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REAL ESTATE MARKET IN UKRAINE: TRENDS OF DEVELOPMENT AND CHALLENGES

The paper analyzes the real estate market in Ukraine. The analysis indicates that the market's capacity for manufactured construction products in Ukraine tended to increase in value terms during 2010-2019. However, in 2020, the capacity decreased compared to the previous year. In order to predict the capacity of this market, it is important to identify the determinants that affect its development. A multifactor econometric linear model was used to quantify the impact of various factors on the development of the real estate market of Ukraine. The construction output (residential buildings) in value terms was taken as a resultant factor. Consumer income, housing investment, and divorce rate were taken as factors influencing it. The authors also considered other factors that affect the development of real estate in Ukraine, but they correlated with the above factors. To determine the influence of factors on the construction output, partial coefficients of elasticity were analyzed. Based on the calculations, it was established that the development of the real estate market in Ukraine is primarily affected by an increase in consumer income and investment in housing. Specifically, their growth by 1% may lead to an increase in production output (residential buildings) by 1.008% and 0.248% respectively in the real estate market of Ukraine.

Keywords: *residential real estate market, multifactor econometric model, consumer income, investment in housing construction*

JEL classification: *C50, R31*

Розвиток ринку нерухомості України позитивно позначається на розвитку економіки, активізації діяльності банківського сектору, зростанні величини інвестицій та зайнятості населення, вирішенню його соціальних проблем через покращання умов проживання. Метою даної статті є дослідження компонентів розвитку ринку нерухомості України. В процесі виконання роботи застосовано різні загальнонаукові та спеціальні методи дослідження - індуктивний, дедуктивний, економічного аналізу та порівняння, кореляційно-регресійного аналізу, графічний, абстрактно-логічний метод.

У роботі проведено аналіз ринку виробленої будівельної продукції України. Він свідчить про те, що протягом 2010-2019 рр. існувала тенденція до зростання його місткості у вартісних показниках, а у 2020 р. порівняно з попереднім роком вона зменшилася. З метою прогнозування місткості даного ринку важливо визначити ті детермінанти, які впливають на його розвиток. Для визначення кількісної оцінки впливу різних факторів на розвиток ринку нерухомості України було використано багатофакторну економетричну лінійну модель. Як результуючий фактор до розгляду приймався обсяг виробленої будівельної продукції (житлові будівлі) у вартісному вираженні. Факторами впливу були визначені доходи споживачів, інвестиції у житлове будівництво та кількість розлучень. Авторами до розгляду приймалися і інші фактори, які впливають на розвиток нерухомості України, але вони корелювали з вищеподаними факторами. Було встановлено, що побудована багатофакторна економетрична модель адекватна статичним даним генеральної сукупності та може бути використана для подальшого аналізу економічного процесу. Для визначення впливу факторів на обсяги виробленої будівельної продукції проаналізовано частинні коефіцієнти еластичності. На підставі проведених розрахунків встановлено, що передусім на розвиток ринку нерухомості в Україні впливає збільшення доходів споживачів та їх інвестиції у житлове будівництво, зокрема їх зростання на 1 % може призвести до збільшення обсягів виробленої будівельної продукції (житлові будівлі) на 1.008 % та 0.248 % відповідно на ринку нерухомості України. Проте умови воєнного стану, зменшення рівня доходів населення України, його інвестицій у нерухомість, руйнування значної кількості житлових та нежитлових приміщень негативно позначаються на досліджуваному ринку. Його активізація прогнозується у післявоєнний період – період відбудови України.

Ключові слова: ринок житлової нерухомості, багатофакторна економетрична модель, доходи споживачів, інвестиції у житлове будівництво

JEL classification: C50, R31

Introduction. The development of the real estate market in Ukraine has a positive impact on the country's socio-economic development. It creates demand for construction materials and equipment, increases employment, and generates tax revenues for the state budget. However, an imperfect legal framework, low purchasing power of citizens, and low investment potential of legal entities have a negative impact on the market. Despite these challenges, the real estate market in Ukraine is actively growing, and more and more individuals and legal entities are getting involved in real estate transactions. The growth in demand has been facilitated by the resumption of mortgage lending by commercial banks and an increase in the number of people working from home due to the coronavirus pandemic.

