потужності. Такі зміни були необхідними на підставі внесених змін до Кодексу

газорозподільних систем, Типового договору розподілу природного газу, Методики визначення тарифу на послуги розподілу природного газу.

Переваги даної методики відповідають вищенаведеним основним завданням, які сьогодні мають вирішувати тарифи, а саме:

1. Кінцевий розмір тарифу, як і його складові, досить легко визначаються, тому що всі витрати відомі заздалегідь, регламентовані і розраховуються відповідно до затверджених нормативів.
2. Новою методикою передбачено, що оплата вартості доставки газу буде відбуватись рівними щомісячними частинами. Це зробить оплату простою і прогнозованою, а також зменшить фінансове навантаження на споживача взимку, оскільки він платитиме за доставку газу рівними частинами впродовж року.
3. Нова модель тарифоутворення дозволить завершити процес відокремлення послуги розподілу від продажу самого газу, як товару. Відповідні кроки передбачені Законом України «Про ринок природного газу» та вимогами Третього енергетичного пакету.
4. Споживач бачитиме, скільки він платить за сам газ і за його доставку та впливатиме на свої видатки.
5. Рівномірні платежі споживачів впродовж року дозволять операторам ГРМ отримати ресурс необхідний для обслуговування та модернізації мереж. В свою чергу, це дозволить підвищити безпеку та безперебійність розподілу природного газу.
6. Після прийняття нової методики, з'явиться можливість спрямувати кошти на підвищення зарплат працівникам газових компаній. Після затвердження тарифів співробітники операторів ГРМ зможуть розраховувати на оплату праці на рівні близько 13 500 грн на місяць, що дорівнює середній зарплаті в промисловості.

Результати. Отже, сукупна вартість обслуговування (надання послуги з розподілу газу) фактично є необхідною валовою виручкою газорозподільної компанії у розрахунковому періоді (наприклад, за рік), та як визначено вище охоплює сумарні поточні витрати і прибуток.

Вартість послуги – це основа для визначення середнього тарифу для регіону. Для його розрахунку вартість обслуговування потрібно розділити на обсяг газу за розрахунковий період. Середні тарифи диференціюються за регіонами країни залежно від умов виробництва і характеру навантажень на мережі. Тож виділяються змінна складова витрат, яка залежить від обсягу виробництва, і постійна, що залежить лише від установленої потужності установок і вартості основних фондів компанії. Склад змінних і постійних витрат установлюється нормативними актами, затвердженими регулятивним органом. Рівень окремих елементів витрат пропонується регулювати на основі спеціально розроблених нормативів, які враховують конкретні умови газопостачання у відповідному регіоні.

Але особливою проблемою є встановлення норми прибутку. Прибуток у більшості газорозподільних компаній розраховується за статтями витрат, які по плану фінансуватимуть з цього прибутку. Очевидно, що такий метод формування прибутку ініціює зростання середніх тарифів.

Рішення визначеного недоліка, тобто існуючої проблеми, полягає в переході під час розроблення тарифів до норми прибутку на інвестований капітал (RAB, Regulatory Asset Base – вартість активів регульованих мережевих компаній) – це система довгострокового тарифоутворення, основною метою якої є залучення інвестицій в розширення і модернізацію інфраструктури). Це відповідає економічній функції прибутку як джерела розширеного відтворення і дозволяє певною мірою компенсувати вади витратного підходу: основний капітал, як розрахункова база прибутку краще піддається контролю з боку регулятивних органів, ніж витрати. За такого підходу норма прибутку визначається на основі структури (джерел) інвестованого капіталу і витрат на його залучення компанією (у вигляді відсотків і дивідендів). Норма прибутку має бути достатньою, для гарантування фінансової стабільності компаній і за необхідності залучення додаткового капіталу. Таким чином, дозволена регулятивними органами частка прибутку в тарифі визначається розміром залученого капіталу та його середньозваженою вартістю [1].

Розуміння того, що тариф повинен не тільки покрити поточні витрати і приносити фіксований прибуток, але й залучати інвестицій в розширення і модернізацію інфраструктури, зафіксовано в моделі тарифоутворення на послуги таких компаній у Великобританії на основі стимулювання. Представлення цього відображено в табл.2, а також співставлено існуючу модель тарифу в Україні для визначення напрямів невідповідності.

Таблиця 2 Порівняння узагальнених підходів до регулювання тарифу на розподіл газу на основі стимулювання та результати (сформовано на основі [1,4])

Діяльність	Розподіл газу на основі RAB-регулювання у Великобританії	Розподіл газу на основі потужності та на основі багаторічного стимулюючого регулювання в Україні
Регулятор	Служба ринків газу та електроенергії у Великобританії (OFGEM)	Національна комісія, яка здійснює державне регулювання у сфері енергетики та комунальних послуг (НКРЕКП)
Модель тарифу	Модель RIIO (Дохід = Стимули + Інновації + Продукція) (на основі стимулювання)	$ТВ = В + П$
Регуляторний період (роки)	8	Витрати плануються на 1 рік, План розвитку газорозподільної компанії планується на 10 років
Регуляторна база активів	Витрати капіталізуються в RAB упродовж періоду регулювання відповідно до настанов OFGEM. Інфляція і амортизація RAB також застосовуються.	Витрати плануються на 1 рік, активи поновлюються в межах розроблених планів розвитку інфраструктурних об'єктів
Дозволена рентабельність	4,2%, до вирахування податків	-
Дозволені обсяги інвестицій	Середньорічна вартість 1,8 млрд фунтів, що становить 14,4 млрд фунтів за восьмирічний регуляторний період у цінах 2009/10 рр.	-
Дозволена амортизація	Доповнення до регуляторної вартості активів (РВА) до 2002 р. - 56 років Доповнення до РВА після 2002 р. - 45 років	Нарахування планованої амортизації здійснюється відповідно до класифікації груп основних засобів та інших необоротних активів і максимально допустимих строків їх амортизації із застосуванням прямолінійного методу, за яким річна сума амортизації визначається діленням вартості, яка амортизується, на строк корисного використання об'єкта основних засобів.
Допустимий рівень інфляції	Індекс роздрібних цін	Індекс роздрібних цін, індекс зростання реальної середньомісячної заробітної плати

Як видно в результаті порівняння міжнародного досвіду на прикладі Великобританії можна відмітити наступні переваги, отримані за рахунок RAB-регулювання досліджуваної послуги:

1. Захист інвестора та інвестованого капіталу інфраструктурної компанії від інфляційних ризиків.
2. Забезпечення інвестора гарантованим доходом (прибутковістю інвестованого капіталу), який дозволяє захищати капітал від знецінення, а також забезпечувати гарантованим відсотковим доходом.
3. Створення механізму залучення приватних інвестицій в інфраструктурні компанії.
4. Захист інтересів споживача послуг інфраструктурних компаній від монопольного завищення цін (тарифів) унаслідок прийняття менеджментом інфраструктурних компаній неефективних рішень з управління витратами та оплати інвестиційних програм компаній. Сьогодні в більшості європейських компаній інвестований капітал відповідає величині залишкової вартості активів.

На противагу вітчизняна модель тарифу на розподіл газу на основі має великі недоліки, а саме:

1. Суперечить принципу «мінімізації витрат». Оскільки підприємство прагне максимізувати одержуваний прибуток шляхом збільшення кількості статей дозволених витрат, тому що величина економічної прибутку зафіксована і є граничною.

2. Не враховує попит на продукцію. Розмір тарифу не залежить від фактичного обсягу виконуваної роботи, тому що встановлений заздалегідь за даними минулих років.

3. Разом з тим, НКРЕКП не передбачила в запропонованих тарифах достатньої компенсації збитків газорозподільних компаній. Лише минулого року вони отримали втрат на суму, що перевищує 4,5 млрд грн. При запропонованих темпах фінансування, збитки будуть відшкодовуватись більше 20 років.

Висновки. Економічна модель тарифу на розподіл природного газу дозволяє у разі зменшення суб'єктом господарювання у базовому періоді витрат на фінансування фонду оплати праці з метою оптимізації штату працівників (за умови дотримання норм технічної безпеки надання послуг розподілу природного газу) та/або обсягів виробничо-технологічних витрат використовувати тарифну виручку, отриману за рахунок такої економії коштів, на заходи з: підвищення рівня середньомісячної заробітної плати працівників; матеріальних та інших витрат операційної діяльності; заходів з виконання інвестиційної програми; інших потреб фінансово-господарської діяльності суб'єкта господарювання з розподілу природного газу. Тому підсумовуючи, методом верифікації на основі виділення елементів моделі та порівняння їх з світовим успішним досвідом регулювання, визначено досліджувану модель відповідною не у повній мірі принципам на основі багаторічного стимулюючого регулювання, які показують свою ефективність у світі.

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ФОРМУВАННЯ ІНФОРМАЦІЙНОЇ СИСТЕМИ ОРГАНІЗАЦІЇ В УМОВАХ ЦИФРОВОЇ ЕКОНОМІКИ

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ABSTRACT

The article reveals the role and importance of information, which is a dominant resource, acquires comprehensive significance for the life of society in a digital economy, determining its political, socio-economic and cultural development. In any organization, the aggregation of data into a single digital information space is important for the management system, which creates such an information infrastructure of the organization (IIO) that allows solving the tasks and is a kind of management loop through the prism of technological innovations. Therefore, the author has developed and proposed a model of the organization's information infrastructure architecture, which contributes to the constant updating of innovations, methods and approaches to the information environment in the digital economy. The information management infrastructure of organizations is becoming a priority management object, requires consideration of its properties and specifics, due to the processes of digital modernization of the economy. The organization's information infrastructure is a comprehensive system that covers information, personnel, a set of applied, technological and technical solutions to provide information support for the organization's work in accordance with the rules and concept, mission and strategy of the organization, its business model and management approaches.

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Вступ. Поява нових технологій, побудова глобальних, національних і регіональних інформаційних мереж та систем відкриває не тільки технічні, але й економічні можливості для об'єднання інформаційних ресурсів цивілізації і забезпечення доступу до них масового користувача. Це приводить до зміни в усіх сферах людської діяльності. Крім того, за мірою зростання швидкості змін, зростає й необхідність в актуальній, своєчасній інформації для управління. При цьому з огляду на те, що швидкість змін стає таким важливим фактором, менеджеру важливо мати найактуальнішу інформацію. Подібна ситуація сприяє посиленню ролі інформаційної системи в організації, висуває її на перший план, а також вимагає, щоб інформаційна система була найсучаснішою. Тобто базова компонента нинішньої економічної організації полягає в роботі з даними і використанням інформаційно-комунікаційних систем в процесі управління. Відбуваються транзакції з обміном даних та їх інтерпретацією, від яких залежить характер майбутніх взаємодій, що, в свою чергу, приводить до формування відносин одних учасників до інших, вироблення правил поведінки, зміни мотивів поведінки, трансформації системи цінностей.

Результати дослідження. Цифрова економіка, що супроводжується глобалізацією та інтеграцією, значно розширює можливості для організацій в області створення конкурентних переваг. Виграє та організація, в якій система управління дозволяє надавати своєму споживачу інформацію про вартість, пропозиції, можливість здійснювати покупки і робити замовлення

протягом 24 години на добу в будь-якому місці, де є доступ до мережі Інтернет. Для того, щоб стати конкурентоспроможним гравцем цього ринку, організаціям необхідні новітні технології для інформаційної підтримки. Цифрова економіка – це еволюційний розвиток традиційної економіки, підтвердженням чого є концепція технологічної сингулярності, яка була представлена ще в 1993 році математиком Вернором Вінджем на симпозіумі Vision-21. Відповідно до цієї концепції «прийде час, коли технічний прогрес стане настільки швидким і складним, що виявиться недоступним для розуміння. Саме такий процес пов'язаний із розвитком інформаційних технологій, біотехнологій, нанотехнологій і когнітивних технологій. Взаємодія всіх цих технологій створить надлюдський інтелект, своєрідну мережеву свідомість» [1].

Сьогоднішній виклик цифрової економіки організаціям полягає в пошуку ними інвестицій для підвищення рівня клієнтського обслуговування. Головною їх цінністю стає прибуток, який вони будуть отримувати від одного клієнта протягом усього циклу їх взаємодії. У даному випадку важливості набуває вміння залучати користувача в процес, побудований з урахуванням його переваг і підлаштовуватися під його потреби, які постійно змінюються. Вибудовування і керування даними процесами неможливо без комп'ютеризації та аналізу великого обсягу інформації, які дозволяють спілкуватися з клієнтом, пропонувати йому персональні пропозиції на основі їх переваг.

Таким чином, основними ознаками формування нової економіки стає: швидке зростання цінності інформації, яка є нескінченним ресурсом; відсутність чітких меж діяльності компаній в умовах мережевого ринку і досить демократичні правила встановлення взаємодій його учасників; обсяг фінансових ресурсів і кількість працівників поступаються швидким інтелектуальним рішенням з високою доступністю для зацікавлених сторін завдяки технічним можливостям. Тобто на сьогодні акцент з володіння будь-яким ресурсом зміщується в бік наявності інформації про цей ресурс, можливості використовувати цю інформацію з метою планування подальшої економічної діяльності організації [2].

