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ЕКОНОМІЧНИХ ПРОЦЕСІВ В УМОВАХ ВІЙНИ

HOUSING AFFORDABILITY ISSUES IN UKRAINE

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Ensuring housing affordability is an urgent task of social and housing policy of Ukraine especially in conditions of full-scale war. In Ukraine, a full-scale military invasion has caused and continues to cause huge losses in all spheres of society every day, destroy residential and non-residential real estate and other infrastructure. In March 2023, the World Bank estimated the cost of recovery and reconstruction of Ukraine at \$411 billion [1].

The purpose of the paper is the methodological determination of housing affordability indicator, the assessment of its pre-war trend in Ukraine; and determination of an acceptable for modern and postwar conditions institutional mechanism for improving housing affordability based on the principle of rent.

Research methods are the following: correlational, analog, time series for the analysis of regional differentiation of housing affordability in Ukraine.

The novelty of the study. The expediency of using the permanent housing rent mechanism as a tool for providing affordable housing in the conditions of a high-level uncertainty of using market instruments for the majority of the population was substantiated. Such scheme could be implemented at the state and regional levels with the direct participation of investors and local self-government bodies within the framework of public-private partnerships.

The current state and crucial problems of housing sector. The situation with housing provision for population in Ukraine in acute martial law conditions is exposed to additional risks associated with requirement to rebuilt destroyed or damaged houses. This situation leads to the threat of slowdown in the total living area commissioning that is required for implementation strategic goals and annual tasks of the state housing policy.

Since 2014 (after illegitimate occupation of the Autonomous Republic of Crimea, the city of Sevastopol, and parts of the Donetsk and Luhansk regions), the unequal recovery of housing sector has been increasing, and the housing provision

inequality has been growing both regionally and socially. It leads to growing tension in socio-economic and political relations, which results in decreasing population's trust in measures for formation and implementation of state housing programs. Institutional instruments for financing housing construction and housing sale have been remaining untransparent, and their implementation have not been stimulating the growth of solvent demand for housing.

According to estimates within the framework of the National Council for the Recovery of Ukraine, for June 2023 the total amount of direct documented damage to residential and non-residential real estate and other infrastructure amounted to more than \$150.5 billion (at replacement cost). Residential buildings (37.1 % or \$55.9 billion) and infrastructure (24.3 % or \$36.6 billion) account for the largest share of the total amount of direct losses. The loss of business assets is at least \$11.4 billion and continues to grow. Direct losses of the agrarian sector as a result of the war are another \$8.7 billion [3].

As of June 2023, the amount of damaged and destroyed housing was 167.2 thousand houses, of which 19.1 thousand were high-rise apartment buildings. Direct losses amounted to UAH 55.9 billion, for 84% of which accounted high-rise apartment buildings. It has had extremely negative impact on the population's housing provision [2].

The main obstacle to the housing reconstruction is, firstly, the absence of a single legal regime for land and the building built thereon, which restricts developers from access to bank financing; secondly, the lack of transparent mechanism for the use of the Fund for the Reconstruction of Property and Destroyed Infrastructure. According to experts' estimates, the corruption margin is from 20 to 40 % of the cost of the constructed objects.

One of the main indicators of population's housing provision is the total area of commissioned residential buildings. From 2000 to 2013, the total area of commissioned housing increased more than twice, while for the period 2015-2021, its index was 0.98. The slowdown in housing growth has negative impact on housing provision of the population. In 2020, there were 24.5 square meters of living area for each resident of Ukraine. This indicator is comparable to similar indicators in other former Soviet countries, but lower than in the countries of the Eastern Europe, for example, Hungary (31.2), the Czech Republic (28.7) and significantly less than in EU countries such as Germany (42.9), the Netherlands (41.4), Switzerland (46.6), Denmark (51.4) [4].

