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ANALYSIS OF PECULIARITIES DEVELOPMENT OF UKRAINE'S CONSTRUCTION INDUSTRY IN COMPARISON WITH EU AND CIS COUNTRIES

Об'єктом дослідження є показники розвитку будівельної галузі України в порівнянні з країнами Європейського Союзу та Співдружності Незалежних Держав. У ході виконання дослідження використовувались методи статистичного, економічного, маркетингового і порівняльного аналізу, методи формальної логіки. В рамках проведеного дослідження проаналізовані основні аспекти розвитку будівельної галузі України. Визначено динаміку оціночних показників розвитку будівельної галузі України за 2014–2018 рр. у порівнянні з іншими країнами та динаміку структури виробництва будівельної продукції в Україні.

Проведено вивчення особливостей розвитку будівельної галузі України в контексті встановлення проблем та переваг функціонування досліджуваної сфери. Аналіз зазначеного напрямку здійснено із використанням авторського підходу щодо оцінки стану розвитку будівельної галузі. За результатами оцінки встановлено, що основні показники розвитку будівельної галузі є низькими як у порівнянні з аналогічними показниками в розвинених, так в країнах, що розвиваються. А також встановлено комплексну картину розвитку будівельної галузі розвинутих країнах і країн, що розвиваються (в тому числі України). Оцінка здійснювалась із застосуванням авторської методики оцінки стану та тенденцій розвитку будівельної галузі розвинених країнах і країн, що розвиваються.

Наукова новизна методики полягає в тому, що пропонується підхід до оцінки рівня розвитку будівельної галузі країни через призму інтегрованих параметрів обсягу виробленої будівельної продукції (виконаних будівельних робіт) підприємствами країни, чисельності населення та території (площі) країни. Завдяки застосуванню авторської методики експрес-оцінки забезпечується можливість встановити стан та проблеми ефективності стратегій розвитку будівельної галузі України, яка в свою чергу, в порівнянні з аналогічними, має перевагу в можливості її уніфікованого застосування для оцінки ефективності стратегій розвитку підприємств будівельної галузі України.

Ключові слова: стратегія розвитку, обсяг виробленої будівельної продукції, індекс розвитку будівельної галузі, будівельна продукція.

Received date: 17.05.2019

Accepted date: 10.06.2019

Published date: 30.08.2019

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1. Introduction

With increasing openness of markets, leaders of certain domestic markets, including in the construction industry, may give up and lose their competitive position to new, innovative companies that have more adaptive, flexible development strategies. The definition of a certain range of development strategies is associated with the need to understand their types, classification by one or another characteristic, or features.

The study of the main directions and development trends of the construction industry in Ukraine is quite an important task in view of the fact that this sphere occupies a leading place in the national economy and needs improvement, despite the best achievements of foreign experience. Studying the formation of construction in Ukraine will create common development vectors, determine the

factors that influence such results, and evaluate contemporary features.

In this area, there is a wide range of scientific studies, for example [1], which need to be clearly systematized and highlighted. This will allow to formulate a unified approach regarding the possible types of strategies for the development of economic systems, depending on certain signs, their characteristics, and the like. So, issues related to the development of the construction industry are reflected in [2, 3]. A detailed analysis of the construction industry in the global economy from the point of view of its comparison with other industries in the context of the dynamic development of globalism is first encountered in [4]. The author reveals the phenomenon of quasi-companies in the construction industry and shows its influence on the development of the industry on a global scale. But the process of developing and introducing innovations

as a factor in the growth and development of the construction industry in Europe is studied by the authors of [5]. In [6], the authors propose evaluating the sustainable development of the industry based on assessments of the life cycle of enterprises. There are studies on individual countries. So, in [7] the results of studies of the UK construction industry are published, which emphasizes the need for its immediate restructuring and changes in the economic paradigm of construction enterprises.

So, the analysis of the main features and development trends of the construction industry on the example of Ukraine, which is important from the point of view of identifying problems and the benefits of the functioning of the studied sphere, is relevant. Understanding the key aspects of the formation of construction in Ukraine will determine the strategic directions of activity of business entities at the present stage of development.

Thus, *the object of research* is the development indicators of the construction industry of Ukraine in comparison with the countries of the European Union (EU) and the Commonwealth of Independent States (CIS). And *the aim of research* is determination of the effectiveness of development strategies of the construction industry

of Ukraine on the basis of a universal methodology of rapid assessment.

2. Methods of research

In the course of the research, the following methods are used:

- methods of system analysis and synthesis to consider the theoretical aspects of strategic management;
- methods of statistical analysis to study the state of the construction industry in Ukraine, the EU and the CIS;
- methods of economic and mathematical analysis to determine the quantitative assessment and new evaluation indicators;
- methods of formal logic to develop ways to improve the effectiveness of development strategies of the construction industry in Ukraine.

3. Research results and discussion

Tables 1, 2 present the dynamics of estimated development indicators of the construction industry of Ukraine for 2014–2018.