До теперішнього часу інформацію не зараховували до найважливіших активів організації. Переважно базисом управління організації був особистий вплив керівництва без належної уваги та урахування докладених зусиль менеджерів для вирішення виробничих завдань і аналізу даних. Розробка та прийняття управлінських рішень спиралися тільки на досвід і інтуїцію керівництва організації, в деяких випадках – на раніше підготовлених варіантах рішень з розрахунком ризиків і можливостей для організації з використанням спеціально обробленої інформації.

Але в умовах цифрової економіки інформаційна сфера набуває системоутворюючого значення для життя суспільства, визначаючи його політичний, соціально-економічний і культурний розвиток. Інформаційна складова в діяльності людей поступово переважає над усіма іншими. Ці технології змінюють саму людину, його духовний світ, залучаючи до світової культури, роблячи його активною часткою всього людства. «Різноманітність трактувань інформації, виявлення інформаційних процесів і явищ практично у всіх сферах природи, суспільства, людини і свідомості означає, що інформація втілює основні початки світобудови» [3, с.81]. Ми повністю погоджуємося, що «Інформація – це фундаментальний генералізаційно єдиний безначально-безкінечний процес резонансно-сотового, частотно-квантового та хвильового відношення, взаємодії, взаємопроникнення і взаємозбереження енергії, руху, маси та антимаси на основі матеріалізації та дематеріалізації в мікро- і макроструктурі Всесвіту» [4, с. 15].

Функціонування любої організації пов'язано зі здійсненням певного набору бізнес-функцій і бізнес-процесів з управління діяльністю та реалізацією зовнішніх і внутрішніх продуктів і послуг, на основі прийнятих технологій управління (процедури вирішення завдань, системи прийняття рішень). Як правило, в організації визначена домінуюча основа розподілу праці управлінського персоналу: функції, процеси або проекти. Дана властивість системи управління визначає формування інформаційної системи (ІС) як середовища реалізації функцій, процесів або як середовища реалізації проектів. Понад те, підтримка діяльності менеджерів в частині прийняття рішень, аналізу інформації, організації колективної роботи і використання експертних систем означає розвиток в організації ІС в якості середовища підтримки інтелектуальної діяльності людини. З точки зору управління організацією необхідно побудувати систему планів, спрямованих на зміцнення позицій організації, задоволення потреб її клієнтів і досягнення певних результатів діяльності. Інформаційна стратегія також – одна із

стратегій організації, що визначає її дії в частині використання інформаційних технологій (ІТ) та інформаційних систем (ІС) для бізнес-цілей, формування ІТ-інфраструктури, структури і способу управління ІТ підрозділом тощо.

Таким чином «Сучасний розвиток суспільства характеризується формуванням інформаційного середовища планетарного масштабу як результату інформаційно-технологічної революції, створенням і поширенням мережевих технологій, інтенсивністю процесів глобалізації, інформатизації та інтелектуалізації. Відповідно розвиток інформаційного суспільства спонукав до кардинальних змін в економіці, визначивши інформацію чинником не лише науково-технічного прогресу, але й виробництва, що став основою формування її інформаційної парадигми» [5, с. 48].

Згідно із сучасними поглядами, інформаційні системи відіграють все більшу роль в досягненні стратегічних цілей організації. Тепер вони не тільки забезпечують обробку інформації для відділів і кінцевих користувачів всередині організації, а й безпосередньо самі породжують вироби і послуги, засновані на інформації, які забезпечують їй конкурентну перевагу на ринку. Розроблення ІС організації залежить від її цілей, завдань, структури та стратегії. Тому оптимальність та ефективність ІС сприяє не тільки дієвому управлінню ресурсами організації, а й отриманню прибутку через всебічне задоволення потреб персоналу всіх ланок організаційної структури. Тобто кожній організації властива індивідуальна модель інформаційних зв'язків, що формується на підставі аналітичного забезпечення управління.

Сучасні інформаційні системи є складними комплексами і включають сукупність різних програмно-апаратних платформ, універсальних і спеціалізованих додатків різних розробників, інтегрованих в єдину інформаційно-однорідну систему, яка допомагає вирішувати завдання кожної конкретної організації.

Таким чином, інформація стає стратегічним ресурсом, що сприяє конкурентній перевазі, тому вважаємо, що поняття «інформація», особливо в умовах цифрової економіки, слід методологічно віднести до її основного інструментарію. Саме безперебійний обмін інформацією дозволяє швидко і злагоджено здійснювати діяльність організації за різними напрямками. І управління інформаційними технологіями набуває, в даному випадку, першорядного значення. «Щоб знизити ризик прийняття невдалих управлінських рішень, необхідно постійно підвищувати ступінь інформованості керівництва підприємств, які розробляють, обґрунтовують і приймають ці рішення. Тому дедалі більшого значення набуває інформаційне забезпечення управлінських рішень та оцінка їх кінцевих результатів» [6, с. 34]. Тобто сучасні інформаційні технології охоплюють весь спектр економіки та господарської діяльності.

Розвиток інформаційно-комунікаційних технологій приводить до зміни як швидкості, так і джерел генерування інформації в умовах цифрової економіки, що вимагає нового характеру їх обробки (Рис. 1).

Результати обробки та аналізу подібних масивів інформації як у споживчому (наприклад, «розумний» будинок), так і у виробничих сегментах є затребуваним продуктом внаслідок посилення процесів кастомізації та комп'ютеризації, створюючи нові конкурентні переваги для організацій за умови володіння відповідною інфраструктурою в області обробки великих даних.

Для забезпечення успішності в умовах стрімких змін в епоху цифрових технологій змінюються правила бізнесу – в конкуренцію вступають нові комп'ютерні моделі управління, що забезпечують формування нової інформаційної політики, продуктивність, інноваційність, гнучкість та адаптивність. Від рівня цифрового потенціалу організації залежить на тільки її конкурентоспроможність, а й інноваційний розвиток на перспективу.

«Не відмовляючись від ідеї максимальної фільтрації інформації, побудова інформаційної політки здійснюється на основі новітніх технологій, які здатні інтегрувати різні системи та інформаційні джерела, позиціонуючи їх як джерела інформації. Так, Т. Стюарт зазначає, що «кожні чотири долари з п'яти, які витрачає Леві Страус на виробництво пари джинсів, витрачаються на інформацію, а не на матеріали, і взагалі витрати на інформацію становлять три чверті даної вартості будь-якої продукції» [7, с. 433].

Інституційна теорія, використовуючи апарат теорії інформації, синтезуючи його з методами аналізу транзакційних витрат, має в своєму розпорядженні суттєві можливості з проведення подальших досліджень економічних відносин.

Рис. 1. Трансформація джерел генерування інформації в умовах цифрової економіки як нова конкурентна перевага

Організацію можливо порівняти з живим організмом, у якому всі його «органи» діють в балансі один до одного і яких пов'язують чисельні взаємодії. Коли відбуваються збій або зміни, порушується гомеостаз і виникає ряд відповідних проблем. Тому і в організації для системи управління важливою є агрегація даних в єдиний інформаційно-цифровий простір, який через призму технологічних нововведень створює таку інформаційну інфраструктуру організації (І ІО), яка уможливлює вирішення поставлених завдань та є своєрідним управлінським контуром.

Розвиток інфраструктури доступу в Інтернет є базисом побудови єдиного інформаційного простору. У той же час паралельно з удосконаленням інфраструктури необхідно проводити проактивну політику, спрямовану на досягнення проривів в області досліджень і розробок цифрової економіки, підвищення компетенцій населення у володінні цифровими навичками. Про це свідчать ініціативи Європейської комісії. Серед цілей, які висуваються Європейською Комісією в області створення Єдиного цифрового ринку та у сфері вдосконалення використання цифрових технологій наступні:

1) забезпечити кращий доступ для споживачів і підприємств до цифрових товарів і послуг по всій Європі (стимулювати електронну торгівлю в ЄС шляхом вирішення проблеми блокування геоданих, забезпечення більш доступною і ефективною транскордонною доставки посилок і заохочення довіри клієнтів за допомогою кращого захисту і правозастосування; модернізувати правила авторського права ЄС в умовах цифровізації);

2) створити необхідні умови для «процвітання» цифрових мереж і служб;

3) максимізувати потенціал зростання цифрової економіки через створення ініціативи в області цифрової промисловості та розвитку європейської економіки даних [8].

Інформаційна інфраструктура організації – це комплексна система, яка охоплює інформацію, персонал, сукупність прикладних, технологічних і технічних рішень для забезпечення інформаційної підтримки роботи організації відповідно до правил і концепцій, визначених місією і стратегією організації, її бізнес-моделлю і підходами до управління.

Архітектура інформаційної інфраструктури – інтегрована концепція, яка визначає модель, структуру, виконувані функції і взаємозв'язок компонентів інформаційної системи, що забезпечує реалізацію стратегії організації і досягнення цілей бізнесу. Архітектура І ІО повинна включати як логічні, так і технічні компоненти. Логічна архітектура надає високорівневий опис з позиції інформаційних потреб місії організації, її функціональних та інформаційних вимог, системних компонентів та інформаційних потоків між цими компонентами. Технічна архітектура визначає конкретні стандарти і правила, які будуть використовуватись для реалізації логічної архітектури.

Інформаційна інфраструктура існує в кожній організації, оскільки без процедур її формування, обробки і використання неможливо здійснювати управління. Узагальнення цього твердження дозволяє говорити про інформаційну інфраструктуру в однині, як деякого єдиного контуру, або, за визначенням Білла Гейтса «нервової системи організації» [9]. З огляду на значимість інформаційної інфраструктури управління організацій для їх функціонування і розвитку саме вона стає пріоритетним об'єктом управління, що вимагає врахування її властивостей і специфіки, обумовленої процесами цифрової модернізації економіки (Рис.2).

Метамодель організації – це найбільш загальне і всебічне уявлення її як єдиної системи, що має короткострокові і довгострокові цілі ведення діяльності, визначені місією і стратегією, яка володіє зовнішніми і внутрішніми ресурсами, необхідними для виконання місії та досягнення поставлених цілей, а також сформованими правилами здійснення діяльності способами реалізації бізнес-процесів і бізнес-функцій.

Завдання метамоделі організації полягає у визначення її архітектури та інфраструктури. Під архітектурою організації розуміється деяка концепція (логічна побудова), яка визначає, що і як вона робить (місія, цілі, стратегія, основні функції), на які частини вона розпадається (властивості елементів), де вони розміщені (структура організації) і як ці частини і на яких засадах взаємодіють (взаємозв'язок компонентів).

Під архітектурою організації розуміється деяка концепція (логічна побудова), яка визначає, що і як вона робить (місія, цілі, стратегія, основні функції), на які частини вона розпадається (властивості елементів), де вони розміщені (структура організації) і як ці частини і на яких засадах взаємодіють (взаємозв'язок компонентів). Архітектура являє собою не групу компонентів, а унікальну ідею, основою якої є розуміння вподобань, інтересів, майбутньої роботи, очікувань, перспектив розвитку, індивідуальних характеристик ключового користувача, що уособлює всю внутрішню організацію суб'єкта господарювання. Інтеграція різних точок зору керівного апарату управління певним чином відображає приховану конструктивну частину організації інформації, що вміщує виключно особливості кожного з учасників та є середовищем руху їх інтелекту, культури, мотивації, власних етичних норм і правил. В архітектурі інтегровані зв'язки мають не технічний, а передусім інтелектуальний характер, що сприяє постійному відтворенню нововведень, методів і підходів до організації інформаційного середовища підприємства [5]. Таким чином, архітектура підприємства – це сучасна, інноваційна і високоефективна концепція стратегічного управління, використання якої дозволяє швидше і більш цілеспрямовано змінювати організацію для реагування на варіації викликів зовнішнього середовища.

Висновки. Залежно від сфери діяльності, всі організації володіють різною інформаційної інтенсивністю. Під цим поняттям доцільно розуміти ступінь залежності діяльності організації (бізнес-процесів, функцій) від швидкості обробки інформації, необхідної для ефективного здійснення такої діяльності. Прийняття рішень менеджерами або власниками організації про модернізацію існуючої ІС або створення нової ІС, а також про застосування в організації будь-яких нових інформаційних технологій, приводить до змін у самій організації, її інфраструктури та визначеної стратегії.

Таким чином, інформаційна інфраструктура управління організацій створює інструментальне середовище для діяльності менеджерів, яке має здатність до мультиплікації та водночас блокування позитивних ефектів їх діяльності. У зв'язку з цим, відбувається трансформація цієї інфраструктури в критично важливий, стратегічний ресурс організації, що визначає її життє-, конкурентоспроможність і здатність до інноваційного розвитку.