Companies operating in the real estate market must constantly forecast the pros-

pects for their development, identify opportunities and threats to their future operation. This requires the establishment of those factors that affect supply and demand in the real estate market. By forecasting their changes, construction companies can also forecast the real estate market. The above determines the relevance and necessity of this study, which aims to identify and systematize the main determinants that affect the real estate market.

Literature review. Construction is one of the industries whose growth indicates the economic and social development of the country. It is closely related to other sectors of the economy, provides fixed assets for all sectors of the economy, and provides certain services for their maintenance in the future. The construction industry stimulates investment growth, which in turn stimulates the overall economy [1]. Pettinger T. [2] also supports a similar theory, proving that the

housing market significantly affects the economy. Bochko O.Yu., Buhaiets A. focused on current trends in studying the investment attractiveness of the construction industry, comparing it to the period of the COVID-19 pandemic [3]. Ilyash O., Hrynkevych S., Ilich L., Kozlovskiy S., Buhaichuk N. pointed out the economic assessment of the interrelation of factors for the development of housing and communal infrastructure and the quality of life of the population in Ukraine [4].

Many scholars have studied the development of the construction market within different countries, conducting either their separate research, for example, Just, T., Levinger, H. [5] - housing markets in China, Cariaga I., El-Diraby T.E. [6] - housing construction markets in Mexico, Tam CM., Deng ZM., Zeng SX., No CS. [7] researched the improvement of the quality of public housing construction in Hong Kong or conducted comparative analysis, for example, Racka I., Palicki S., Kostov I. [8] analyzed real estate markets in Poland and Bulgaria. Chan P. [9] studied the construction industry in developing countries. Clarke L., Herrmann G. [10] justified the costs of production, labor productivity in social housing construction in England, Scotland, Denmark, and Germany.

When studying the construction industry, researchers also focused on the factors that affect its development or decline. In particular, Adams Z., Füss R. [11] pointed to the macroeconomic determinants of international housing markets. Bujanda A., Fullerton T.M. demonstrated the influence of transportation infrastructure on the development of the construction industry, indicating the spatial dimension of buildings and the possibility of access to them [12].

Investments are important for the development of the construction industry. In 2020, the global construction sector amounted to over 11 trillion dollars, and it is expected to grow by 9% in the current year [13]. Popova N., Kataiev A., Nevertii A., Kryvoruchko O., and Skrynkovskiy R. emphasized the importance of innovative development [14]. Sobieraj J., and Metelski D. also focused on key factors for managing investment projects in the residential construction sector in Poland

[15]. However, scientists take into account not only investments. Many pointed out financial aspects [16] and digitization [17], which were important for modern development. Some of them summarized pricing policies in the construction industry, notably Himmelberg C., Mayer C., Sinai T. [18]. Within the pricing policy, Forys I., Putek-Szeląg E., Ziembicka B. [19] studied the impact of energy efficiency on the market value of housing units (using selected buildings in Szczecin as an example). Szopinska K., Krajewska M., Kwiecien J. [20] demonstrated the influence of road traffic noise on housing prices (using Poland as an example).

Summing up the development of the construction industry, Seliuchenko, N., Kosar N. [21] pointed out the main trends in the primary real estate market in Ukraine. Diametrically opposed studies on critical success factors were conducted by Banihashemi S., Hosseini MR., Golizadeh H., Sankaran S. [22]. Meanwhile, Tam CM., Deng ZM., Zeng SX., and No CS. [7] highlighted the need for continuous improvement in construction quality.

Therefore, despite the existing number of scientific works, our research is a logical continuation of previous ones, as it points to the components of the development of the real estate market in Ukraine, which are necessary and relevant in the conditions of a war-ravaged construction sector, especially in the eastern regions of Ukraine.

Therefore, the results of the authors' research supplemented the studies of domestic and foreign scientists in the theoretical and methodological direction of identifying determinants of the development of the housing and construction product market.

This study is a continuation of the author's research by Bochko O., Kosar N., Kuzo N., Bilyk I., and Zarichna O., which focused on the impact of the real estate market volumes in Ukraine on its GDP and analyzing determinants of its development [23].

The purpose of this article is to study the components of the development of the real estate market in Ukraine and to form a rating of influence.

Research methods. Various general scientific and specialized research methods were used in the process of work. In particular, inductive and deductive methods were used to analyze the volume of residential construction, GDP, and the consumer price index. Using economic analysis and comparison, the interest rates on deposits in hryvnia and foreign currency for the period of 2005-2020 were analyzed. Correlation-regression analysis was used to investigate the relationships between the main factors and factors and the indicator (the volume of Ukraine's real estate market). The graphical method was used to visually represent the results of the research. The abstract-logical method was used for theoretical generalizations and conclusions.