Table 1

The dynamics of the estimated development indicators of the construction industry of Ukraine for 2014–2018*

No.	Country/Indicator	Year				
		2014	2015	2016	2017	2018
Ukraine						
1	The volume of construction products (construction works) by the country's enterprises (<i>Vcp</i>), million USD	3 135.5	2 298.8	2 710.5	3 761.0	4 901.8
2	Building product index (<i>Ibp</i>)	43.9	73.3	117.9	138.8	130.3
3	Construction industry development index in relation to human potential (<i>Icdp</i>), Ukraine	72.936	53.759	63.651	88.730	116.285
3.1	Developed countries, including:					
3.1.1	Construction industry development index in relation to human potential (<i>Icdp</i>), Germany	2793.2251	2793.23	2860.54	2922.08	2939.04
3.1.2	Construction industry development index in relation to human potential (<i>Icdp</i>), Spain	1173.52	1218.27	1243.21	1296.47	1357.44
3.1.3	Construction industry development index in relation to human potential (<i>Icdp</i>), Poland	1000.810	923.362	903.037	920.263	1086.423
3.1.4	Construction industry development index in relation to human potential (<i>Icdp</i>), Denmark	3553.97	3590.56	3752.71	3895.72	4075.23
3.2	Developing countries, including:					
3.2.1	Construction industry development index in relation to human potential (<i>Icdp</i>), Kazakhstan	848.6932	487.6741	548.9956	585.1943	599.3186
3.2.2	Construction industry development index in relation to human potential (<i>Icdp</i>), Belarus	577.7766	511.57	435.54	459.28	480.17
3.2.3	Construction industry development index in relation to human potential (<i>Icdp</i>), Armenia	332.606	330.023	280.356	283.219	285.967
4	Construction industry development index in relation to the country area (<i>Icdpt</i>), Ukraine	0.005	0.004	0.0045	0.006	0.008
Initial data:						
–	Country population (<i>Pap</i>), million people	42.9899	42.7605	42.5845	42.3864	42.1532
–	Area (territory) of the country, sq. m	603628	603628	603628	603628	603628
4.1	Developed countries, including:					
4.1.1	Construction industry development index in relation to the country area (<i>Icdpt</i>), Germany	0.64	0.64	0.66	0.67	0.68
4.1.2	Construction industry development index in relation to the country area (<i>Icdpt</i>), Spain	0.11	0.11	0.11	0.12	0.12
4.1.3	Construction industry development index in relation to the country area (<i>Icdpt</i>), Poland	0.122	0.112	0.110	0.112	0.132
4.1.4	Construction industry development index in relation to the country area (<i>Icdpt</i>), Denmark	0.47	0.47	0.50	0.52	0.54
4.2	Developing countries, including:					
4.2.1	Construction industry development index in relation to the country area (<i>Icdpt</i>), Kazakhstan	0.0054	0.0031	0.0036	0.0039	0.0040
4.2.2	Construction industry development index in relation to the country area (<i>Icdpt</i>), Belarus	0.03	0.02	0.02	0.02	0.02
4.2.3	Construction industry development index in relation to the country area (<i>Icdpt</i>), Armenia	0.034	0.033	0.028	0.029	0.029

Note: * – calculated according to [8, 9]

Table 2

The dynamics of the estimated development indicators of the construction industry of Ukraine for 2014–2018*

No.	Country/Indicator	Absolute deviation, +/-			
		In 2015 compared to 2014	In 2016 compared to 2015	In 2017 compared to 2017	In 2018 compared to 2014
Ukraine					
1	The volume of construction products (construction works) by the country's enterprises (<i>Vcp</i>), million USD	-836.70	411.70	1050.50	1140.80
2	Building product index (<i>Ibp</i>)	29.40	44.60	20.90	-8.50
3	Construction industry development index in relation to human potential (<i>Icdp</i>), Ukraine	-19.18	9.89	25.08	27.56
3.1	Developed countries, including:				
3.1.1	Construction industry development index in relation to human potential (<i>Icdp</i>), Germany	0.00	67.31	61.54	16.96
3.1.2	Construction industry development index in relation to human potential (<i>Icdp</i>), Spain	44.75	24.94	53.26	60.97
3.1.3	Construction industry development index in relation to human potential (<i>Icdp</i>), Poland	-77.45	-20.32	17.23	166.16
3.1.4	Construction industry development index in relation to human potential (<i>Icdp</i>), Denmark	36.59	162.15	143.01	179.51
3.2	Developing countries, including:				
3.2.1	Construction industry development index in relation to human potential (<i>Icdp</i>), Kazakhstan	-361.02	61.32	36.20	14.12
3.2.2	Construction industry development index in relation to human potential (<i>Icdp</i>), Belarus	-66.21	-76.03	23.74	20.89
3.2.3	Construction industry development index in relation to human potential (<i>Icdp</i>), Armenia	-2.58	-49.67	2.86	2.75
4	Construction industry development index in relation to the country area (<i>Icdpt</i>), Ukraine	0.00	0.001	0.0015	0.002
Initial data:					
-	Country population (<i>Pap</i>), million people	-0.23	-0.176	-0.1981	-0.233
-	Area (territory) of the country, sq. m	0.0	0.0	0.0	0.0
4.1	Developed countries, including:				
4.1.1	Construction industry development index in relation to the country area (<i>Icdpt</i>), Germany	0.000	0.020	0.010	0.010
4.1.2	Construction industry development index in relation to the country area (<i>Icdpt</i>), Spain	0.000	0.000	0.010	0.000
4.1.3	Construction industry development index in relation to the country area (<i>Icdpt</i>), Poland	-0.010	-0.002	0.002	0.020
4.1.4	Construction industry development index in relation to the country area (<i>Icdpt</i>), Denmark	0.000	0.030	0.020	0.020
4.2	Developing countries, including:				
4.2.1	Construction industry development index in relation to the country area (<i>Icdpt</i>), Kazakhstan	-0.0023	0.0005	0.0003	0.0001
4.2.2	Construction industry development index in relation to the country area (<i>Icdpt</i>), Belarus	-0.010	0.000	0.000	0.000
4.2.3	Construction industry development index in relation to the country area (<i>Icdpt</i>), Armenia	-0.001	-0.005	0.001	0.000