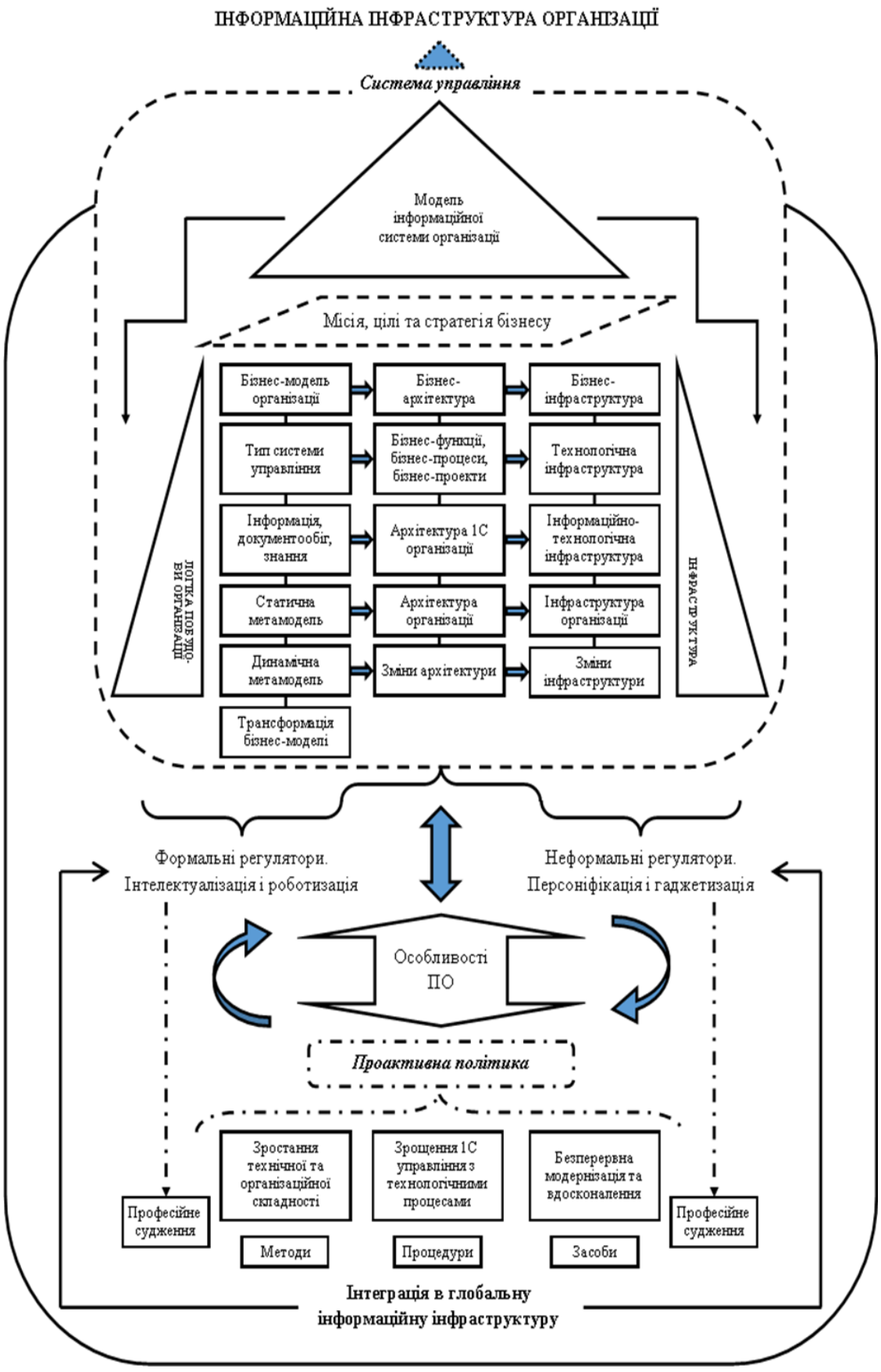

Рис. 2. Модель архітектури інформаційної інфраструктури організації в умовах цифрової економіки

З огляду на значимість інформаційної інфраструктури управління організацій для їх функціонування і розвитку, сама вона стає пріоритетним об'єктом управління, що вимагає подальшого її удосконалення з урахуванням нових властивостей і специфіки, обумовленої процесами цифрової модернізації економіки. Створення механізму координації інвестицій розширює інвестиційні можливості підприємств, стимулює інвестування в економіку і зміцнює фінансову систему держави. Автором визначено поняття інвестиційної привабливості підприємства в системі нової управлінської парадигми, запропоновано структуру методологічних підходів діагностичного аналізу інвестиційної привабливості підприємств та обґрунтовано критерії оцінки інвестиційної привабливості підприємств, що сприяє можливості отримання дієвої управлінської інформації щодо активізації впровадження інвестиційних проектів.

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INTERNATIONAL EXPERIENCE OF CREATION LOGISTIC PARK

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ABSTRACT

One of the main trends of modern economic relations is the transition of priorities from the producer market to the buyer market.
In this regard, the ability to combine production, the planning system with individual purchasing preferences is becoming a decisive factor in competition and the economy of the future. As a result, rapid changes in buyers' preferences, their requests for quality of delivery lead to the need to reduce delivery times and volumes, and to reduce reserve stocks of time and materials. Perhaps the second feature is the strengthening of integration processes among countries, particularly in the context of the expansion of the WTO, with the possibility of placing production in countries with cheaper labor and lower tax rates, and the development of international trade has opened up access to cheaper resources.

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Overview of foreign experience.

The world system of logistics complexes as a whole has already been formed. The system was pioneered by Atlanta Airport in the United States, where Delta began docking its own flights in the 1950s. Since then, Atlanta has been the busiest airport in the world.

In establishing logistics complexes in the UK, private companies are negotiating with county authorities. When they determine where the centre is to be located, they establish private joint-stock companies. Some logistics centres are established on a partnership basis, with several private companies operating in the same centre. An example of such a project is the city of Milton Keynes (United Kingdom), on whose territory Magna Park is located. The complex includes a huge number of distribution centers offering tenants various logistics operations, including the possibility of several modes of transport. Magna Park is one of the largest projects in the world and a vivid example of the logistics complex.

The geography of Italian logistics complexes and the economic feasibility of their establishment determine the proximity to the intersections of important national and trans-European land routes, shipping routes, airports, as well as production centres, which, when exporting products, make transport infrastructure busy (Milan, Verona, Turin, Trieste, Bologna, Florence, Ancona, etc.).

Logistics centres in Japan have been established in areas where major industries, airports and seaports are located. Such centres, located along international transport corridors, increase the volume of total freight traffic and improve the efficiency of air freight traffic when using these centres as transit airports for refuelling purposes.

In Western Europe, the targeted development of transport logistics centers began in the early 1980s, owing to the high growth of freight and passenger transport in the context of the globalization of world commodity markets. The construction of large logistics centres (hubs) in Western Europe has become a trend in the past 10-15 years. The area of such projects can exceed 1 million square metres.

Today, in the world, the initiative and support of the Government is of great importance for the creation of adequate modern technological requirements and market conditions of the logistics complex infrastructure.

For example, the reason for the Dubai hub was the desire of the State to invest and benefit not only from the development of commodity industries, oil and gas production, but also from areas of the economy with higher value added.

The increasing competition between producers has forced them to look for additional opportunities to reduce the transport component in the final price of the goods. As a result, with total world GDP-about 30 trillion dollars. At the beginning of the twenty-first century, the world's direct exports of goods exceeded 6 trillion dollars. Exports of services amounted to $1.7 trillion. In turn, the share of components coming from other countries within the framework of international cooperation increased from 19 per cent in the 1980s to 50 per cent in 2005, including 17 / 51 per cent in Germany, 24 / 49 per cent in England, 15 / 40 per cent in Japan, 21 / 48 per cent in France, 14 / 45 per cent in Sweden, 27 / 60 per cent in Holland, 24 / 42 per cent in Belgium.

Consider the foreign experience of the creation of multimodal transport and logistics parks in the world.

In terms of experience in building logistics parks, Germany, Japan and Taiwan are in the forefront of the world. According to their experience and the functions of the logistics park, some international logistics experts divide the logistics park into four categories: according to the completeness of the function, it can be divided into comprehensive logistics park and professional logistics park; according to the logistics service area, it can be divided into international logistics park, national logistics park, regional logistics park and urban logistics park.

According to the service object, it can be divided into logistics park served by production enterprises, logistics park serving commercial retail industry, and social logistics park facing the whole society; from the point of view of specialization, it can be divided into industry logistics park and third-party logistics park.

The construction history of the logistics park in Japan is a little longer, and the earlier construction of the logistics park in Tokyo, Japan, is designed to alleviate the urban traffic pressure.

They have accumulated some experience in the process of building a logistics park, mainly in three aspects: first, attach importance to planning; second, preferential land use and government investment policies; third, good municipal facilities and investment policies.

Germany is a country with relatively perfect transportation development in the world. for them, the current task is to optimize the use of existing transport infrastructure and give full play to their potential.

The German government's approach is to integrate various modes of transport, alleviate the spread of traffic congestion and improve the capacity of the entire transportation system.

Germany generally adopts the development model of overall planning by the federal government, construction supported by the government and municipal government, corporate management, and independent management of resident enterprises.

As a transportation hub, Nuremberg Logistics Park in Germany was built in the mid-1970s and developed into a logistics park in the 1980s, covering an area of 3.37 square kilometers, with a development of 2.17 square kilometers in the first phase and 1.2 square kilometers in the second phase (now under development).

The main body of the construction is the joint-stock company supported by the government, and the capital source of construction governance is mainly from government funding and enterprise loans.

The functions of the joint-stock company in the construction and management of the logistics park are the development of land, public transportation, facilities construction, large-scale equipment leasing, public facilities maintenance, coordination with relevant departments, and so on.

The function of the logistics park is that the resident third-party logistics companies provide international transit logistics, regional logistics and urban distribution services, as well as services for the transportation and processing of renewable resources.

At present, there are more than 30 third-party logistics companies in the park, with an operating volume of 9.1 million tons.

The emergence of logistics parks has greatly promoted the rapid economic development of Japan, Germany and so on.

According to the research of German authoritative institutions, in the next 10 years, even in countries with highly developed transport industries such as Japan and Germany, the construction of logistics parks is still in a period of vigorous development.

This is based on the fact that after the emergence of the logistics park, it has produced huge economic and social benefits to the enterprises using the park and even to the neighboring cities, which is mainly manifested in: reducing the pressure of logistics on urban traffic, reducing the adverse impact of logistics on the urban environment, improving the economies of scale of logistics management, meeting the requirements of the large-scale development trend of warehouse construction, and meeting the requirements of intermodal transport of goods.

In Germany, the Federal Ministry of Transport, Construction and Urban Affairs has two basic objectives, one of which is "mobility" for transportation. The federal government is committed to increasing investment in integrated transport from the current 62.5 million euros to 115 million euros per year, and will launch strategies to take air pollution, climate change, noise pollution and traffic congestion into account, thus making the economic evaluation of various modes of transport more transparent.

The status of the logistics industry in Germany and even the whole Europe makes the federal government hope to further improve the international image of German logistics.

By improving the working conditions of employees in the freight industry and carrying out basic and in-depth training activities, we can provide sufficient human resources for the development of logistics in Germany.

Three factors affecting logistics park.

In the long run, if enterprises want to choose their own logistics park, they need to consider the following three factors.

1. Have a good plan

When choosing a logistics park, enterprises should first consider whether the relevant national departments have put forward guiding opinions on the construction of international and national logistics parks according to the development of logistics, vehicles and urban layout.

As far as a region is concerned, the core issue of planning is to determine the number, function, scale and location of the park on the basis of correct evaluation, so as to avoid rushing up and seeking perfection in a big way, and to select the main body of the construction of the logistics park. determine the mode of operation.

When the government establishes an enterprise company to operate, it can choose the main body of operation in different ways: rent or sale, or the combination of rent and sale.

2. Attention should be paid to location selection and spatial layout.

When choosing a logistics park, enterprises should consider four major factors in the location choice and spatial layout of the logistics park: first, the park can be connected by at least two modes of transportation, including highway and railway; the second is to select the center of the transportation hub to adapt the layout of the logistics park to the transportation network; third, economic rationality, including lower land price, sufficient quantity and high-quality labor force, etc., to create conditions for park enterprises to obtain necessary benefits; fourth, to meet the requirements of environmental protection and ecological balance.

3. The warehouse of logistics park should be paid attention to.

The warehouse is a scarce commodity, and the land occupied by the logistics park is also a scarce commodity, if the warehouse and land can not be used well. In that case, warehouses will become more and more scarce.

If it is not easy to use because of the unreasonable planning and design of warehouse and logistics park, it will affect the utilization rate, operation efficiency and return on investment of logistics warehouse, and then it will also affect the relationship between supply and demand of logistics warehouse.

In fact, it is not all unsuccessful experiences and lessons, in the logistics park warehouse planning and design, there are still some good logistics park cases.

For example, a large state-owned enterprise in China has developed a set of logistics park warehouse standards in line with China's national conditions in the process of developing logistics park warehouses and logistics centers on a large scale. It is said that this standard has been recognized by foreign well-known logistics real estate developers and used by international logistics research experts for reference.

The development of logistics park is a means to serve the development of economy.