Research Results. The analysis of the real estate market in Ukraine indicates that during 2010-2019 there was a tendency to increase its value capacity. It is worth noting that there was a significant devaluation of the Ukrainian currency in 2014-2015, which also affected the growth of construction output during 2014-2016. However, in 2020, there was a 12.42% decrease in this indicator compared to 2019. Additionally, in 2020, the volume of housing construction in Ukraine decreased compared to the previous year (fig. 1).

The increase in demand for real estate in 2020 was due to the fact that commercial banks in Ukraine began to lower deposit rates, particularly on deposits in foreign currency, and the population began to invest actively in

real estate, expecting additional income from renting it out (fig. 2).

However, despite the significant reduction in interest rates on deposits in 2020 (they decreased by 38.46% compared to 2019), another factor that should contribute to the development of the real estate market of Ukraine is interest rates on mortgage loans in UAH whose value is affected by interest rates on deposits. In 2020, interest rates on mortgage loans in UAH decreased compared to 2019 insignificantly — by 0.61%, which makes mortgages inaccessible to the majority of the population of Ukraine. Uncertainty about the future caused by the coronavirus pandemic has led to a decrease in household investment in housing, despite a growth in household incomes in 2020 by 6.1% compared to 2019. Specifically, investment in housing decreased by 39.86%. The growth in incomes of the Ukrainian population in 2020 compared to 2019 was primarily due to an increase in the average salary from UAH 10.497 to UAH 11.591, representing a growth of 10.42%. In general, the annual steady growth of income of the Ukrainian population, which was observed during 2005-2020 (except for 2014), is a factor that has a positive impact on the development of the real estate market of Ukraine.

The demand for real estate is also driven by an increase in the number of marriages and the formation of new families. In 2020, 119.8 thousand marriages were

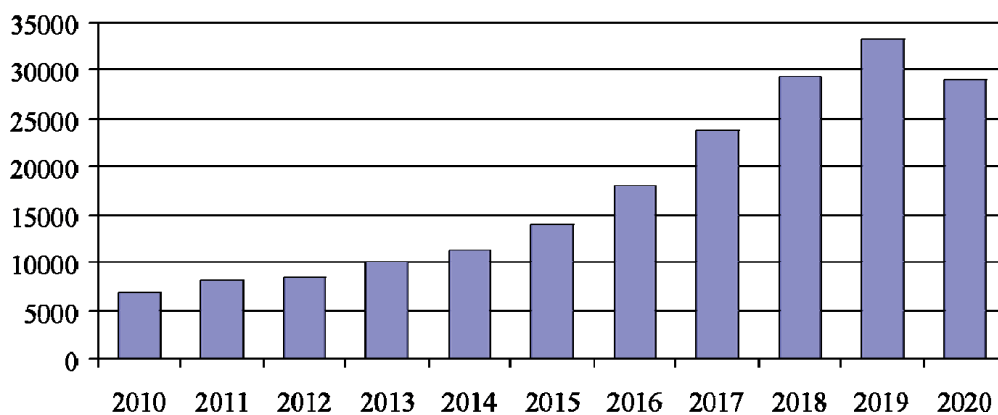


Fig. 1. Dynamics of production volumes, UAH million

Source: build by authors based on [24]