In order to get closer to European countries in terms of providing the population of Ukraine with housing up to the level of 35.0 square meters of total living area per person in 10 years (2024—2034), after the restoration of residential buildings destroyed or damaged in 2022 and 2023 (total of 3,322,000 sq. m.), it is necessary to ensure the annual rate of housing construction of at least 3.6 %.

In fact, for 2000-2021, the index of total living area of commissioned residential buildings in cities was 1.57, the index of living area (apartments) commissioning was 1.69, which is twice less than required. At the same time, the excess of the growth of residential units over the growth of the living area means a reduction in the rate of the living area commissioning. The reason is the high market prices for dwellings, that

leads to reducing the availability of comfortable housing. In terms of socio-demographic policy, it is important to provide the family with comfortable living conditions, that's why the strategy of housing provision for population should focus on two indicators: total living area commissioning (thousand square meters) and the number of residential units and rooms in them, which meets modern housing standards.

The housing stock of Ukraine consists mainly of old buildings. Only 8.7 % of houses were built after 1991. In its remaining part, 40.5 % are houses that were built before 1960 and require capital and current repairs. These include multi-apartment buildings, which have already exhausted their operational resource after several decades of mismanagement and lack of proper repair. According to academic and statistical studies, houses that are repaired every year make up 0.1 % of the housing stock. However, even in them, repairs are limited to urgent works that do not lead to any improvement in living conditions. Almost 0.4 % of the housing stock of Ukraine is dilapidated and wrecked. In such houses live 177.8 thousand citizens.

A consequential aspect of housing affordability is housing overcrowding. The overcrowding rate is defined as the percentage of the population living in an overcrowded household, i.e., a household that does not have at its disposal a minimum number of rooms available, depending on the household's size, family situation and the ages of its members [6].

In 2021 in Ukraine almost 50 % of total population lived in overcrowded housing [6]. The largest share of such individuals lives in Zakarpattia, Ivano-Frankivsk, Lviv, Khmelnytskyi, Ternopil oblasts and the city of Kyiv. The negative situation in the housing sector is aggravated by the long-standing issue of overcrowded households. According to 2021 statistical data, 7.1 % of households are almost three times behind the national average size of living area per person, they have less than 7.5 square meters per each family member [5].

In the EU 17 % of population lived in overcrowded households in 2021 [6]. The overcrowding rate in Ukraine is comparable with similar indicators in some Eastern European countries, such as Romania (41 %), Poland (35.7), Bulgaria (37.9), Latvia (41.3, but it is inferior to, for example, Hungary (18), the Czech Republic (15.4 and is significantly worse than in the countries of the central EU, such as Germany (10.6), Switzerland (5.8), the Netherlands (3.4 %) [6]. The main reason for the high level of housing overcrowding in Ukraine is low housing affordability and inability of the majority of the population to purchase their own housing of appropriate quality. The limited living space and housing overcrowding make the issue of housing affordability more sharp. Therefore, an important component of housing affordability is increasing the availability of improved housing conditions for households living in overcrowded conditions.

Housing affordability. The analysis of housing conditions shows that in the general socio-demographic structure of households there are different groups of households, including those that live in unsatisfactory conditions and require special attention within the framework of the national housing policy. There is no international agreement on definition or measurement of housing affordability, and there is no single measure to completely reflect all issues around the ability of households to secure decent housing in an appropriate location for an acceptable price.

One of such housing affordability measures is the median multiple indicator, recommended by the World Bank and the United Nations, that rates affordability of housing by dividing the median house price (or median cost per square meter of living area) by the median household income (or median wage). This indicator characterizes the population's demand for housing and is measured by the number of years in which family can purchase a dwelling. According to this methodology there are generally accepted Housing Affordability Ratings [7]: Housing is considered Affordable if Median Multiple is < 3 ; Moderately Unaffordable if Median Multiple is 3—4; Seriously Unaffordable if Median Multiple is 4—5; Severely Unaffordable if Median Multiple is > 5 . This rating rates middle-income housing affordability in 92 major housing markets in eight nations: Australia, Canada, China, Ireland, New Zealand, Singapore, the United Kingdom and the United States.