When an enterprise chooses a logistics park, the first starting point should be to consider its logistics market and the actual and potential logistics demand in the city or region, which is the basis and basis for enterprises to choose logistics park planning.

China-Kazakhstan Logistics Park.

The China-Kazakhstan logistics terminal in the port of Lianyungang is a vivid example and a model of international logistics cooperation. The logistics cooperation base between China and Kazakhstan (Lianyungang) is the first "Silk Road Economic Belt" physical project put forward and implemented by President Xi Jinping during his visit to Kazakhstan. It is mainly engaged in international cargo transport business such as international multimodal transport, unpacking and consignment, warehousing and so on.

Kazakhstan-Chinese logistics terminal in the port of Lianyungang in northeastern China on the coast of the Yellow Sea has become one of the centers of the resurgent economic belt of the Great Silk Road.

The choice of this port is of great geostrategic importance. Nowadays, it is one of the 25 largest seaports in the world.

Lianyungang occupies an important position between East and West and represents the eastern beginning of a new Eurasian transcontinental corridor.

In the interpretation of strategic significance, Lu Lin pointed out that the construction of the "two bases" of Lianyungang will directly promote the development of the core area of the "Belt and Road Initiative" intersection, and stressed the importance of China-Kazakhstan logistics cooperation base and Shanghai Cooperation Organization Park. When studying the prospect of Sino-Kazakh logistics cooperation, Yang Kailin pointed out that the three parties of the two countries should work together to build an upgraded logistics base. In addition, Lan Shaomin, Wang Congyi, du Junyu and others have followed up and studied the establishment of China-Kazakhstan logistics cooperation base, looking forward to the inestimable node role of China-Kazakhstan logistics. Peng Zhenghuai made it clear in his discussion on the guidance of the China-Kazakhstan (Lianyungang) Logistics Cooperation Base in the "Belt and Road Initiative" strategy that the China-Kazakhstan (Lianyungang) Logistics Cooperation Base is the first physical project in the construction of the "Silk Road Economic Belt". It has important guiding significance for the construction of "Belt and Road Initiative". Only by co-ordinating the overall domestic and international situation and giving full play to the pitting effect of the logistics cooperation base of China and Kazakhstan (Lianyungang), can we help our country to achieve a successful start to the construction work of "Belt and Road Initiative". In expanding strategic advantages, Yang Ruojian pointed out that how to give full play to the radiation role of Lianyungang Logistics Cooperation Base project and promote the development of national key industries has become an important strategic topic.

Shen Kunrong pointed out that Lianyungang should give full play to the role of the eastern node of the Silk Road Economic Belt, serve the new economic policy of "Bright Road" in Kazakhstan, and study the feasibility and operational requirements of policy guarantee cooperation. find a balance between top-level design and base-level vitality;

Liu Kaishan shows in his research that Lianyungang's implementation of the "Belt and Road Initiative" strategy makes Lianyungang occupy the best time and geographical location, but as the eldest brother in the forerunner area of reform and opening up for more than 30 years, its economic development lags behind. as the rear army of coastal economic development, Lianyungang can be "first-to-last" in the regional competition depends on being able to fully grasp the preferential policies given by the state, and it is necessary to pay close attention to the logistics cooperation base between China and Kazakhstan.

In order to expand the strategic advantage, it is helpful for Lianyungang to start later and arrive first, and realize the upturn against the wind.

In May 2014, the construction of the first joint Kazakh-Chinese terminal with an area of 21 hectares was laid on its territory.

“Belt and Road” initiative has opened up Lianyungang's unique development opportunities and strengthened its links with the outside world. On June 7 2017, the first cross-border freight trains to Almaty and Istanbul departed from the China-Kazakhstan logistics terminal of the port of Lianyungang. This demonstrated the successful integration with the logistics terminal of a large deep-sea port, a maritime highway and a China-Europe rail route. It is also a new model of logistics cooperation between China and Kazakhstan.

Having become the first "material platform" during the construction of the "Belt and Road", the China-Kazakhstan logistics terminal has earned as an international economic platform of cross-border transport and warehousing logistics of five Central Asian countries. Cross-border freight trains

departing from the terminal operate at more than 200 railway points in five Central Asian countries, including Istanbul (Turkey) and Duisburg (Germany). Over the past six years Lianyungang has been actively promoting the construction of roads, ports, highways and parks, as well as transport hubs, within the framework of the "Belt and Road".

At present, more than 10 container trains travel regularly to Central Asia and Europe.

They provide more than 30 per cent of China's exports on the New Eurasian Continental Bridge and more than 60 per cent of cross-border traffic to Central Asia. At the same time, more than 40 sea container lines and 13 sea lines have been opened for cargoes without containers.

Sino-Kazakh logistics cooperation is in the development stage of both opportunities and challenges, and the current opportunities are: under the background of excellent international trade development and preferential national policies, China is bound to usher in the golden period of international trade in the next few years.

In order to grasp the golden period of international trade, we should focus on the growth of trade demand, and the China-Kazakhstan logistics cooperation base should respond positively and give full play to its strategic opportunity as the first physical platform of "Belt and Road Initiative".

Therefore, on the basis of ensuring the steady growth of material flow in China-Kazakhstan Logistics Park, we should reasonably forecast logistics demand and prepare ahead of time for the growth of international trade.

The purpose of logistics demand analysis, on the one hand, is to clarify the current transport strength of the logistics park, and the other is to provide data support for the subsequent expansion and transformation of the park.

As an intuitive digital index, the logistics flow of a logistics park can measure the infrastructure level, customer scale group and freight handling capacity of a park.

The demand forecast of the operation material flow of the logistics park can help the park to recognize the future customer demand, and formulate a reasonable park development plan by comparing the material flow in and out of the existing park.

Therefore, exploring the logistics flow of the Sino-Kazakh logistics cooperation base and scientifically forecasting the logistics flow have very important theoretical and practical significance for deepening the planning and construction of the logistics park. Therefore, this section analyzes and forecasts the logistics of the Sino-Kazakh logistics cooperation base.

Since the official operation of China-Kazakhstan Logistics Park in July 2014, logistics flow has been mainly generated by point-to-point transport trains. at present, there are a total of three point-to-point trains. They are Lianyungang-Almaty, Lianyungang-Duisburg and Lianyungang-Tashkent. By the end of 2018, the total volume of goods in and out of the warehouse was 13.2 million tons, and the volume of empty and heavy containers in and out of the warehouse was about 850000 TEU.

The specific data are shown in table 1.

Table 1. Logistics flow Statistics of Kazakhstan Logistics Cooperation Base

Year	Empty and heavy box in and out of the field/TEU	Disassembly and packing volume / TEU	Goods in and out of the warehouse / ton
2015	142693	31036	1423652
2016	176351	28732	3214196
2017	256792	17556	4242858
2018	276882	14886	4321731

As can be seen from table 1 above, the business volume of China-Kazakhstan logistics cooperation base shows an upward trend, with an increase of about 12% over the same period, and the number of unpacking and packing decreased by 18% compared with the same period last year.

Due to the large basic data, maintaining a growth rate of more than 10% all the year round, the facilities of the base can meet the needs of logistics growth in the short term.

In the long run, if the park does not expand or replan the functional area, within a few years, the logistics park will face the crisis of overload operation.

China-Kazakhstan Logistics Cooperation Base Construction Measures

1. Strengthen the construction of software and hardware system of port and logistics

(1) strengthening the construction of port and logistics hardware system, the prerequisite for the smooth implementation of trade between China and Kazakhstan (Lianyungang) logistics

cooperation base against the port, improving the port logistics hardware system. The Sino-Kazakh logistics cooperation base is a company directly under the port group, and the establishment of the port provides a prerequisite for the import and export trade of the park.

Comprehensively enhance the port and logistics hardware system for foreign trade and China-Kazakhstan logistics cooperation base train to play a strong supporting capacity, to do this: first, to optimize the functional layout of the port. Revise the port planning, formulate and implement the shoreline utilization plan, complete the regulatory detailed planning of Xuwei Port area and Ganyu Port area, and match the functional facilities for industrial layout and logistics and transportation. The second is to speed up the construction of deep-water waterways.

Upgrade the waterway level and ship berthing capacity, pay more attention to the waterway construction of Lianyungang area, Xuwei Port area, Ganyu Port area and Guanhe Port area, so as to meet the import and export requirements of all kinds of bulk goods. The third is to speed up the construction of specialized wharf berths.

To focus on the construction of an industrial port in Xuwei Port area, and speed up the construction of specialized terminals and industrial supporting terminals such as Sheng Hong Refining and Chemical Integration, Donghua Energy, Satellite Petrochemical and LNG Terminal, so as to meet the needs of international trade going out to sea through Lianyungang and the sustainable development of China-Kazakhstan logistics cooperation base.

(2) to strengthen the construction of port and logistics software system, first of all, it is necessary to clarify the basic function of the port and incorporate the function into the information process.

Ensure timely and effective access to logistics information, focus on the construction of the port logistics information platform, focus on the customs declaration of import and export goods and the schedule of arrival and departure, and strive to achieve one declaration, one inspection and one release.

First of all, strengthen the construction of electronic ports. Led by the Municipal Information Committee entrusted by the Lianyungang Municipal Government, the three major EDI platforms, namely, the customs, the port and the shipping exchange, are effectively integrated, and it is proposed to establish a department specially responsible for electronic ports to achieve local customs declaration, inspection declaration, timely entry of customs declaration and inspection information, and transmit the letter and information to customers at the first time. Second, streamline customs clearance procedures.

Simplify the transit procedures for the import and export of goods as far as possible, especially the import and export of goods from Lianyungang Port, apply for approval in advance, shorten customer waiting time, recommend paperless office system, online declaration, online examination and approval, reduce customer door-to-door processing time, so as to improve the customs clearance efficiency of import and export goods, and then improve customer satisfaction.

2. Strengthen the construction of logistics system and service capacity.

(1) the development of the industry of constructing "Internet +" efficient logistics system is inseparable from the effective support of the Internet and big data. An efficient logistics system is the preferred factor to win the logistics market. Strengthening the operation level of the Internet of things in the China-Kazakhstan logistics cooperation base and cultivating intelligent logistics enterprises is the development goal of the China-Kazakhstan logistics cooperation base.

Promote the intellectualization of multimodal transport and establish brand trains.

Build the "Information Silk Road", build an international intelligent multimodal transport center oriented to "Belt and Road Initiative", keep abreast of the whole process of multimodal transport, and easily distribute relevant policies, economic and trade market needs and other information of countries and regions along the route. Establish an intelligent distribution system and recognize the importance of intelligent warehousing.

According to the logistics supply and demand information, timely put forward the corresponding distribution route and distribution time; for the containers that need to be stored, query the empty container space in the park, in order to facilitate the principle of entering and leaving, warehousing.

In addition, we will promote the integration and interactive development of intelligent logistics, intelligent transportation, e-commerce and other new forms of industry, so as to form a paperless, networked, intelligent and efficient modern logistics system.

(2) enhance the service consciousness and enhance the added value of logistics.

To realize the comprehensive function of Lianyungang as an open door city of "Belt and Road Initiative", the key is to find the right breakthrough and starting point. At present, most of the goods in

the hinterland of Lianyungang, especially in the vast area of Longhai-Lanxin Line, do not gather in Lianyungang, but most of them flow to other ports.

Because the hinterland consignors borrow port for export, the short channel is not the only consideration. The collection and distribution conditions of Lianyungang are similar to those of Shanghai, Rizhao, Qingdao, Tianjin and other ports, but they are not as good as them in terms of economic development and functional services, resulting in the loss of customers.

The shortage of hardware should be made up in terms of service software, strengthen internal operation and management, get rid of the mentality of "Hong Kong boss" and "master", uphold the consciousness of "consignor is small owner", lower posture, provide accurate service, reduce charges, improve efficiency, and effectively enhance the function and reputation of port services.

3. Strengthen the logistics service function of the land bridge and play a linkage role.

Lianyungang City is located at the eastern end of the New Eurasian Continental Bridge and has a natural transportation advantage. Make full use of the logistics service function of the land bridge to promote the train to transport products to Asian countries all the way to the west from Lianyungang, along the new continental bridge, so as to increase the density of cooperation with Central Asian countries. In addition, go to sea eastward to increase the density of land and sea intermodal transport in South Korea and Japan, strengthen foreign import and export trade, and provide convenient and affordable logistics and transportation services.

4. Strengthen the cooperation and supporting capacity construction between the logistics park and other parks in Lianyungang.

(1) to improve the functional construction of the park, first of all, to solve the internal problems of the park.

Take the reduction of freight rates as the key goal, consider further solving the problem of high comprehensive freight through policy support, technological innovation and management innovation, in order to gain price advantage in homogenized competition, and attach importance to the introduction of talents. break the age, gender, region, personnel relations and other conditions, select talents rather than academic qualifications and identity, and attract talents from all sides to work in the park. Secondly, highlight the advantageous industries and make great efforts to develop the transportation of agricultural products. Take Kazakh wheat as a breakthrough to attract more agricultural products from the five Central Asian countries to go out to sea in Hong Kong, build a characteristic train of logistics cooperation bases between China and Kazakhstan, and build a demonstration model of "Belt and Road Initiative" agricultural cooperation.