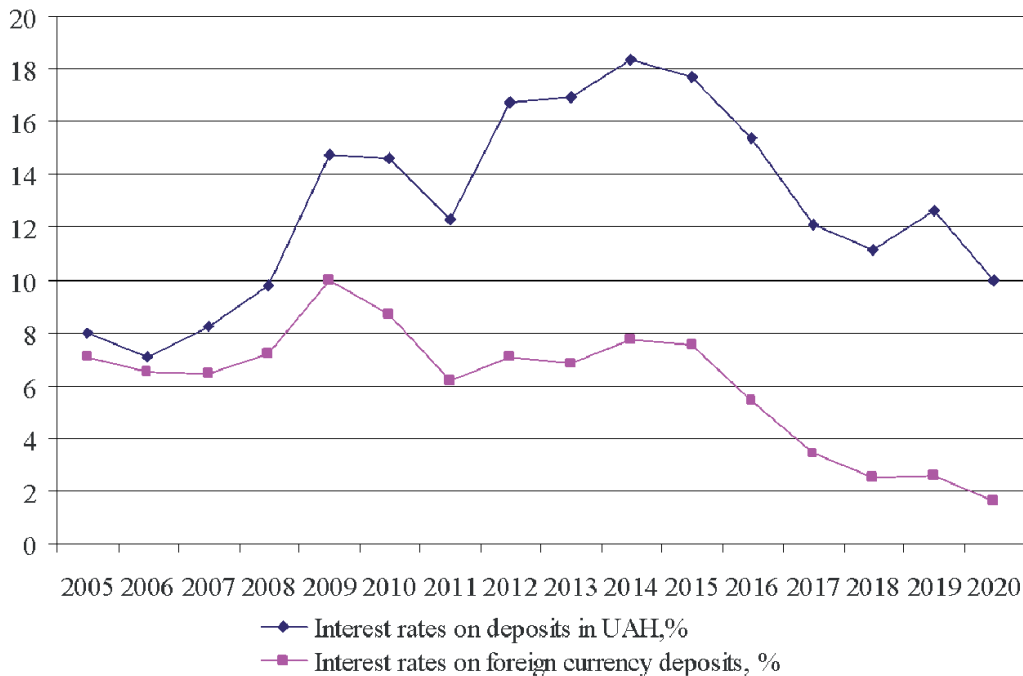


Fig. 2. Dynamics of interest rates on deposits in hryvnias and foreign currency for 2005-2020

Source: build by authors based on [25]

registered, compared to 138 thousand in 2019, representing a decrease of 29.38%. This trend is also reflected in the number of divorces.

Table 1 presents the dynamics of the volume of construction products (specifically, residential buildings) and the main factors influencing them, in order to determine a quantitative assessment of their impact on the development of the real estate market of Ukraine.

According to Table 1, from 2005 to 2020 consumer income increased by 3.6 times, and in 2020 by 6.1%. This is one indicator among the respondents, which had a positive trend over the past year. According to the results of research for 2019-2020, investments in housing construction, the number of divorces, and interest rates on mortgage loans in UAH over 2020 decreased by 39.9%, 13.2%, and 0.6 points respectively. Examining these indicators for 2005-2020, we can say that only the number of divorces decreased by 5%. All the other indicators grew: interest rates on mortgage

loans — by 18.2%, consumer incomes — by 35.5%, and the volume of construction output (residential buildings) — by 4 times.

To quantify the impact of various factors on the development of the real estate market of Ukraine, it is advisable to use a multifactor econometric linear model that allows to quantify the impact of various factors on a particular economic process or phenomenon and in general has the form [26]

$$y = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + \dots + a_mx_m + u. \quad (1)$$

When constructing a multifactor econometric model, it is necessary to determine whether the condition of independence between the selected factors is fulfilled, that is whether the phenomenon of multicollinearity is absent. To study the phenomenon of multicollinearity, the Farrar-Glauber method was deployed, incorporating three types of statistical criteria [26], which are used to detect multicollinearity: of the entire array of factors (X^2); of each factor with all others (F-criterion); of each pair of factors (t-test)

Table 1

Dynamics of production volumes (residential buildings) and the main factors influencing them

Years	The volume of manufactured construction products (residential buildings), UAH million	Consumer income, UAH million	Investments in housing construction, UAH million	Number of divorces, thousand units	Interest rates on mortgage loans in UAH, %
	y	x ₁	x ₂	x ₃	x ₄
2010	6 876.5	1 101 175	25 753.7	126.1	27.4
2011	8 137.1	1 251 005	26 582.3	182.5	28.8
2012	8 523.0	1 457 864	34 256	168.5	29.0
2013	9 953.1	1 548 733	36 128.9	164.9	28.5
2014	11 292.4	1 516 768	33 177	130.7	27.8
2015	13 908.8	1 772 016	45 609.8	129.4	29.8
2016	18 012.8	2 051 331	44 864.9	130.0	31.6
2017	23 730.0	2 652 082	53 371.8	128.7	30
2018	29 344.8	3 248 730	57 395.9	153.9	31.3
2019	33 208.8	3 744 060	58 014.9	138.0	32.6
2020	29 083.6	3 972 428	34 885.7	119.8	32.4