In Ukraine, research of affordability, construction and diversity of housing is in development stage. There are the results of studies on the housing affordability in Ukraine, which are compared with similar international indicators. Owing to the lack of data on housing prices in local markets in Ukraine, housing affordability was estimated based on average price data at the regional level. The proposed approach is useful but does not particularly solve the problems of comparing the solvent demand and housing construction indicators, their mutual influence, as it relies on "manual" collection of information in the absence of official statistical data. The data show that in one half of the regions the housing purchase is seriously complicated, in the other — it is essentially unaffordable, and there is not a single region where it is affordable. For a more detailed assessment of housing affordability, it is theoretically possible to compare the calculated housing area commissioning index by regions. The results of the calculations are shown in Fig. 1.

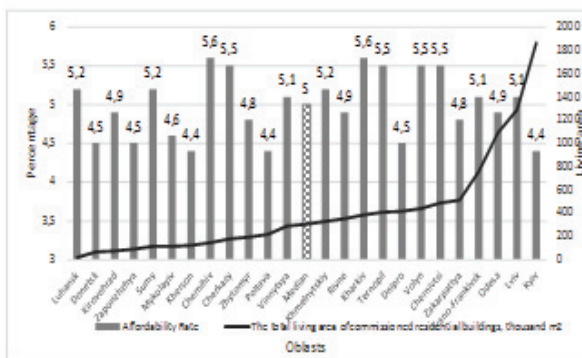


Fig. 1. Housing affordability ratio and population's housing provision by regions of Ukraine, 2021.

Source: own calculations based on [8].

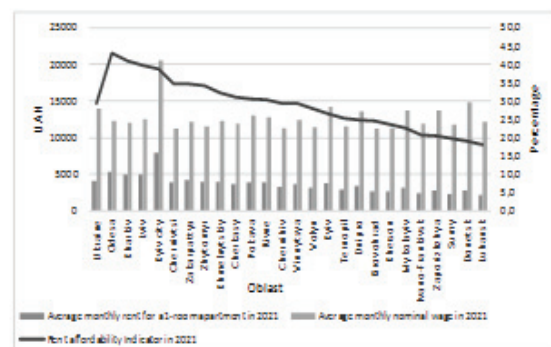


Fig. 2. The rent affordability indicator in 2021.

Source: own calculations based on [8].

The rent affordability indicator measures whether a typical salary is enough for a typical rental home at the national level based on the most recent price and income data. It is calculated by dividing the average monthly rent for a 1-room apartment by an average monthly nominal wage [8]. The calculation determines whether rent payments are less than, equal to or more than 30 % of average wage. For Ukraine at the end of 2021, this ratio was at the level of the affordability threshold and stood at

29.4 % (Fig. 2), but for some oblasts it exceeded 40 % (in Odesa oblast rent affordability indicator was 43 % in 2021, in Kharkiv oblast — 41, in Lviv oblast — 40, in the city of Kyiv — 39 %).

In the conditions of military invasion, the negative dynamics of the economic sentiments indicator in construction will intensify. Already in the first quarter of 2022, it was 17.6. Accordingly, the total living area commissioning will also slow down. To revive business activity, developers should take measures to reduce the housing cost per square meter. This can improve the housing affordability ratio. However, in housing stock structure, a significant share will still belong to poor households, whose housing needs remain unsatisfied. Measures to restore destroyed and damaged housing can have a positive effect on the housing affordability ratio, since the owners of such housing are mostly low- and middle-income households. According to the Government, the demand for housing in coming years will increase. The dwellings of about 1.4 million households (about 3.4 million people) is damaged or destroyed. [2] Due to the state housing policy, measures of social support will be implemented to meet their needs. First of all, compensation will be received by categories of citizens determined by the Verkhovna Rada of Ukraine. As of March 2023, the Ministry of Digital Transformation of Ukraine recorded more than 340,000 applications concerning damaged and destroyed housing [10]. Under these conditions, it is necessary to revise and improve the mechanisms of housing construction financing.