(2) strengthening the ability of cooperation with other parks at present, Lianyungang City has international trade platforms such as the Shanghai Cooperation Organization International Logistics Park, Comprehensive Free Trade Zone and Free Trade Zone, involving a wide variety of goods such as agricultural products, machinery, ores, chemicals, electronic equipment and so on.

5. Strengthen cooperation and resource sharing between China-Kazakhstan logistics cooperation bases and other parks. Strengthen cooperation with the SCO Logistics Park and find more cooperative countries for mutual benefit and common development through the SCO platform.

Start the construction of Sinotrans Shanghai Cooperation Logistics Center as soon as possible, enlarge the east-west two-way opening function of the national eastern, central and western regional cooperation demonstration zone, promote the early use of the comprehensive bonded area, and make good use of Lianyungang Forum, Lianyungang Expo and other open platforms. to create a number of "Belt and Road Initiative" characteristic exhibition brands.

6. Opening up a new international train.

First of all, we will enhance the capacity of cross-border transport routes between Asia and Europe.

Speed up the construction of the "two bases" to promote the seamless docking of ports, shipping, roads and parks, and make every effort to build a world-class multimodal transport system.

First, expand and upgrade the infrastructure construction of the China-Kazakhstan base, reduce the cargo turnover time of the China-Kazakhstan logistics transit base by more than half, promote the import and export of containers and goods to a new level, and make every effort to build an international grain logistics transport channel. The second is to improve the carrying capacity of Shanghe Logistics Park.

In order to meet the subsequent entry of a large number of goods into the park, expand the actual operation area of the loading and unloading station and Dazong bulk cargo trading center of the park, and enhance the comprehensive service function of the park. Third, open the China-Europe train

transport corridor. Deepen cooperation with the Harbin Railway and the Caspian Sea Alliance to keep the Central Asian train in the leading position in the country; smooth the network nodes of the southern line of the European train, and promote the stable operation and regular transportation of the Lianyungang Turkish Istanbul train. Fourth, improve the multimodal transport system.

To speed up the strategy of giving priority to the development of containers, strengthen the construction of Haihe intermodal transport and sea-rail intermodal transport network, and timely increase the number of routes to meet the requirements of goods going to sea. Secondly, under the premise of ensuring the smooth transportation of goods, we should appropriately open up new international trains.

In the new policy "opinions on supporting the Construction and Development of the Shanghai Cooperation Organization (Lianyungang) International Logistics Park and China-Kazakhstan Logistics Cooperation Base" issued not long ago, it is pointed out that in response to the "Belt and Road Initiative" initiative, the provincial government will spare no effort to support the import and export trade of Lianyungang and strive to create the backbone and benchmark of the new Asia-Europe land and sea transport channel.

While ensuring the smooth flow of China-EU train transport routes, we will deepen cooperation with the Harbin Railway and the Caspian Sea Alliance to keep the Central Asian train in a leading position in the country.

7. Opening up international air transport channels.

Speed up the construction of international airports and form an efficient and coordinated transport capacity. There are nine civil aviation airports in Jiangsu, of which the earliest is Nanjing Lukou International Airport (1997), and the latest and most external is Lianyungang Baitabu International Airport (2017). As the shortest express transportation mode among the five major transportation, air transport has priority for international trade, especially for the air transport of special goods. Lianyungang opened the international air train later, which directly affects the transport speed of international air parts.

Therefore, after comprehensively considering the opinions of various parties, the Lianyungang Municipal Party Committee put forward the strategic idea of building an international new airport to the provincial government at a higher level, and successfully approved the project by the State Council and the Central military Commission on January 27, 2018. The new airport (Huaguoshan International Airport) was approved by the State Council and the Central military Commission.

The successful construction of the new airport will make up for the lack of air transport in Lianyungang in international trade, speed up the formation of an integrated transport system of "port, aviation and railway", and form an efficient cooperative transport capacity.

8. Deepen cooperation with Horgos Port and Central Asian countries.

(1) deepen cooperation with Horgos Port Base.

Horgos Port is located in Yili Kazakh Autonomous Prefecture, Xinjiang, China, across the river from Kazakhstan, and has developed into an important port linking Central Asian countries for trade.

More and more "made in China" are transported to the five Central Asian countries and European countries through the Horgos port.

Data show that among the 1668 trains exported through Horgos in 2018, mainly from cities such as Lianyungang and Zhengzhou, the Sino-Kazakh logistics cooperation base in Lianyungang is the region with the largest export volume from Horgos, indicating that the two have close cooperation.

Take Horgostna as the westbound station of China-Kazakhstan logistics cooperation base, declare inbound and outbound freight forwarders here, improve the customs clearance efficiency of China-EU trains, and strengthen cooperation with Horgos port. Publicize the Sino-Kazakh logistics cooperation base as the eastern import and export site, attract orders from Uzbekistan, Kazakhstan, Germany, Poland and other countries to achieve win-win cooperation.

(2) deepen cooperation between China and Kazakhstan logistics cooperation bases and countries. First, deepen cooperation with Central Asian countries.

Central Asia is the key object of cooperation under China's "Belt and Road Initiative" initiative, taking the Sino-Kazakh logistics base as an opportunity for cooperation, and deepening cooperation with Central Asian countries through trade exchanges, with the goal of becoming a model of cooperation in "China-Central Asia" international projects.

Strategic forecast of Logistics Cooperation between China and Kazakhstan under the background of "Belt and Road " Initiative.

In order to better adapt to the growing market demand under the "Belt and Road Initiative" initiative in the future, avoid the difficulties in the operation of the base caused by excessive material flow in the future, and take precautions against it, a logistics forecasting model is constructed to respond to the sustainable development of the park.

From economy to engineering, prediction is almost a very important factor. There are a lot of software specifically aimed at this field. In this study, the prediction calculation is carried out by Excel.

Prediction program.

The purpose of any prediction is to determine the current trend and to determine the expected results of the subjects at a particular time in the future.

Method 1: Trend line

One of the most popular types of graphical predictions in Excel is to infer by constructing trend lines. Construct a constraint schedule based on tabular data composed of parameters and function values. We need to draw a trend line.

Can choose one of the six types of approximation:

- Linear;
- Logarithm;
- Exponential;
- Linear polynomials;
- Multiplicative power;
- Moving average.

It should be noted that if the prediction time does not exceed 30% of the base during the analysis period, the prediction inferred from the trend line is valid.

Therefore, over a period of 12 years, we cannot make, effective predictions for more than 3 to 4 years. But even so, unless force majeure occurs during this period and vice versa, it will be relatively credible because it is an extremely favourable environment that did not exist in previous periods.

Method 2 FORECAST operator

The FORECAST feature in Excel allows you to predict future values with some accuracy based on existing values and return the corresponding values.

For example, some objects have properties that change over time.

These changes can be fixed experimentally to produce a table of known x values and corresponding y values, where x is the unit of time and y represents the quantitative property of the property.

Using the FORECAST function, you can assume the subsequent y value of the new x value.

The FORECAST function adopts the linear regression method, and its equation is $y= ax+b$, where:

The coefficients are calculated as $\bar{y} - b\bar{x}$ ($\bar{y}$, $\bar{x}$ – the smallest arithmetic numbers selected from samples with known y and x values are y and x, respectively).

The coefficient b is determined according to the following formula:

$$b = \frac{\Sigma(x-\bar{x})(y-\bar{y})}{\Sigma(x-\bar{x})^2}, \quad (1)$$

Method 3: TREND operator

You can use another function, TREND, to predict.

It also belongs to the category of statistical operators.

Its syntax is largely similar to that of the FORECAST tool, as follows:

TREND (known value y; known x value; new marker value x; (tail value).

You can see that the parameters of "known y value" and "known x value" exactly match the same element in the FORECAST statement, while the "new x value" parameter matches the X parameter of the previous tool.

In addition, the trend has an additional “consta” argument, but it is not mandatory and will be used only if there are fixed factors. This operator works best when there is a linear constraint on the function.

Method 4: GROWTH operator

Another function of forecasting in EXCELL is the growth operator.

It also applies to a set of tools, but unlike the previous sets, it uses an exponential method rather than a linear constraint.

The syntax for this tool is as follows:

GROWTH (known value y; known x value; new tag value x; (tail value).

As we have seen, the argument for this function is exactly the same as that of the operator, so we will not repeat these arguments, but will apply them directly to practical applications.

Analysis of forecasting results.

In order to forecast the demand, the logistics flow data of China-Kazakhstan Logistics Park from 2015 to 2018 are selected.

As shown in table 2.

Table 2. Annual material flow of China-Kazakhstan Logistics Cooperation Base

Year	**2015**	**2016**	**2017**	**2018**
Goods in and out / ton	1423652	1423652	4242858	4321731

1) Trend line

A) Linear

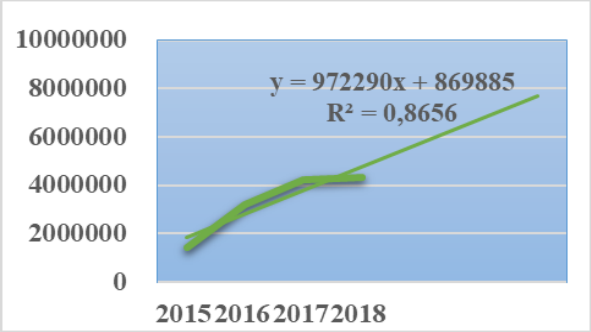

Fig. 1. Linear trend.

After constructing the constraint graph (fig. 1), the linear trend is predicted and calculated by graphic method.

The results of the linear trend are shown in table 3.

Table 3. The result of linear trend

Year	**2019**	**2020**	**2021**
Goods in and out / ton	1963923395	1964895685	1965867975

B) Exponential

The results of the exponential trend are shown in fig. 2 and table 4.

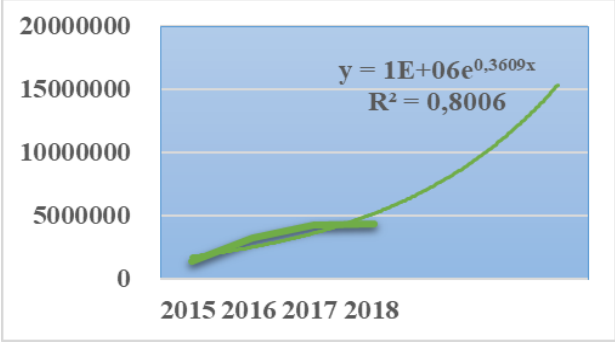

Fig. 2. Exponential trend.

Table 4. The result of exponential trend

Year	**2019**	**2020**	**2021**
Goods in and out / ton	6977.12	6980.58	6984.03

C) Power.

The results of the power trend are shown in fig. 3 and table 5.

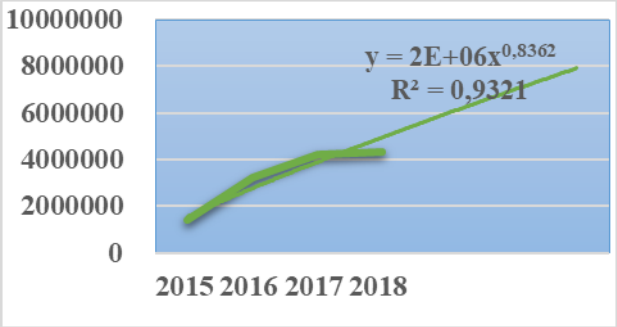

Fig. 3. Power trend.

Table 5. The result of power trend

Year	2019	2020	2021
Goods in and out / ton	17378.99	17390.31	17398.92

2) Use FORECAST, TREND statistical function to analyze and predict.

A) FORECAST.

The material flow is predicted according to the FORECAST function prediction theory, and the results are shown in table 6.

Table 6. The result of FORECAST function

Year	2019	2020	2021
Goods in and out / ton	5731334	6285101.5	7029339.5

B) TREND.

The material flow is predicted according to the TREND function prediction theory.

The result of the TREND function is exactly the same as that of the FORECAST function, which can be seen in table 7.

Table 7. The result of TREND function

Year	2019	2020	2021
Goods in and out / ton	5731334	6285101.5	7029339.5

The results are listed in the table 8.

Table 8. Combination forecasting results

Year	Linear trend	Exponential trend	Power trend	FORECAST	TREND
2019	1963923395	6977.12	17378.98658	5731334	5731334
2020	1964895685	6980.58	17390.31258	6285101.5	6285101.5
2021	1965867975	6984.03	17398.9203	7029339.5	7029339.5

Because the result of the graphic method is not accurate, the graphic calculation will have to be abandoned, and the most reliable result is the result of using FORECAST function and TREND function.

Through the forecast of the logistics flow in the park, the results show that the logistics flow of the logistics cooperation base between China and Kazakhstan will keep a steady upward trend in the next few years.

But it is necessary to note that China-Kazakhstan logistics cooperation base is facing a variety of opportunities and challenges. It is not only facing the threat of fierce competition and backward transportation system, but also ushering in a golden development period of strengthening international cooperation and increasing trade volume.