Source: build by authors based on [24]

$$\chi_p^2 = -\left(n-1-\frac{2m+5}{6}\right)\ln(\det R) \quad (2)$$

where n – the number of observations;
 m – the number of factors;
 det R – the determinant of the correlation matrix;

$$F_j = (z_{jj} - 1) \frac{n - m - 1}{m} \quad (3)$$

where z_{jj} - the elements of the matrix Z, inverse to the correlation;

$$t_{ij} = \frac{r_{ij.12...m} \sqrt{n - m - 1}}{\sqrt{1 - r_{ij.12...m}^2}} \quad (4)$$

де r_{ij.12...m} - partial correlation coefficients, determined by the formula:

$$r_{ij.12...m} = \frac{z_{ij}}{\sqrt{z_{ii}z_{jj}}} \quad (5)$$

If multicollinearity is detected, it is necessary to eliminate the factors that cause it.

For further calculations, it is necessary to determine the correlation matrix (R) and inverse to it (Z)

$$R = \begin{pmatrix} 1 & 0.665 & -0.371 & 0.893 \\ 0.665 & 1 & -0.225 & 0.682 \\ -0.371 & -0.225 & 1 & -0.283 \\ 0.893 & 0.682 & -0.283 & 1 \end{pmatrix}$$

$$Z = \begin{pmatrix} 5.506 & -0.533 & 0.691 & -4.360 \\ -0.533 & 1.924 & 0.000 & -0.835 \\ 0.691 & 0.000 & 1.176 & -0.285 \\ -4.360 & -0.835 & -0.285 & 5.384 \end{pmatrix}$$

The results of the multicollinearity study are shown in Table 2.

o eliminate multicollinearity, it is advisable to remove the factor that causes this phenomenon, namely x₄. The method of least squares is used to determine the parameters a₀, a₁, a₂, a₃ a_m [26]

$$\hat{A} = (X^T X)^{-1} (X^T Y) \quad (6)$$

where \hat{Y} - the date of the indicator;
 X - matrix of these factors;
 A - vector of model parameters.

Table 2

**The results of the study of the multicollinearity of factors affecting the construction output
(residential buildings)**

Criterion	Value	The critical value at the probability of 0.95	Result	
X^2 - criterion	20.94	12.6	There is a general multicollinearity	
F-criterion	F_1	6.759	4.53	Factor x_1 is multicollinear with others
	F_2	1.386	4.53	Factor x_2 is not multicollinear with others
	F_3	0.264	4.53	Factor x_3 is not multicollinear with others
	F_4	6.576	4.53	Factor x_4 is multicollinear with others
Partial correlation coefficients	$r_{12,34}$	-0.164	There is a weak inverse connection between factors x_1 and x_2 , provided that other factors do not affect this connection	
	$r_{13,24}$	0.272	There is a weak direct connection between factors x_1 and x_3 , provided that other factors do not affect this connection	
	$r_{14,23}$	-0.801	There is a dense inverse connection between factors x_1 and x_4 , provided that other factors do not affect this connection	
	$r_{23,14}$	0.0001	There is no connection between factors x_2 and x_3 , provided that other factors do not affect this connection	
	$r_{24,13}$	-0.260	There is a weak inverse connection between factors x_2 and x_4 , provided that other factors do not affect this connection	
	$r_{34,12}$	-0.113	There is a weak inverse connection between factors x_3 and x_4 , provided that other factors do not affect this connection	
t-test	t_{12}	-0.407	2.447	There is no multicollinearity between factors x_1 and x_2
	t_{13}	0.692	2.447	There is no multicollinearity between factors x_1 and x_3
	t_{14}	-3.275	2.447	There is multicollinearity between factors x_1 and x_4
	t_{23}	-0.0003	2.447	There is no multicollinearity between factors x_2 and x_3
	t_{24}	-0.658	2.447	There is no multicollinearity between factors x_2 and x_4
	t_{34}	-0.279	2.447	There is no multicollinearity between factors x_3 and x_4