Note: * – calculated according to [8, 9]

According to the results of Tables 1, 2 it is possible to state the following, namely:

1. The volume of construction products (completed construction works) (*Vcp*) in Ukraine in 2014, 2015 was characterized by a reduction [10]. This trend was characteristic of many sectors of the economy during the indicated period. It is caused, in particular, by the difficult political situation in the country caused by the annexation of the Autonomous Republic of Crimea, some territories of Donetsk and Luhansk regions, military events that began in 2014, and the deterioration of economic development in all areas [10]. Including the devaluation of the Ukrainian hryvnia in 2014–2015 (change from 8.2 UAH for 1 USD as of December 31, 2013 up to 16.3 UAH for 1 USD as of December 31, 2014 and up to 25.02 UAH for 1 USD as of December 31, 2015), as well as other external and internal development factors [11]. Since 2016, there has been a gradual stabilization of the construction industry in Ukraine, the value of the studied indicator is growing and as of December 31, 2018, equal to 4901.8 million USD [11].

According to changes in the production indicator of the construction industry of Ukraine, the value of the construction industry index (*Ibp*) fluctuated. In particular, in 2014, in 2015 it contracted, a particularly significant decrease characterizes 2014, when the country's economic and political situation worsened significantly. 2016 was characterized by optimization characteristics, and in 2018. This index was 130.3. The development prospects of the industry are stipulated by many factors, the most important of which in 2019, 2020 are related to the economic and legislative policies of the new head of state, government, parliament, which will be elected in 2019.

2. Construction industry development index in relation to human potential (*Icdp*) in Ukraine, as well as the indicator of the volume of production of construction products, shows a decrease in 2014, in 2015. And since 2016, it begins to grow. In 2018, it was equal to 116.285 USD per person. As can be seen from the data of Tables 1, 2, this value is the lowest in comparison with its values in all considered developed countries (Germany, Spain, Poland,

Denmark), and with developing countries. In particular, among the studied countries of the second category (developing), Armenia is characterized by the lowest level in terms of the indicated indicator, but the value in this country is 2.5 higher than in Ukraine.

3. Construction industry development index in relation to the country area (*Icdt*) in Ukraine is characterized by a decrease in 2014, in 2015, when the majority of development indicators. Since 2016, there has been some growth, and in 2018 it is equal to 0.008 USD per 1 sq.km of state territory. The obtained indicator is low, the results of Kazakhstan prevail, which, as in Ukraine, has a low level of coverage of the territory with construction objects. This applies to both residential and non-residential buildings, and engineering infrastructure (roads, waterways, railways, communications, etc.), which is in poor condition in both countries.

4. Conclusions

The features of the development of the construction industry in Ukraine are studied in the context of establishing the problems and advantages of the functioning of the studied sphere. The analysis of this direction is carried out using the author's approach to assessing the state of development of the construction industry. According to the results of the assessment, it is found that the main indicators of the development of the construction industry are low both in comparison with similar indicators in developed and developing countries. The key features of the functioning of the construction industry in Ukraine are studied and characterized, in particular:

1) decrease in the volume of production of products in this sector in 2014, in 2015. From political, military, economic processes, and the restoration of development, starting in 2016, caused by a certain stabilization of the economy;

2) steady trend throughout 2017, 2018 to reduce the construction of buildings and the growth of construction of engineering infrastructure (mainly, repair and reconstruction of bridges, roads);

3) growth trend of the construction and repair of social infrastructure facilities (schools, dispensaries, kindergartens, etc.), starting in 2018, taking into account the decentralization processes and the ability of local communities to manage local budget funds.

The author's technique presented in the work can be used to expand the methodological support of the indicated problems, and its provisions can be used for educational and methodological materials, empirical studies of industry enterprises. The research results will be useful in the practical application of this technique and provide for ease of operationalization, eliminate the need to attract external experts, and allow to evaluate a wide range of development parameters.

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