In order to better meet the important historical opportunity of the rapid development of international trade, it is predicted that the logistics flow that may be reached by the China-Kazakhstan logistics cooperation base in the next three years will play a data early warning role for the follow-up development of the park.

The forecast results show that if the park is not expanded, only relying on the existing logistics stations and container yards, the park will face difficulties in cargo handling and transport overload in less than three years.

In this regard, it is an inevitable trend to deepen the construction of logistics cooperation bases between China and Kazakhstan.

Conclusions. Thus, as the world experience shows, the creation of a national logistics organization with all the characteristics of a 3-4PL-provider is almost impossible without the support of the state, including interaction with state agencies, including customs, organization of partnership with freight carrier organizations and other participants providing logistics processes.

In addition, the public administration should focus on solving problems that can only be done by them.

This is the development of a general programme for the development of logistics, taking into account a range of economic, transport, environmental, social and other factors, as well as methodological support, and it is necessary to improve and monitor the implementation of the rules and regulations of equipment and operation of terminal facilities, etc.

In addition, it is a profitable business for the state, whose macroeconomic effects are as follows:

- Reduction of the share of total national economic expenditures on the promotion of goods and goods in the GDP structure by 5-10%;
- reducing the inflation rate by reducing logistics costs;
- increase of investment attractiveness of projects for placement of production facilities.

Improving the competitiveness of the economy through the creation of an effective modern logistics mechanism, which will provide at minimum cost to the economy:

- Integrated supply logistics for production centres;
- optimization of inventories and release of frozen financial resources;
- Integrated logistics for the distribution of goods from production centres to consumption centres (including imported goods).

The most important indirect effects will be:

- qualitatively improving the efficiency of consumer markets, increasing the availability of goods by reducing consumer prices, improving the quality and standard of living of the population;
- reduction of the cost of moving goods from production centers to consumers, reduction (phased "extinction") of non-productive intermediaries.

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DEVELOPMENT OF COOPERATION BETWEEN CENTRAL ASIAN COUNTRIES AND CHINA IN ACCORDANCE WITH THE “ECONOMIC BELT OF SILK ROAD”

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ABSTRACT

The Economic belt of the Silk Road project (hereinafter referred to as the "EBSR") has formed China's new long-term strategy "One belt − one way". With a view to the practical implementation of the EBSR initiative, China, in cooperation with interested Asian countries, is creating two important financial development institutions: the Asian Infrastructure Investment Bank and the Silk Road Fund. The new Chinese initiative, judging by the available information available, can pursue three strategic objectives:
expansion of international and regional trade; the creation of international transport corridors from China to Europe and the Middle East through the territory of Kazakhstan and Central Asia;
gradual increase of China's economic presence in Central Asia as a strategically important partner. Kazakhstan, as well as other countries of Central Asia, it is important to participate in the implementation of the Chinese EEPS initiative, to effectively use the emerging new opportunities and advantages of regional cooperation, while achieving, at the same time, minimizing risks and threats.

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Introduction. Nowadays, the great interest is the new Chinese initiative, which aimed at the revival of the Great Silk Road in modern conditions. This initiative opens up new opportunities and prospects for trade, economic and investment cooperation between the countries along the Silk Road, including Kazakhstan. Moreover, for the practical implementation of its initiative, China is creating such new development financial institutions as the Asian Infrastructure Investment Bank and the Silk Road fund, whose capitals will be used to implement infrastructure projects.

On September 16, 2013, speaking at the Nazarbayev University in Astana, President of the People’s Republic of China Xi Jinping expressed the idea of creating the "Economic belt of the Silk Road" as a new form of deepening cooperation between China, the states of Central Asia and Russia. This idea caused a powerful resonance not only among politicians and political scientists, but also in the community of economists and experts, since the leader of China first put forward a foreign policy initiative that affects the prospects for economic development of the whole continent − Eurasia. Over the past time, the initiative has become not just a concept, but a major international project of great economic interest not only for China itself, but for all countries along the Great Silk Road, including the Republic of Kazakhstan.

The Economic belt of the Silk Road project (hereinafter referred to as the "EBSR") has formed China's new long-term strategy "One belt − one way".

The new Chinese initiative, judging by the available information available, can pursue three strategic objectives:

- expansion of international and regional trade;
- the creation of international transport corridors from China to Europe and the Middle East through the territory of Kazakhstan and Central Asia;
- gradual increase of China's economic presence in Central Asia as a strategically important partner

To achieve these goals, the key tasks for China are:

- development of trade and economic cooperation, removal of numerous barriers and restrictions in international and mutual trade, creation of a favorable climate for investment inflow;
- the construction of the Eurasian transcontinental network of railways and highways, which allows the flexible use of various international transport corridors;
- comprehensive deepening of China's trade, economic, transport and logistics links with countries along the Silk Road, primarily with the countries of Central Asia;
- connect all the links of the Great Silk Road with the help of advanced transport-infrastructure and communication networks, as well as the development of a pipeline system;
- expansion of exports of Chinese goods, according to which China has excess production capacity within the country, primarily in its western provinces (overproduction of steel, aluminum, photoelectric equipment, wind generators, etc.);
- the conduct of mutual settlements between Silk Road participants using different currencies.

Countries along the Silk Road.

The countries of Eurasia along the Silk Road (hereinafter referred to as the "SR") can be conditionally grouped into five regions, for each of which China in its initiative defines a specific role.

First of all, the Central Asian region, including Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan, is designated as an outpost for expanding trade and economic ties with Europe, Russia, Turkey and Iran. Kazakhstan and Central Asia as a whole occupy an exceptionally important geostrategic position in Central Eurasia. These countries have treasures of precious metals, ore and metallurgical raw materials, energy resources.

The second region includes Iran, Iraq, Jordan, Syria, Saudi Arabia, Turkey and other countries of Western Asia. In this case, the energy of these countries ensures the production and export of oil and gas resources for China.

Azerbaijan, Georgia, Armenia in the Caucasus, Ukraine, Belarus, Moldova in Eastern Europe are in the third region located on the border of Asia and Europe. The countries of this region, due to their geo-economic location, were at the junction between the European Union and the Eurasian Economic Union.

Russia, due to the scale of its economy and its long geographical location both in Asia and in Europe, is reasonably considered by China as a separate economic region and an independent regional center. Historically, it is only partially located along the Silk Road. Russia, together with Kazakhstan, Belarus, Armenia and Kyrgyzstan, is currently engaged in the formation of the Eurasian Economic Union. Moreover, due to the historical situation, Russia closely cooperates with the countries of Central Asia, the Caucasus and Western Asia.

Afghanistan, Pakistan and India can also be identified in a separate region. Central Asia is the main goal of the Chinese EBSR concept, which provides for the modernization and construction of new railway lines, highways, pipelines and other infrastructure elements that promote the development of international and regional trade.

As expected, the main cargo flow by EBSR will be from the East to the West (Fig. 2). Western and central provinces of China due to the newly created international transport corridors will be on direct rail communication with the EU countries along the route through the station Dostyk (Kazakhstan).

By 2035, China, according to the forecast of British Petroleum, will become the largest consumer of oil in the world, pushing the United States. For twenty years, the demand for oil (0.8% per year) will grow more slowly than the demand for gas (1.9%). Half of the increase in demand for gas will be covered by supplies from Russia and the Middle East, the other half - shale gas supplies. Therefore, China will pay more attention to the pipelines in Central Asia, passing through the territory of Kazakhstan.

With a view to the practical implementation of the EBSR initiative, China, in cooperation with interested Asian countries, is creating two important financial development institutions: the Asian Infrastructure Investment Bank and the Silk Road Fund.

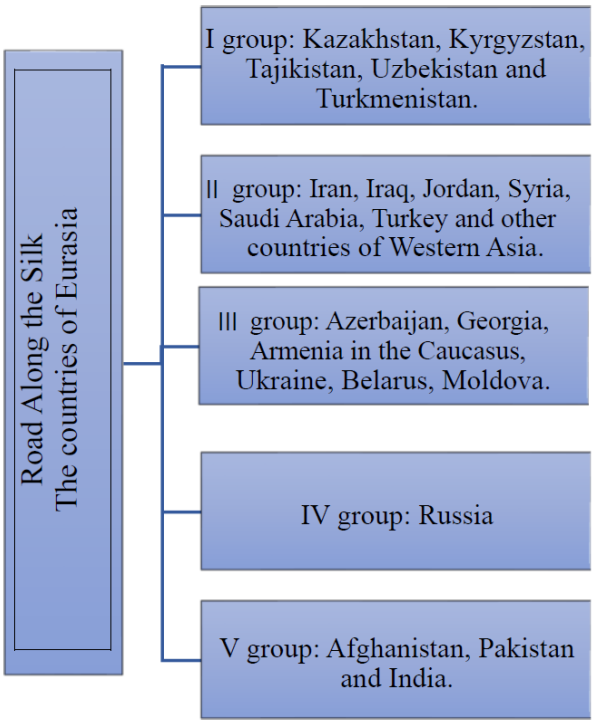

Fig. 1. Countries along the SR

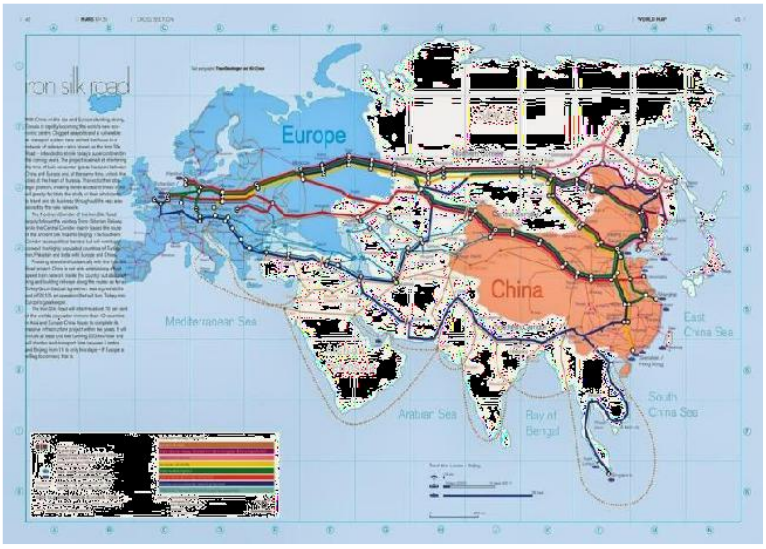

Fig 2. The railway line of the "Economic Belt of the Silk road"

Access to the domestic markets of Kazakhstan and Kyrgyzstan will allow Chinese companies and banks to simultaneously enter the common markets for goods, services, capital and labor of the Eurasian Economic Union. At present, the Silk Road Economic Belt and Maritime Silk Road Economic Belt Strategy is one of the largest initiatives, which has fundamentally changed the face of the modern world and formed a new paradigm for economic and general geostrategic development.

Today, China is the leading force in Central Asia and has the potential to influence the global vision of mankind. China is becoming a non-traditional superpower representing all aspects in different regional backgrounds, and it is also a major investor and trading partner of Central Asian countries. Kazakhstan is the important and largest market for China in the CIS region, second only to Russia. The level of development of Kazakh-China economic and trade relations is more dynamic. Effective foreign trade policy, utilization of resource potential in the industrial sector, modernization, technological potential-all these have led to the rapid development of the Kazakh economy. As mentioned earlier, the further development of the Eurasian transport corridor has opened a new

milestone in Sino-Kazakh cooperation, providing a direct link between China's "Belt and Road Initiative" mega project, Kazakhstan's new economic policy "Nuri Zell" and the Eurasian Economic Union. The Eurasian Integrated Transport system project will create mature transport and logistics corridors, which will promote trade relations among countries along the corridor.

At the same time, the development of Eurasian transport corridors will solve some of the economic and social problems in the areas attracted by the project. Kazakhstan has enough potential to become a major transportation hub in Eurasia. The geographical location of the Republic makes it possible for it to become a major transit hub between Europe and Asia and a major partner of China in the region.

Today, there are five international transport corridors in Kazakhstan (MTK), which greatly shortens the distance and time for the delivery of goods compared with maritime corridors:

The Trans-Asian Railway Corridor: the north (Western Europe-China, Japan, South Korea) and the south (South-East Europe-China-Southeast Asia); The Central Asian Corridor (Central Asia-Russia and EU countries); North-South Corridor (Nordic-Gulf States); Europe-Caucasus-Asia International Transport Corridor (TRACECA).

TRACECA is a multimodal transport system for the countries of the region and its purpose is to develop trade and economic relations as well as transport links between countries and regions. Today, TRACECA includes the transport systems of 13 member countries of the basic multilateral agreement on international transport development in the Europe-Caucasus-Asia corridor. The corridor originated in Eastern European countries (Bulgaria, Moldova, Romania, Ukraine) and also passed through Turkey.