Financial instruments and strategic aims of housing development. Before the full-scale invasion, a wide system of institutional instruments for housing construction financing has been developed in Ukraine, that includes: housing and construction cooperatives; joint financing institutions; targeted bonds; venture fund options; funds for financing construction; bank mortgage; preferential housing financing programs (state, regional, corporate, bank); state mortgage; financing at the individuals' own expense. However, before choosing the housing construction financing method during the period of war, attention should be paid to a number of important issues. It is of primary importance for investors, developers and customers of construction to determine the risks of certain financing method.

The analysis of the main methods of housing financing in Ukraine shows, that they mostly have an entirely market orientation and are aimed at the high-income population. The sustainability of these financial mechanisms is closely related to the financial stability of the economic system. The stronger it is, the more efficiently the institutional mechanisms in the housing sector work. A stable and effective system of financial methods for purchasing housing, which citizens trust, is a necessary condition for the development of the housing sector. The National Bank of Ukraine, which has a wide range of instruments for ensuring financial stability, pays insufficient attention to the effectiveness of housing financing mechanisms, their qualitative analysis and informing and warning about the detection of risks. It is necessary that the National Bank, which adheres to the recommendations of the European Systemic Risk Board (ESRB), clearly and publicly defines the goals and tools of macroprudential policy in the area of construction and purchase of housing by the population. It is important that this is done and publicized in macroprudential strategies. They should focus on solving

two urgent tasks: restoring destroyed housing and creating a modern, civilized housing market for the future.

It could be implemented through the housing lease mechanism as a targeted providing of population with housing in the system of public-private partnership. In the updated housing policy, the particular importance has a system of rental apartment houses construction in the regions, that ensures the housing affordability for population. Such schemes can be implemented at the state and regional levels with the direct participation of investors and local self-government bodies. Financing of rental apartment houses should become the main source and organizational mechanism for the development of residential construction in the medium term.

Rental housing on the basis of non-commercial hiring would give an opportunity to provide housing for households with incomes insufficient to purchase dwellings and will offer possibility to improve the situation with housing overcrowding.

The development of affordable rental housing construction is possible if the following measures are implemented [9]: • gradual increase of the share of rental housing to 5–10 % of the total volume of newly built housing; • ensuring of affordable commercial housing rents for families with average incomes; • development and implementation of typical construction projects for rental buildings with economy-class apartments; • creation of a specialized state body with the functions of an investor and owner of rental housing; • deshadowing of rental operations due to a reduction in the tax rate on rental income.

Creating social prospects for improving living conditions for all strata of the population without balanced functional-spatial development of territories and improving the quality of the urban environment carries the risk of losing the sustainable spatial organization of settlements. In the conditions of military operations, changes in the housing market, internal migration of the population and free movement of capital, it is necessary to calculate the prospects of complex socio-economic development of urban and rural areas. Expanding the spectrum of opportunities in this direction will not only prevent negative consequences in the disposal of land during housing construction, but will also contribute to the implementation of new planning solutions.

Conclusions. The issue of housing affordability requires coordination of the goals and objectives of the housing policy with the goals and objectives in other areas of regulation, for example, financial. In Ukraine, the study of the availability and diversity of housing construction mechanisms in relation to household income is just beginning, which is mainly due to the lack of necessary statistical data.

To ensure the availability of housing, the concept of non-commercial rental houses is proposed. This approach makes it possible, in accordance with social standards, to provide housing to citizens who have low incomes and need to improve living conditions. The mechanism for the development of non-commercial rental houses is focused on the possibility of subsidized rent at below-market rates. A positive attitude towards the lease mechanism is based on European practice. More than 50 % of households in European countries live on the basis of rent.

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