Source: the authors' research

To apply the method of least squares, we form a matrix X and a vector of values of the indicator

$$X = \begin{pmatrix} 1 & 1101175 & 25753.7 & 126.1 \\ 1 & 1251005 & 26582.3 & 182.5 \\ 1 & 1457864 & 34256 & 168.5 \\ 1 & 1548733 & 36128.9 & 164.9 \\ 1 & 1516768 & 33177 & 130.7 \\ 1 & 1772016 & 45609.8 & 129.4 \\ 1 & 2051331 & 44864.9 & 130.0 \\ 1 & 2652082 & 53371.8 & 128.7 \\ 1 & 3248730 & 57395.9 & 153.9 \\ 1 & 3744060 & 58014.9 & 138.0 \\ 1 & 3972428 & 34885.7 & 119.8 \end{pmatrix}, \quad Y = \begin{pmatrix} 6876.5 \\ 8137.1 \\ 8523.0 \\ 9953.1 \\ 11292.4 \\ 13908.8 \\ 18012.8 \\ 23730.0 \\ 29344.8 \\ 33208.8 \\ 29083.6 \end{pmatrix}.$$

$$\hat{A} = \begin{pmatrix} -6162.391 \\ 0.008 \\ 0.212 \\ -12.268 \end{pmatrix}.$$

So, the model will look like

$$\hat{y} = -6162.391 + 0.008x_1 + 0.212x_2 - 12.268x_3.$$

To determine the adequacy of the constructed multifactor model, you can use the coefficient of determination (R^2), F-test (F), and von Neumann test (Q)

As a result of calculations, we will receive

$$R^2 = \frac{\sum(\hat{y}_i - \bar{y})^2}{\sum(y_i - \bar{y})^2}, \quad (7)$$

where \bar{y} - the average value;
 y_i - actual values;
 \hat{y}_i - theoretical values,

$$F = \frac{R^2/m}{(1-R^2)/(n-m-1)}, \quad (8)$$

$$Q = \frac{\sum_{i=2}^n (u_i - u_{i-1})^2}{\sum_{i=1}^n u_i^2} \cdot \frac{n-1}{n}, \quad (9)$$

where u_i - random deviations (residues).

An adequate multifactor econometric model can be used to analyze an economic phenomenon or process and forecast.

The results of the study of the adequacy of the constructed economic-mathematical model are shown in Table 3.

Thus, the constructed multifactor econometric model is adequate to the static data of the general population and can be used for further analysis of the economic process.

To determine the impact of factors affecting the construction output (residential buildings), partial elasticity coefficients are important, which show how many percent the indicator will change if one of the factors changes by one percent with constant values of other factors. Partial coefficients of elasticity are shown in Table 4.

Table 3

The results of the study of the adequacy of the multifactor model of the influence of certain factors on the construction output (residential buildings) in Ukraine

Indicator	Value	The critical value at the probability of 0.95	Result
Coefficient of determination	0.9888	-	$R^2 = 1$, therefore, there is a dense connection between certain factors and the volume of construction products (residential buildings)
F-criterion	206.459	4.35	$F > F_{cr}$, therefore, the model is adequate to the data of the general population
Von Neumann's criterion	2.405	1.18 3.61	Autocorrelation of residues is absent

Source: the authors' research

Table 4

The impact of changes in individual factors on the construction output (residential buildings) in Ukraine

Coefficients of elasticity	Value	Result
Ex_1	1.008	With an increase in consumer income by 1%, the construction output (residential buildings) will increase by 1.008%, provided that the volume of investment in housing construction and the number of divorces will not change
Ex_2	0.248	With an increase in investment in housing construction by 1%, the construction output (residential buildings) will increase by 0.248%, provided that consumer income and the number of divorces will not change
Ex_3	-0.049	With the increase in the number of divorces, the construction output (residential buildings) will decrease by 0.049%, provided that consumer income and investment in housing construction will not change

Source: the authors' research

The factors that have the most significant impact on the development of the real estate market in Ukraine are consumer income and investment in housing construction. A 1% increase in consumer income and investment in housing construction can cause an increase in construction output (residential buildings) by 1.008% and 0.248%, respectively.

However, the conditions of martial law have a negative impact on the real estate market of Ukraine. First of all, there is a significant reduction in consumer income and a decrease in their investments in purchasing housing due to uncertainty about the future. It is also necessary to take into account the significant amount of destroyed housing in Ukraine as a result of military actions. According to previous estimates by the Ministry of Community and Territorial Development as of mid-October 2022, over 2.4 million residents of Ukraine have faced the problem of destruction or significant damage to their housing [27]. According to the information from the regional military administrations, from February 24 to October 18, 2022, about 160,000 damaged and destroyed objects were recorded in the territories of Ukraine that were available for counting, of which 60% have a degree of destruction of more than 50%. Analysis of damaged real estate objects in Ukraine shows that residential premises prevail, their number exceeds 142,000. Of these residential premises, 54,000 are characterized by a degree of destruction of up to 50%, and about 88,000 - from 50% to 100%. At the same time, the conditions of the post-war period and the reconstruction of Ukraine will have a positive impact on the further growth of the real estate market.