Then cross the Black Sea to the ports of Poti and Batumi in Georgia, and then to the transport network of Iran's South Caucasus countries, using land links from Turkey to the region. From Azerbaijan, through the Caspian Sea ferry crossing points (Baku-Turkmenistan Bash, Baku-Aktau), TRACECA route) to the railway networks of the Central Asian countries (Central Asia)-Turkmenistan and Kazakhstan, the transport networks of these countries are connected to the destinations of Uzbekistan, Kyrgyzstan and Tajikistan and border with China and Afghanistan, while Central Asian countries are connected by land and sea to Iran.

At the same time, the Route Coordination Committee includes JSC "Azerbaijan Railway", JSC "Georgia Railway", JSC "State Company", "NC" KTZ "of Kazakhstan", CJSC "Azerbaijan Caspian Shipping Company", JSC "State Company", "Aktau International Maritime Trade Port", Baku International Maritime Trade Port and LLC "Batumi Seaport".

According to the forecast of experts, the transit freight volume from China to TRACECA countries may increase from 1.5 million tons to 5 million tons in the medium to long term. The priority areas of action for TRACECA countries to develop the Europe-Caucasus-Asia corridor are set out in the Intergovernmental Committee (MMA) TRACECA Strategy for 2016-2026. At the same time, the main obstacles to trade and transport along the TRACECA Corridor are cumbersome import and export procedures, lack of coherence among member States and lack of funds. The regulatory environment for general business and corruption at border crossings have led to continuous delays in vehicles at border crossings. The MMA TRACECA strategy provides solutions to existing problems. The trans-Caspian Sea route Silk Wind ("Silk Wind") was developed at the end of 2012 within the framework of TRACECA.

In 2014, Kazakhstan, Azerbaijan, Georgia, Turkey and China established the Coordinating Committee for the Development of International Transport routes across the Caspian Sea ((CC TITC)). The results of the work of the members of the Coordinating Committee are as follows:

- Effective comprehensive freight rates for container transport and preferential rates for oil, natural gas, oil and grain transport;
- China-Kazakhstan-Azerbaijan-Georgia-Turkey railway and maritime transport companies involved in international rail and ferry direct transport cooperation container train passage technology has been approved;
- To create a container service "nomadic express";
- He organized three pilot container trains "Nomadic Express".
- He launched an image campaign and a roadshow.

One of the main partners of the committee is the China Transportation Association. Subsequently, the composition of the Committee expanded at the expense of "Ukrzaliznytsia" and "Ukrferi" (Ukraine), TransLogistic (Moldova) and PKP LHS (Poland). The Coordinating Committee was later transformed into an association with the Hungarian ZRT (Hungary) of Railway Freight Transport. Ukraine and Lithuania then signed a joint memorandum with the TITC container train

Viking, allowing EU countries to supply goods to China and Central Asia through the creation of free trade zones. In addition, container trains from the Baltic countries are planned to be launched through Black Sea ports and integrated with nomadic express trains in Central Asia and China. The most well-prepared work within the ITC is the infrastructure of Kazakhstan.

The thawed international maritime trading port Aktau is an important channel for import and export business in the Ural and Siberian regions. The above land transport corridor can shorten the delivery time of east-west routes. Today, the best way for Kazakhstan and China to establish mutually beneficial cooperation has been worked out (table 1).

Table 1. Kazakhstan is regarded as a major project as part of the "Belt and Road Initiative" project

Plan	Value, millions of dollar	Construction time
The dry port "Horgos"	222	2014–2020
"Kuryk" port	261	2015–2018
"Zhezkazgan - Beinewu" railway	1 131	2012–2017
"Arkalyk-Shubarkol" railway	242	2012–2017
"Almaty 1-Chu" railway	102	2015–2017
Nursultan new railway station	561	2013–2017
Shymkent logistic center	43	2014–2017
Nursultan logistic center	82	2014–2016
Modernization Construction of Aktau Port	112	2014–2017

It should be noted that the Government of Kazakhstan is implementing a breakthrough project aimed at accelerating the development of Kazakhstan's transport and transit system.

One of the projects is the construction of an international transit highway corridor with a total length of 2700 km, "Western Europe-Western China". St.Petersburg – Moscow – Niznii Novgorod – Kazan'-Orenburg – Aktobe – Kyzylorda – Shymkent – Talas – Gurdai – Almaty - Horgos Urumqi – Lanzhou – Zhengzhou – Lianyungang route has a total length of 8445 km. Of these, 2333 km pass through Russian territory, 2787 km through Kazakhstan and 3425 km through Chinese territory. The project aims to establish an effective east-west route across Kazakhstan and to open direct transit routes for import and export goods and goods. The annual freight volume of the Kazakh section is expected to reach 30 million tons.

The route will connect China, Kazakhstan, Russia, Europe and Central Asian countries (Kyrgyzstan, Uzbekistan, Tajikistan). Compared with the existing alternative corridors (Transsib Highway, sea passage through the Suez Canal), the main positive indicators of the project are the length and duration of the journey.

If the maximum use time of the sea passage is 45 days and that of Waixi cloth is 14 days, then the travel time along the "Western Europe-Western China" passage is about 10 days. The project will provide freight in three main directions: China-Kazakhstan, China-Central Asia, and China-Kazakhstan-Russia-Western Europe.

In 2014, Kazakhstan built the 1036 km Zhezkazgan – Benewu railway line, reducing the distance from East Kazakhstan to West Kazakhstan to 1000 km, thus tripling the rail transport time in the Central European direction. It is planned to build a narrow-gauge road, Horgos – Aktau port. At the same time, the Kazakhstan-Turkmenistan-Iran railway line provides opportunities to reach the Persian Gulf countries and India, which enables goods from the central and western regions of China to be transported to these countries as soon as possible.

In order to improve the port's handling capacity, Aktau Port built a new dry cargo terminal in 2015, increasing the port's handling capacity to 19.5 million tons. The terminal in the north of Aktogai is under construction and will increase the port's handling capacity by 3 million tons. In addition, in order to ensure the transhipment of transit goods and the development of Caspian Sea-to-Caspian Sea multimodal transport, a project to build a ferry complex at the port of Curique is being implemented. Overall, it is planned to increase the total handling capacity of the Kazakh seaport to 26 million tons by 2020, which will make it a strategic point for cargo transshipment in the direction of the Caspian Sea.

These projects develop a framework for the country's unified transport architecture and interfaces with regional and world trade corridors. In order to optimize trade, special economic zones have formed the "Horgos-East Gate" with developed production and service infrastructure. The main purpose of this facility is to provide services for import, export and transit cargo flows. In addition to industrial and logistics areas, the infrastructure of the SEZs also includes a dry port, which was

launched in 2015 with the aim of integrating and distributing goods in the eastern part of the country. In addition, Kazakhstan is actively striving to build an internal terminal network by 2020.

Each transport and logistics centre includes category A warehouses, refrigerated storage, vegetable storage, shelf storage, container areas, customs services and temporary storage warehouses. At the same time, services are provided in accordance with the principle of "one window".

In 2014, a logistics terminal was established with Chinese partners at Lianyungang Port, which is currently the main gathering point for cargo flows to and from / through Kazakhstan. The corridor is the shortest road route from China to Europe in 10 to 12 days (which is 3.5 times shorter than the traditional sea route through the Suez Canal). TLC's container processing capacity is expected to increase from 193000 pounds equivalent in 2015 to 550000 pounds equivalent by 2020. At the same time, LLC "Lianyungang Group" has a 51% stake, and KTZ Express (a subsidiary of JSC "NC" KTZ "national transport logistics operator, created specifically for multimodal transport)-49%. The cost of the project amounts to 99.3 million dollars. $35.1 million, of which $35.1 million was allocated to the fund. The United States has invested 33.7 million dollars in port services. KTZ express delivery, the rest by Chinese banks to grant credit. The dry port is technically connected with the two railway ports bordering China-the Jidigen-Colgas Railway and the Western Europe-Western China Highway, with the participation of major transport and logistics operators in charge, opening a new stage of transport development in Eurasia.

“Belt and Road” Initiative's largest logistics projects is a transcontinental project to build an Eurasian high-speed freight and passenger corridor (HSL Eurasia) linking China and Europe. The construction project of the Eurasian plant is currently the largest railway project in the world, with a total length of about 9500 km, of which 6700 km (70%) will form a new railway line. The project is expected to create the largest high-speed transport network with a length of more than 50,000 kilometers by integrating the transport systems of Asia, Russia and EU countries. There will be 17300 kilometers of Eurasian railway in Kazakhstan.

The Eurasian project is scheduled to be completed in 2026. Different parts of the project will have different production dates. In 2018, the Russian-Chinese consortium began the construction of the first phase of the "Eurasian"-"Moscow-Kazan" project operating on Russian territory, which is scheduled to be put into production in 2023. The "Moscow-Kazan" project operating in Russia was started by the Russian-Chinese consortium in 2018 and is scheduled to be put into production in 2023. Under the JSC "Russian Railway" (RR) project, HSL "Eurasia" will contribute to the growth of mutual trade, deepen regional integration and increase the prosperity of the region as a whole. According to preliminary estimates by developer JSC Russian Railway, trade between China and EU countries is expected to more than double-from $632 billion in 2016 to $135.6 million in 2035. JSC Russian Railway also noted that in the first five years of the opening of the Eurasian plant, transport between China and Europe is expected to increase 3.3 times, or 5.9 million to 8.5 million tons per year. In addition, transit plans in these directions have increased to 16.6 million tons per year.

For the purpose of financing the highway "Eurasia" project, the project developers have provided a mechanism for combining state funds with funds from international financial organizations such as the Silk Road Fund, the BRICS Bank, the Eurasian Development Bank, and the Russia-China Foundation.

In order to implement the "Eurasian" project on the Russian side, a project was carried out to involve countries planning to build railway lines to form a new transport route along the historic Silk Road. So far, Russia has reached an agreement with Kazakhstan on the joint development of the project.

Therefore, in February 2018, JSC "Russian Railway" signed a memorandum of cooperation in the field of "Eurasian" highway development with JSC "NC" Kazakstan Temir Zholy (KTZ). Within the framework of the memorandum, an action plan for project implementation at the railway bureau level was formed, and Kazakhstan formulated the draft terms of reference for the feasibility study of highway construction projects according to the action plan. At the same time, it is worth noting that on the Kazakh side, an alternative route for the construction of the highway "Eurasia" has been provided.

With the participation of Azerbaijan, Georgia, Turkey, Ukraine, Romania and Poland, an international trans-Caspian Sea transport route across the territory of Kazakhstan was opened, and the Uzen-Berecit-Gogan railway line, as well as Turkmenistan and Iran, created unprecedented opportunities for access to new markets.

Compared with the sea, the land trans-European route connecting Europe and Asia has obvious competitive advantages. The completion of the construction of the Kars-Akhalkalaki railway section on the Turkish-Georgian border will give additional impetus to the development of the line.

However, the potential of international transport routes across the Caspian Sea has not yet been fully realized. In this regard, it is necessary to recognize the potential of this route to serve the growing container flow from China. To create favorable conditions for increasing the flow of goods to China-Europe-China, up to 500000 20-pound equivalent containers will be allowed by 2020. One of the promising areas of cooperation is the construction of the Eurasian Canal (Caspian Sea-Azov-Black Sea Basin) to expand transit potential for the benefit of Kazakhstan, Russia, China and Caspian Sea countries-Turkmenistan, Iran and Azerbaijan. This could be an effective corridor for the entire Central Asian region to reach the sea through Russia. In order to prove the economic feasibility of building an Eurasian corridor, experts assessed the transit goods that may flow from China to Europe through Kazakhstan and Russia by 2050. Two options are calculated: no existence of the Eurasian Strait and during its construction.

According to scientists, before the construction of the Eurasian corridor in 2030, the volume of Chinese cargo passing through Kazakhstan and further through Russia will be about 6.3 million tons, and when the channel is opened, it will reach 24 million to 30 million tons.

Before the construction of the Eurasian Canal in 2050, the volume of Chinese cargo through Kazakhstan and further through Russia will be about 12.9 million tons, and after the opening of the channel-43 million tons to 51 million tons.

The "Sinogidro" Chinese company has determined the volume of China's export cargo flow, which is likely to be transported from east to west through the Eurasian Strait. According to 2015 estimates, by 2030, 18 million – 30 million tons of goods will be transported through Eurasian waterways in 2030 and 34 million-44 million tons of Chinese exports in 2050.

Kazakh and Chinese companies are willing to participate in the financing of this channel construction on an equal footing. The project to create a multimodal transport corridor the Eurasian Trans-Continental Corridor will promote the development of transit potential and international transport and communication flows. The implementation of the project will facilitate the smooth shipment of goods from Asia to Europe.

The transport corridor will pass through:

1. Through Kazakhstan, Russian territory and further to Europe (within the framework of combined transport and logistics companies);

2. From Horgos through the territory of Kazakhstan to the port of Aktau, then along the Caspian Sea to Azerbaijan, then within the framework of the Coordinating Committee through Georgia (China, Turkey), the agreement on "north-south" international transport corridors (Turkmenistan, Iran, India, Middle East countries) and international corridors TRACECA (Georgia, Azerbaijan, Turkey).

In order to implement this initiative, a national legal framework for the development of multimodal transport (intermodal transport, multimodal transport) has been established, in particular:

- Container transport is not subject to the state control of the natural monopoly of the Republic of Kazakhstan;
- Domestic shipping companies are exempted from enterprise income tax;
- Cars are granted tariff exemptions to avoid a shortage of EU IV and above vehicles used in international transport.

In order to further develop cooperation between countries, it is necessary to improve the quality of transport infrastructure and reduce tangible and intangible obstacles, namely:

- Customs procedures at borders (ports) should be accelerated and simplified to bring them in line with the international conventions signed by TRACECA countries;
- The pre-declaration system should be implemented;
- Port procedures (ship berthing and loading and unloading planning, cargo storage monitoring, port information system) need to be improved;
- Electronic booking must be made in advance, which is a kind of ship prepayment system.

It is necessary to implement complex forms of tariff payment for multimodal transport, so that customers can easily obtain transparent door-to-door customs duties. Located in the heart of Eurasia and between the poles of the world economy, Kazakhstan attaches particular importance to the development of transit potential.

Today, a strategic transport corridor connecting the north and south of Eurasia and Eurasia has been built. More than 15 container transit routes between China and Europe pass through Kazakhstan. In the long run, the Eurasian transport route through Kazakhstan will become an efficient route from China to Europe. This will create favorable conditions for the large-scale development of the western

region and the development of trade and logistics in the central region, and have a positive impact on the "international multimodal transport" of China-EU trade.

Commodity turnovers of Kazakhstan with major trading partners. Correlation-regression analysis between the volume of commodity turnovers (y), the volume of imports (x1) and the volume of exports (x2)

China is Kazakhstan's largest trading partner in Asia, and Kazakhstan ranks second among China's trade partners in the CIS after Russia.

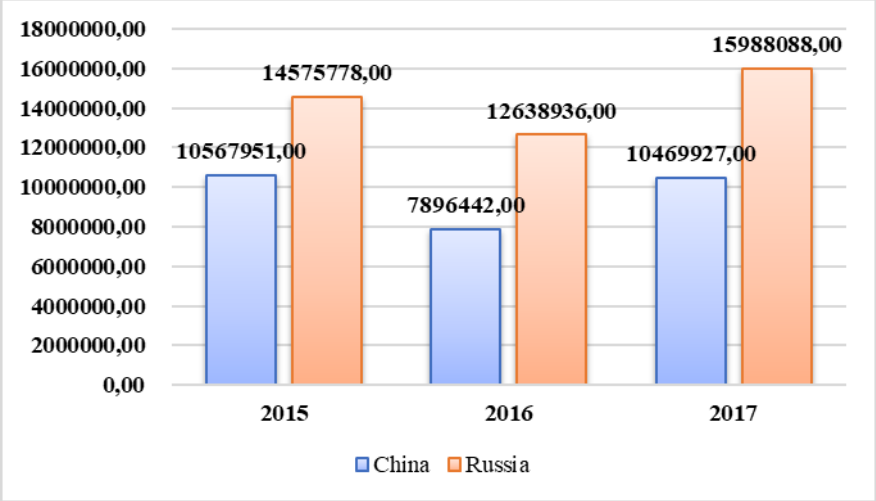

Fig. 3. The commodity turnovers of the Republic of Kazakhstan with major trading partners

The commodity turnovers of the Republic of Kazakhstan with the main trading partners such as Russia and China in 2017, according to calculations based on the data of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, concluded to 26 458 015,2 thousand US dollars (Fig.3), of which 15,988,088 thousand USA dollars − Russia, 10469927,13 thousand US dollars − China. The growth rates for China in 2016-2017 years is 32,59%, Russia – 26,5% respectively.

Correlation-regression analysis is performed to determine the degree of correlation between the result and the factors influencing the result.

The analysis of the influence of factors on the volume of commodity turnover (y) is carried out according to the following data: the volume of imports (x1) and the volume of exports (x2). To begin with, it is necessary to determine the nature of the relationship between the symptoms and establish a form of communication between them.

Indicators for commodity turnover, imports and exports between China and Republic of Kazakhstan are presented in table 2.

Table 2. Commodity turnover, exports and imports between China and Republic of Kazakhstan

Year	The commodity turnovers, Y	Import, X1	Export, X2
2013	22 738 200,0	8 364 500,0	14 373 700,0
2014	17 156 600,0	7 357 200,0	9 799 400,0
2015	10 567 950,9	5 087 813,4	5 480 137,5
2016	7 896 442,2	3 668 032,2	4 228 410,0
2017	10 469 927,1	4 692 242,4	5 777 684,7

As a result of the construction of the correlation matrix by means of MS Exsel we obtain the following data (table 3).

Table 3. Correlation matrix

	The commodity turnovers, Y	Import, X1	Export, X2
The commodity turnovers, Y	1		
Import, X1	0,984374208	1	
Export, X2	0,996579319	0,966454653	1

Data on regression analysis for commodity turnover, export and import are presented in table 4.

Table 4. Regression analysis for commodity turnover, export and import

	Regression statistics
Multiply R	1
R^2	1
Standardized R^2	1
Standard Error	9,95504E-10
Observations	5

Dispersion analysis					
	df	SS	MS	F	The significance of F
Regression	2	1,48E+14	7,38E+13	7,44E+31	1,34E-32
Balance	2	1,98E-18	9,91E-19		
Total	4	1,48E+14			

	Coefficients	Standard Error	t-statistics	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Y-intersection	-4,65661E-09	2,45E-09	-1,89858	0,198034	-1,5E-08	5,9E-09	-1,5E-08	5,9E-09
Import, X1	1	9,92E-16	1,01E+15	9,84E-31	1	1	1	1
Export, X2	1	4,65E-16	2,15E+15	2,17E-31	1	1	1	1

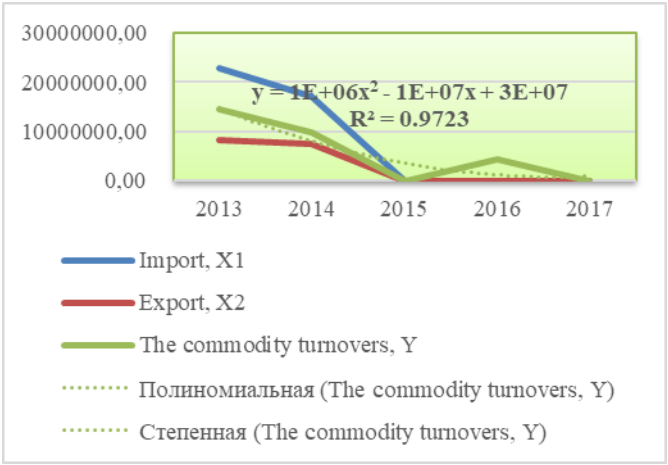

Fig. 4. Commodity turnover, exports and imports between China and Republic of Kazakhstan

As a result of the solutions of the equation in MS Excel, the following parameters were obtained:

$$Y=-4.65661E-09+1*X1+1*X2,$$

Integration of the obtained parameters should be:

A 0 = -4.65661E-09 − the conditional beginning of a meaningful interpretation is not subject to;

A 1 = 1 − coefficient of pure regression at the first factor;

A 2 = 1 − pure regression coefficient for the second factor.

The coefficient of multiple correlation is 1, it indicates that the connection is very strong.

Conclusions. Kazakh-Chinese trade and economic relations were developed on the basis of important and numerous inter-State and intergovernmental treaties and agreements defining the basic principles and directions of mutually beneficial cooperation between the Republic of Kazakhstan and the people's Republic of China.

Silk Road Economic belt (Silk Road Economic belt) opens up new opportunities for economic development, brings stability and security.

The mutual interest of the leaders of the ESDP project is expressed in the willingness to create a common security space based on partnership, political dialogue, which can counter external threats of various kinds.

At present, China is the dominant force and has the potential to influence the global vision of mankind.

China is becoming a non-traditional superpower, representing various aspects in different regional contexts, as well as a key player in Central Asia as the main investor and leading trading partner for the countries of the region.

Kazakhstan is an important and largest market for China in the CIS area after Russia. The level of development of trade and economic ties between Kazakhstan and China is becoming more dynamic.

Effective foreign trade policy, use of resource potential of the industrial sector, modernization, technological potential-all this led Kazakhstan to rapid development of the economy. The implementation of the EBSR project in the long term will improve the transport infrastructure, provide Kazakhstan's access to the seaports of the countries participating in the Silk Road, accelerate the delivery of Kazakhstan goods to world markets, increase external and mutual trade, reduce costs for domestic exporters, including through the elimination of trade barriers and restrictions, attract new investments and joint projects.

At the same time, the formation of EBSR will be restrained due to the existing differences in the level of socio-economic development and living standards of countries located along the SR, the inadequate development of the transport and logistics infrastructure in Central Asia, the poor level of transport and forwarding services, the low efficiency of using rolling stock, the unwillingness of local businesses to compete internationally and enter foreign markets.

One of the threats for Kazakhstan may be the preservation of the raw material orientation of the national economy, since the investment projects of Chinese companies are primarily related to the extraction of oil and natural gas. So, over the past few years, 24.6 billion investments from China, more than $ 17.3 billion were invested in the extraction of hydrocarbon raw materials, $ 6.2 billion − in the construction of trunk oil pipelines. Other threats include strengthening China's trade, economic and migration expansion to the Kazakhstan market, increasing dumping by Chinese enterprises, priority hiring of Chinese at enterprises created by China in Kazakhstan, increasing unemployment, deteriorating trade balance, increasing contraband, increasing competition for Kazakhstan enterprises, deterioration of the environment, etc.

The revived Great Silk Road on the basis of modern transport infrastructure and communications is able to ensure the rapid advancement of goods, services, capital and labor between Europe and Asia, as well as between countries along the Silk Road.

Kazakhstan, as well as other countries of Central Asia, it is important to participate in the implementation of the Chinese EEPS initiative, to effectively use the emerging new opportunities and advantages of regional cooperation, while achieving, at the same time, minimizing risks and threats.

In the same year, Kazakhstan adopted a five-year National Infrastructure Development Programme, which aims to improve domestic infrastructure to "ensure long-term economic growth in Kazakhstan". According to the law, within five years, Kazakhstan will give priority to the development of domestic transport and logistics infrastructure, especially as part of the trans-continental corridor, namely the Western Europe-China Western Corridor, and "continue to establish logistics centres in the east and maritime infrastructure in the west". Kazakhstan must therefore complete the construction of the centre-south-east-west roads by the end of the "five years", which will establish "ray links" between the capital and important areas of the country.

Therefore, the goals and objectives of Kazakhstan are in line with China's development strategy. China and the Republic of Kazakhstan launched the "Belt and Road Initiative" and "Nserrajul Road" connection project in 2016, and work on the construction of transport and logistics infrastructure in China and Kazakhstan is under way.

In addition, according to the strategies of Kazakhstan and China, the two sides must take all measures to "develop transit transport corridors, establish logistics centres in Kazakhstan and simplify procedures (customs, taxation, finance, etc.). In order to expand mutual trade", this will also enable Chinese products to enter the European and Middle East markets more quickly. Kazakhstan accounts for a large share of the trade between China and the West. As a result, by 2020, it is expected that more than 3000 container trains from China or China will pass through Kazakh territory as part of the "Belt and Road Initiative" and "Nurly Zhol" strategic link plan.

Despite the shortcomings in transport cooperation between China and the Republic of Kazakhstan, despite the implementation of the "Belt and Road Initiative" revitalization plan, this project is promising and useful. And the problems that must be solved quickly in order to successfully implement the China-Kazakhstan strategic interface plan.

In short, Sino-Kazakh logistics cooperation has been booming for a long time, and even now, there is still room for bilateral relations between the two countries to expand. In addition, so far, the implementation of the China-Kazakhstan logistics project has reached the international strategic level. This not only enables the two countries to develop backward areas where road and rail routes are located, but also through Kazakhstan, a country regarded as a transit transport hub, this enables China to independently develop faster, more reliable and promising access to the European market, while partly freeing itself from the import and export dependence on less efficient maritime routes.

For Kazakhstan this is an opportunity to modernize and integrate its transport system with the international transport system and stabilize its economy through China's investment and payment of goods transit costs.

In addition, although the problems and difficulties have yet to be solved together, but the implementation of the Kazakhstan-China strategic interface project, which has long been building large-scale transport infrastructure in China and the Republic of Kazakhstan, will enable countries far apart to transport goods, resources and others quickly and without difficulty. It also helps to establish a "huge free trade area" in China's northwest provinces, from Central Asia to Central and Eastern Europe.

In conclusion, it should be noted that Kazakhstan was chosen for the purpose of promulgating the concept of the "Economic belt of the Silk Road". The leadership of China regards Kazakhstan as the main and prospective trade and economic partner in Central Asia. Moreover, Kazakhstan has the largest economy in the region and accumulates more than 70% of China's trade turnover with Central Asian countries. Expansion of mutually beneficial trade, economic and investment cooperation of countries along the ancient Silk Road will lead to the transformation of Central Eurasia into a region of strategic stability, political security and economic progress.

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