Conclusions. Positive changes in the real estate market of Ukraine contribute

to the development of the banking sector, increase investment, employment boost, improve living conditions and contribute to the overall development of the country's economy. Therefore, the main determinants that affect the development of this market were identified in the work. The volume of construction output (residential buildings) in value terms was taken into consideration as a resultant factor. Influence factors were determined by consumer income, investment in housing construction and the number of divorces. The authors also considered other factors that affect the development of real estate in Ukraine, but they correlated with the above factors. Based on the constructed multifactor economic-mathematical model, it has been established that the development of the real estate market in Ukraine is primarily influenced by the increase in consumer income and their investment in housing, in particular, their growth by 1% may lead to an increase in construction output (residential buildings) by 1.008% and 0.248% respectively. At the same time, the factor of increasing the number of divorces correlates in the opposite direction with the volume of construction output (residential buildings) in Ukraine and an increase in the number of divorces by 1% will lead to a decrease in construction output (residential buildings) by 0.049% provided that consumption income and the volume of investment in housing construction will not change.

However, the conditions of the war, the decrease in the income level of the Ukrainian population, their investment in real estate, and the destruction of a significant number of residential and non-residential premises have a negative impact on the studied market. Its activation is expected in the post-war period - the period of Ukraine's reconstruction.

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REAL ESTATE MARKET IN UKRAINE: TRENDS OF DEVELOPMENT AND CHALLENGES

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The development of the real estate market in Ukraine has a positive impact on the economy, contributes to the activation of the banking sector, investment and employment growth, and improvement of living conditions, which, in turn, alleviates social problems. The aim of the article is to study the

components of the development of the real estate market in Ukraine. In the course of the work, various general scientific and special research methods were applied, including inductive and deductive methods used to analyze the construction output, GDP, and the consumer price index. With the help of economic analysis and comparison, an analysis of interest rates on deposits in hryvnia and foreign currency for 2005-2020 was carried out. The method of correlation-regression analysis was used to study the relationships between the main influencing factors and the resultant factor (the volume of Ukraine's real estate market). The graphical method was used to visually represent the results of the study. The abstract-logical method was used for theoretical generalizations and drawing conclusions.

The authors analyzed the real estate market in Ukraine and revealed a trend of growth in its capacity in value terms during 2010-2019 and a decrease in 2020 compared to the previous year. To forecast the capacity of this market, it is important to identify the determinants that affect its development. A multiple regression linear econometric model was used to quantitatively assess the impact of different factors on the development of Ukraine's real estate market. The construction output (residential buildings) in value terms was taken as a resultant factor. Consumer income, housing investment, and divorce rate were taken as factors influencing it. Based on research, it was found that from 2005 to 2020 consumer income increased by 3.6 times, and in 2020 by 6.1%. This is one of the indicators among the respondents, which had a positive trend over the past year. According to the results of research for 2019-2020, investments in housing construction, the number of divorces, and interest rates on mortgage loans in UAH for 2020 decreased by 39.9%, 13.2%, and 0.6 points respectively. Examining these indicators for 2005-2020, we can say that only the number of divorces decreased by 5%. All other indicators increased: interest rates on mortgage loans — by 18.2%, consumer incomes — by 35.5%, and the construction output (residential buildings) — by 4 times.

Based on the coefficient of determination, F-test, and von Neumann criterion, it was established that the constructed multiple econometric models are adequate for the statistical data of the population and can be used for further analysis of the economic process. To study the influence of factors on the construction output, partial coefficients of elasticity were analyzed. Based on the performed calculations, it was found that the development of the real estate market in Ukraine is primarily influenced by an increase in consumer income and their investments in residential construction, with a 1% increase leading to a 1.008% and 0.248% increase, respectively, in the construction output (residential buildings) in the real estate market of Ukraine. However, the conditions of the war, the decrease in the income level of the Ukrainian population, decrease in the real estate investments, and the destruction of a significant number of residential and non-residential premises have had a negative impact on the studied market. Its activation is expected in the post-war period — the period of restoration of Ukraine.

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